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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15

INVENTORY SHEET

Work Order #: 1607235D

	Page Nos. From	Page Nos. To
1. Work Order Cover Page & Laboratory Narrative	1	5
a. Lumen Validation Report	--	--
2. Sample Results and Raw Data (Organized by Sample)	6	245
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	246	258
b. Surrogate Recover Summary Form (If Applicable)	259	259
c. Internal Standard Summary Form (If Applicable)	260	260
d. Duplicate Results Summary Sheet	261	262
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	263	419
g. MDL Study (If Applicable)	420	443
h. Continuing Calibration Verification Data (Summary Sheet	444	459
i. Second Source LCS(Summary + Raw Data)	460	623
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	624	624
l. GC/MS Tune (Results + Raw Data)	625	644
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	645	646
b. Chain-of-Custody Records	647	648
c. Sample Log-In Sheet	649	649
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	650	652
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	653	661
c. Manual Calculations	--	--
d. Canister Dilution Factors	662	663
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	664	665
g. Variance Table	--	--
h. Canister Certification	--	--
i. Data Review Check Sheet	666	667

Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	8/3/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1607235D

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 #**	Building 18 VI
DATE RECEIVED:	07/14/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	07/27/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B18IA-1	Modified TO-15	5.5 "Hg	5.1 psi
02A	B18IA-2	Modified TO-15	6.7 "Hg	4.8 psi
03A	B18IA-3	Modified TO-15	5.1 "Hg	5 psi
04A	B18IA-4	Modified TO-15	4.7 "Hg	5.2 psi
05A	B18IA-5	Modified TO-15	5.9 "Hg	5 psi
06A	B18IA-1D	Modified TO-15	5.5 "Hg	5.2 psi
14A	B18AA-071216	Modified TO-15	4.7 "Hg	5 psi
15A	Lab Blank	Modified TO-15	NA	NA
16A	CCV	Modified TO-15	NA	NA
17A	LCS	Modified TO-15	NA	NA
17AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 07/27/16

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 Low Level
Anderson Mulholland & Associates, Inc.
Workorder# 1607235D

Seven 6 Liter Summa Canister (100% Certified) samples were received on July 14, 2016. 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

The Chain of Custody (COC) information for sample B18AA-071216 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

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. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. All The canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

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
B18IA-1	1607235D-01A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18IA-2	1607235D-02A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18IA-3	1607235D-03A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18IA-4	1607235D-04A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18IA-5	1607235D-05A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18IA-1D	1607235D-06A	7/ 9/2016	7/14/2016	NA	10	7/19/2016	NA	Good
B18AA-071216	1607235D-14A	7/12/2016	7/14/2016	NA	7	7/19/2016	NA	Good
Lab Blank	1607235D-15A	NA	NA	NA	NA	7/19/2016	NA	Good
CCV	1607235D-16A	NA	NA	NA	NA	7/19/2016	NA	Good
LCS	1607235D-17A	NA	NA	NA	NA	7/19/2016	NA	Good
LCSD	1607235D-17AA	NA	NA	NA	NA	7/19/2016	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: B18IA-1

Lab ID#: 1607235D-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.82	3.1
Chloromethane	0.82	0.92	1.7	1.9
Freon 11	0.16	5.8	0.93	33
Ethanol	0.82	15	1.6	28
Freon 113	0.16	0.072 J	1.3	0.56 J
Acetone	0.82	11	2.0	26
2-Propanol	0.82	6.1	2.0	15
Methylene Chloride	0.33	0.36	1.1	1.2
Hexane	0.16	0.095 J	0.58	0.34 J
2-Butanone (Methyl Ethyl Ketone)	0.82	1.1	2.4	3.2
Tetrahydrofuran	0.82	0.33 J	2.4	0.96 J
Chloroform	0.16	0.048 J	0.80	0.24 J
Cyclohexane	0.16	0.042 J	0.57	0.14 J
Carbon Tetrachloride	0.16	0.064 J	1.0	0.41 J
Benzene	0.16	0.070 J	0.53	0.22 J
1,2-Dichloroethane	0.16	1.2	0.67	5.0
Trichloroethene	0.16	0.59	0.89	3.2
4-Methyl-2-pentanone	0.16	0.078 J	0.68	0.32 J
Toluene	0.16	2.0	0.62	7.7
2-Hexanone	0.82	0.11 J	3.4	0.45 J
Ethyl Benzene	0.16	0.078 J	0.72	0.34 J
m,p-Xylene	0.16	0.19	0.72	0.83
o-Xylene	0.16	0.078 J	0.72	0.34 J
Styrene	0.16	0.035 J	0.70	0.15 J
1,2,4-Trimethylbenzene	0.16	0.040 J	0.81	0.20 J
Naphthalene	0.82	0.036 J	4.3	0.19 J

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Client Sample ID: B18IA-1

Lab ID#: 1607235D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071909**	**Date of Collection:**	**7/9/16 7:02:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/19/16 01:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.82	3.1
Freon 114	0.16	Not Detected	1.2	Not Detected
Chloromethane	0.82	0.92	1.7	1.9
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	5.8	0.93	33
Ethanol	0.82	15	1.6	28
Freon 113	0.16	0.072 J	1.3	0.56 J
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	11	2.0	26
2-Propanol	0.82	6.1	2.0	15
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.36	1.1	1.2
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	0.095 J	0.58	0.34 J
1,1-Dichloroethane	0.16	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.1	2.4	3.2
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	0.33 J	2.4	0.96 J
Chloroform	0.16	0.048 J	0.80	0.24 J
1,1,1-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Cyclohexane	0.16	0.042 J	0.57	0.14 J
Carbon Tetrachloride	0.16	0.064 J	1.0	0.41 J
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.070 J	0.53	0.22 J
1,2-Dichloroethane	0.16	1.2	0.67	5.0
Heptane	0.16	Not Detected	0.68	Not Detected
Trichloroethene	0.16	0.59	0.89	3.2
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	0.75	Not Detected
4-Methyl-2-pentanone	0.16	0.078 J	0.68	0.32 J
Toluene	0.16	2.0	0.62	7.7
trans-1,3-Dichloropropene	0.16	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	0.11 J	3.4	0.45 J

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Client Sample ID: B18IA-1

Lab ID#: 1607235D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071909**	**Date of Collection:**	**7/9/16 7:02:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/19/16 01:37 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	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	0.078 J	0.72	0.34 J
m,p-Xylene	0.16	0.19	0.72	0.83
o-Xylene	0.16	0.078 J	0.72	0.34 J
Styrene	0.16	0.035 J	0.70	0.15 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	0.040 J	0.81	0.20 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	8.8	Not Detected
Naphthalene	0.82	0.036 J	4.3	0.19 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071909.d
Lab Smp Id: 1607235D-01A
Inj Date : 19-JUL-2016 13:37
Operator : ef Inst ID: msd20.i
Smp Info : 250mL# 33531
Misc Info : 5.5"Hg -> 5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
Dil Factor: 1.65000
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.727	16.726 (1.000)	130	95419	5.00000		80.00- 120.00	100.00
16.727	16.726 (1.000)	128	73763			47.94- 107.94	77.30
16.727	16.726 (1.000)	49	134414			102.10- 162.10	140.87
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	324667	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	53618			0.00- 45.77	16.51
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	301560	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	178872			26.51- 86.51	59.32
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	163262	5.89885	5.899	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	84515			32.47- 92.47	51.77
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.822	20.822 (1.142)	98	314290	5.01198	5.012	80.00- 120.00	100.00
20.822	20.822 (1.142)	70	41840			0.00- 41.37	13.31

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
20.822	20.822 (1.142)	100	208154			36.07- 96.07	66.23
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
25.485	25.485 (1.073)	174	164851	5.09151	5.092	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	204473			89.67- 149.67	124.03
25.485	25.485 (1.073)	176	158644			67.40- 127.40	96.23
11 Freon 12					CAS #: 75-71-8		
4.697	4.672 (0.281)	85	30672	0.37848	0.6245	80.00- 120.00	100.00
4.649	4.672 (0.278)	87	10080			2.54- 62.54	32.86
17 Chloromethane					CAS #: 74-87-3		
6.601	6.577 (0.395)	50	15204	0.56029	0.9245	80.00- 120.00	100.00
6.577	6.553 (0.393)	52	2198			3.03- 63.03	14.46
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	278125	3.55100	5.859	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	178587			34.91- 94.91	64.21
42 Ethanol					CAS #: 64-17-5		
12.297	12.269 (0.735)	45	92281	9.10317	15.020	80.00- 120.00	100.00
12.297	12.269 (0.735)	46	36027			11.72- 71.72	39.04
12.297	12.269 (0.735)	43	26503			0.00- 52.99	28.72
49 Freon 113					CAS #: 76-13-1		
12.764	12.763 (0.763)	151	2323	0.04393	0.07248	80.00- 120.00	100.00(a)
12.764	12.763 (0.763)	153	1593			34.49- 94.49	68.58
12.736	12.763 (0.761)	101	3052			96.39- 156.39	131.35
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	96050	6.60331	10.895	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	316037			278.33- 338.33	329.03
57 2-Propanol					CAS #: 67-63-0		
13.560	13.533 (0.811)	45	165802	3.68561	6.081	80.00- 120.00	100.00
13.560	13.533 (0.811)	43	63959			0.00- 52.04	38.58
13.560	13.533 (0.811)	59	6774			0.00- 34.17	4.09
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	6509	0.21947	0.3621	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	9123			97.79- 157.79	140.16
14.027	14.027 (0.839)	51	2604			9.84- 69.84	40.01
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	2665	0.05770	0.09520	80.00- 120.00	100.00(a)

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

   78 Hexane (continued)
 14.933  14.878 (0.893)    43      5256                    33.20-  93.20   197.23
 14.878  14.878 (0.889)    86       494                     0.00-  48.21    18.54
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 16.365  16.344 (0.978)    72      9675 0.65570    1.082  80.00- 120.00   100.00
 16.344  16.344 (0.977)    43     43466                  345.54- 405.54   449.22
 16.344  16.344 (0.977)    57      3200                     0.00-  59.64    33.08
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 16.696  16.696 (0.998)    42      6809 0.19843   0.3274  80.00- 120.00   100.00(a)
 16.727  16.696 (1.000)    71      1934                    10.37-  70.37    28.40
 16.727  16.696 (1.000)    72      2465                    13.30-  73.30    36.20
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83      1890 0.02940  0.04851  80.00- 120.00   100.00(a)
 16.819  16.819 (1.006)    85      1128                    35.08-  95.08    59.68
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84      1133 0.02562  0.04227  80.00- 120.00   100.00(a)
 17.035  17.035 (1.018)    56      2611                    82.51- 142.51   230.34
 17.035  17.035 (1.018)    41      2446                    30.91-  90.91   215.82
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 17.251  17.250 (1.031)   119      2175 0.03912  0.06454  80.00- 120.00   100.00(a)
 17.251  17.250 (1.031)   117      2408                    75.13- 135.13   110.71
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 17.621  17.621 (0.966)    78      3365 0.04273  0.07051  80.00- 120.00   100.00(a)
 17.641  17.621 (0.968)    77       490                     0.00-  54.04    14.56
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 17.744  17.744 (0.973)    62     26134 0.75475    1.245  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64      9027                     2.26-  62.26    34.54
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 18.611  18.610 (1.021)   130     12809 0.35639   0.5880  80.00- 120.00   100.00
 18.611  18.610 (1.021)    95     12875                    67.33- 127.33   100.51
 18.611  18.610 (1.021)    97      8431                    32.56-  92.56    65.82
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.557  20.572 (1.128)    43      2551 0.04738  0.07818  80.00- 120.00   100.00(a)
 20.572  20.572 (1.128)    58       894                     9.48-  69.48    35.07
 20.588  20.572 (1.129)    85       242                     0.00-  47.76     9.49
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91    105154 1.24561    2.055  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
147 Toluene (continued)							
20.962	20.962 (1.150)	92	62909			30.04- 90.04	59.83
158 2-Hexanone					CAS #: 591-78-6		
22.406	22.406 (0.943)	58	2002	0.06635	0.1095	80.00- 120.00	100.00(a)
22.406	22.406 (0.943)	43	2898			153.17- 213.17	144.73
22.377	22.406 (0.942)	100	350			0.00- 52.35	17.49
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	1661	0.04703	0.07760	80.00- 120.00	100.00(a)
23.906	23.906 (1.006)	91	5148			282.65- 342.65	309.78
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	4384	0.11585	0.1912	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	10151			170.44- 230.44	231.51
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	1700	0.04749	0.07836	80.00- 120.00	100.00(a)
24.710	24.710 (1.040)	91	4684			177.28- 237.28	275.49
172 Styrene					CAS #: 100-42-5		
24.751	24.751 (1.042)	104	1086	0.02129	0.03512	80.00- 120.00	100.00(a)
24.731	24.731 (1.041)	78	1148			22.29- 82.29	105.69
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.396	26.395 (1.111)	105	1991	0.02432	0.04012	80.00- 120.00	100.00(a)
26.396	26.395 (1.111)	120	1000			17.68- 77.68	50.23
228 Naphthalene					CAS #: 91-20-3		
29.756	29.772 (1.252)	128	1483	0.02165	0.03572	80.00- 120.00	100.00(a)
29.756	29.772 (1.252)	127	597			0.00- 42.99	40.29

QC Flag Legend

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

Report Date: 27-Jul-2016 15:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071909.d
Lab Smp Id: 1607235D-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.5"Hg -> 5.1psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	95419	-17.66
123 1,4-Difluorobenze	406395	243837	568953	324667	-20.11
163 Chlorobenzene-d5	363239	217943	508535	301560	-16.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-01A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.5"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.899	117.98	70-130
$ 146 Toluene-d8	5.000	5.012	100.24	70-130
$ 177 4-Bromofluorobenze	5.000	5.092	101.83	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

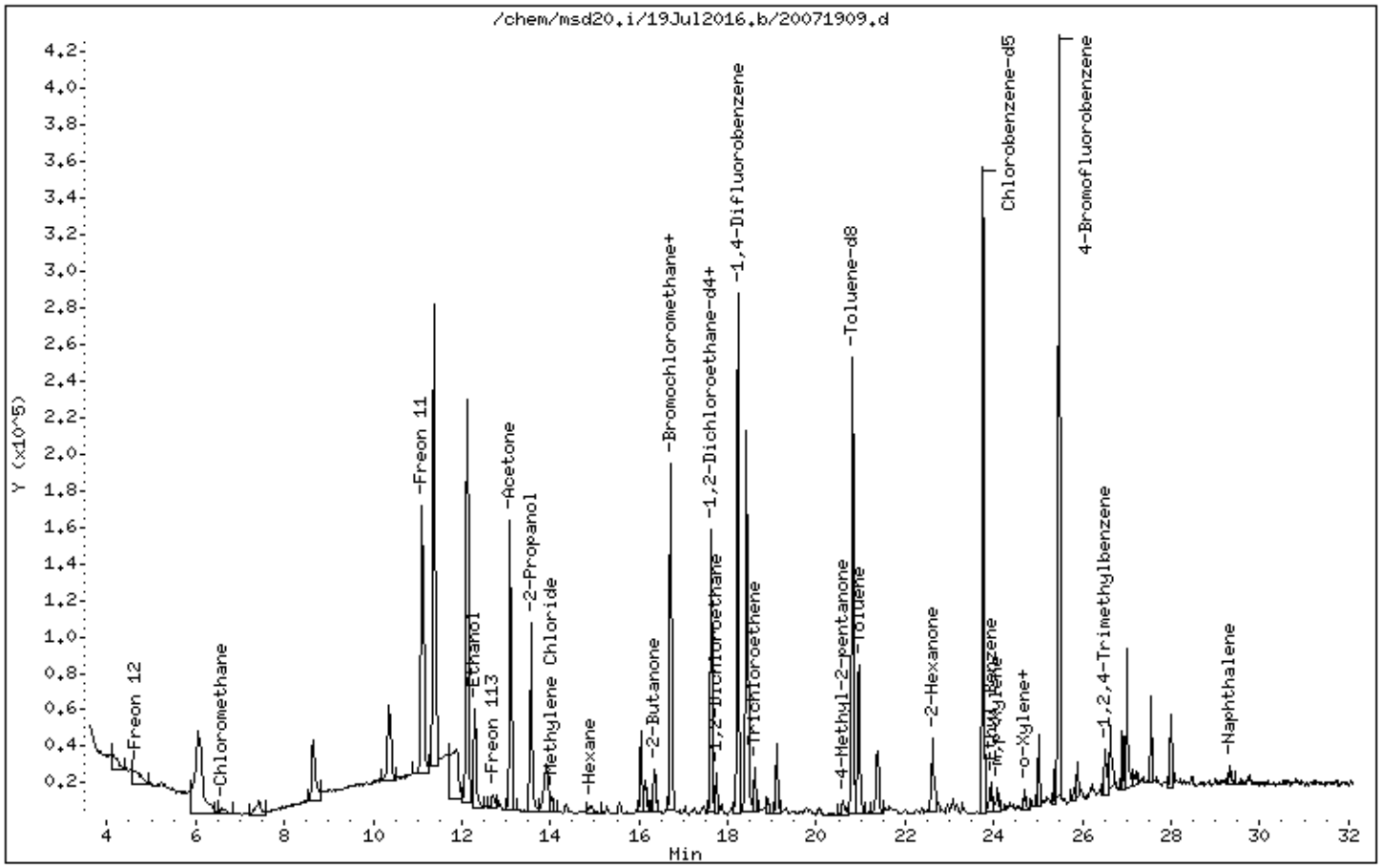
Instrument: msd20.i

Sample Info: 250mL# 33531

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

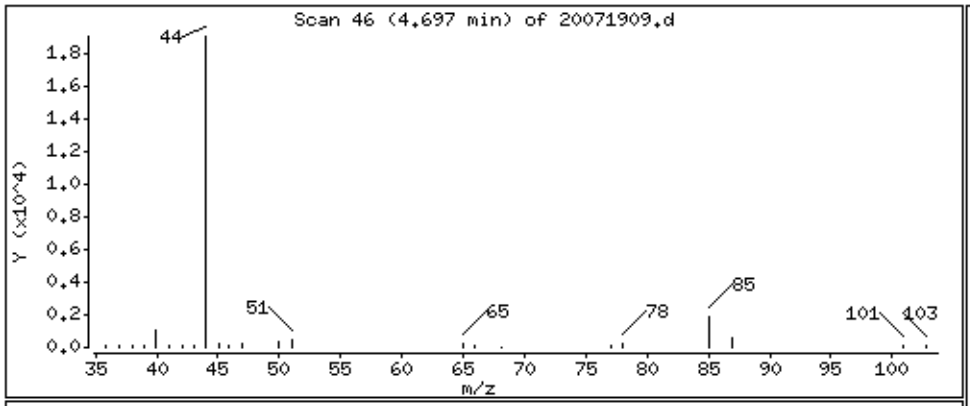
Operator: ef

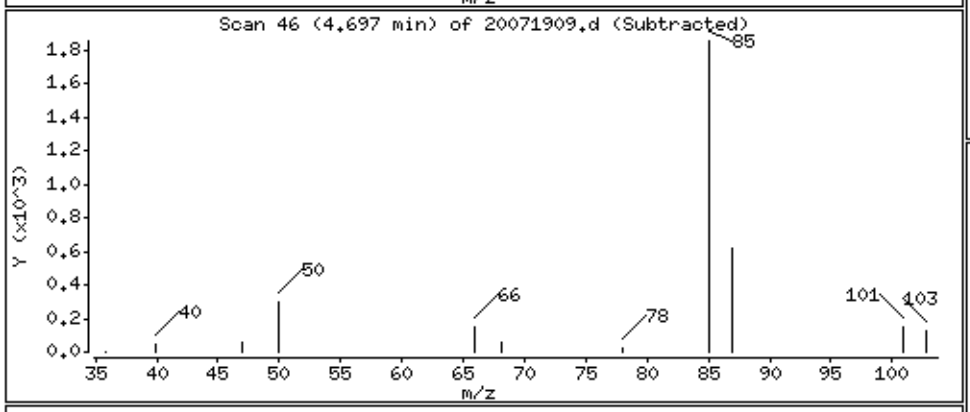
Column phase: RTX-624

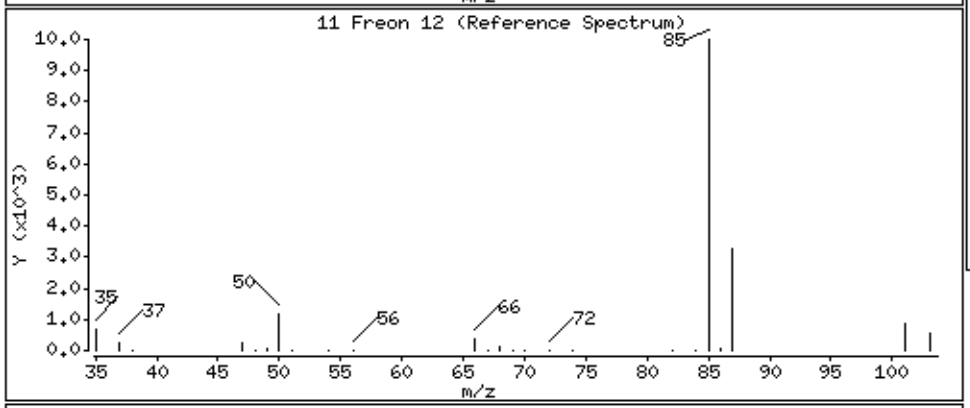
Column diameter: 0.32

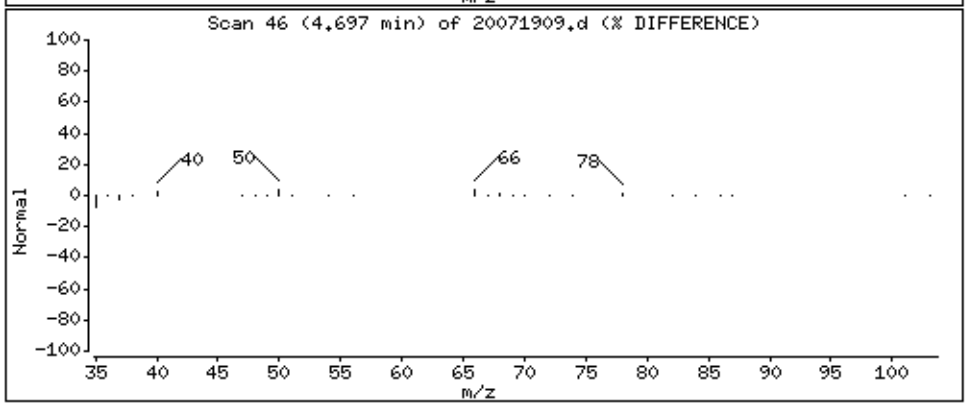
11 Freon 12

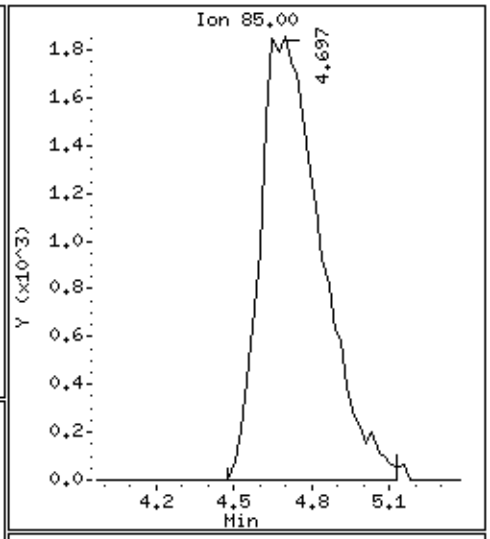
Concentration: 0.6245 PPBV

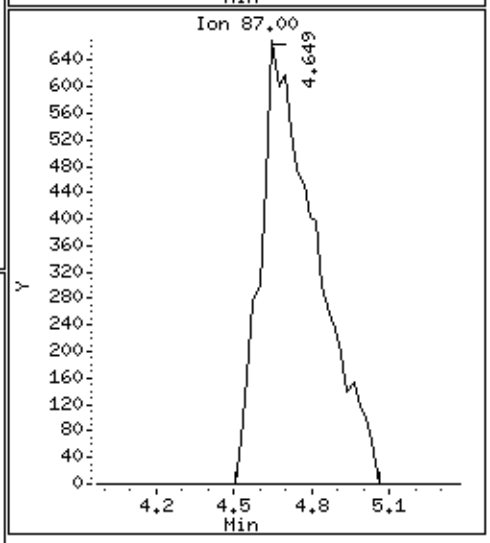












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

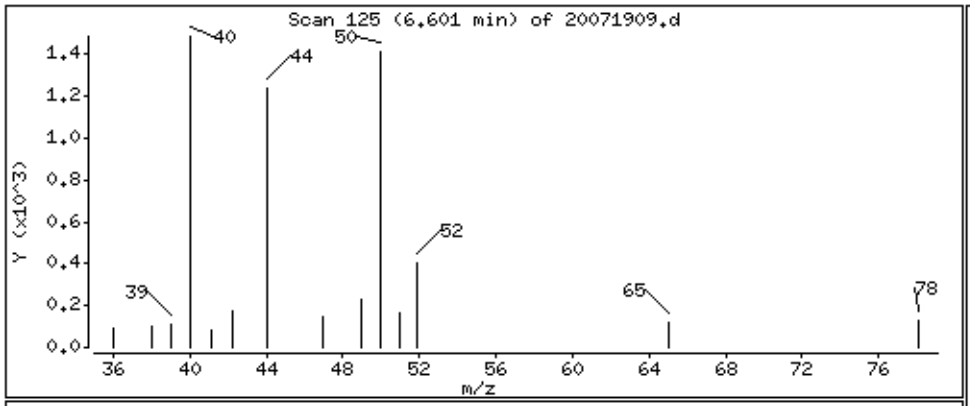
Operator: ef

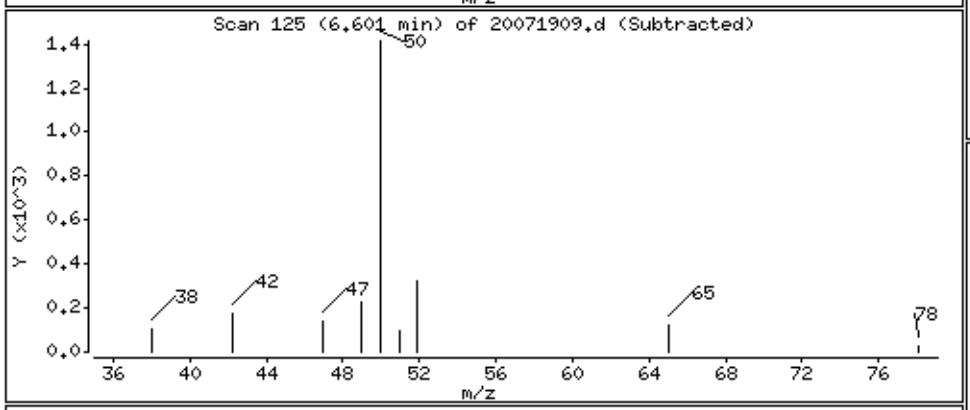
Column phase: RTX-624

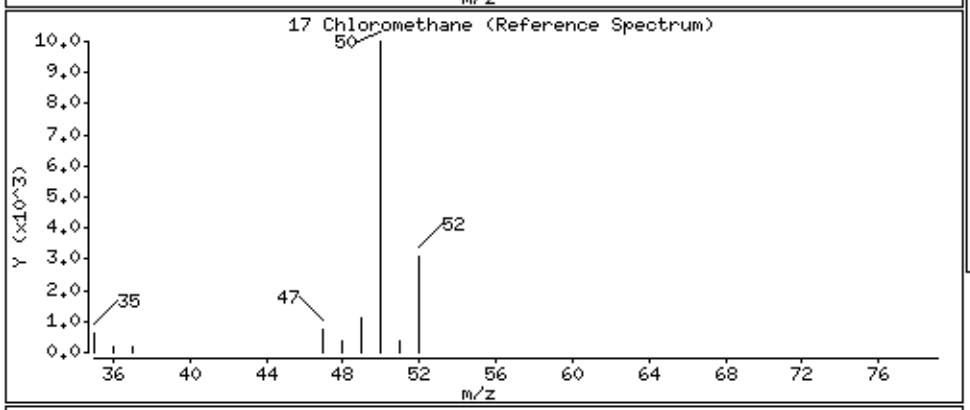
Column diameter: 0.32

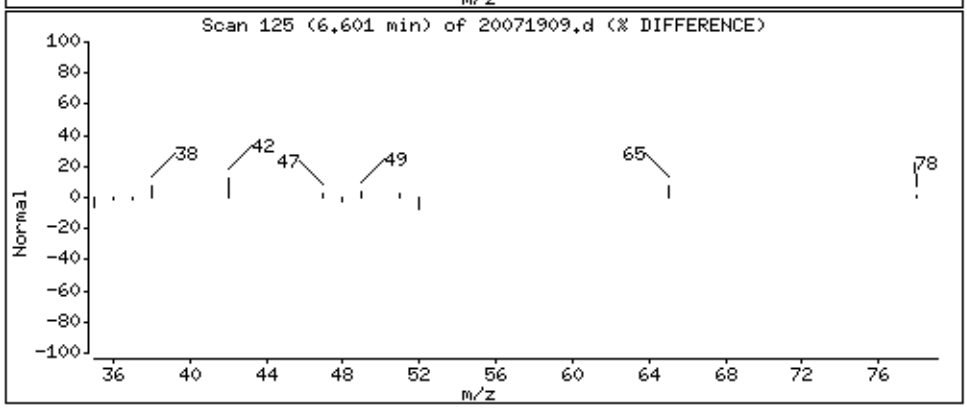
17 Chloromethane

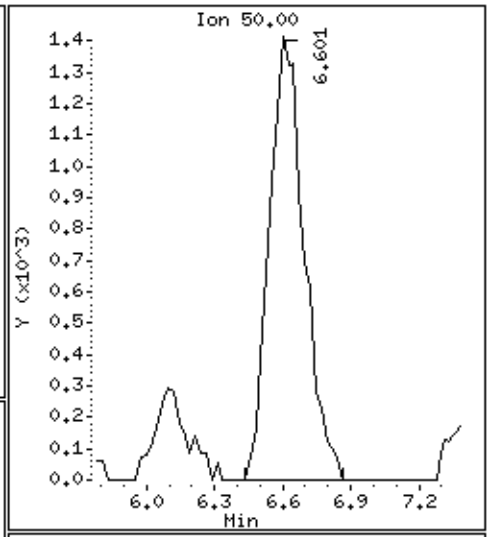
Concentration: 0.9245 PPBV

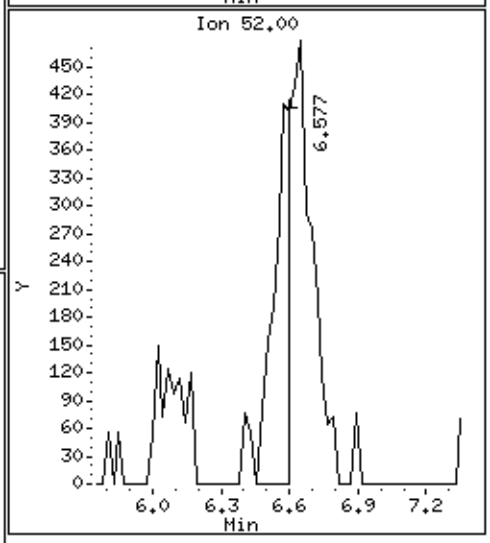












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

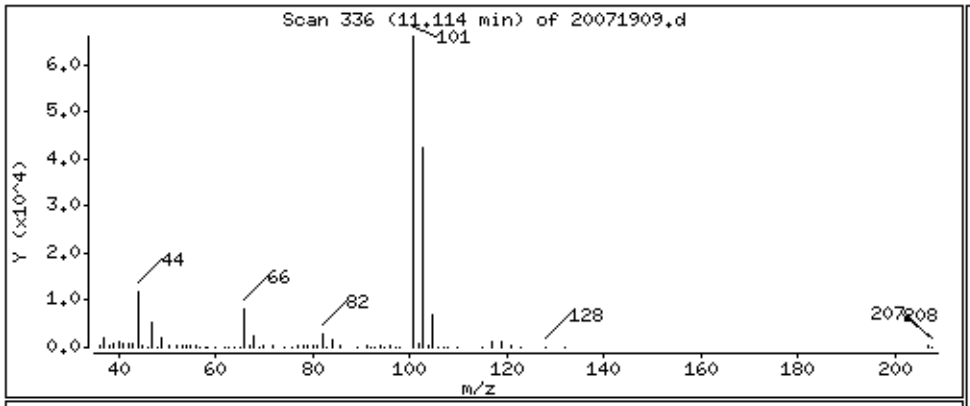
Operator: ef

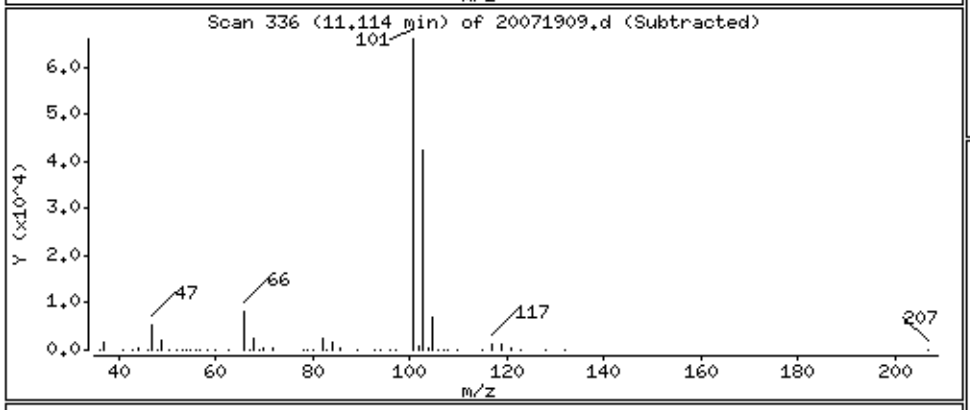
Column phase: RTX-624

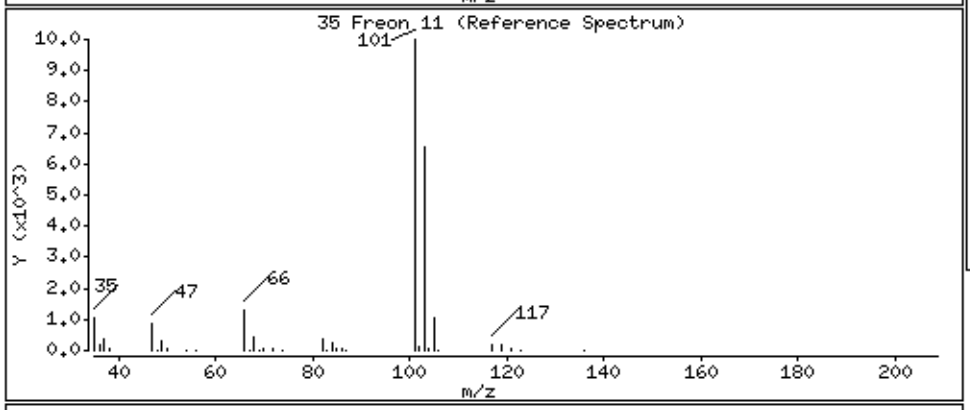
Column diameter: 0.32

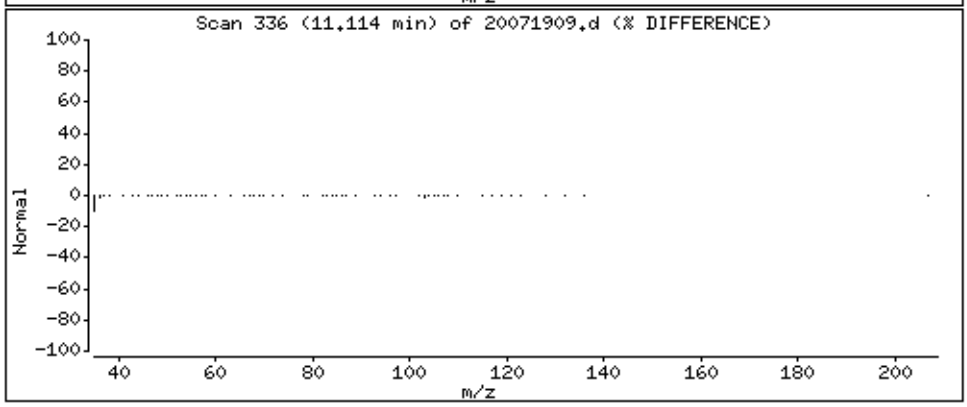
35 Freon 11

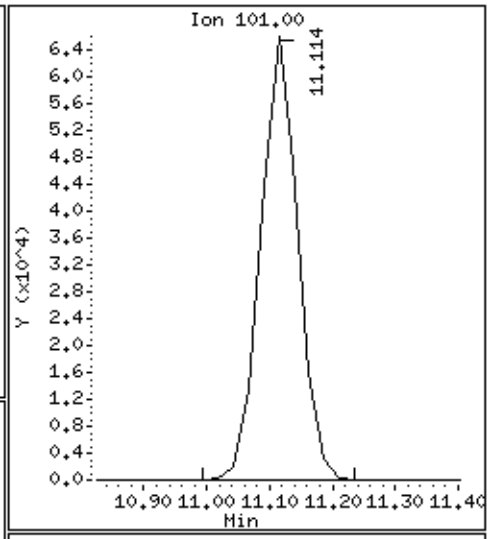
Concentration: 5.859 PPBV

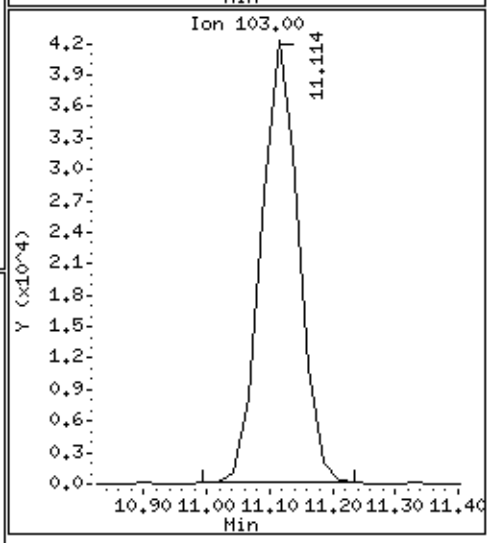












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

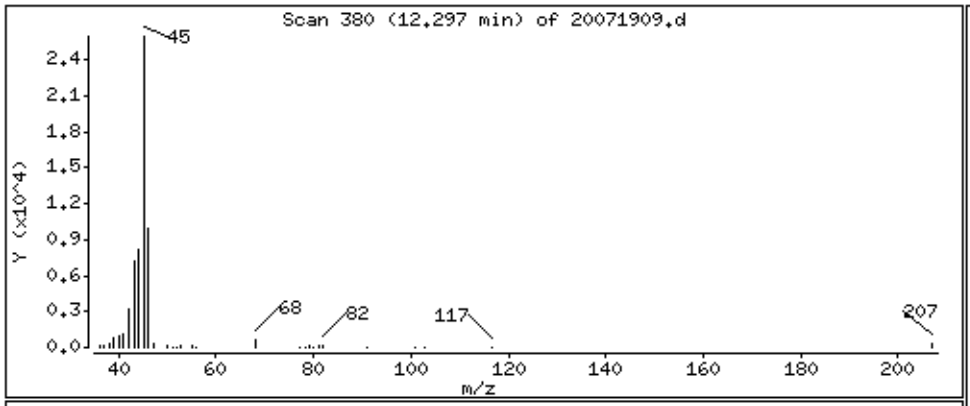
Operator: ef

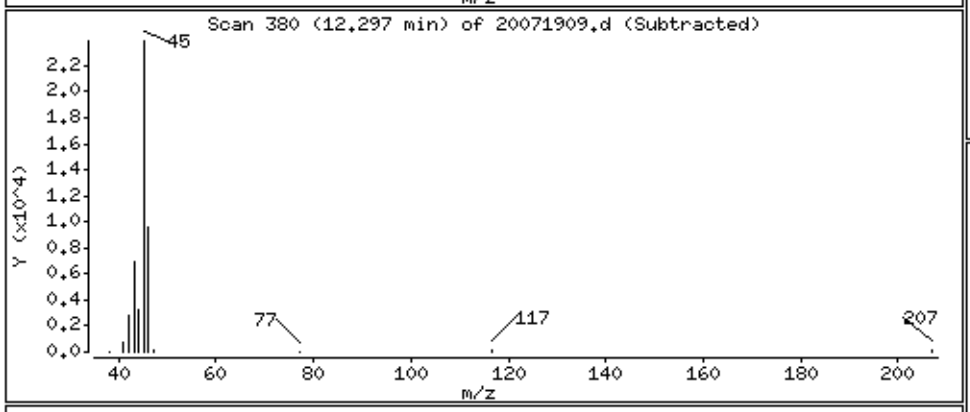
Column phase: RTX-624

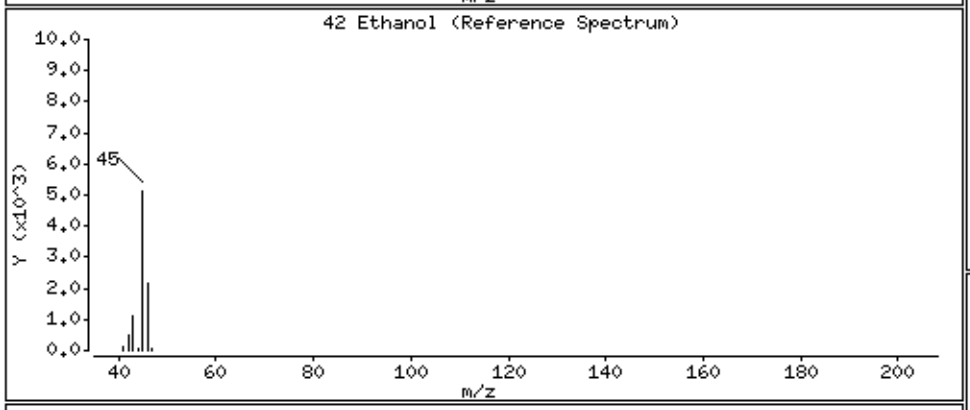
Column diameter: 0.32

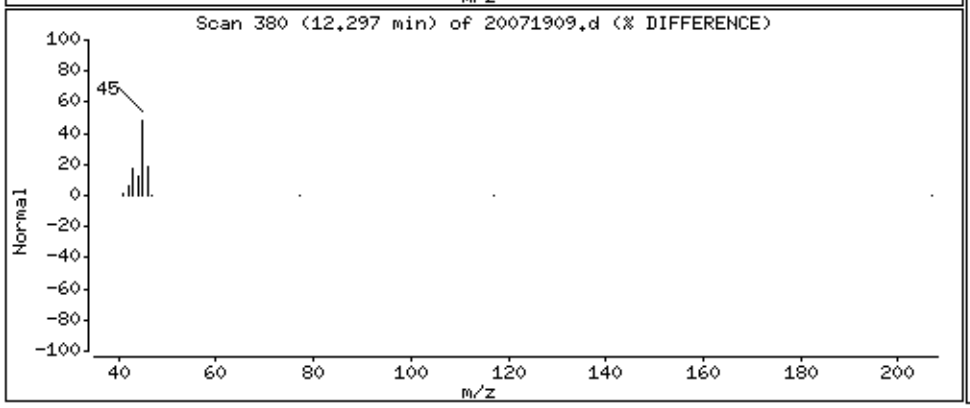
42 Ethanol

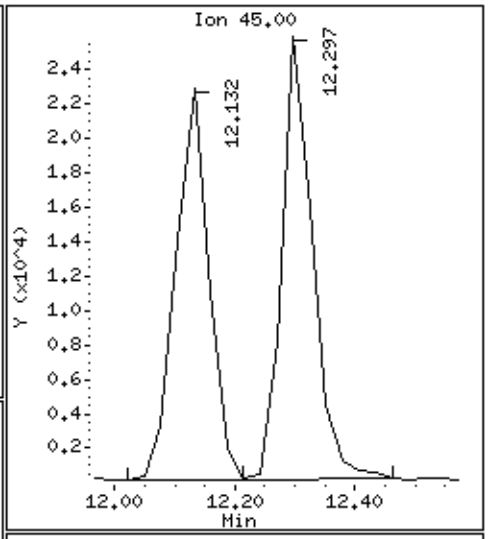
Concentration: 15.020 PPBV

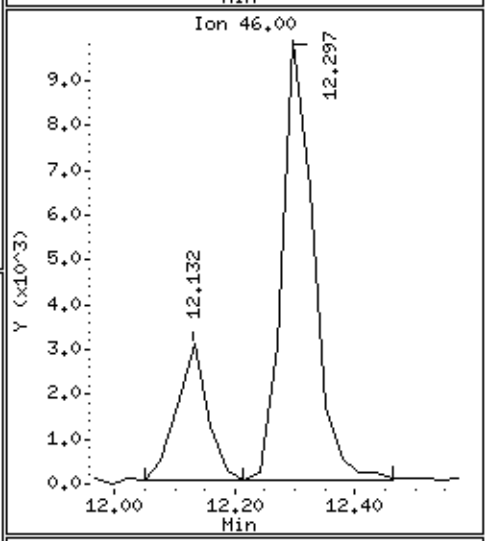


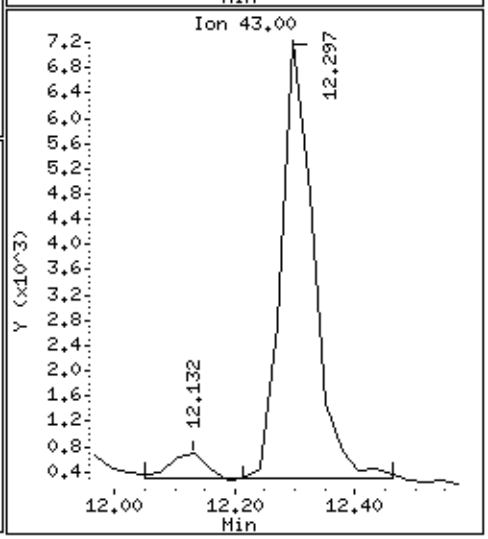












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

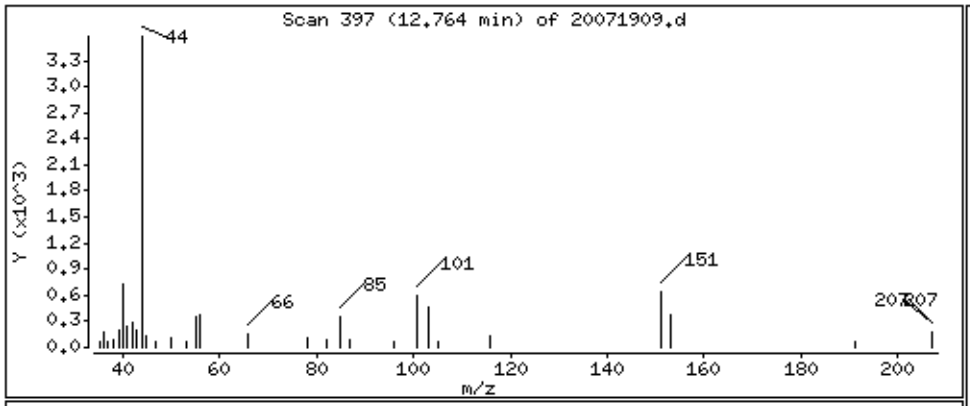
Operator: ef

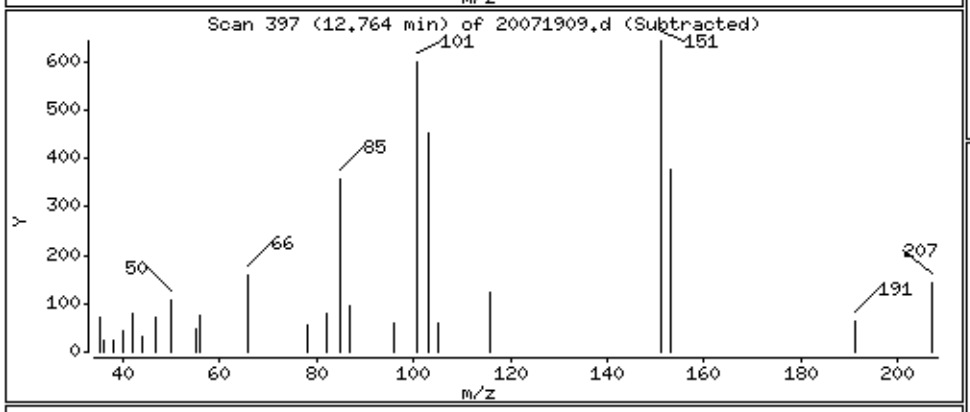
Column phase: RTX-624

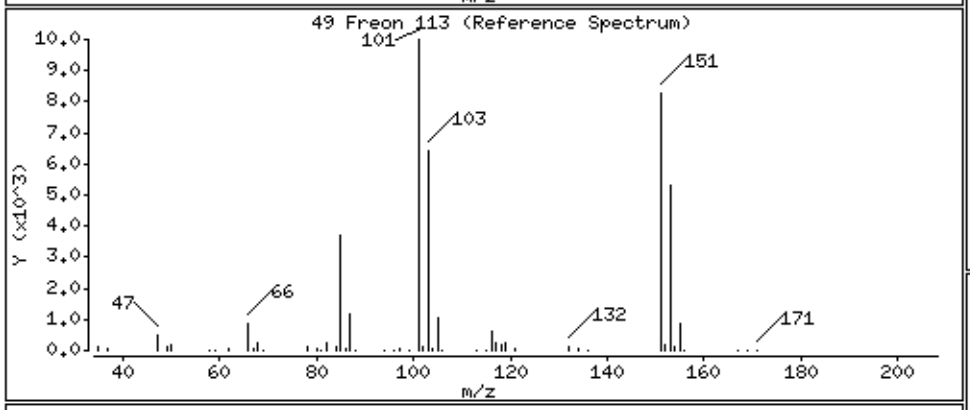
Column diameter: 0.32

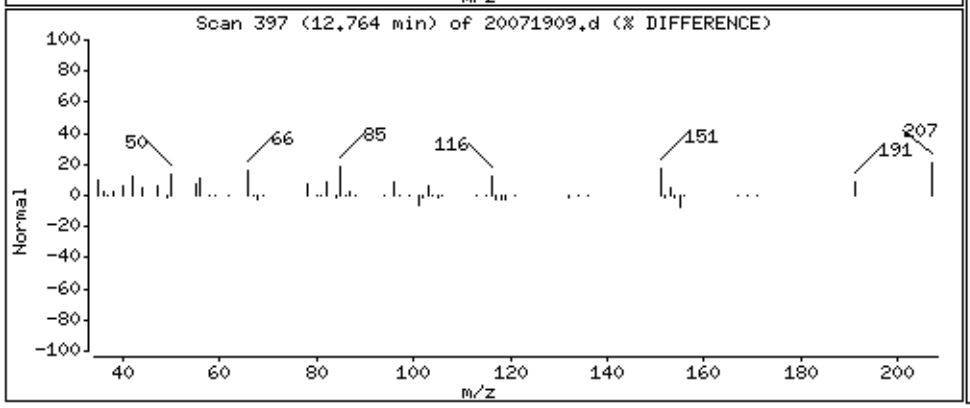
49 Freon 113

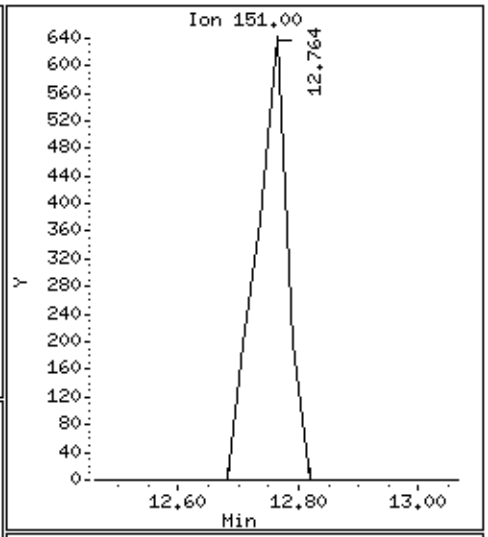
Concentration: 0.07248 PPBV

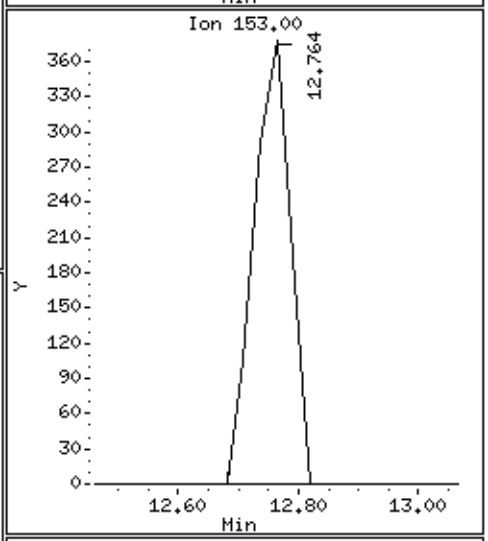


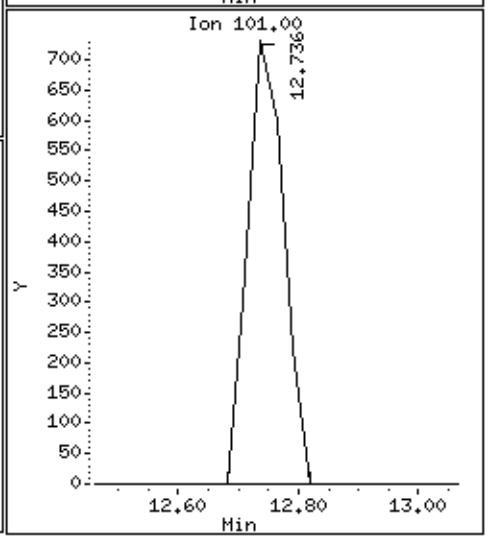












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

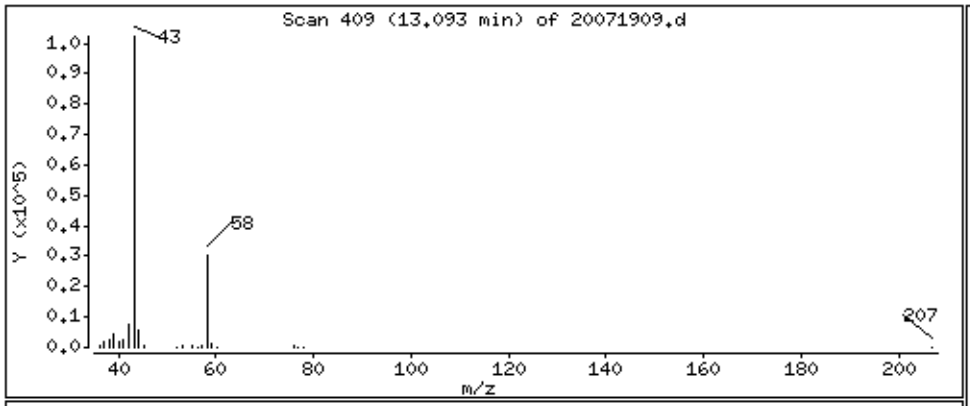
Operator: ef

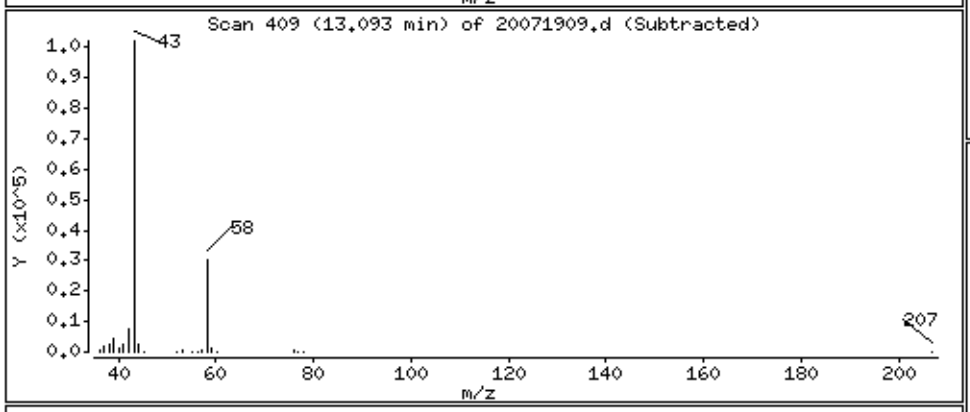
Column phase: RTX-624

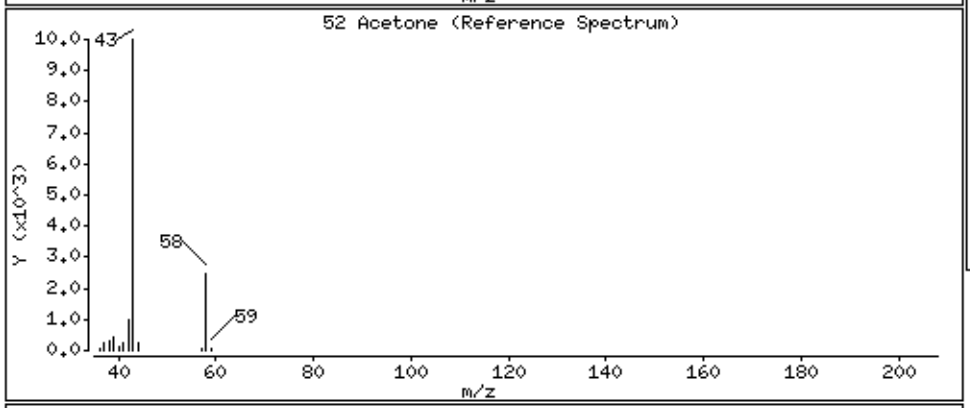
Column diameter: 0.32

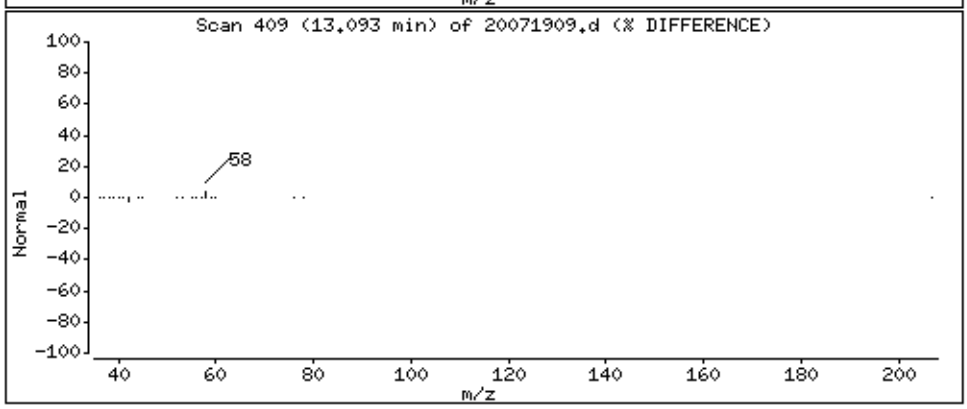
52 Acetone

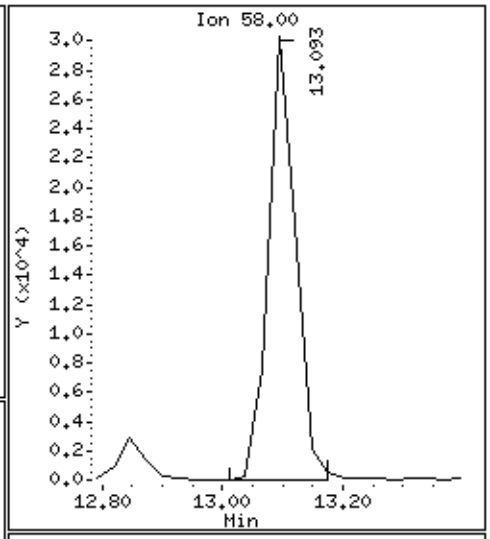
Concentration: 10.895 PPBV

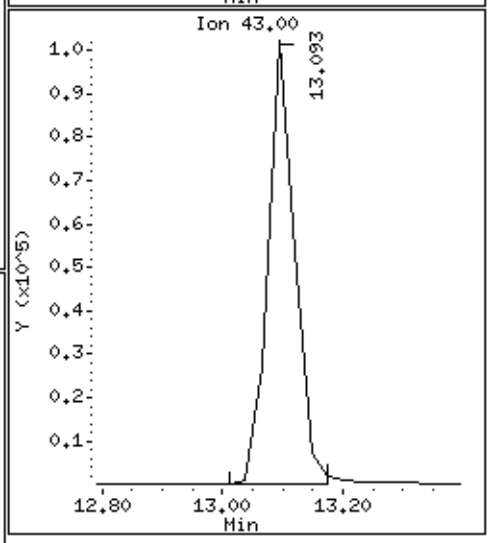












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

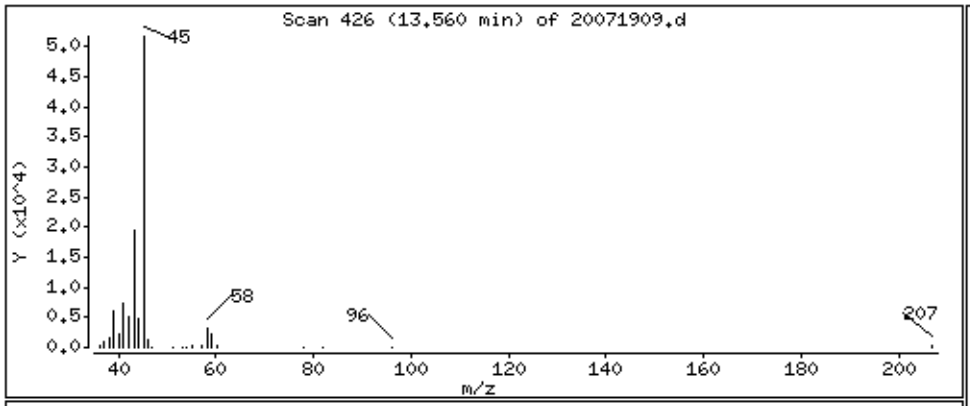
Operator: ef

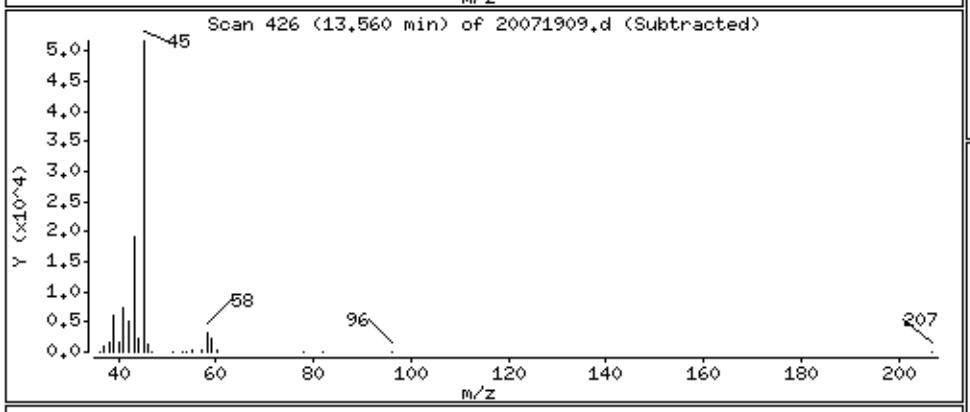
Column phase: RTX-624

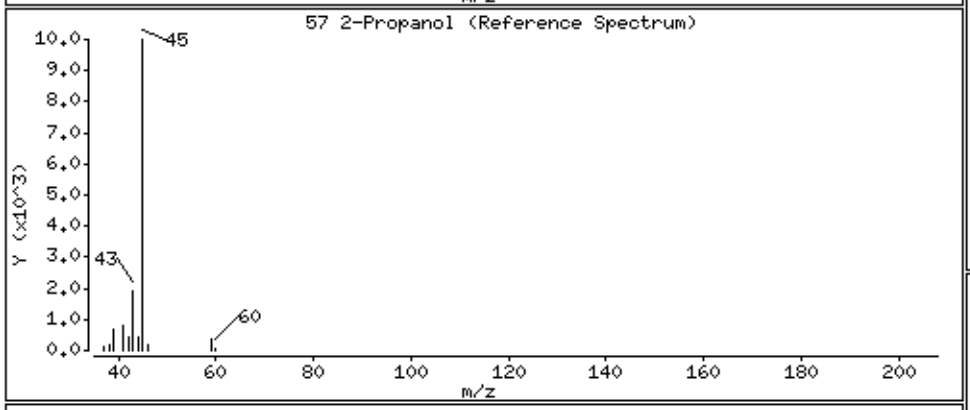
Column diameter: 0.32

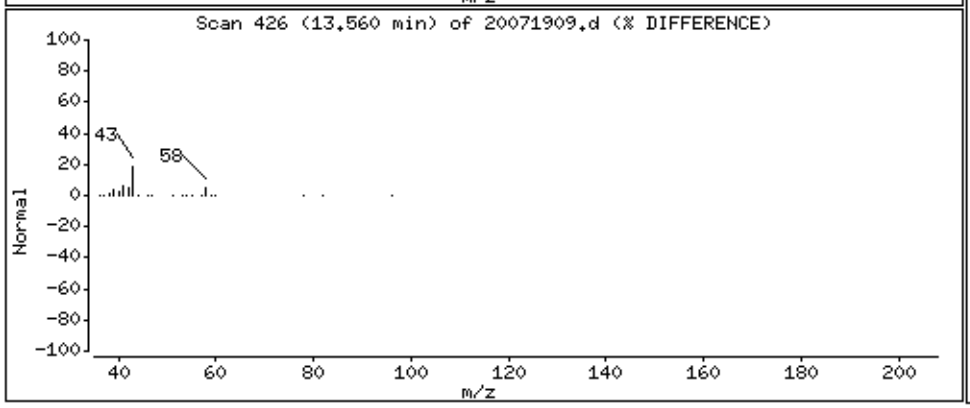
57 2-Propanol

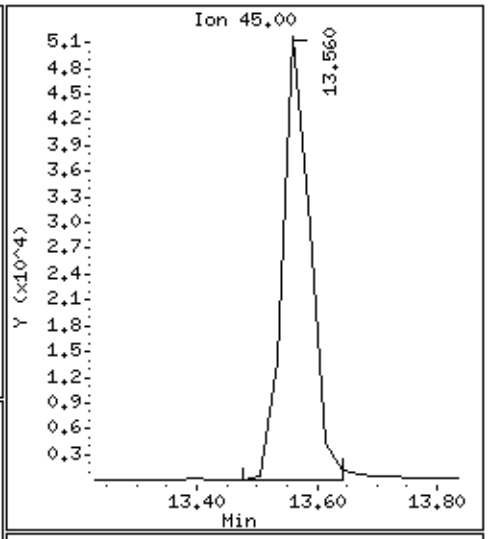
Concentration: 6.081 PPBV

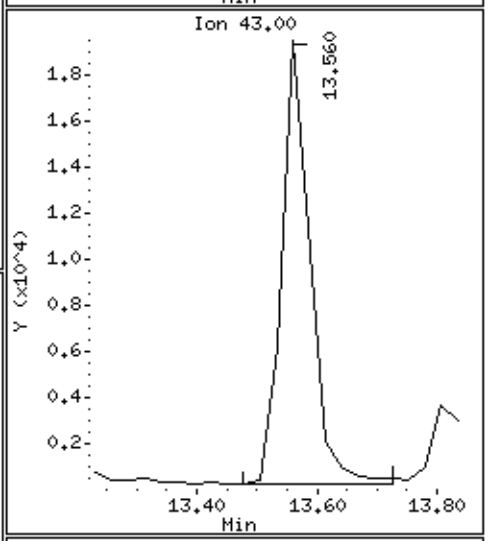


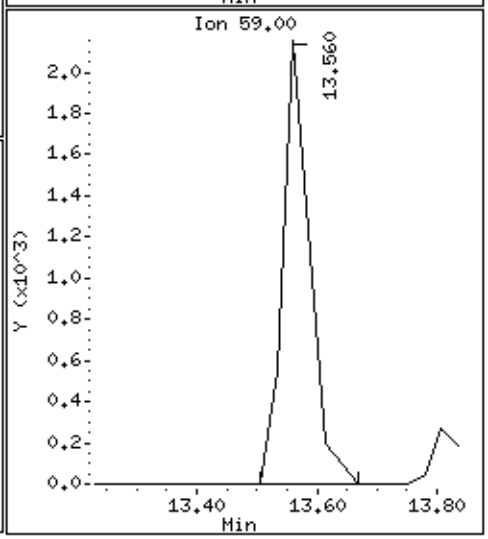












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

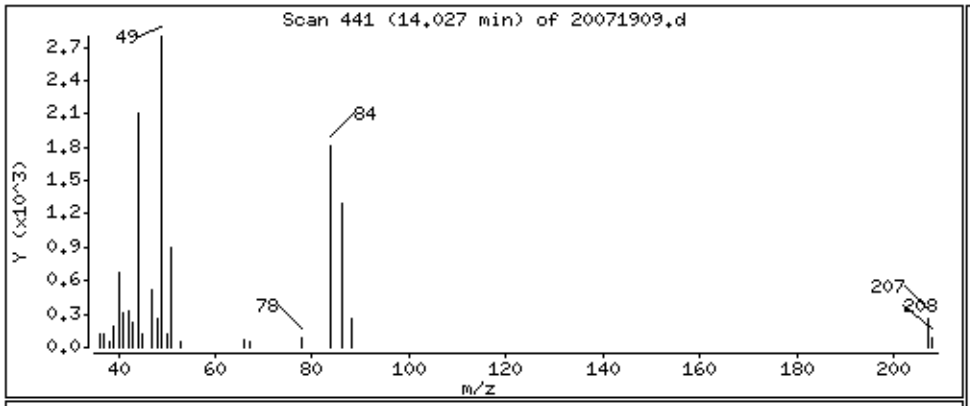
Operator: ef

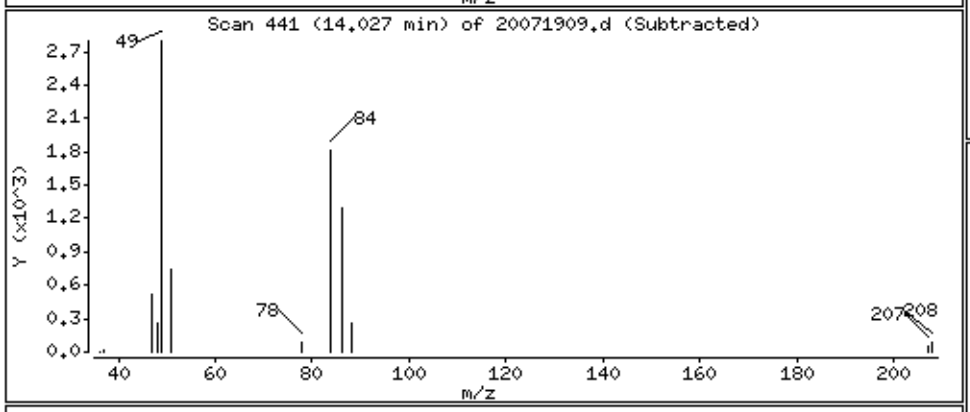
Column phase: RTX-624

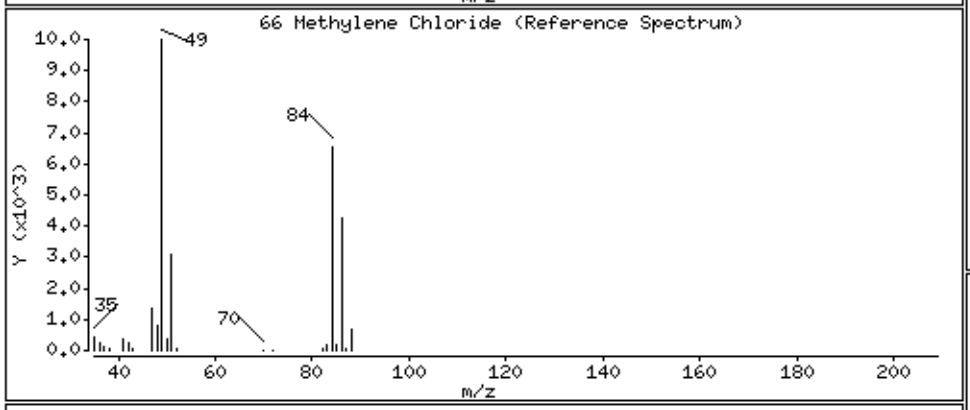
Column diameter: 0.32

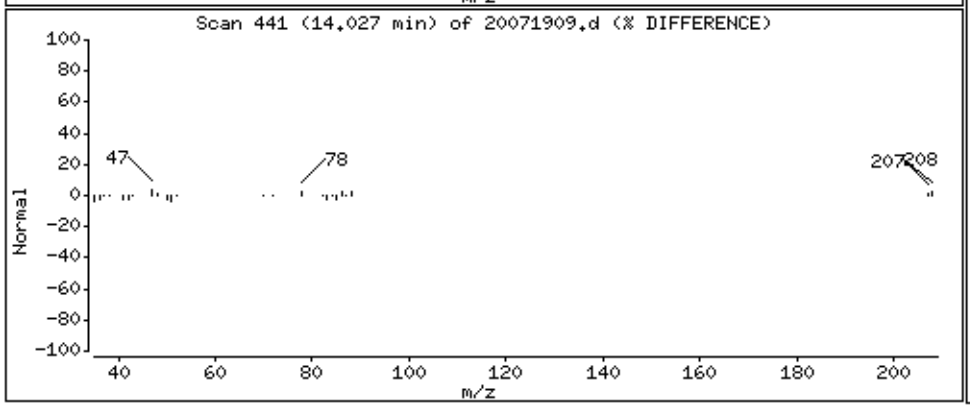
66 Methylene Chloride

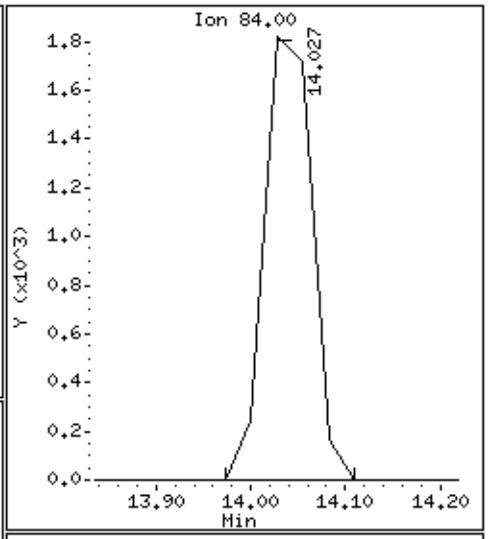
Concentration: 0.3621 PPBV

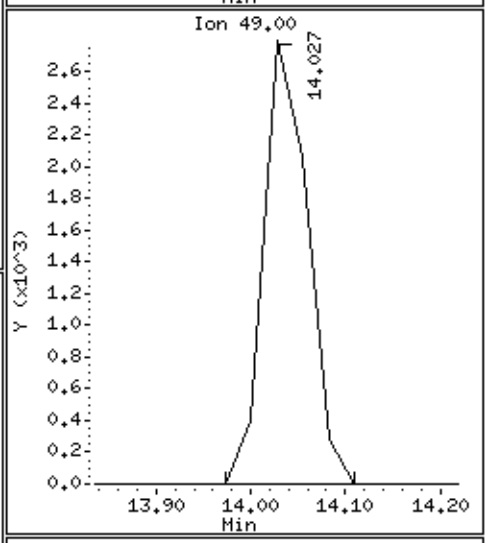


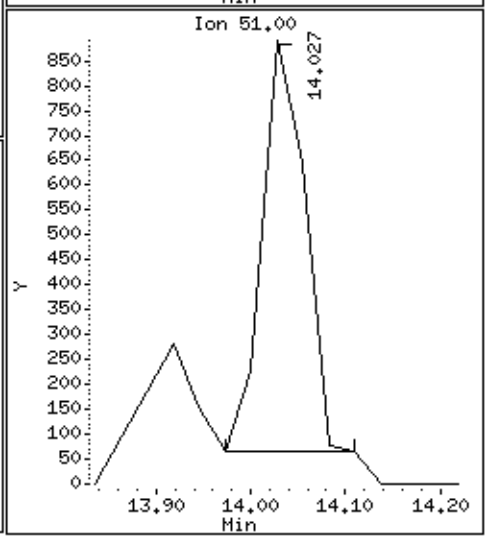












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

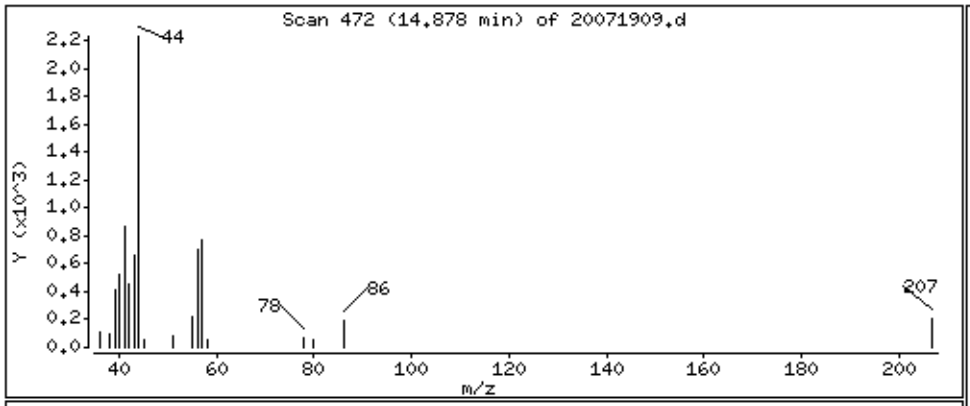
Operator: ef

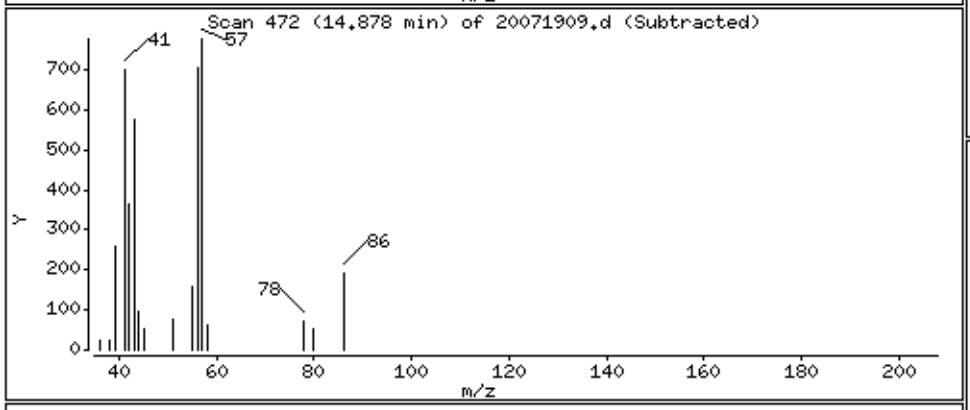
Column phase: RTX-624

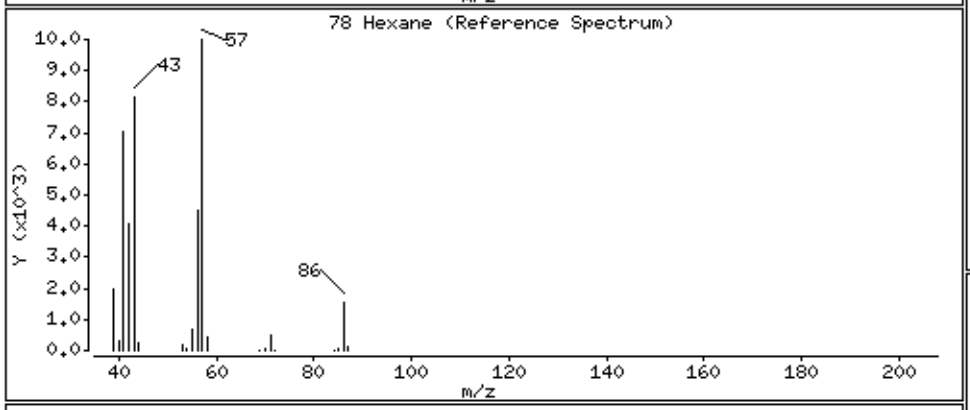
Column diameter: 0.32

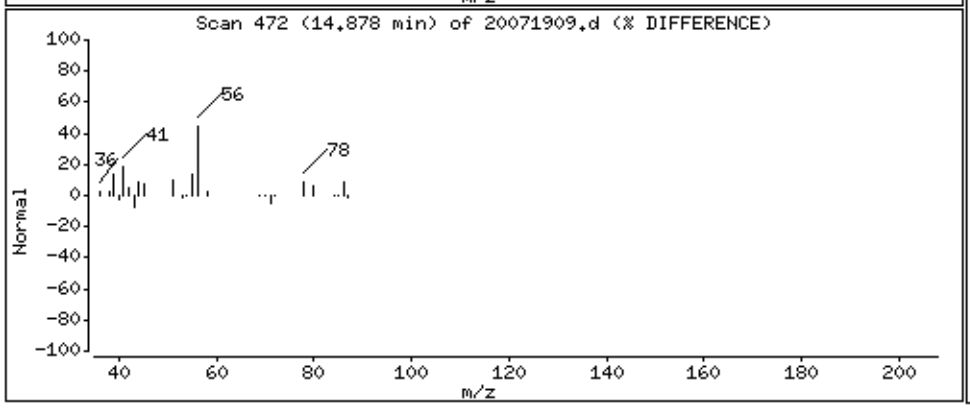
78 Hexane

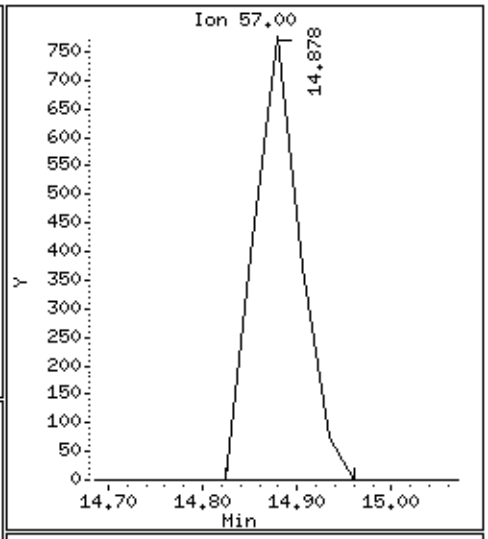
Concentration: 0.09520 PPBV

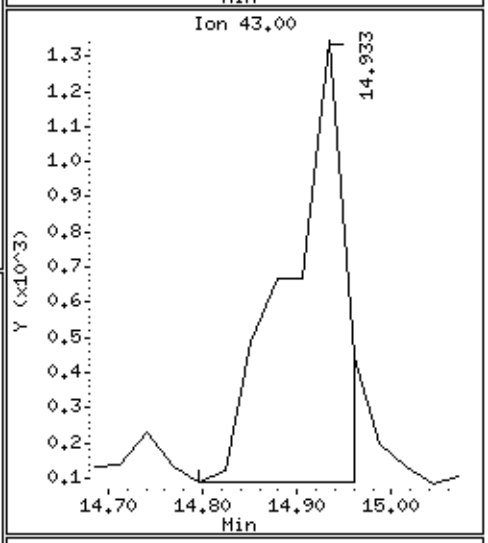


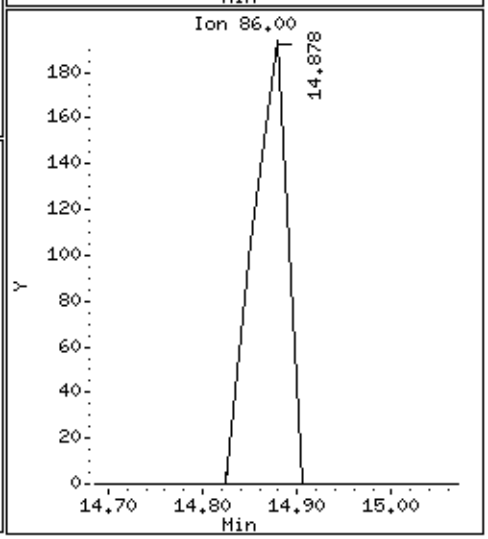












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

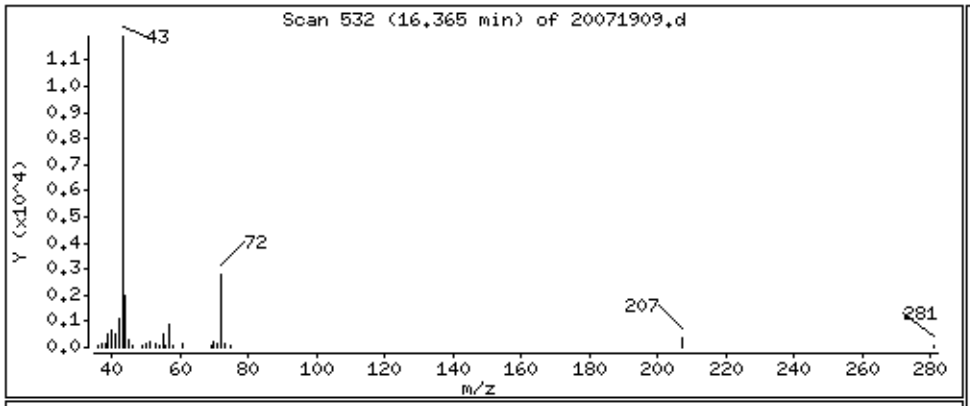
Operator: ef

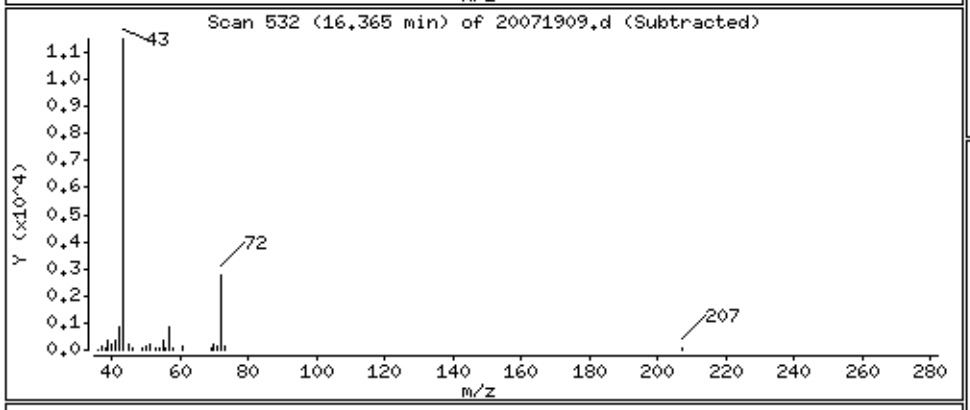
Column phase: RTX-624

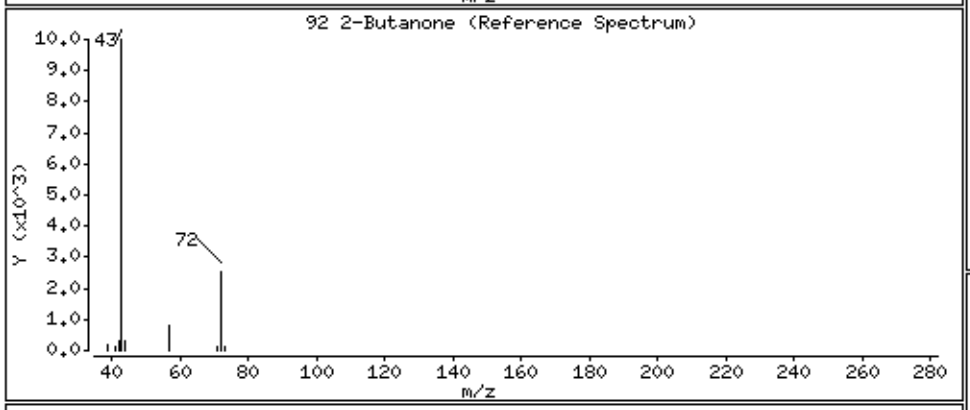
Column diameter: 0.32

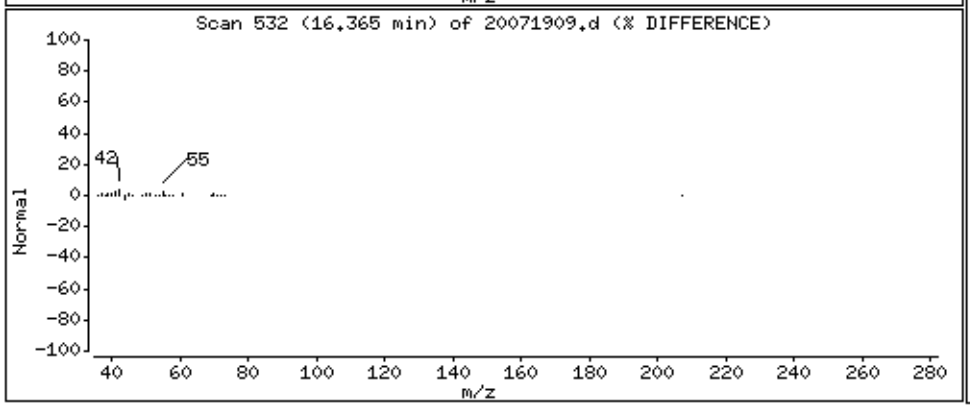
92 2-Butanone

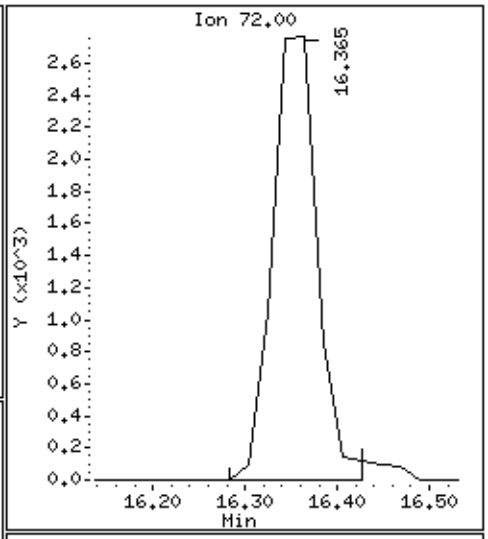
Concentration: 1.082 PPBV

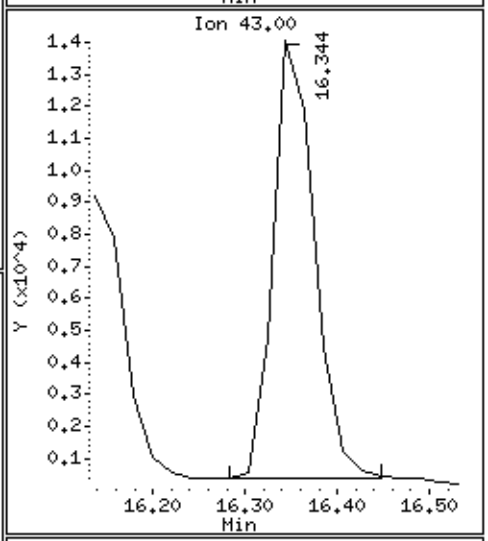


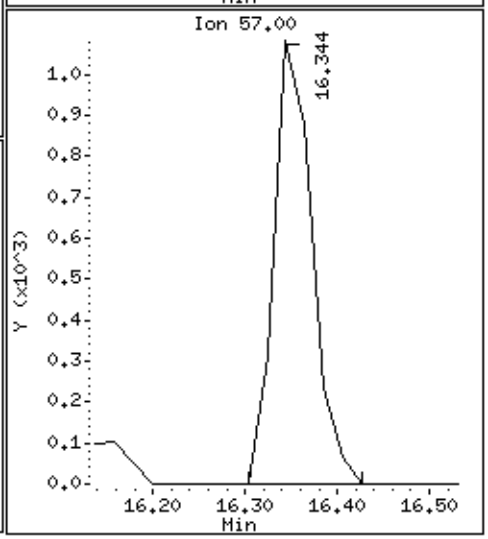












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

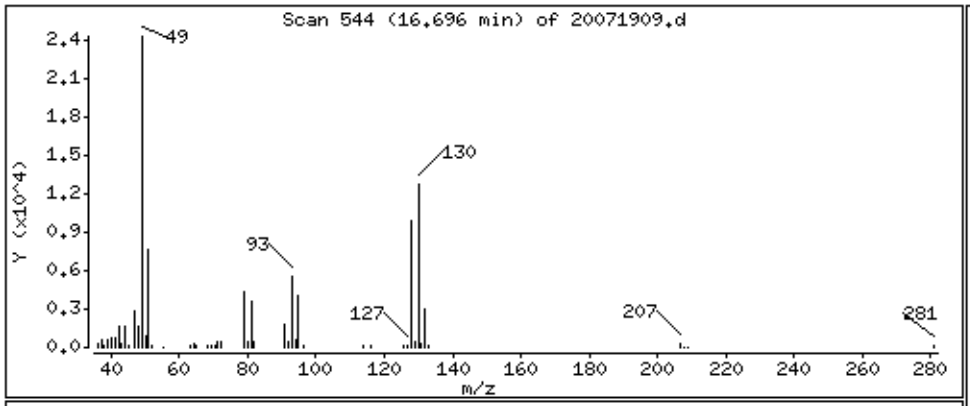
Operator: ef

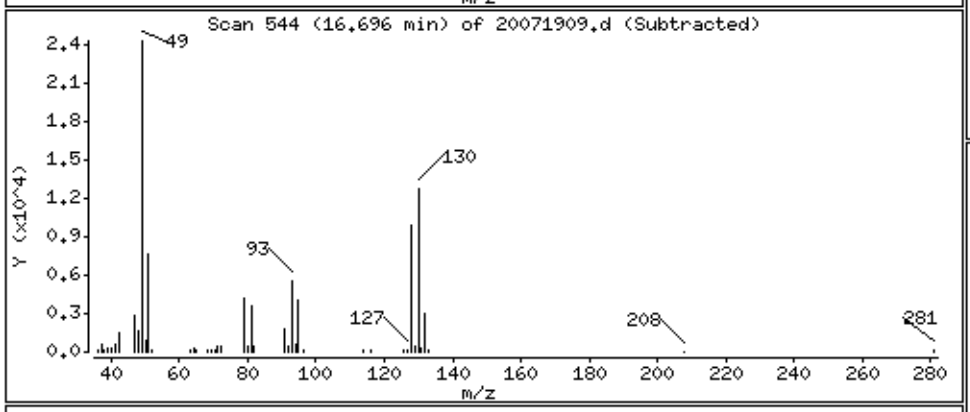
Column phase: RTX-624

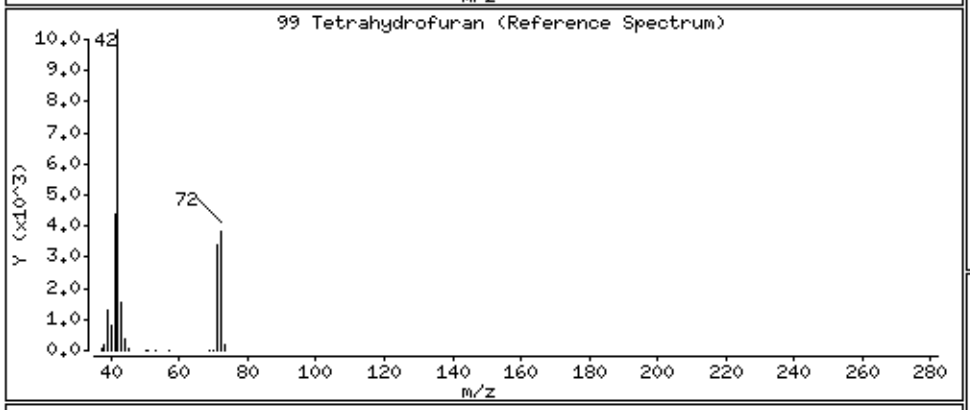
Column diameter: 0.32

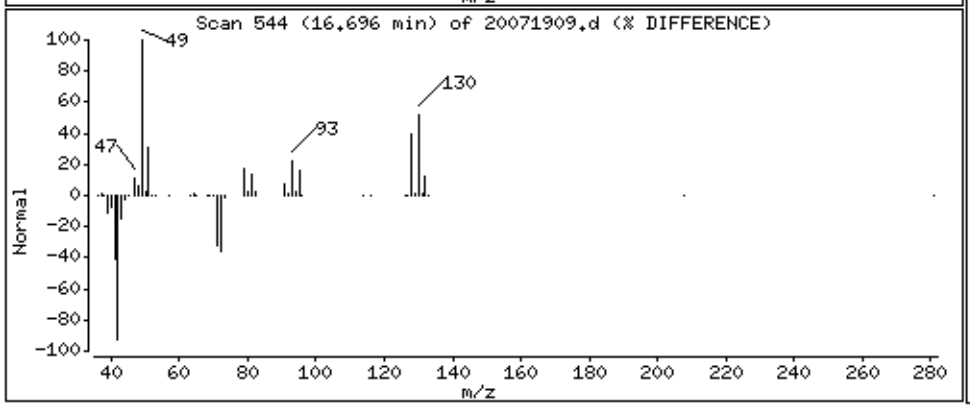
99 Tetrahydrofuran

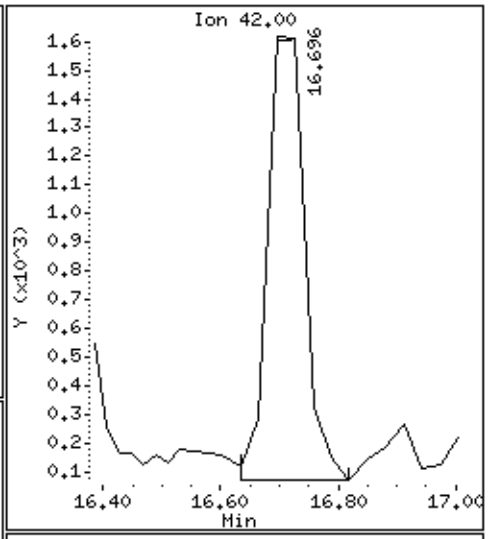
Concentration: 0.3274 PPBV

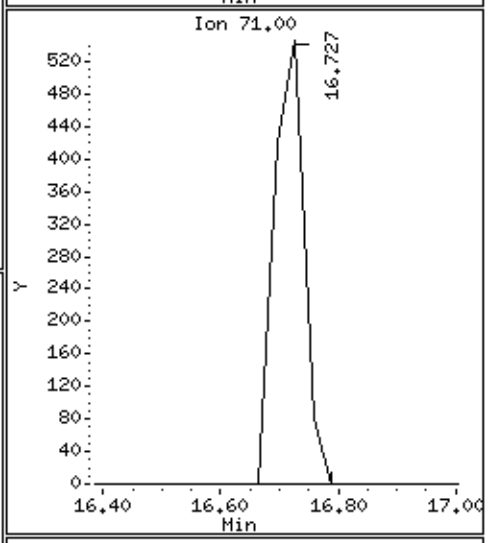


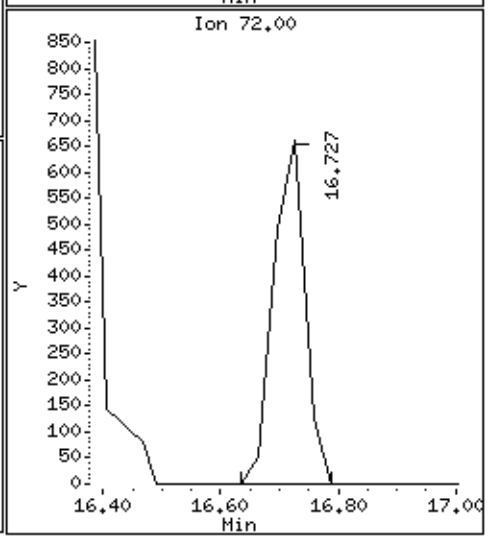












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

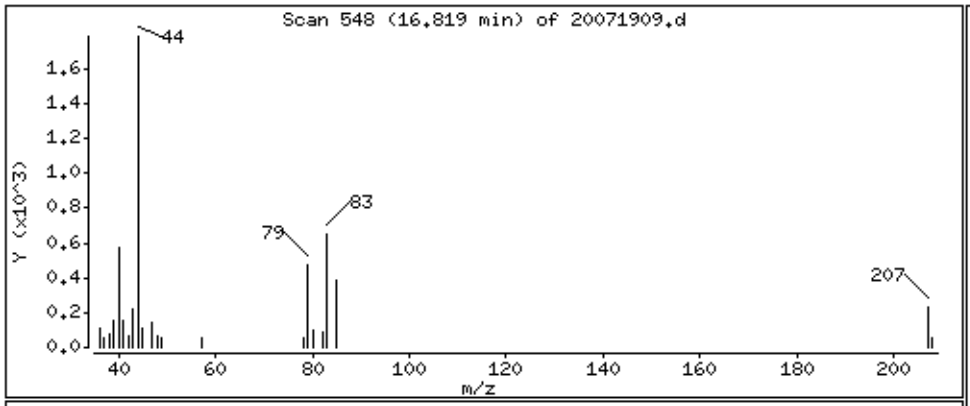
Operator: ef

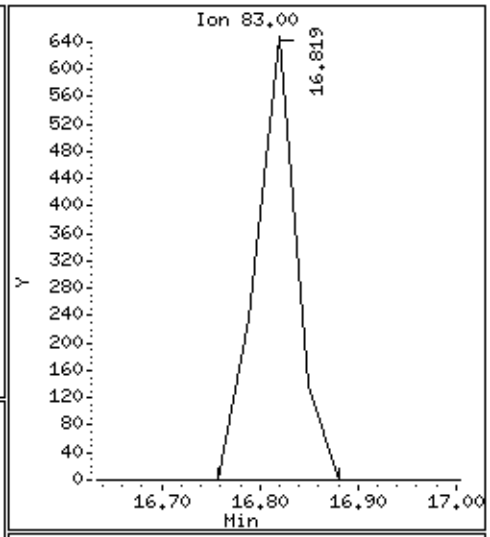
Column phase: RTX-624

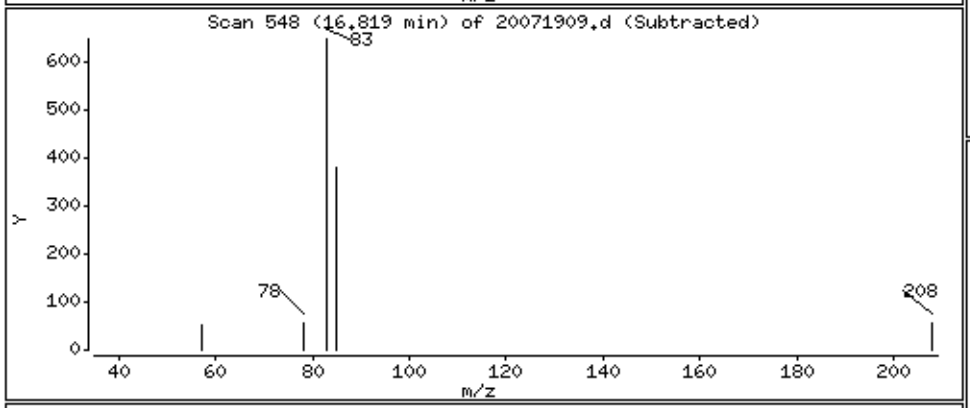
Column diameter: 0.32

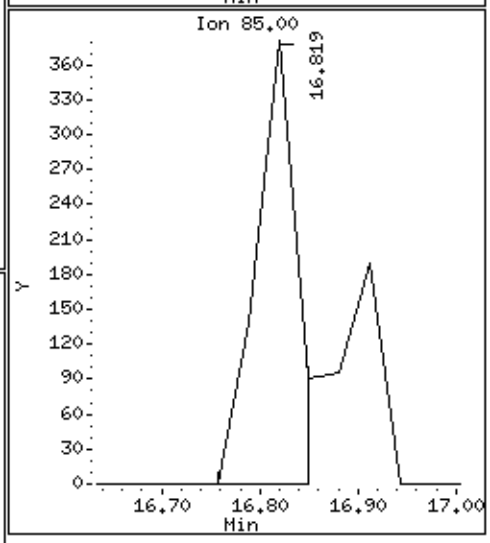
100 Chloroform

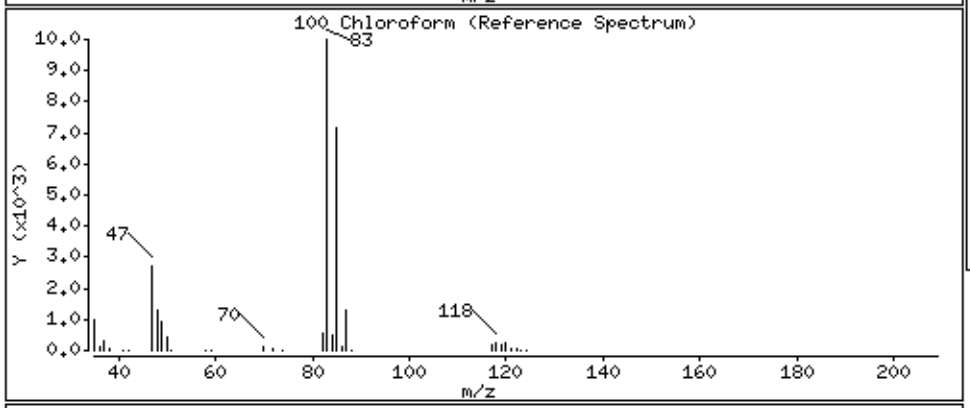
Concentration: 0.04851 PPBV

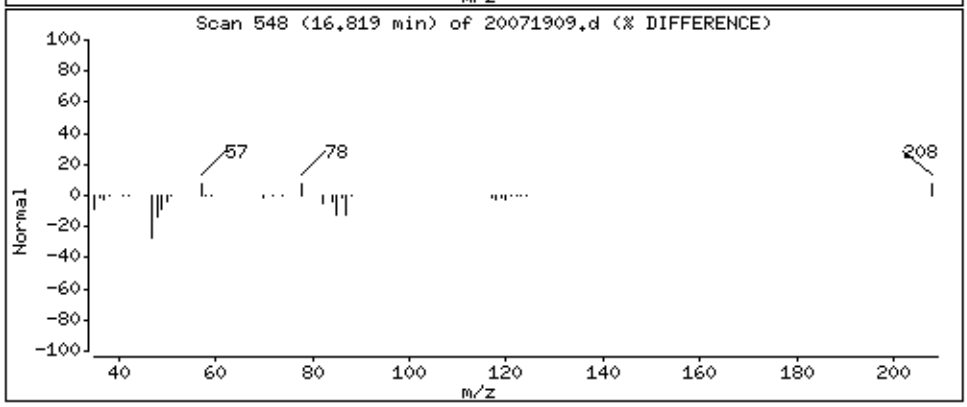












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

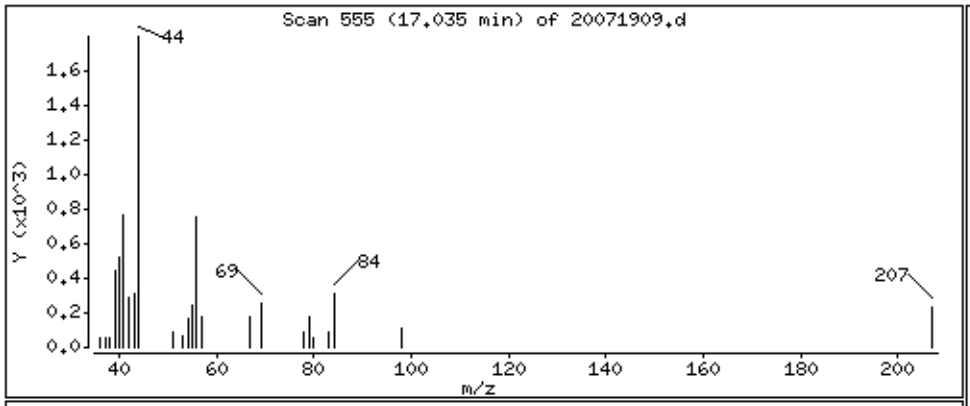
Operator: ef

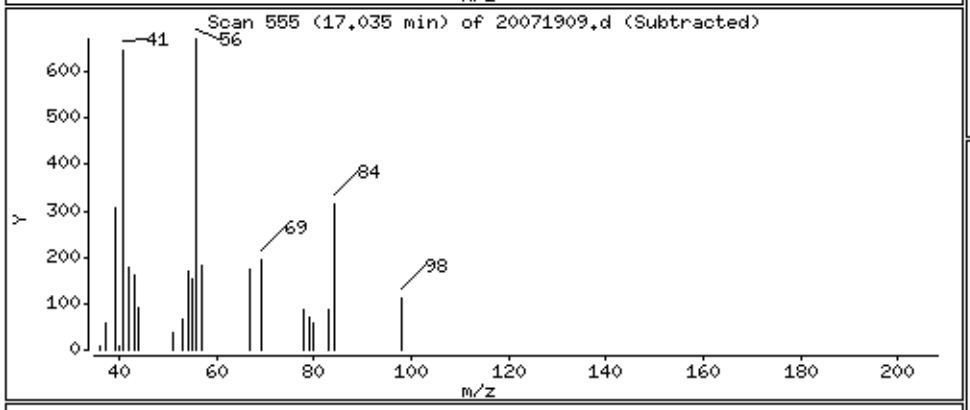
Column phase: RTX-624

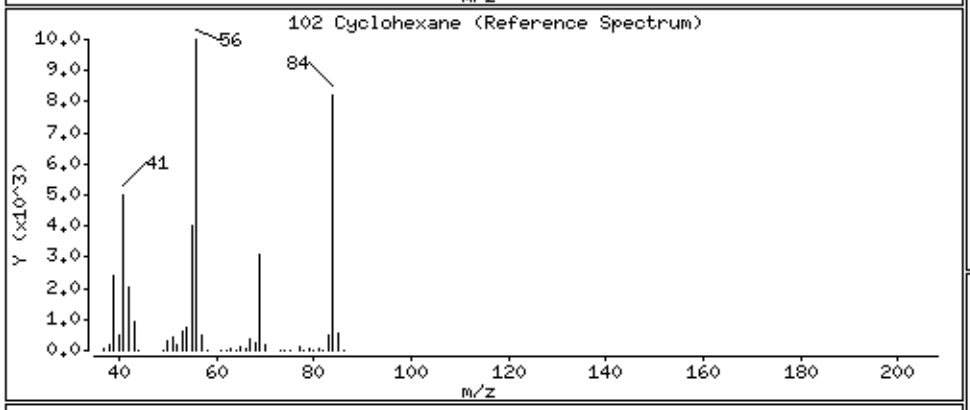
Column diameter: 0.32

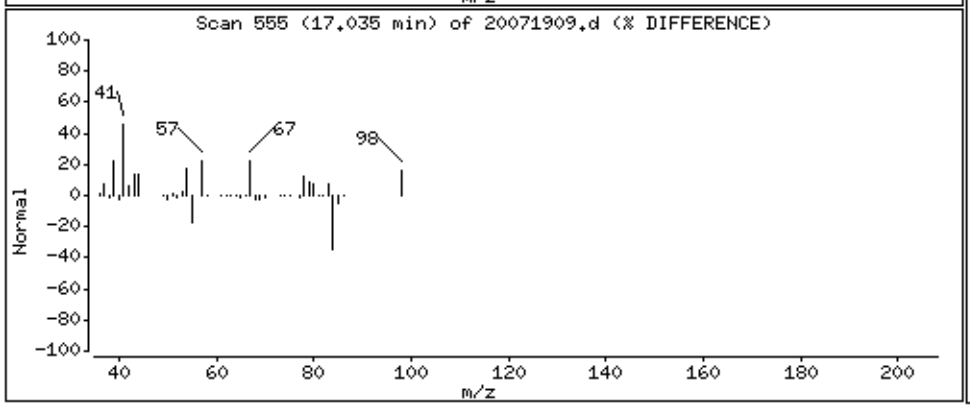
102 Cyclohexane

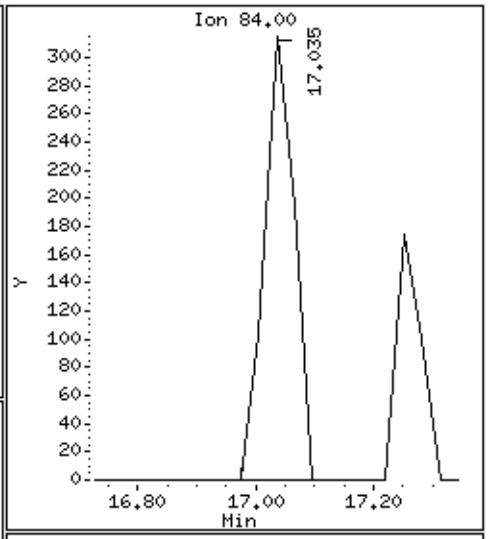
Concentration: 0.04227 PPBV

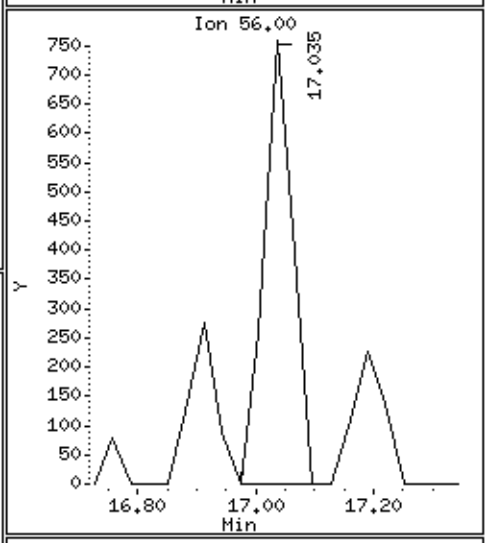


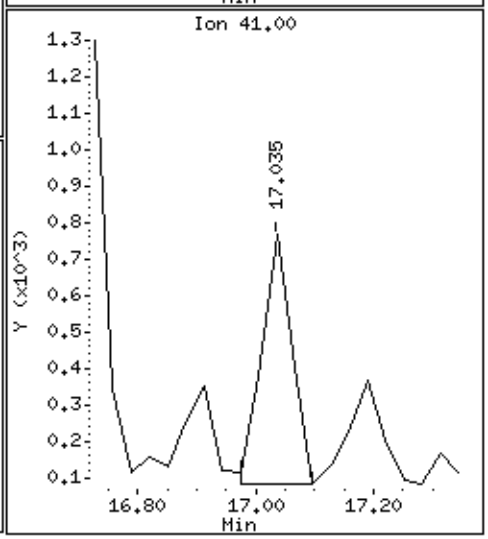












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

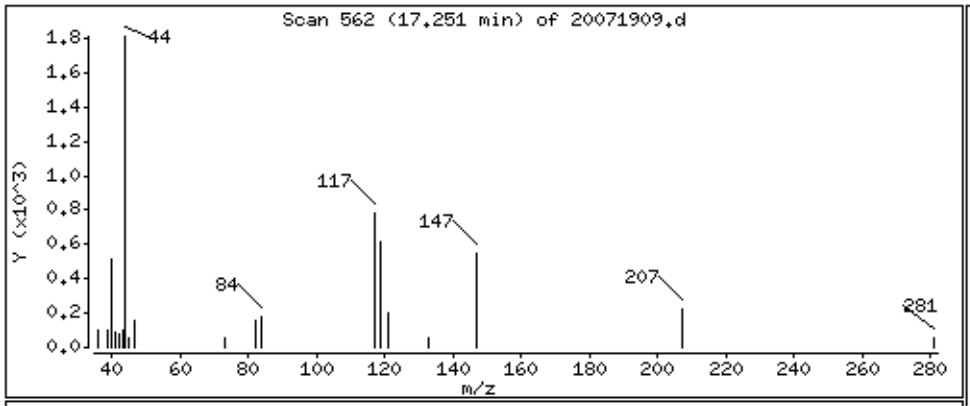
Operator: ef

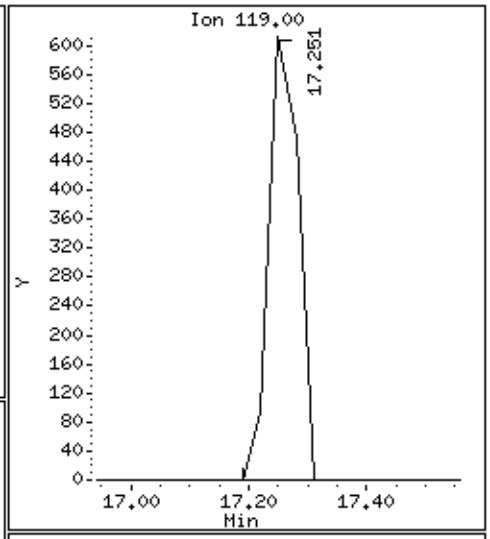
Column phase: RTX-624

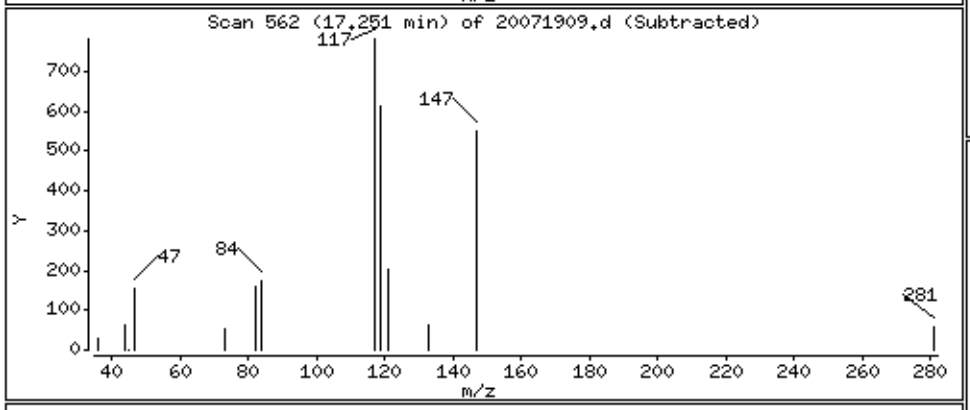
Column diameter: 0.32

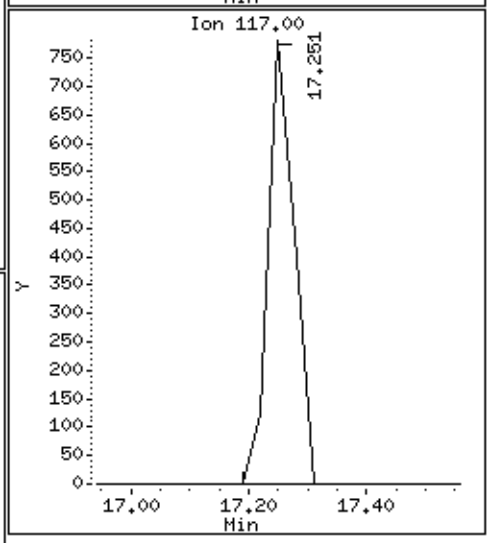
106 Carbon Tetrachloride

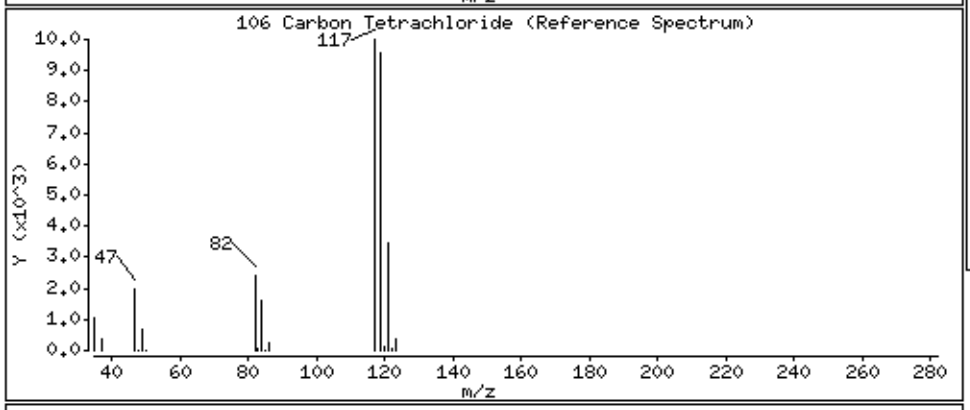
Concentration: 0.06454 PPBV

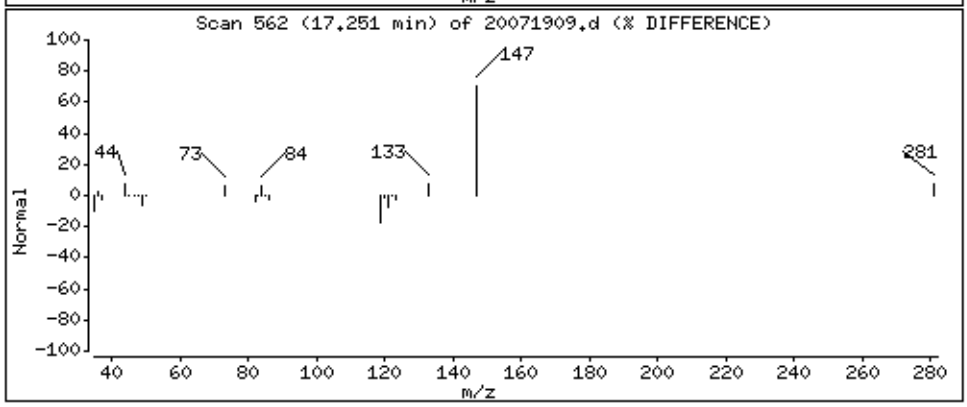












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

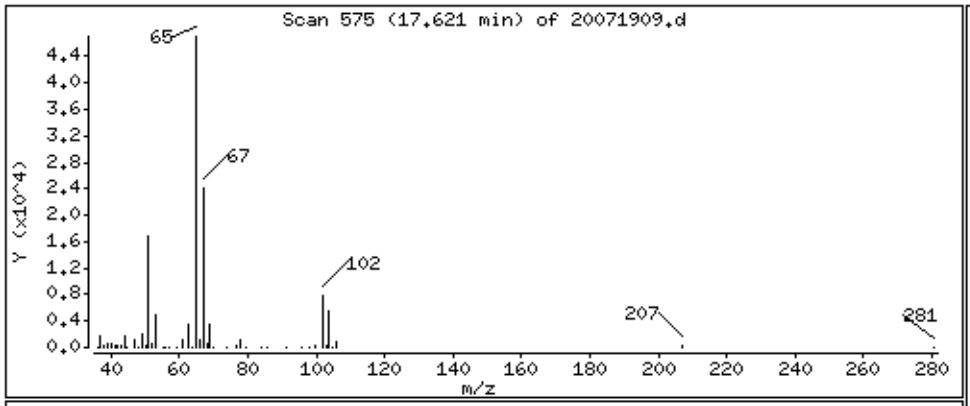
Operator: ef

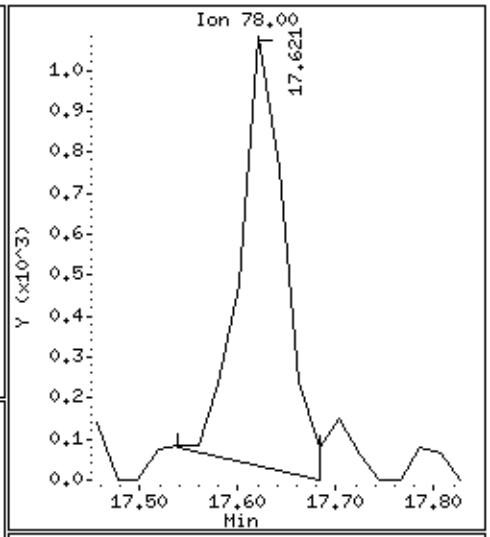
Column phase: RTX-624

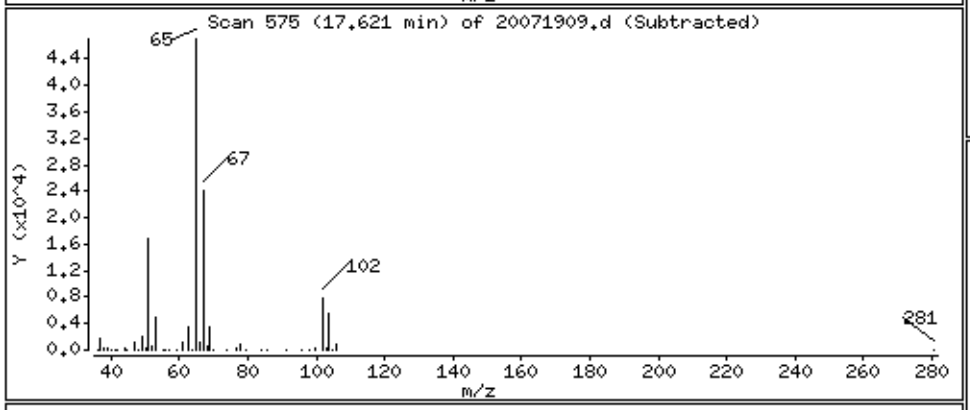
Column diameter: 0.32

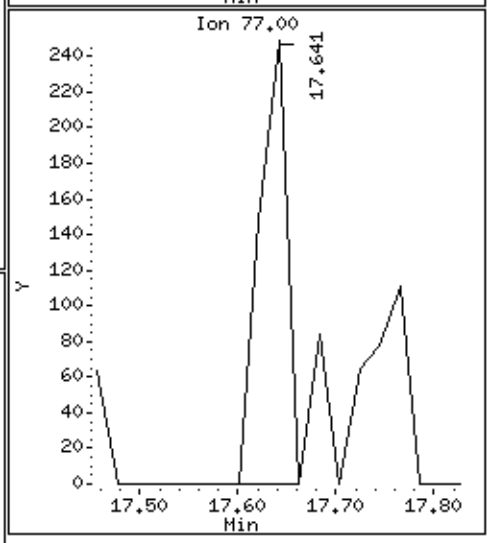
116 Benzene

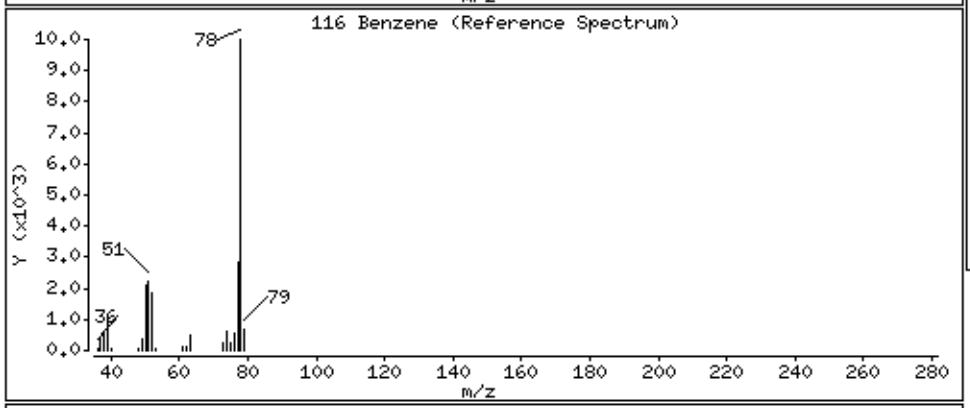
Concentration: 0.07051 PPBV

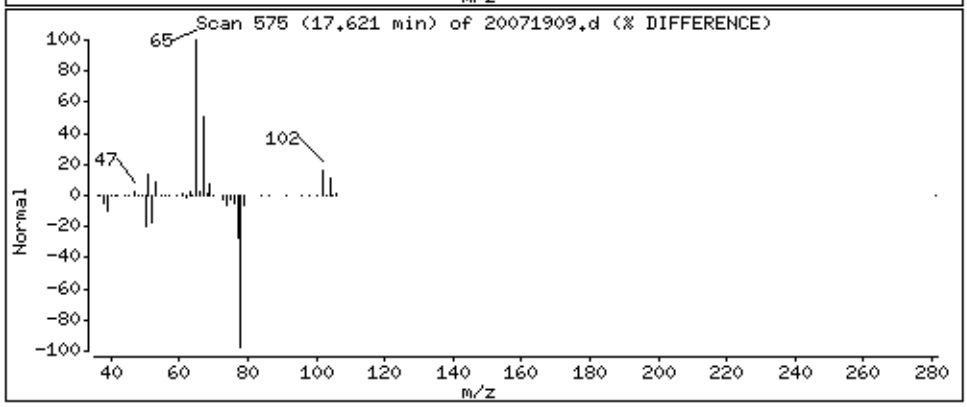












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

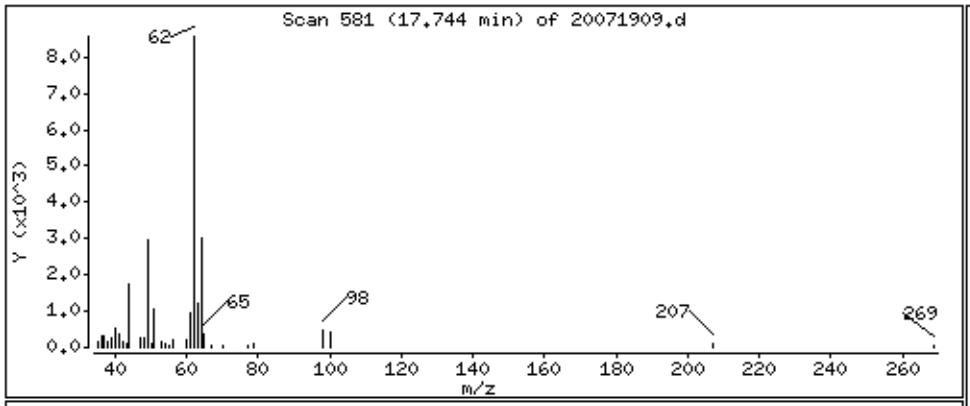
Operator: ef

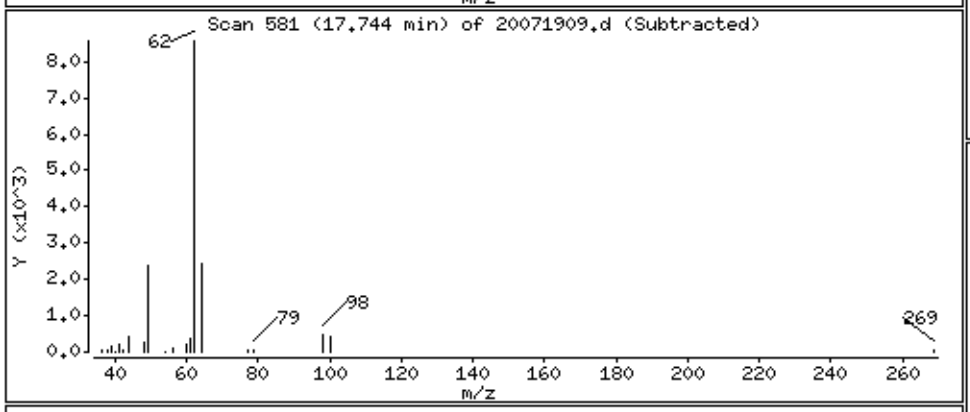
Column phase: RTX-624

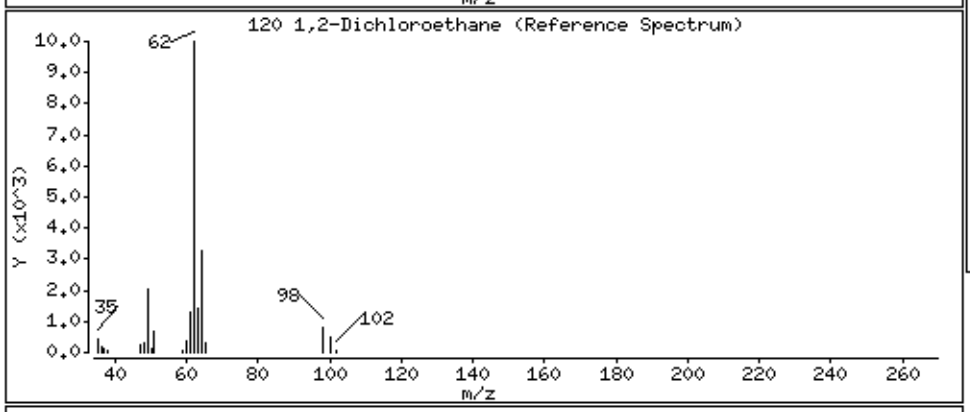
Column diameter: 0.32

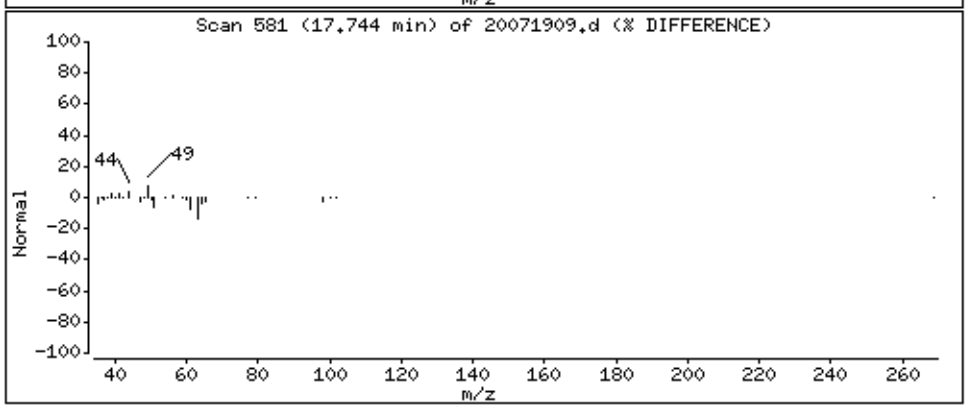
120 1,2-Dichloroethane

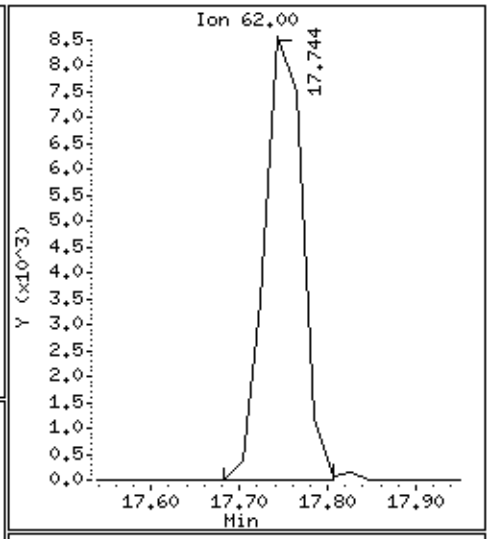
Concentration: 1.245 PPBV

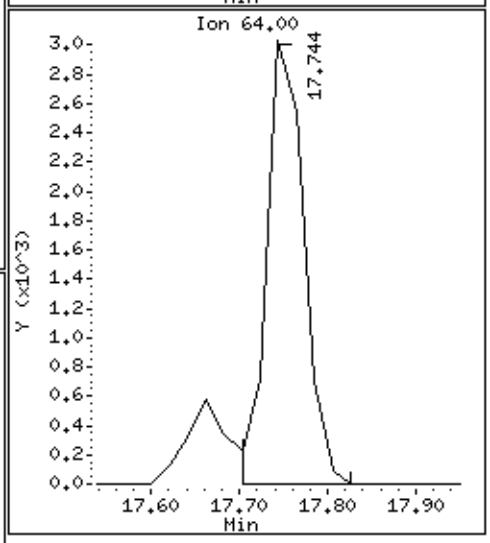












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

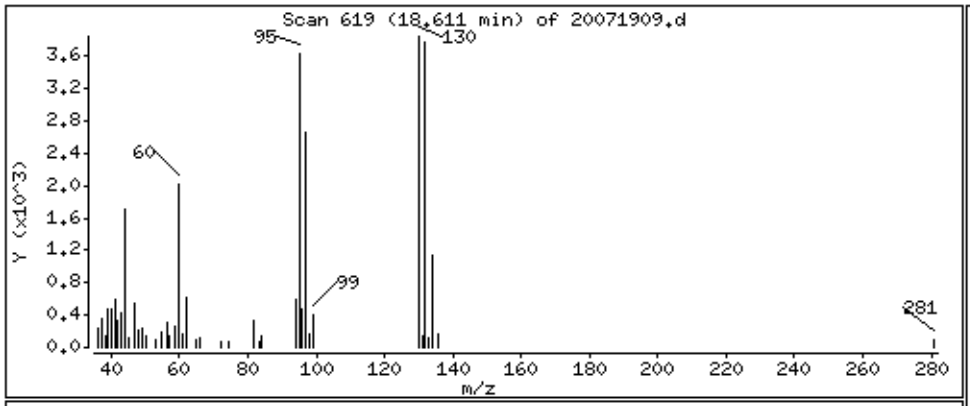
Operator: ef

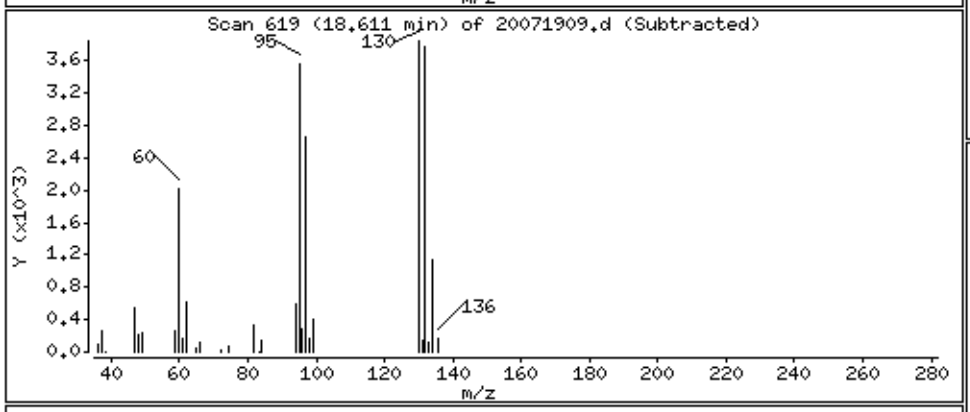
Column phase: RTX-624

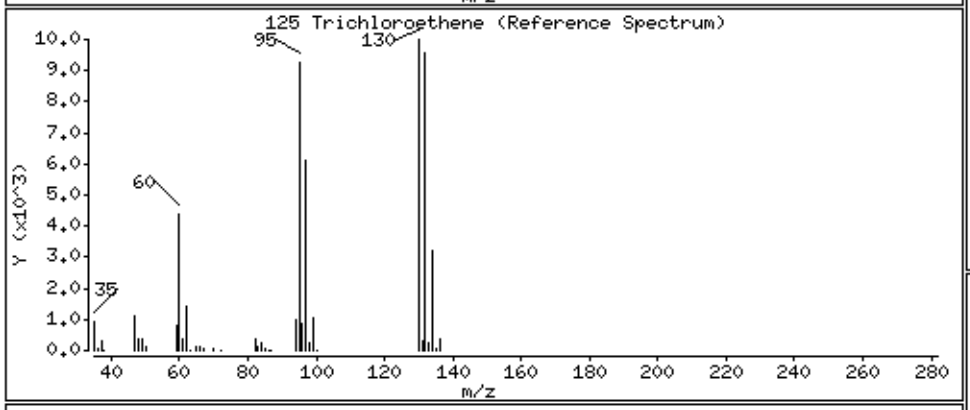
Column diameter: 0.32

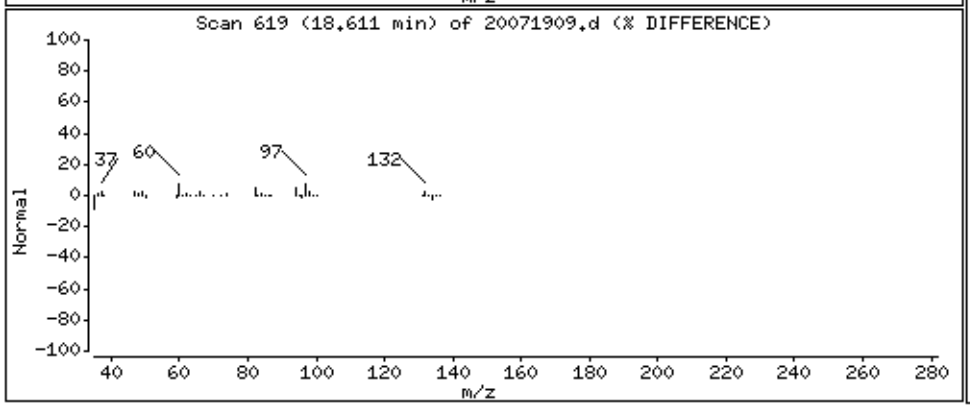
125 Trichloroethene

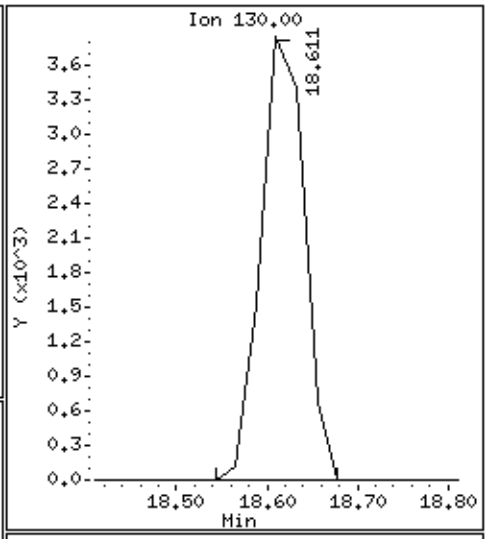
Concentration: 0.5880 PPBV

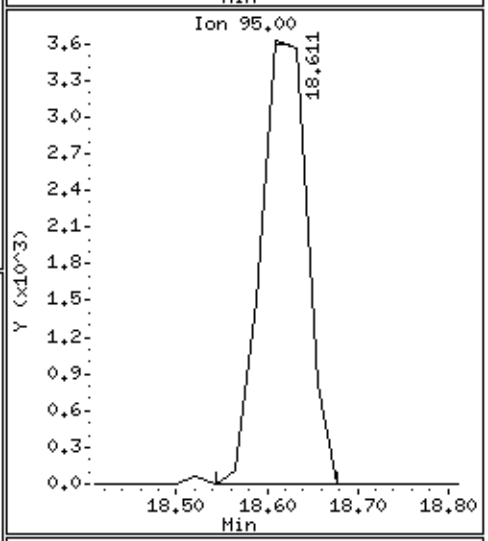


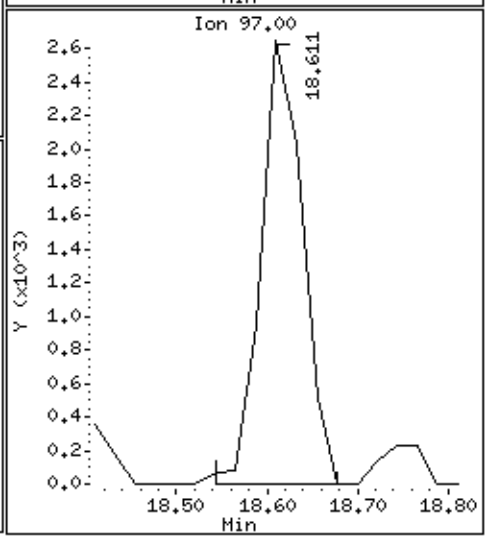












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

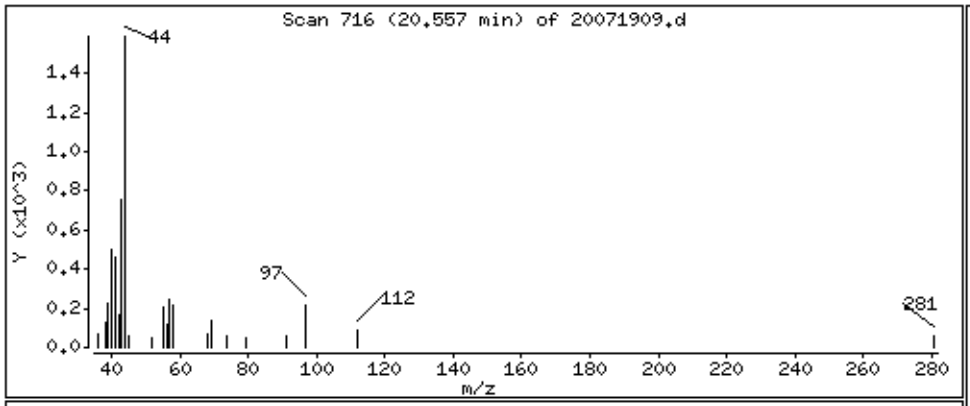
Operator: ef

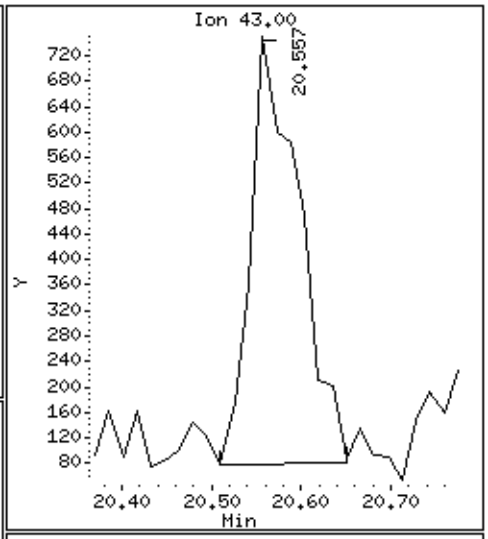
Column phase: RTX-624

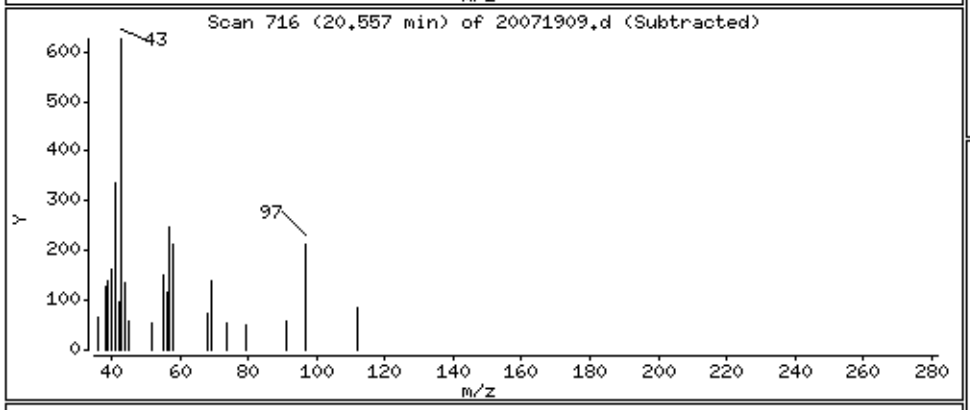
Column diameter: 0.32

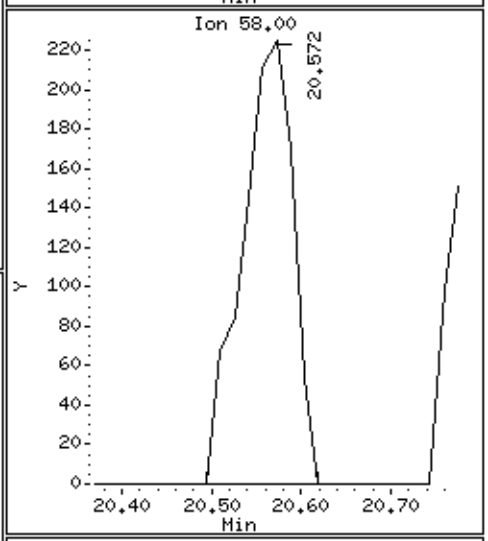
145 4-Methyl-2-pentanone

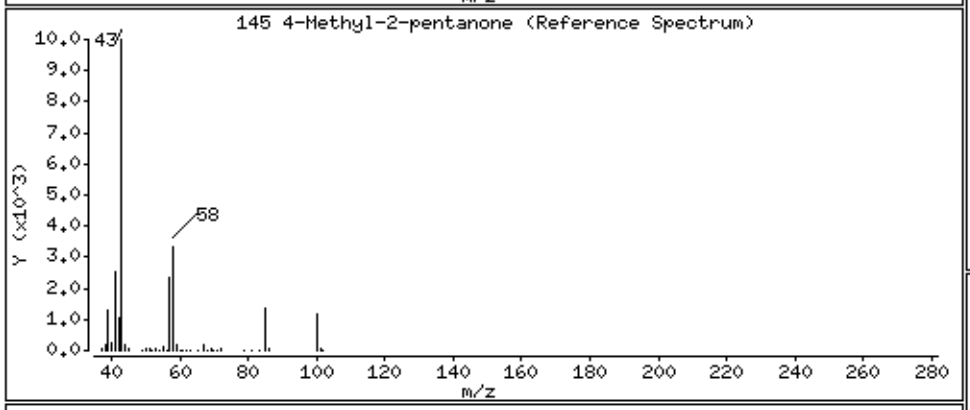
Concentration: 0.07818 PPBV

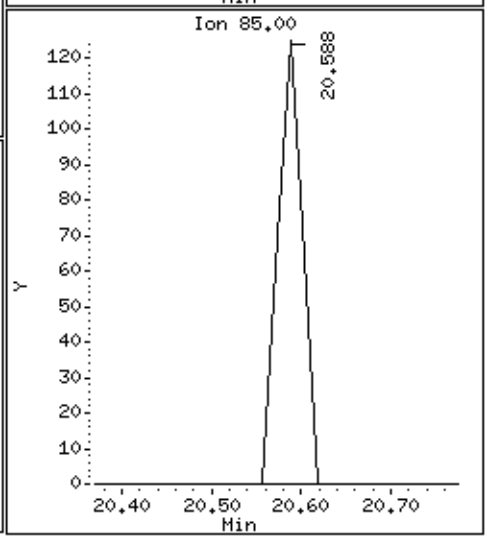


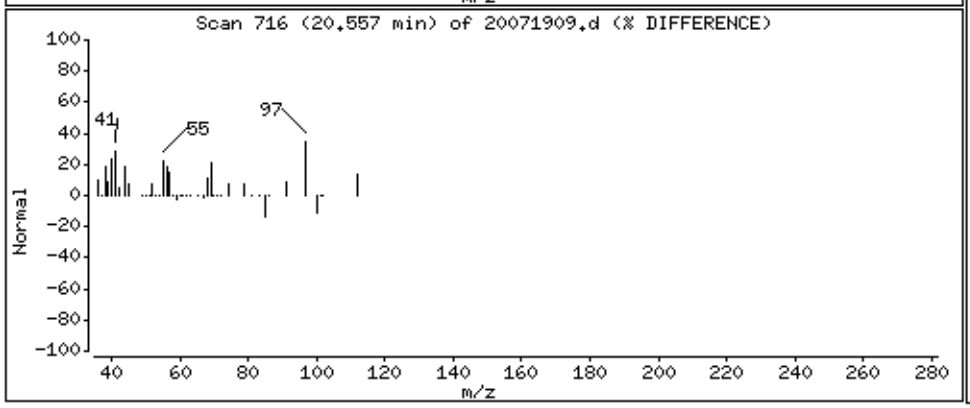












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

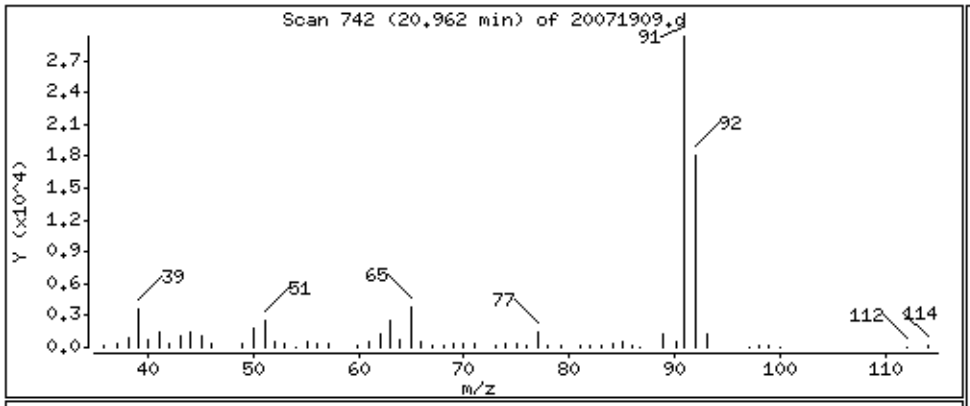
Operator: ef

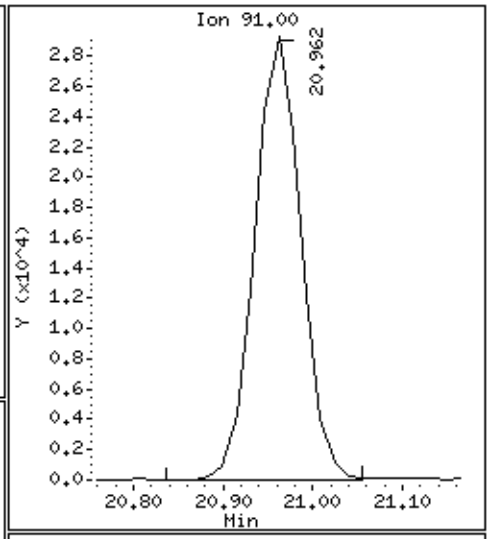
Column phase: RTX-624

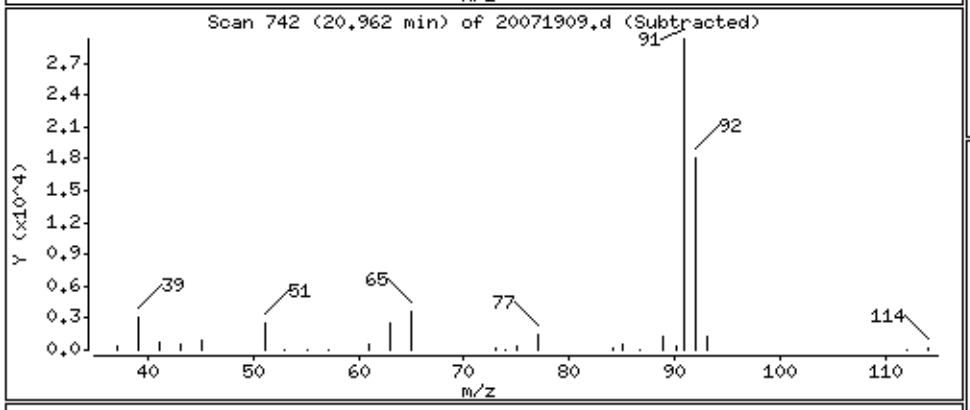
Column diameter: 0.32

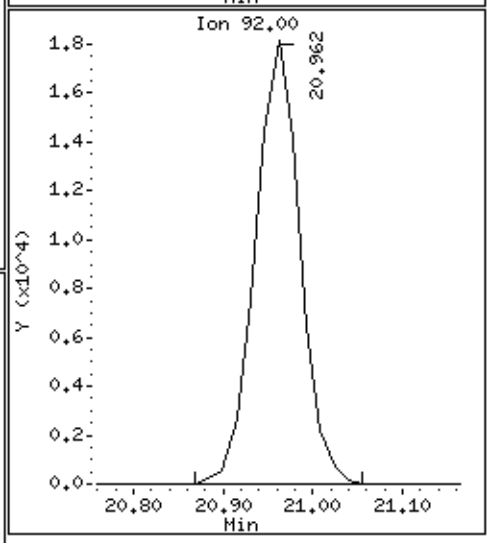
147 Toluene

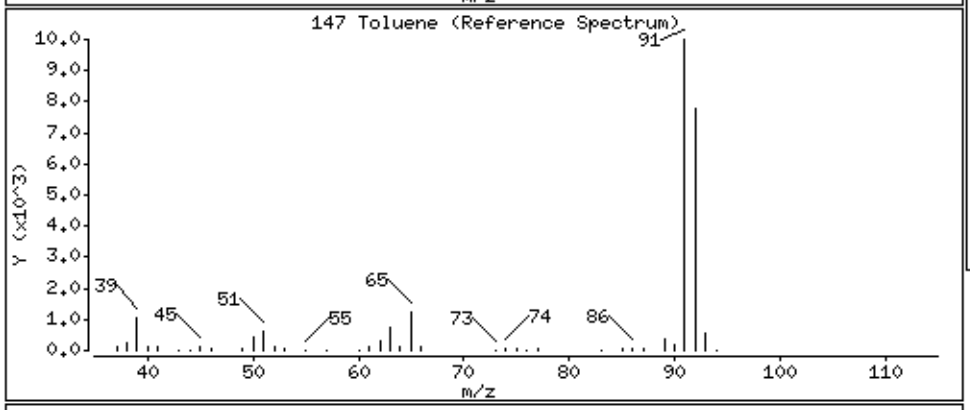
Concentration: 2.055 PPBV

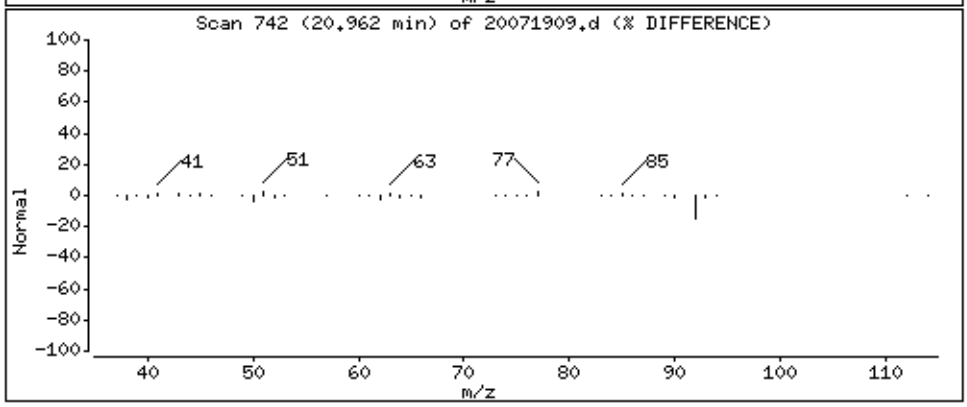












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

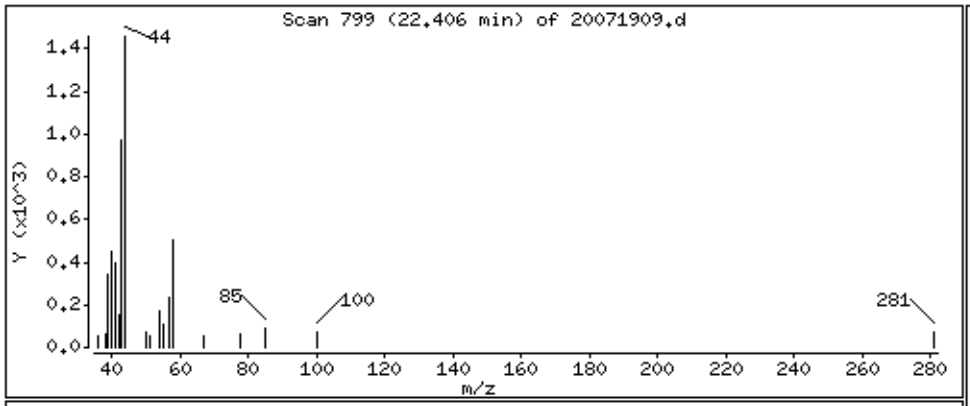
Operator: ef

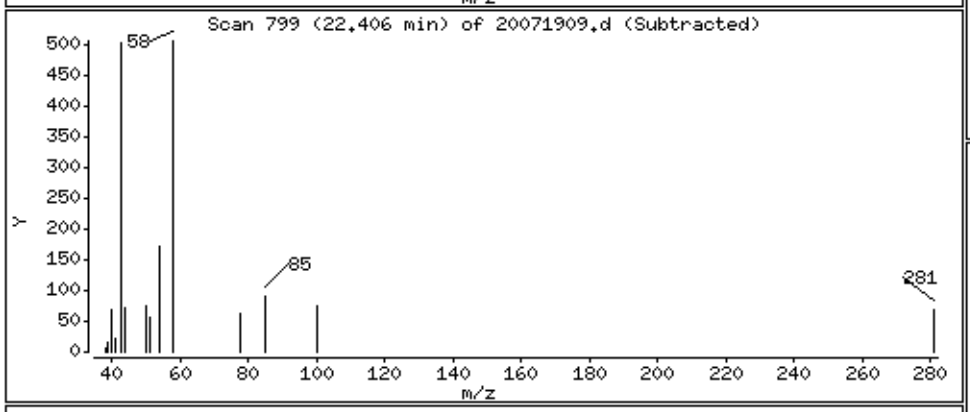
Column phase: RTX-624

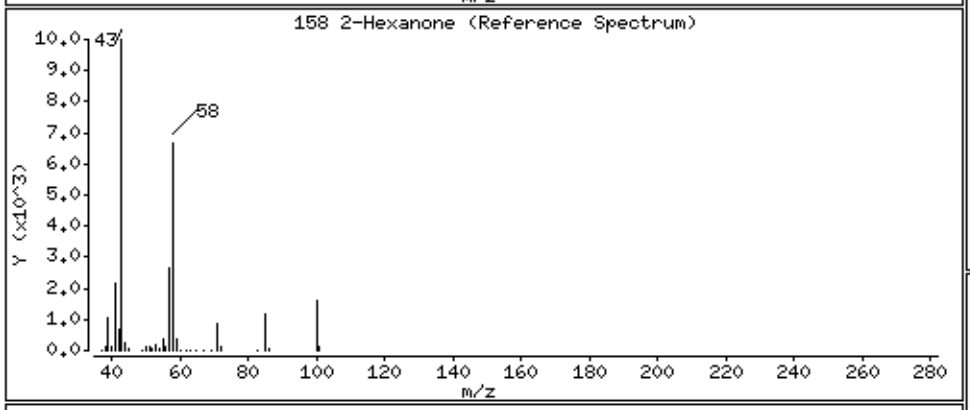
Column diameter: 0.32

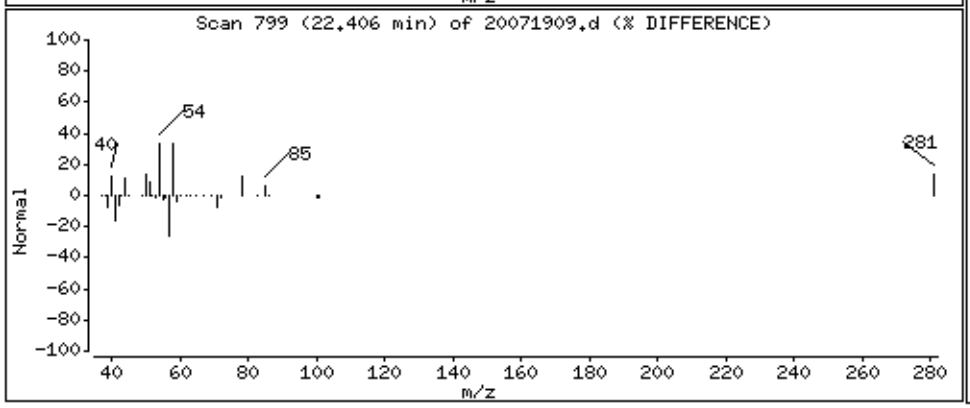
158 2-Hexanone

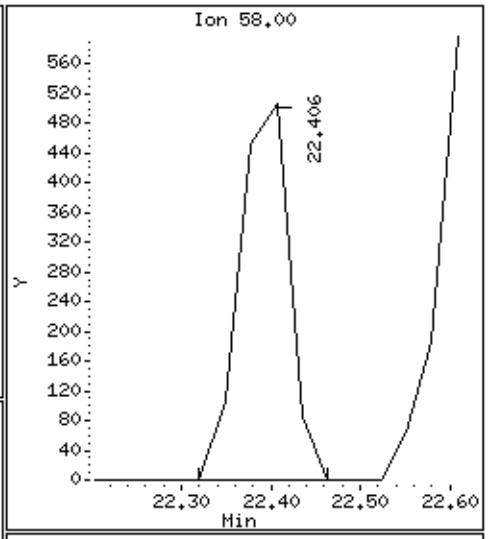
Concentration: 0.1095 PPBV

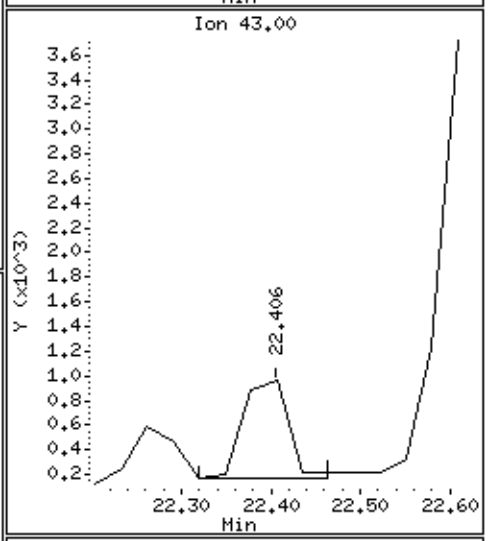


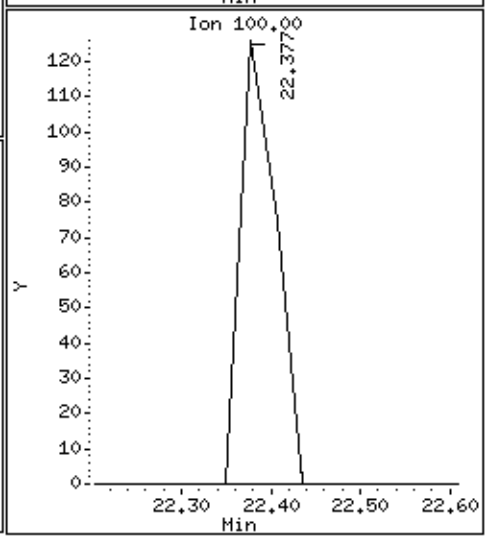












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

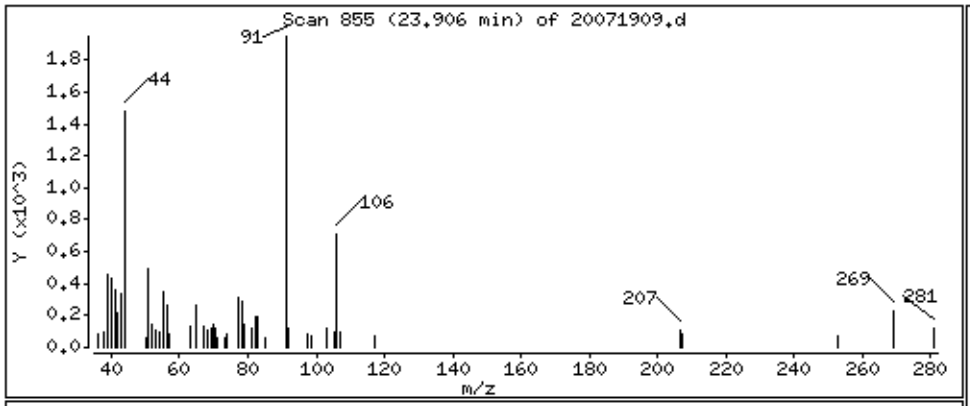
Operator: ef

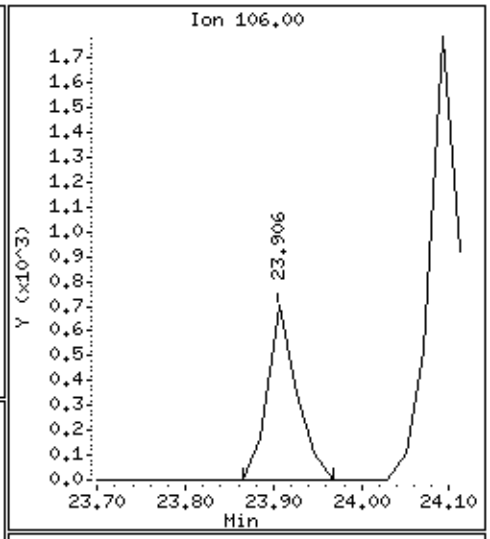
Column phase: RTX-624

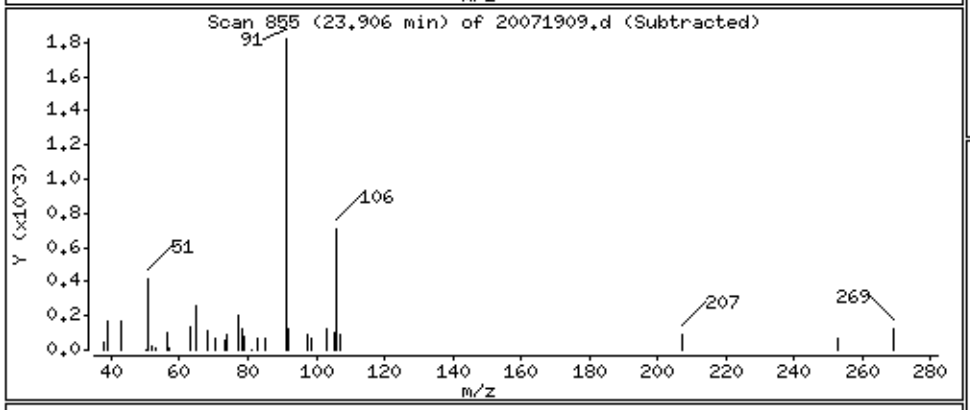
Column diameter: 0.32

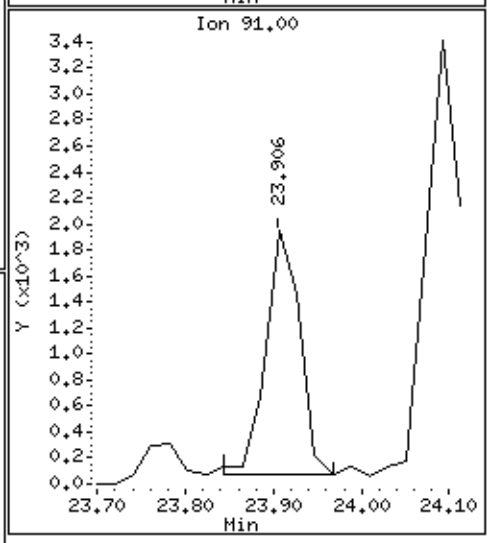
167 Ethyl Benzene

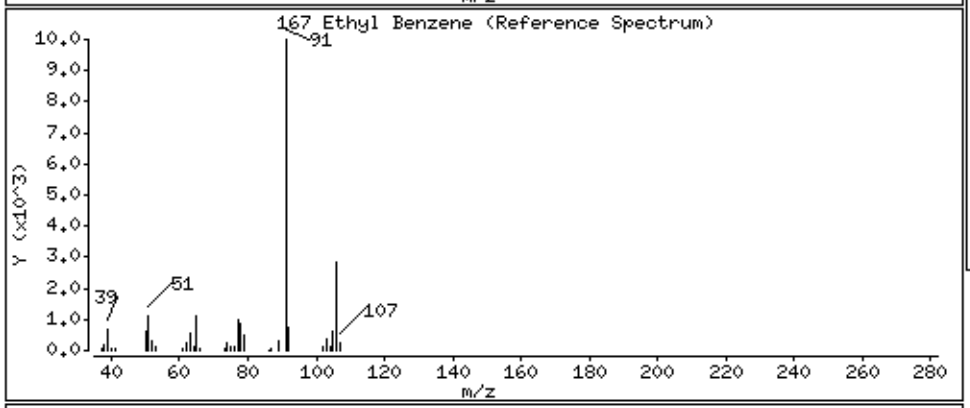
Concentration: 0.07760 PPBV

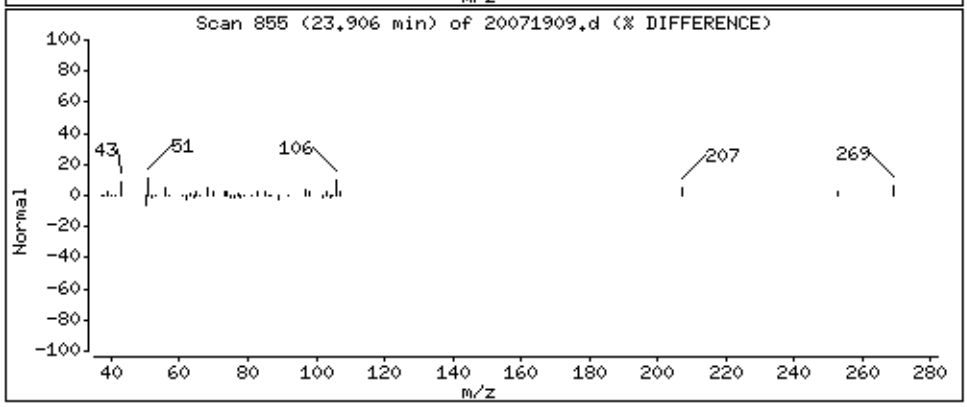












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

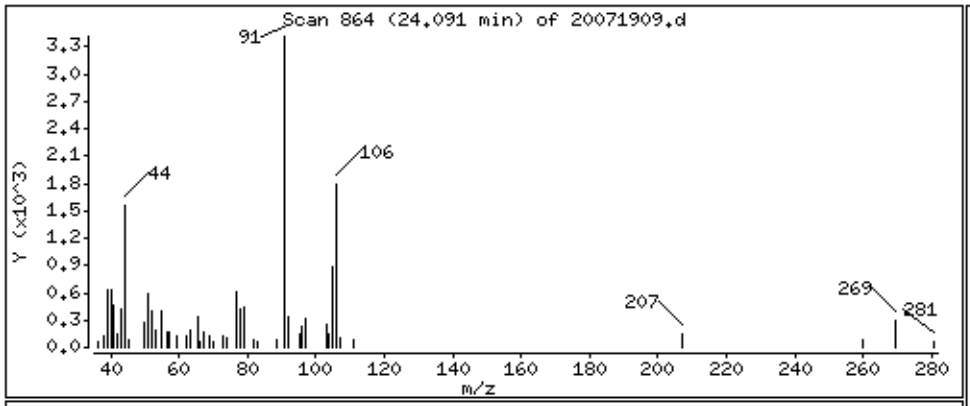
Operator: ef

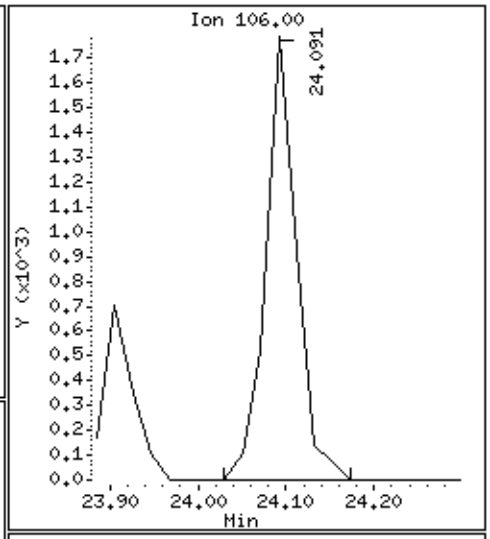
Column phase: RTX-624

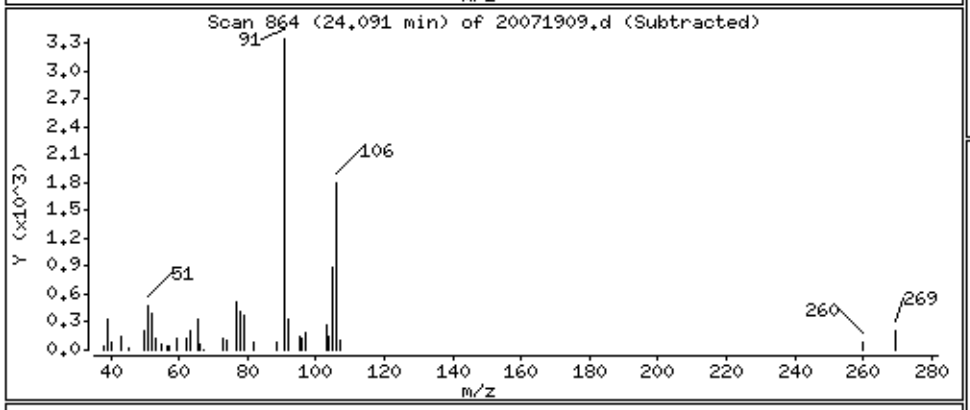
Column diameter: 0.32

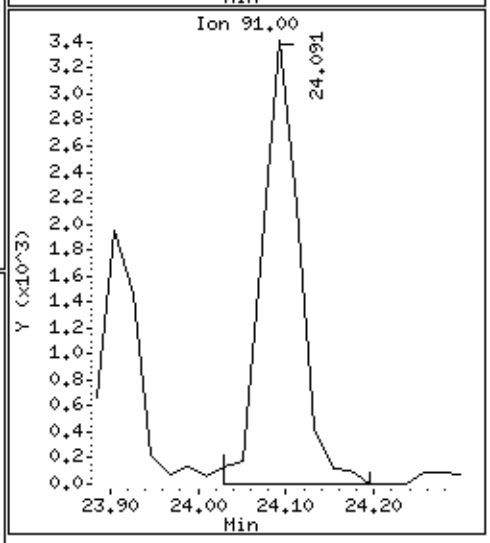
169 m,p-Xylene

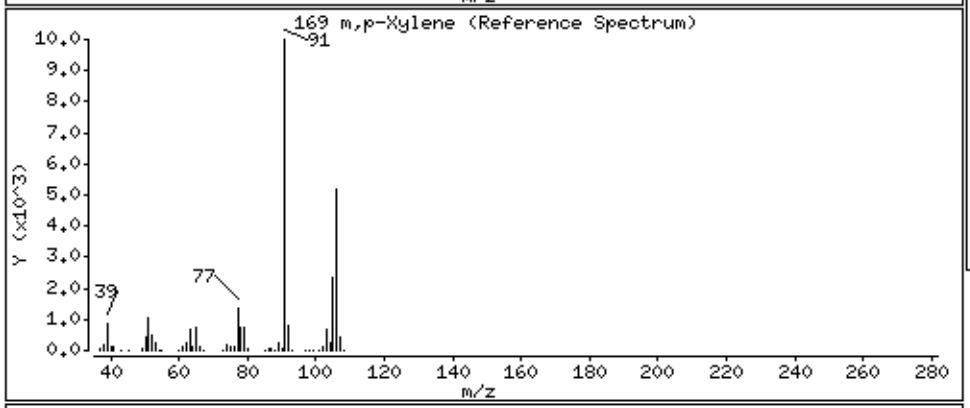
Concentration: 0.1912 PPBV

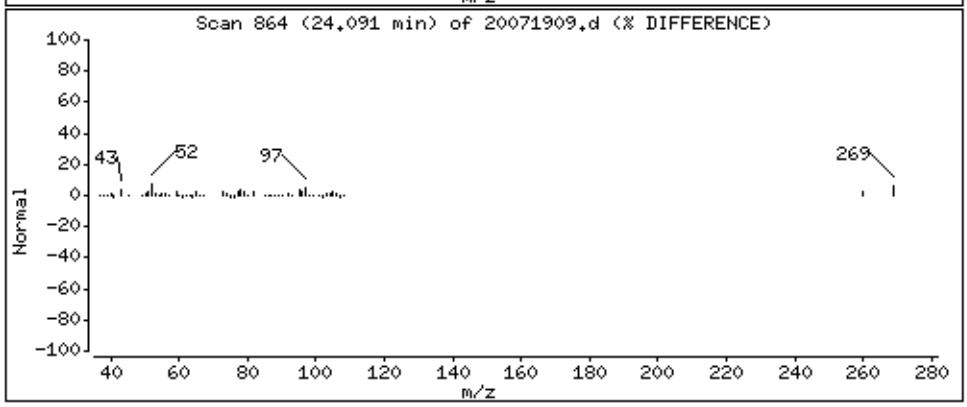












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

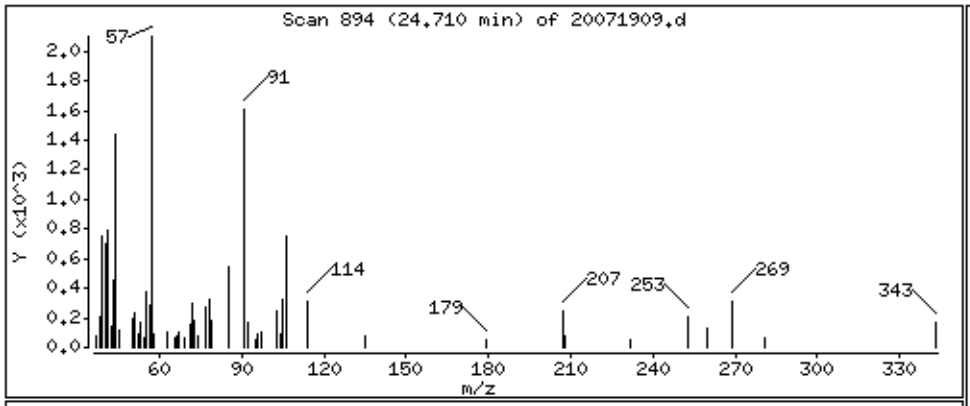
Operator: ef

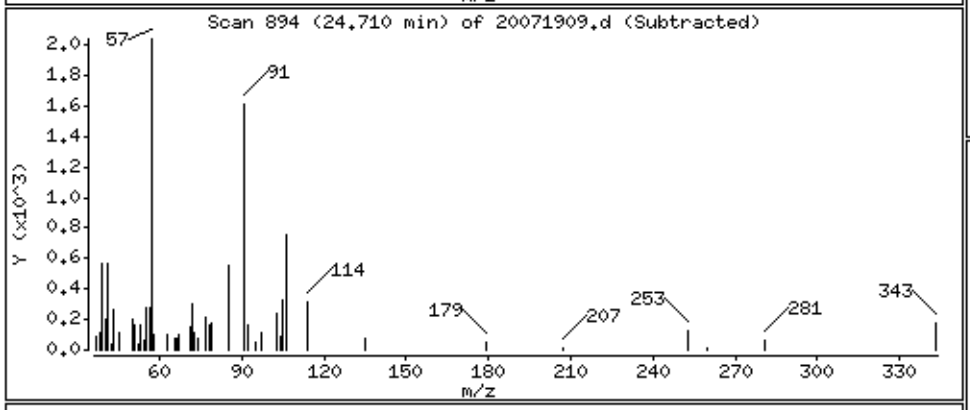
Column phase: RTX-624

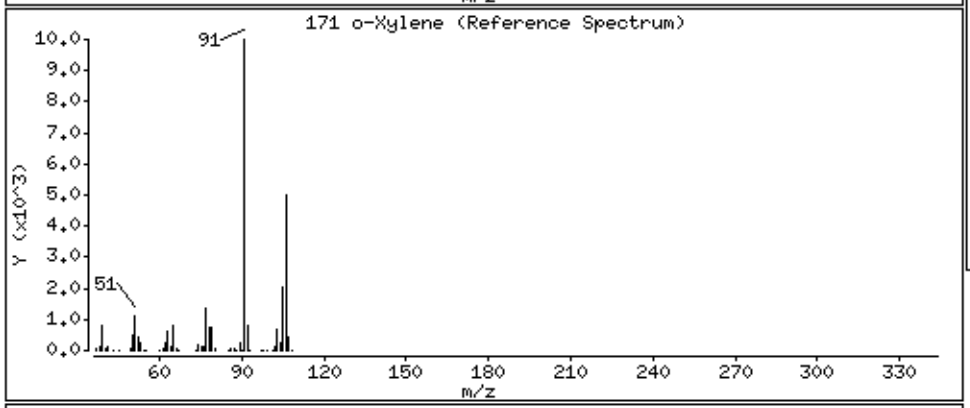
Column diameter: 0.32

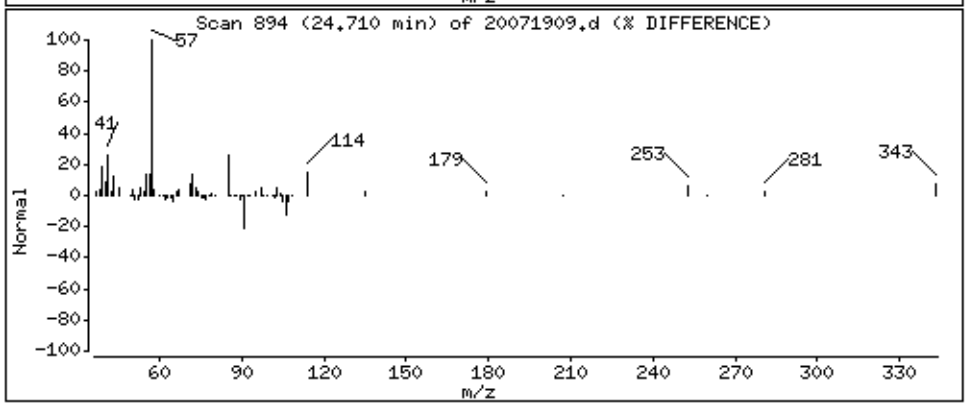
171 o-Xylene

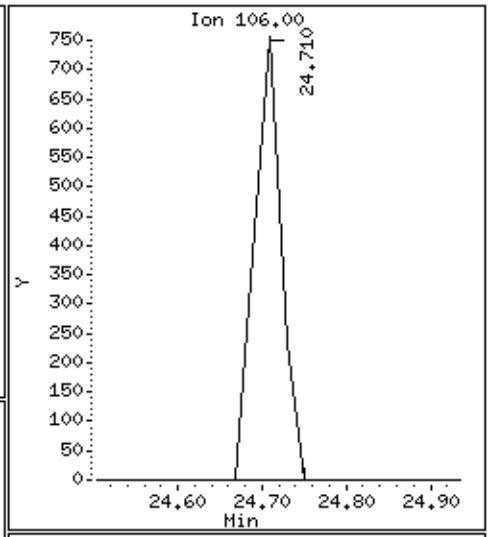
Concentration: 0.07836 PPBV

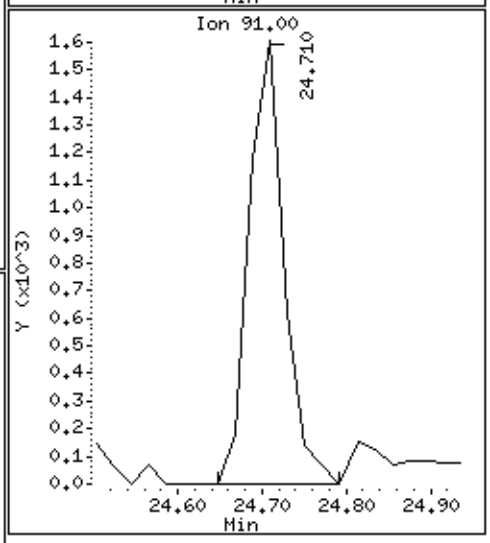












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

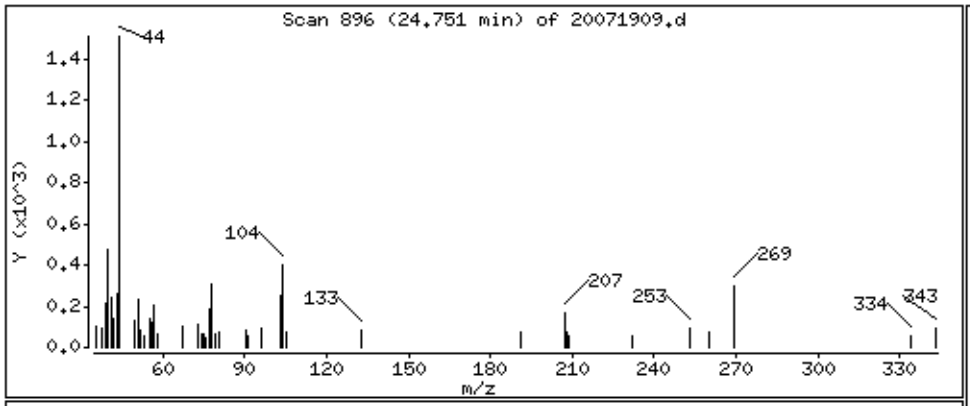
Operator: ef

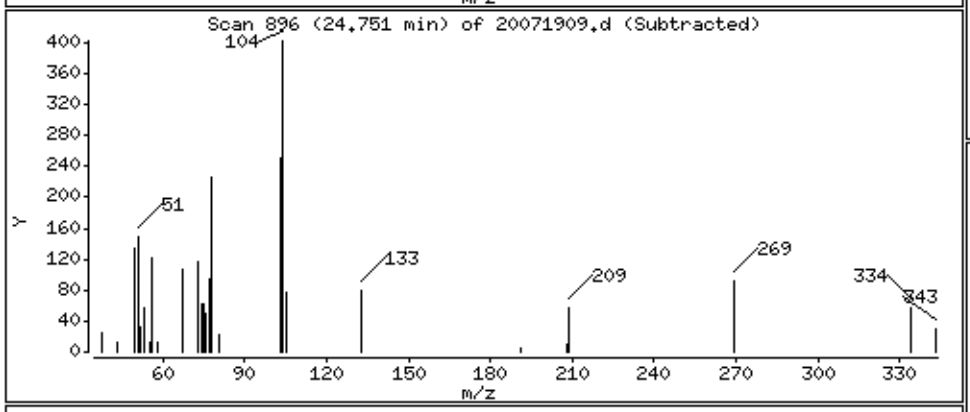
Column phase: RTX-624

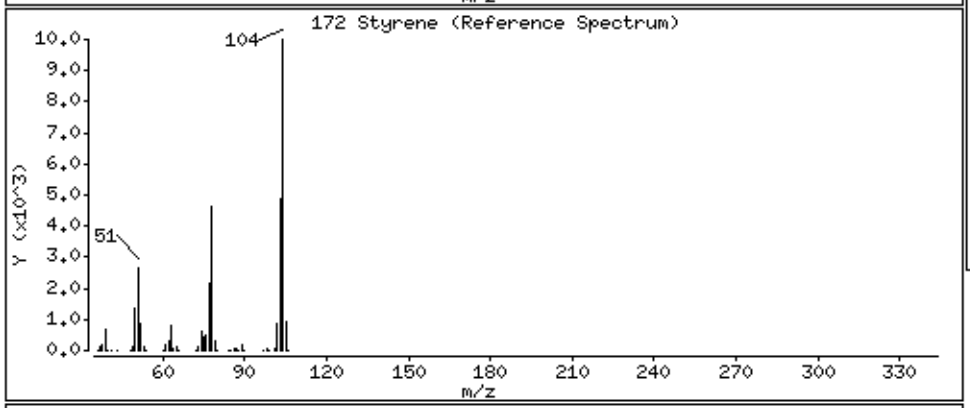
Column diameter: 0.32

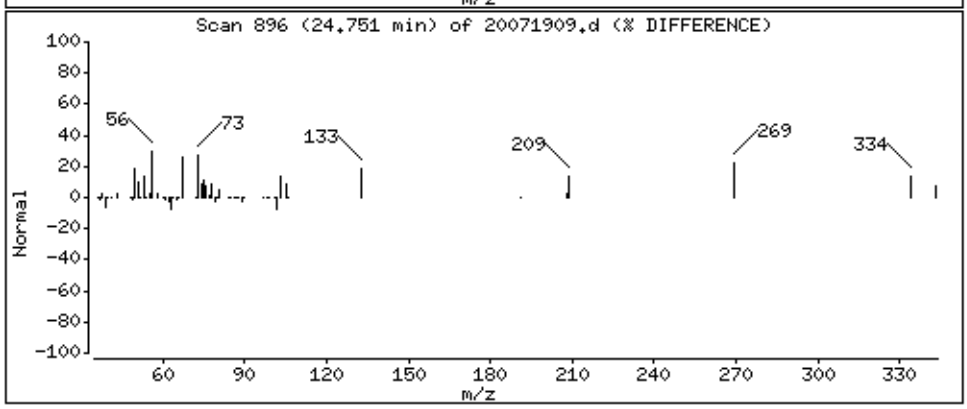
172 Styrene

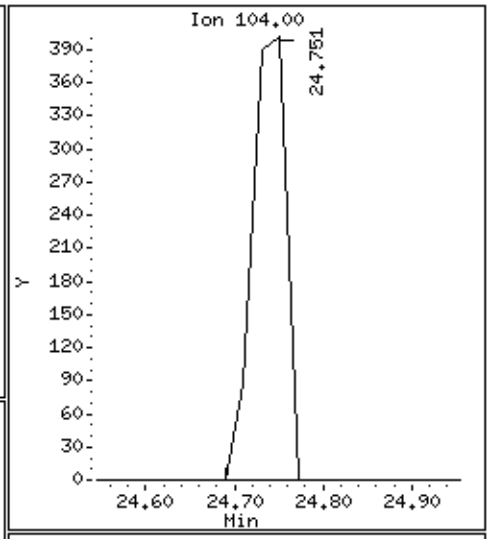
Concentration: 0.03512 PPBV

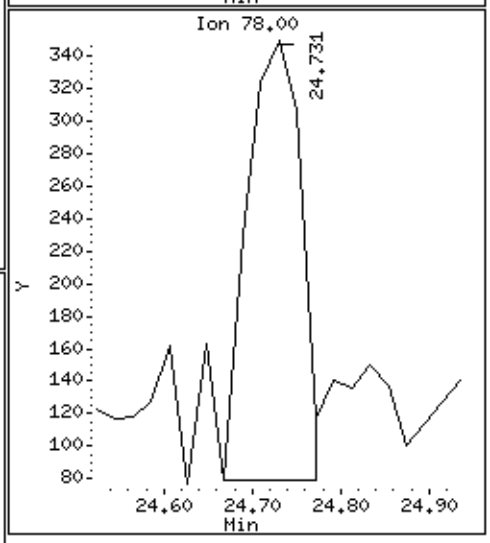












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

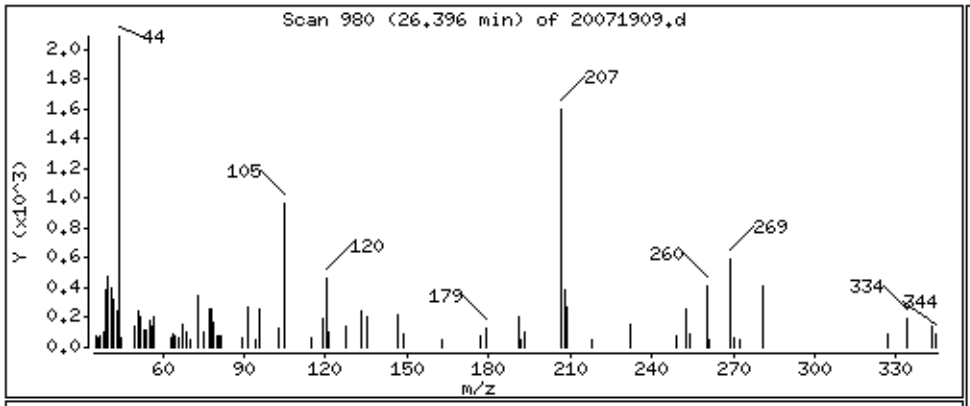
Operator: ef

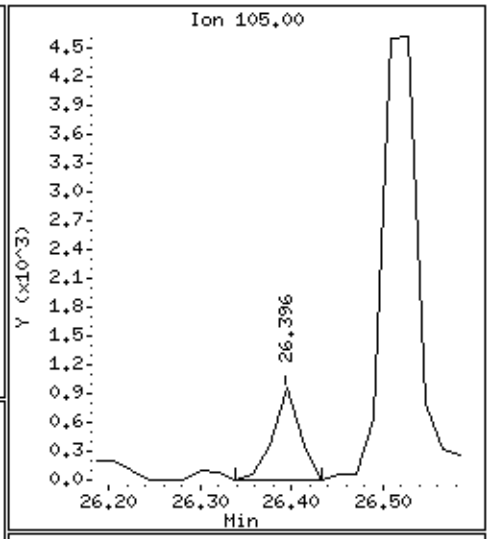
Column phase: RTX-624

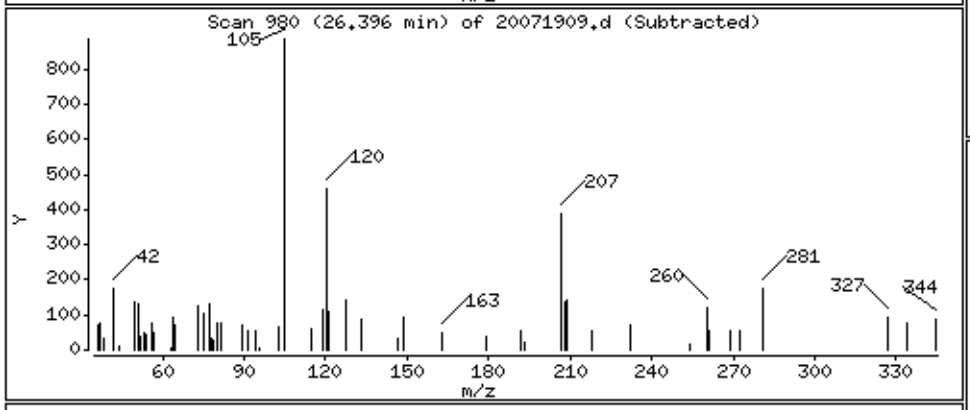
Column diameter: 0.32

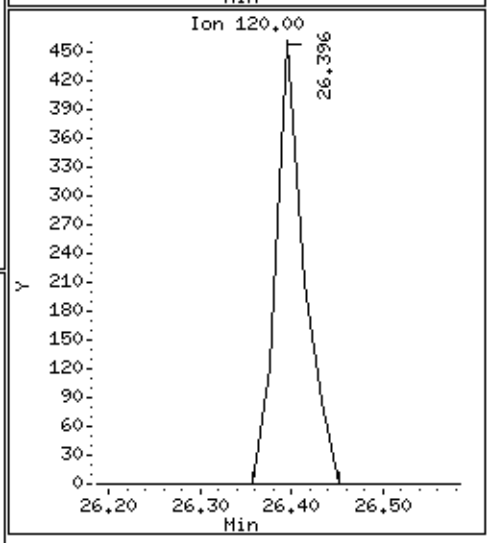
196 1,2,4-Trimethylbenzene

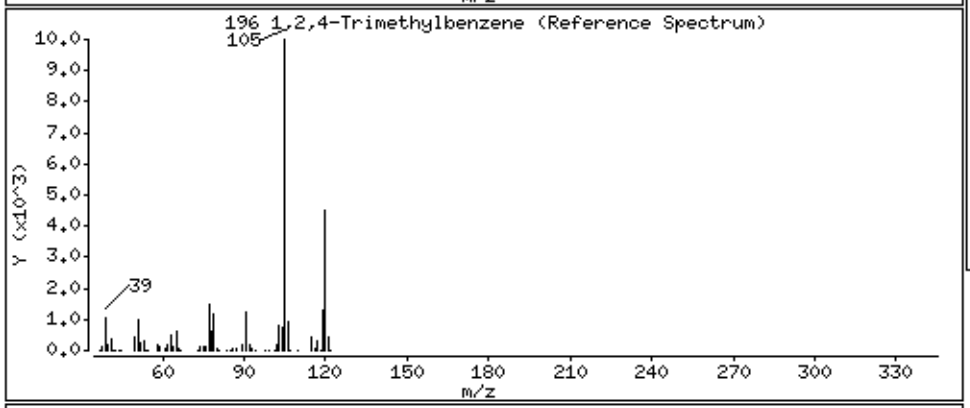
Concentration: 0.04012 PPBV

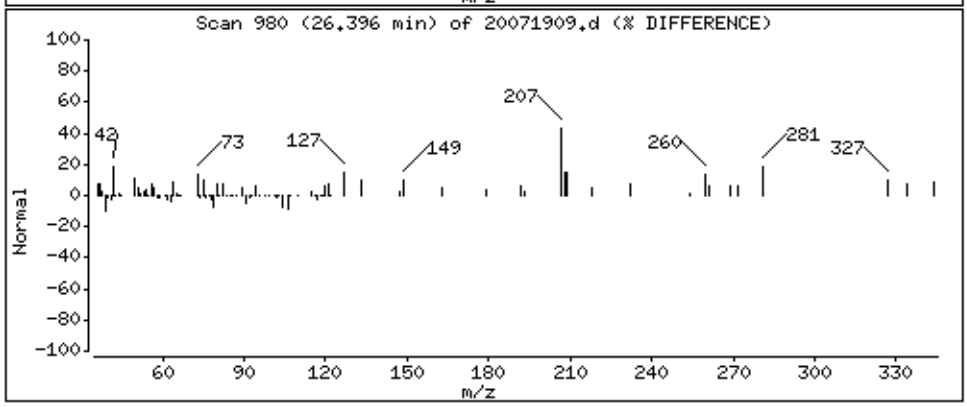












Data File: /chem/msd20.i/19Jul2016.b/20071909.d

Date : 19-JUL-2016 13:37

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 33531

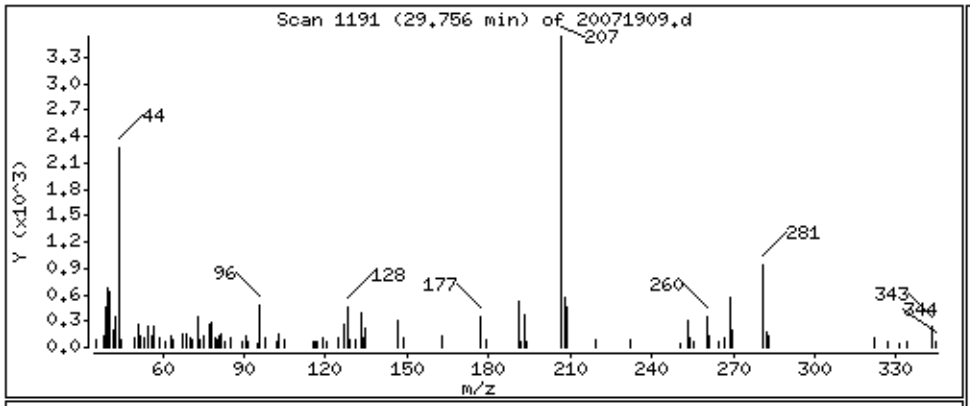
Operator: ef

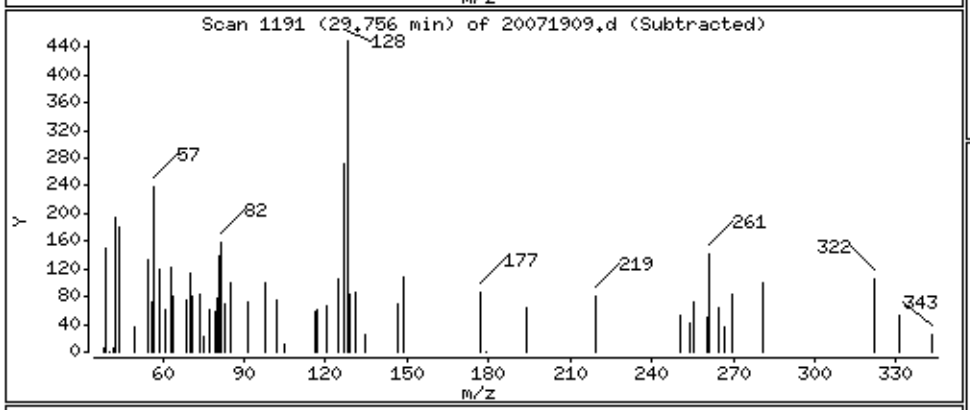
Column phase: RTX-624

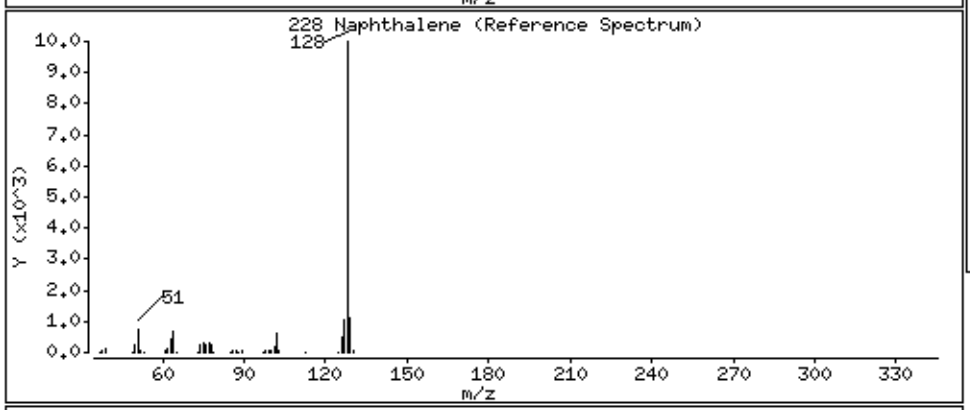
Column diameter: 0.32

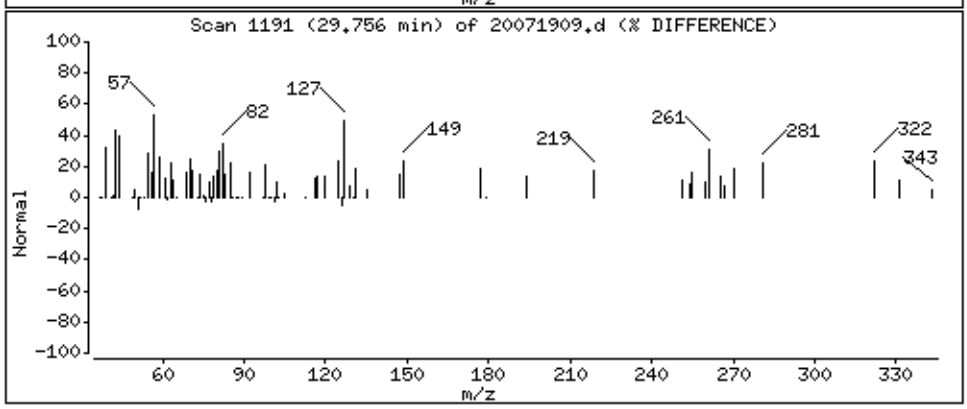
228 Naphthalene

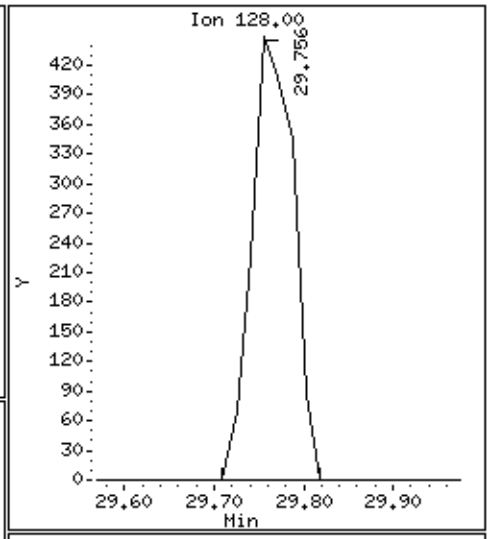
Concentration: 0.03572 PPBV

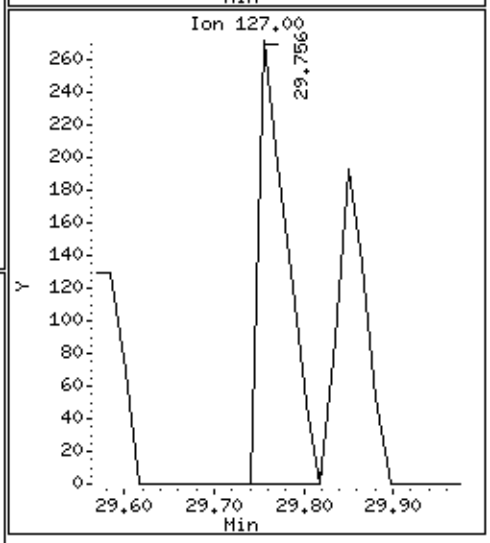












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-2

Lab ID#: 1607235D-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.84	3.1
Chloromethane	0.86	0.88	1.8	1.8
Freon 11	0.17	7.9	0.96	44
Ethanol	0.86	25	1.6	48
Freon 113	0.17	0.075 J	1.3	0.58 J
Acetone	0.86	13	2.0	32
2-Propanol	0.86	14	2.1	33
Methylene Chloride	0.34	0.39	1.2	1.4
Hexane	0.17	0.17	0.60	0.61
2-Butanone (Methyl Ethyl Ketone)	0.86	1.2	2.5	3.6
Chloroform	0.17	0.049 J	0.83	0.24 J
Cyclohexane	0.17	0.20	0.59	0.68
Carbon Tetrachloride	0.17	0.061 J	1.1	0.38 J
Benzene	0.17	0.18	0.55	0.56
1,2-Dichloroethane	0.17	1.1	0.69	4.4
Heptane	0.17	0.34	0.70	1.4
Trichloroethene	0.17	0.39	0.92	2.1
4-Methyl-2-pentanone	0.17	0.18 J0	0.70	0.75 J0
Toluene	0.17	2.9	0.64	11
2-Hexanone	0.86	0.13 J	3.5	0.54 J
Ethyl Benzene	0.17	0.11 J	0.74	0.46 J
m,p-Xylene	0.17	0.29	0.74	1.2
o-Xylene	0.17	0.12 J	0.74	0.52 J
Styrene	0.17	0.069 J	0.73	0.29 J
Propylbenzene	0.17	0.044 J	0.84	0.21 J
4-Ethyltoluene	0.17	0.13 J	0.84	0.66 J
1,3,5-Trimethylbenzene	0.17	0.060 J	0.84	0.30 J
1,2,4-Trimethylbenzene	0.17	0.17 J	0.84	0.82 J
Naphthalene	0.86	0.030 J	4.5	0.16 J

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Client Sample ID: B18IA-2

Lab ID#: 1607235D-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071910**	**Date of Collection:**	**7/9/16 6:49:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**7/19/16 02:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.84	3.1
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	0.88	1.8	1.8
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	7.9	0.96	44
Ethanol	0.86	25	1.6	48
Freon 113	0.17	0.075 J	1.3	0.58 J
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	13	2.0	32
2-Propanol	0.86	14	2.1	33
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.39	1.2	1.4
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	0.17	0.60	0.61
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	1.2	2.5	3.6
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	0.049 J	0.83	0.24 J
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Cyclohexane	0.17	0.20	0.59	0.68
Carbon Tetrachloride	0.17	0.061 J	1.1	0.38 J
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	0.18	0.55	0.56
1,2-Dichloroethane	0.17	1.1	0.69	4.4
Heptane	0.17	0.34	0.70	1.4
Trichloroethene	0.17	0.39	0.92	2.1
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	0.18 J0	0.70	0.75 J0
Toluene	0.17	2.9	0.64	11
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	0.13 J	3.5	0.54 J

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Client Sample ID: B18IA-2

Lab ID#: 1607235D-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071910**	**Date of Collection:**	**7/9/16 6:49:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**7/19/16 02:24 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	0.11 J	0.74	0.46 J
m,p-Xylene	0.17	0.29	0.74	1.2
o-Xylene	0.17	0.12 J	0.74	0.52 J
Styrene	0.17	0.069 J	0.73	0.29 J
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	0.044 J	0.84	0.21 J
4-Ethyltoluene	0.17	0.13 J	0.84	0.66 J
1,3,5-Trimethylbenzene	0.17	0.060 J	0.84	0.30 J
1,2,4-Trimethylbenzene	0.17	0.17 J	0.84	0.82 J
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	0.030 J	4.5	0.16 J

J = Estimated value.
J0 = Estimated value due to bias in the CCV.
Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	92	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071910.d
Lab Smp Id: 1607235D-02A
Inj Date : 19-JUL-2016 14:24
Operator : ef Inst ID: msd20.i
Smp Info : 250mL# 6L0015
Misc Info : 6.7"Hg -> 4.8psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	92869	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	71783			47.94- 107.94	77.29
16.726	16.726 (1.000)	49	135546			102.10- 162.10	145.95
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	313690	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	49960			0.00- 45.77	15.93
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	301119	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	178232			26.51- 86.51	59.19
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	163846	6.08250	6.082	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	81045			32.47- 92.47	49.46
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.822	20.822 (1.142)	98	312430	5.15666	5.157	80.00- 120.00	100.00
20.822	20.822 (1.142)	70	40713			0.00- 41.37	13.03

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
20.822	20.822 (1.142)	100	202647			36.07- 96.07	64.86
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
25.485	25.485 (1.073)	174	149130	4.61271	4.613	80.00- 120.00	100.00
25.485	25.466 (1.073)	95	188300			89.67- 149.67	126.27
25.485	25.485 (1.073)	176	141720			67.40- 127.40	95.03
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	28965	0.36723	0.6280	80.00- 120.00	100.00(M)
4.672	4.672 (0.279)	87	9430			2.54- 62.54	32.56
17 Chloromethane					CAS #: 74-87-3		
6.625	6.577 (0.396)	50	13681	0.51801	0.8858	80.00- 120.00	100.00
6.601	6.553 (0.395)	52	5508			3.03- 63.03	40.26
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	350697	4.60052	7.867	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	225791			34.91- 94.91	64.38
42 Ethanol					CAS #: 64-17-5		
12.296	12.269 (0.735)	45	145773	14.7748	25.265	80.00- 120.00	100.00
12.296	12.269 (0.735)	46	62793			11.72- 71.72	43.08
12.296	12.269 (0.735)	43	42501			0.00- 52.99	29.16
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	2264	0.04399	0.07522	80.00- 120.00	100.00(a)
12.763	12.763 (0.763)	153	1206			34.49- 94.49	53.28
12.763	12.763 (0.763)	101	3143			96.39- 156.39	138.80
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	109852	7.75955	13.269	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	370567			278.33- 338.33	337.33
57 2-Propanol					CAS #: 67-63-0		
13.560	13.533 (0.811)	45	346909	7.92319	13.549	80.00- 120.00	100.00
13.560	13.533 (0.811)	43	120094			0.00- 52.04	34.62
13.560	13.533 (0.811)	59	14413			0.00- 34.17	4.15
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	6561	0.22729	0.3887	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	9433			97.79- 157.79	143.76
14.027	14.027 (0.839)	51	2869			9.84- 69.84	43.74
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	4558	0.10139	0.1734	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane (continued)							
14.933	14.878 (0.893)	43	6148			33.20- 93.20	134.88
14.878	14.878 (0.889)	86	821			0.00- 48.21	18.03
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	10297	0.71701	1.226	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	49486			345.54- 405.54	480.55
16.344	16.344 (0.977)	57	3473			0.00- 59.64	33.73
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	1810	0.02893	0.04947	80.00- 120.00	100.00(a)
16.819	16.819 (1.006)	85	789			35.08- 95.08	43.62
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	4996	0.11606	0.1984	80.00- 120.00	100.00
17.035	17.035 (1.018)	56	7109			82.51- 142.51	142.28
17.035	17.035 (1.018)	41	5159			30.91- 90.91	103.27
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	1923	0.03553	0.06076	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	1919			75.13- 135.13	99.81
116 Benzene					CAS #: 71-43-2		
17.621	17.621 (0.966)	78	7858	0.10328	0.1766	80.00- 120.00	100.00
17.621	17.621 (0.966)	77	2980			0.00- 54.04	37.92
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	21079	0.63007	1.077	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	6826			2.26- 62.26	32.38
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	4082	0.19677	0.3365	80.00- 120.00	100.00
17.867	17.847 (0.980)	100	924			9.17- 69.17	22.65
17.847	17.847 (0.979)	43	7152			158.08- 218.08	175.20
125 Trichloroethene					CAS #: 79-01-6		
18.633	18.610 (1.022)	130	7985	0.22994	0.3932	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	8138			67.33- 127.33	101.91
18.610	18.610 (1.021)	97	4255			32.56- 92.56	53.29
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.572	20.572 (1.128)	43	5558	0.10685	0.1827	80.00- 120.00	100.00
20.572	20.572 (1.128)	58	792			9.48- 69.48	14.26
20.557	20.572 (1.128)	85	329			0.00- 47.76	5.92
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	136630	1.67509	2.864	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
147 Toluene (continued)							
20.962	20.962 (1.150)	92	80587			30.04- 90.04	58.98
158 2-Hexanone					CAS #: 591-78-6		
22.406	22.406 (0.943)	58	2323	0.07711	0.1318	80.00- 120.00	100.00(a)
22.406	22.406 (0.943)	43	4266			153.17- 213.17	183.65
22.406	22.406 (0.943)	100	507			0.00- 52.35	21.83
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	2201	0.06241	0.1067	80.00- 120.00	100.00(a)
23.906	23.906 (1.006)	91	8471			282.65- 342.65	384.79
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	6376	0.16874	0.2885	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	14820			170.44- 230.44	232.41
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	2514	0.07033	0.1203	80.00- 120.00	100.00(a)
24.710	24.710 (1.040)	91	5389			177.28- 237.28	214.32
172 Styrene					CAS #: 100-42-5		
24.731	24.751 (1.041)	104	2045	0.04014	0.06864	80.00- 120.00	100.00(a)
24.731	24.731 (1.041)	78	1470			22.29- 82.29	71.87
182 Propylbenzene					CAS #: 103-65-1		
25.732	25.732 (1.083)	91	2911	0.02550	0.04360	80.00- 120.00	100.00(a)
25.732	25.732 (1.083)	120	725			0.00- 53.87	24.93
188 4-Ethyltoluene					CAS #: 622-96-8		
25.826	25.864 (1.087)	105	7558	0.07839	0.1340	80.00- 120.00	100.00(a)
25.826	25.864 (1.087)	120	2285			0.21- 60.21	30.24
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	2887	0.03543	0.06059	80.00- 120.00	100.00(a)
25.940	25.940 (1.092)	120	1348			20.26- 80.26	46.69
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	7935	0.09705	0.1660	80.00- 120.00	100.00(a)
26.395	26.395 (1.111)	120	3329			17.68- 77.68	41.95
228 Naphthalene					CAS #: 91-20-3		
29.756	29.772 (1.252)	128	1211	0.01770	0.03027	80.00- 120.00	100.00(a)
29.741	29.772 (1.252)	127	191			0.00- 42.99	15.83

QC Flag Legend

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

Report Date: 27-Jul-2016 15:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071910.d
Lab Smp Id: 1607235D-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 6.7"Hg -> 4.8psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	92869	-19.86
123 1,4-Difluorobenze	406395	243837	568953	313690	-22.81
163 Chlorobenzene-d5	363239	217943	508535	301119	-17.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:10

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-02A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 6.7"Hg -> 4.8psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	6.082	121.65	70-130
$ 146 Toluene-d8	5.000	5.157	103.13	70-130
$ 177 4-Bromofluorobenze	5.000	4.613	92.25	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

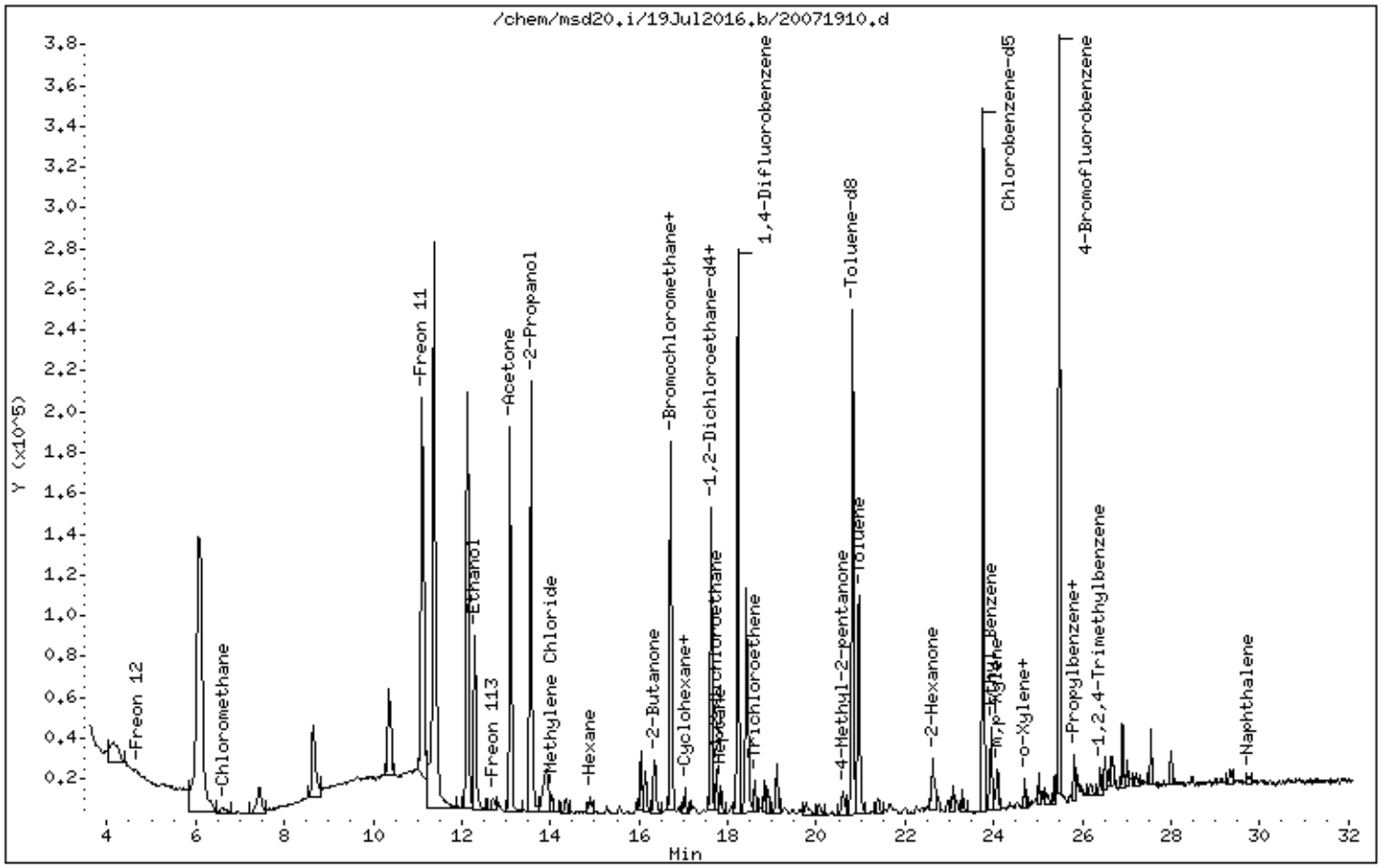
Instrument: msd20.i

Sample Info: 250mL# 6L0015

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

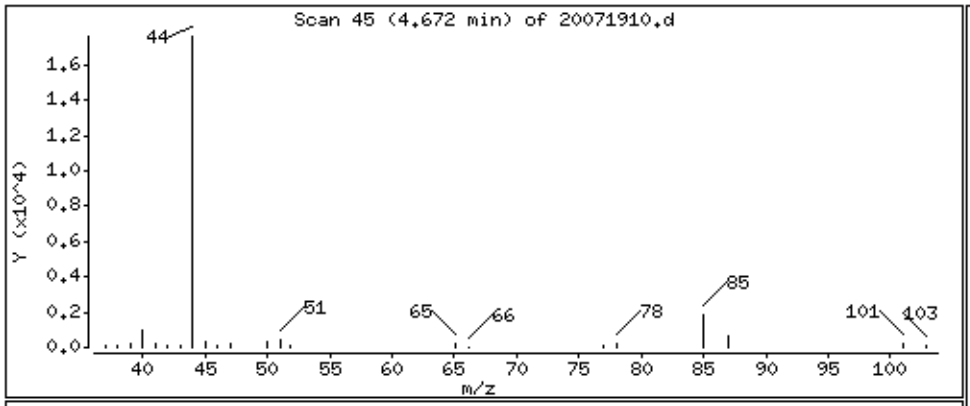
Operator: ef

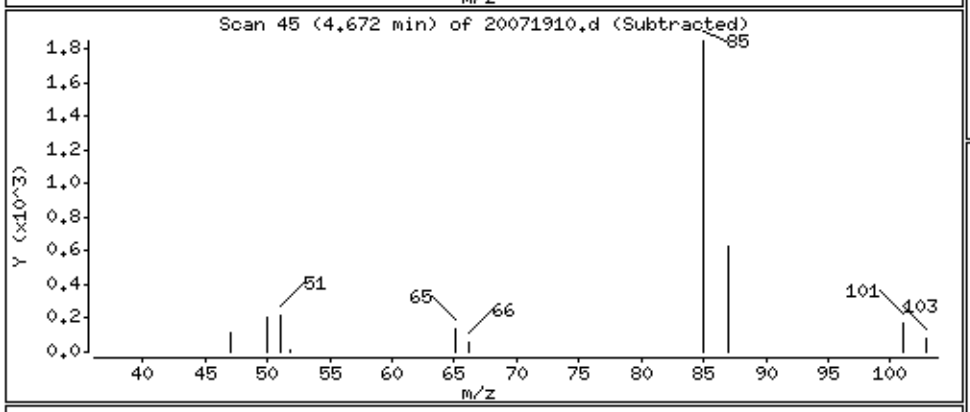
Column phase: RTX-624

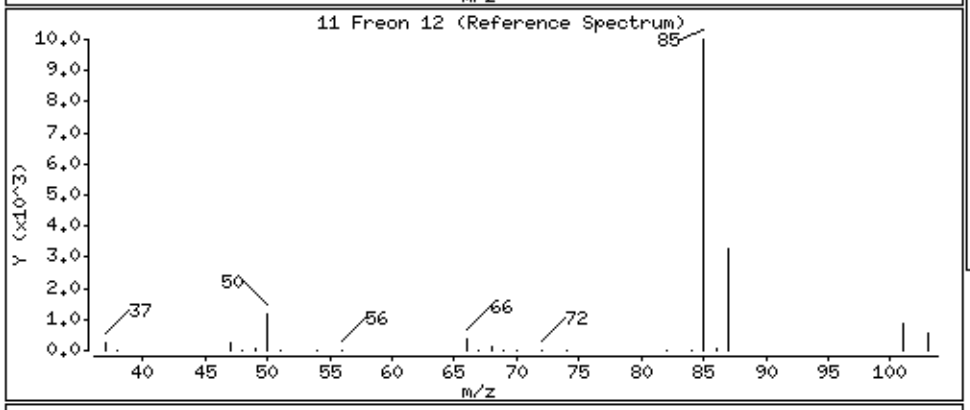
Column diameter: 0.32

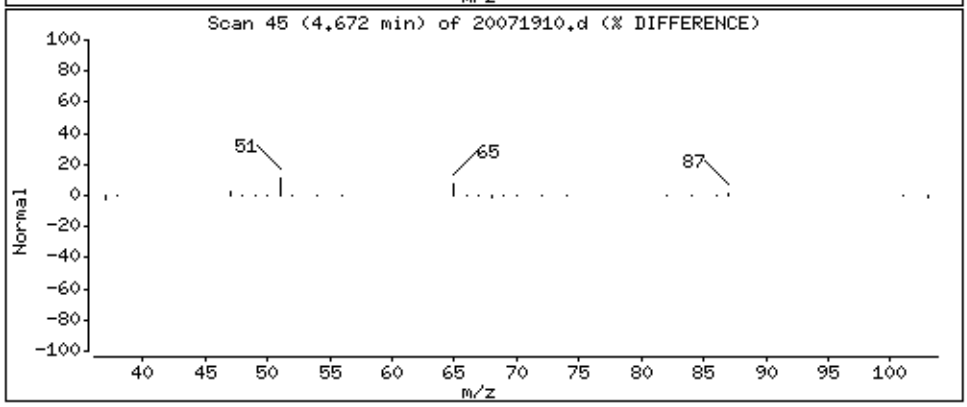
11 Freon 12

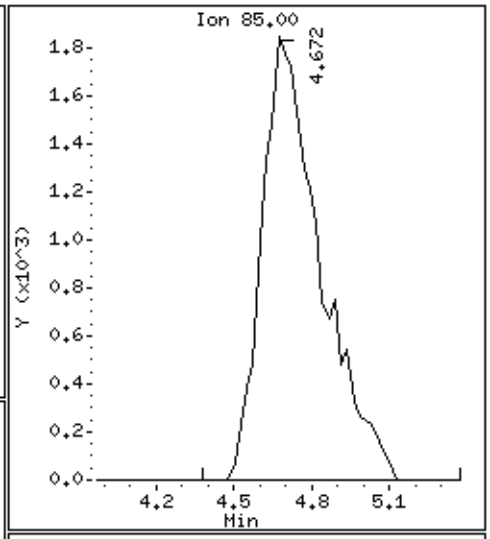
Concentration: 0.6280 PPBV

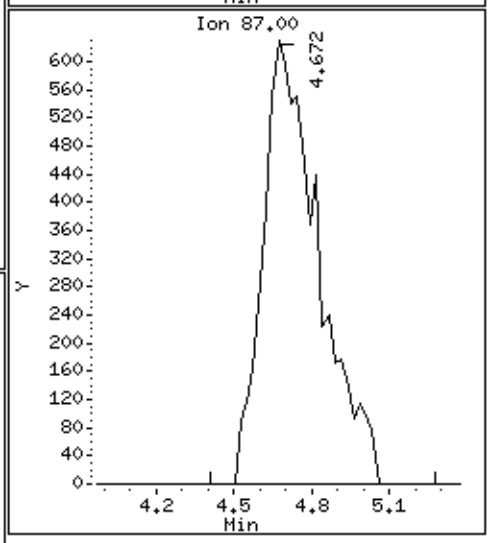












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

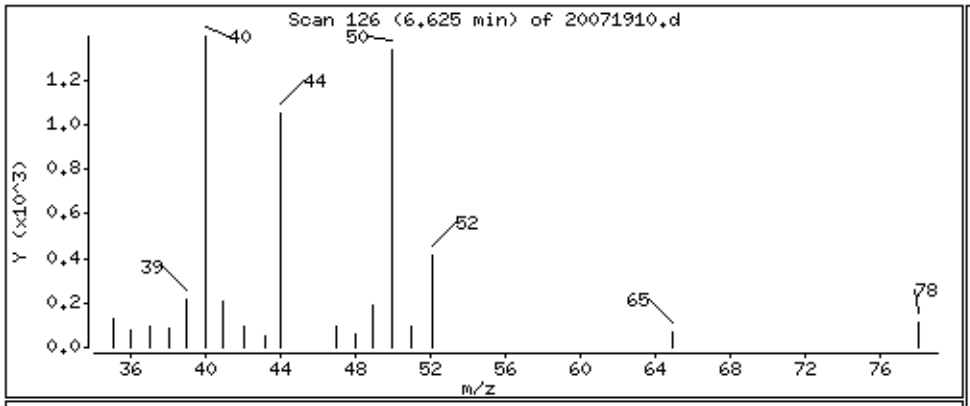
Operator: ef

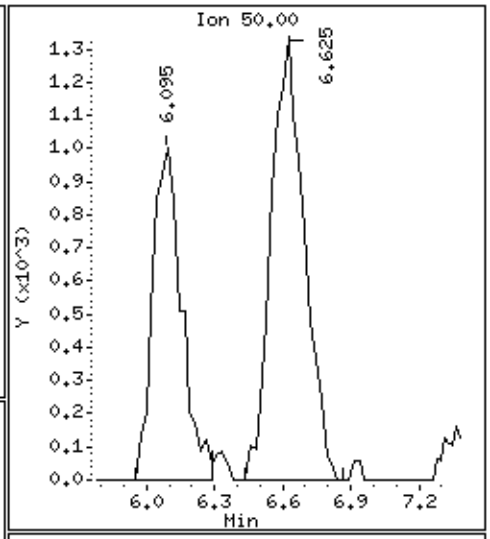
Column phase: RTX-624

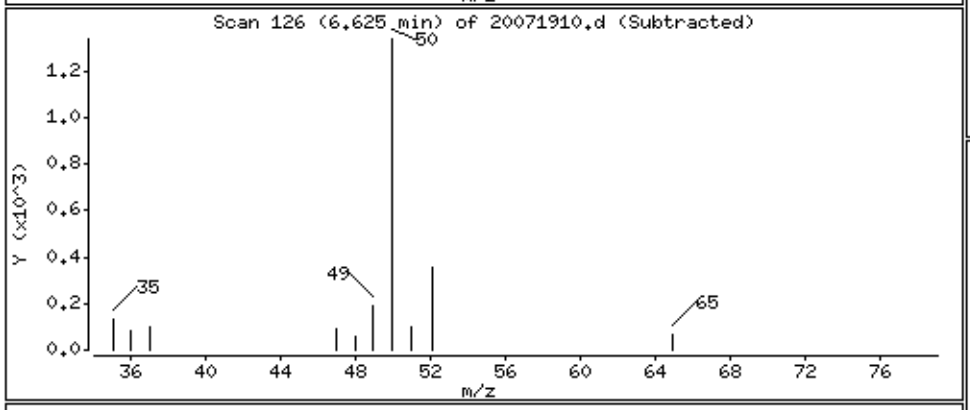
Column diameter: 0.32

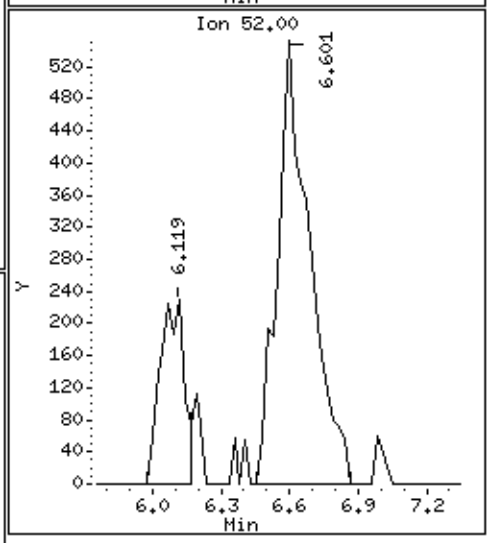
17 Chloromethane

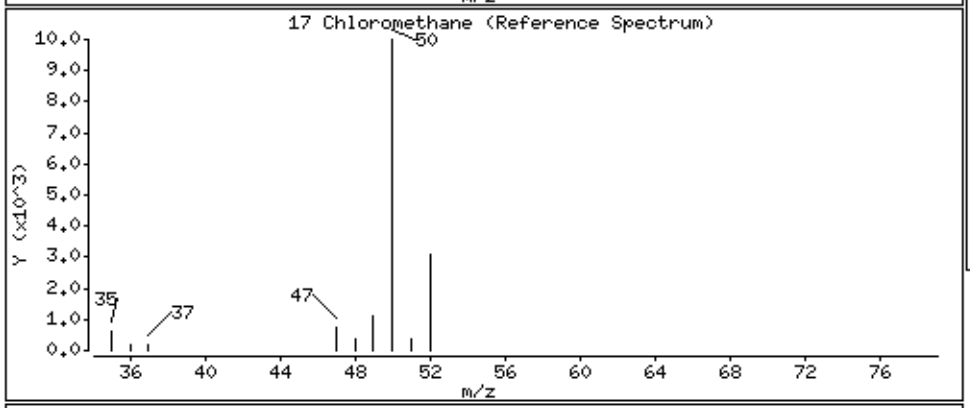
Concentration: 0.8858 PPBV

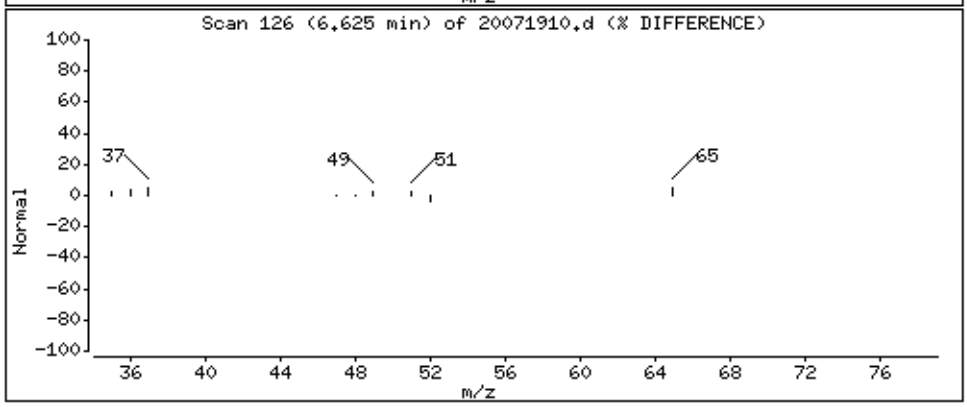












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

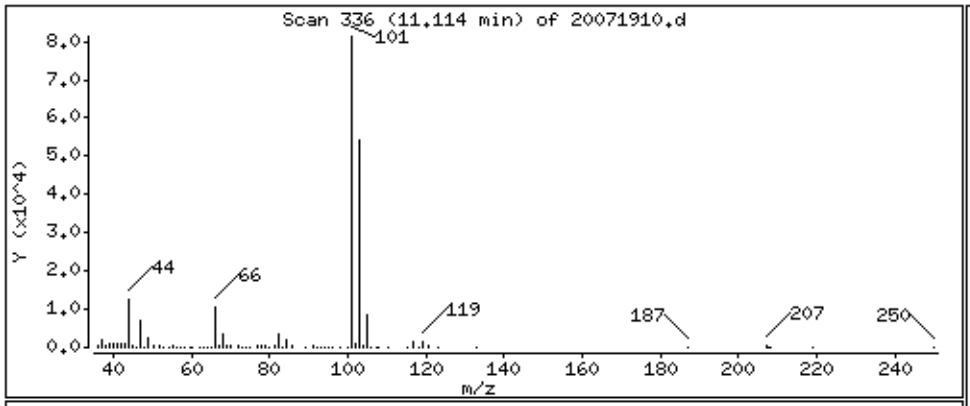
Operator: ef

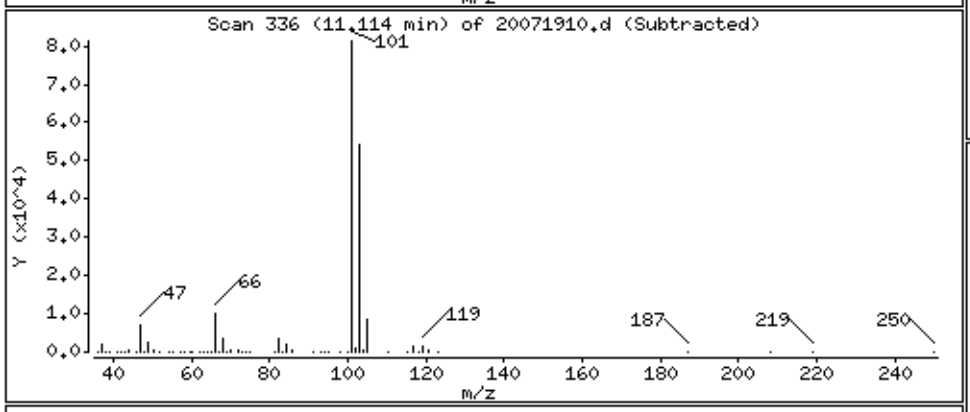
Column phase: RTX-624

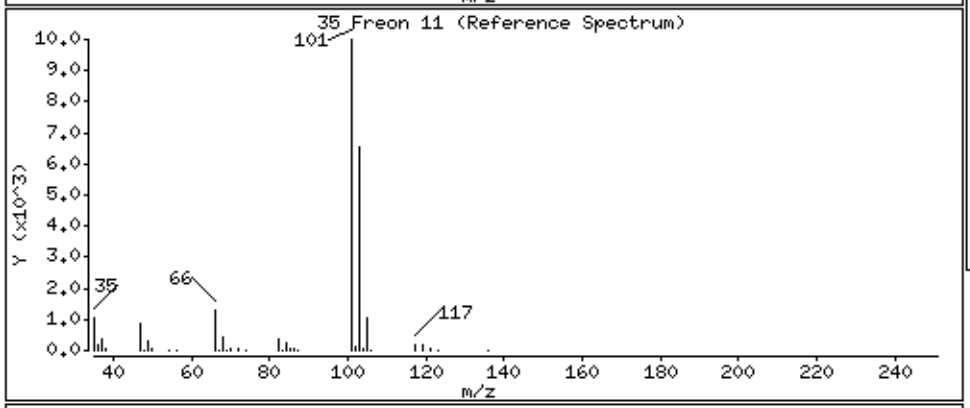
Column diameter: 0.32

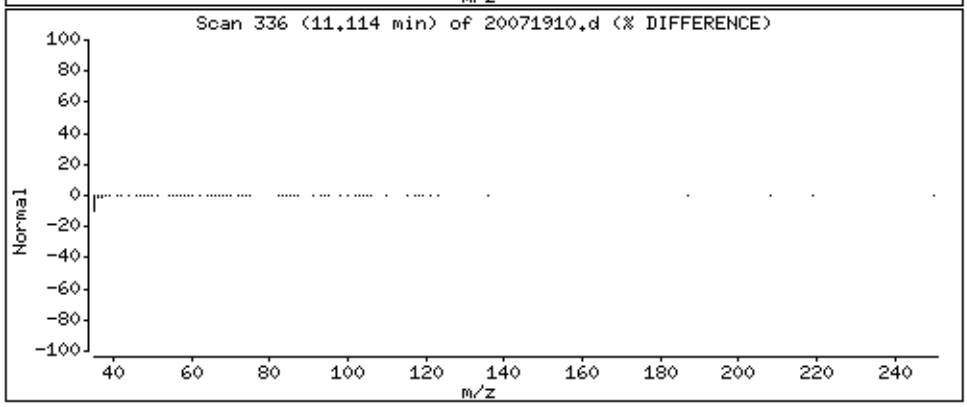
35 Freon 11

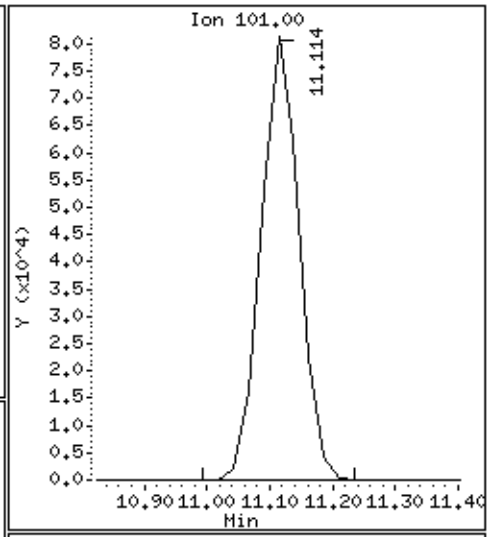
Concentration: 7.867 PPBV

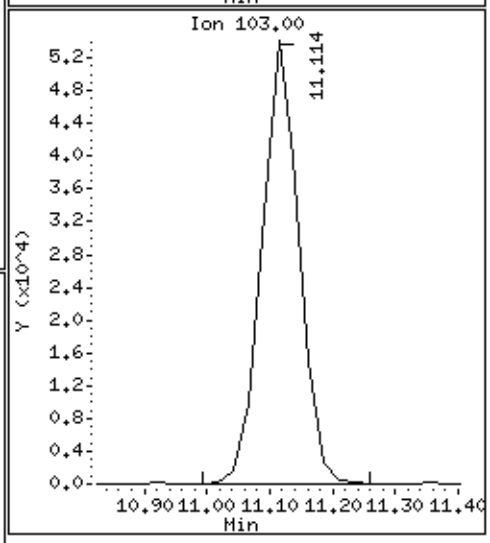












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

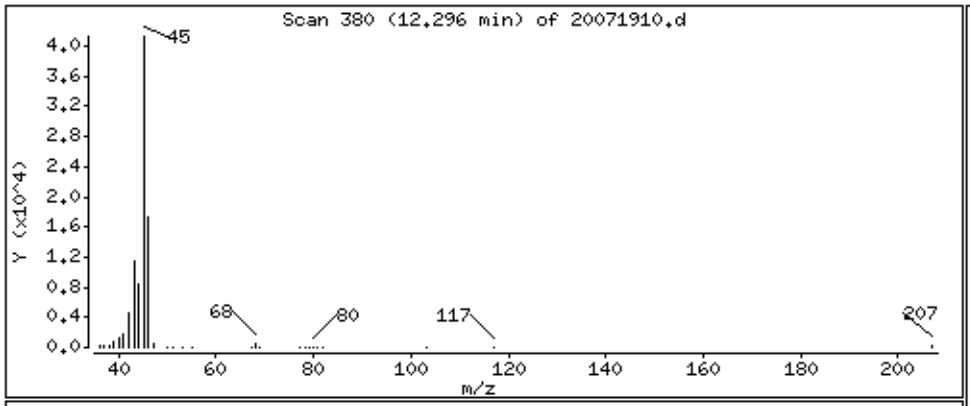
Operator: ef

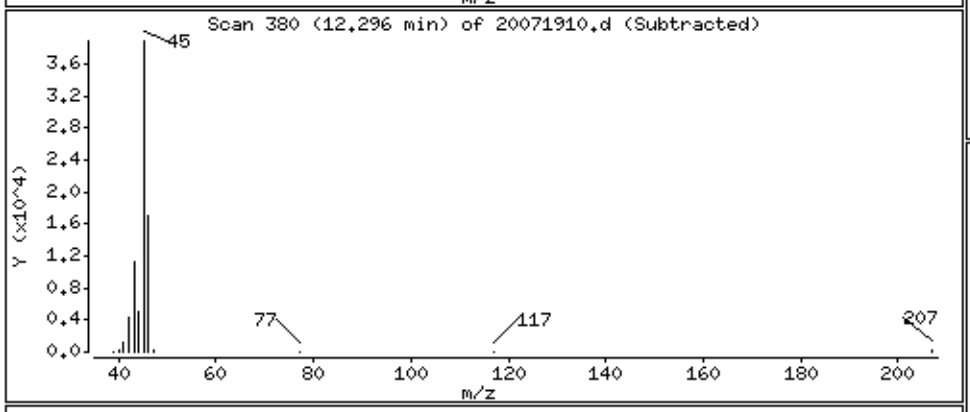
Column phase: RTX-624

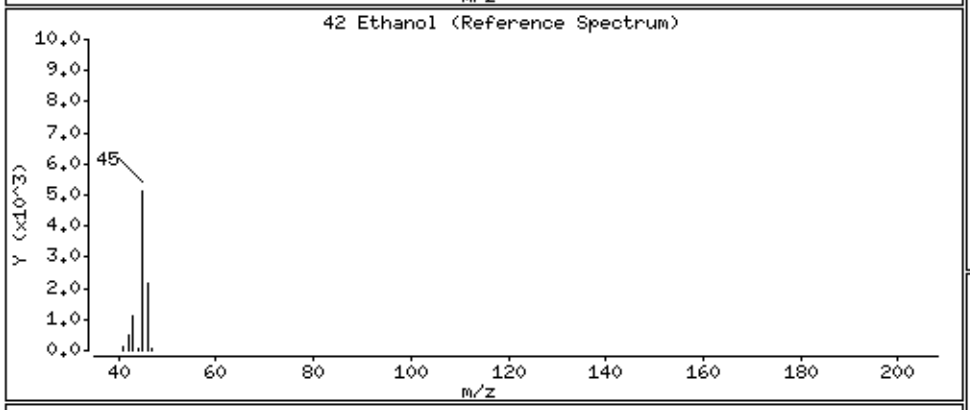
Column diameter: 0.32

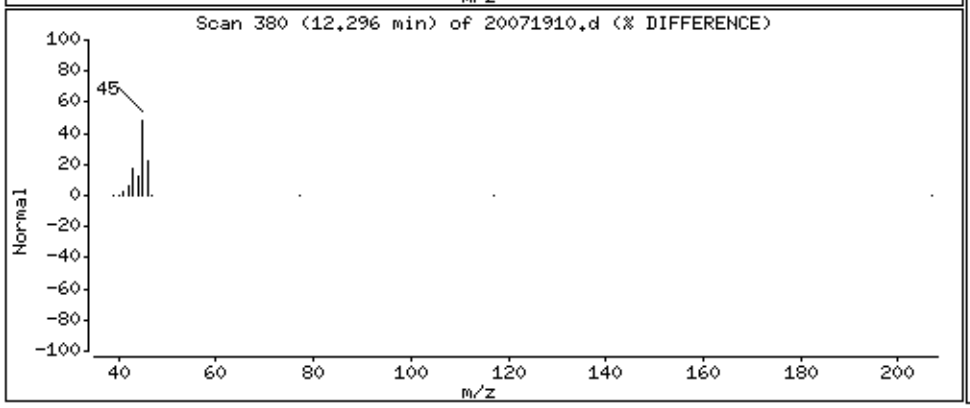
42 Ethanol

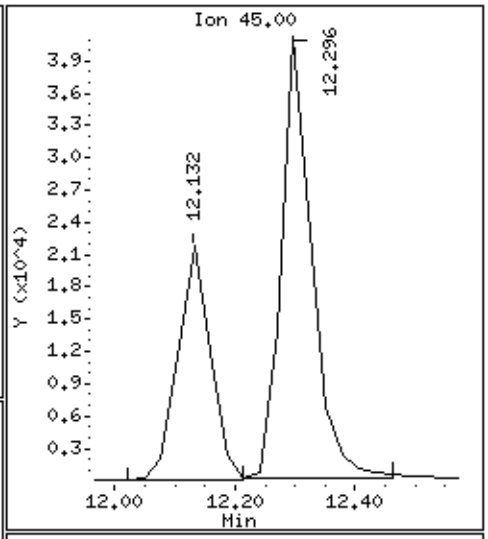
Concentration: 25.265 PPBV

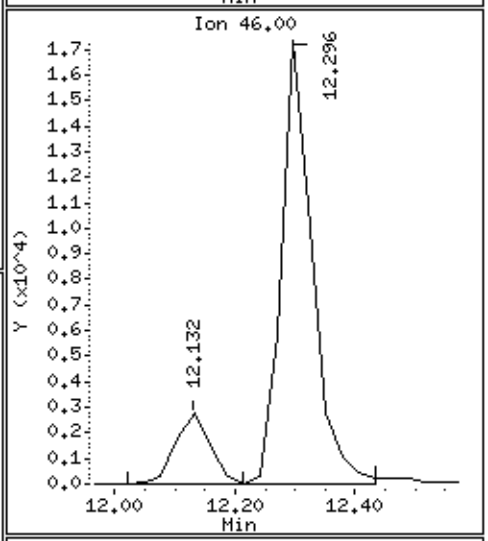


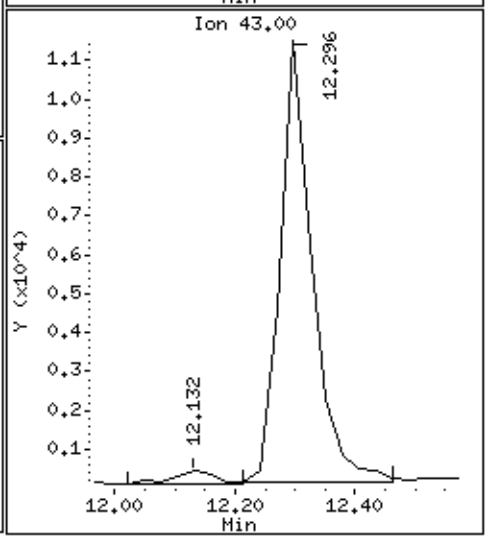












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

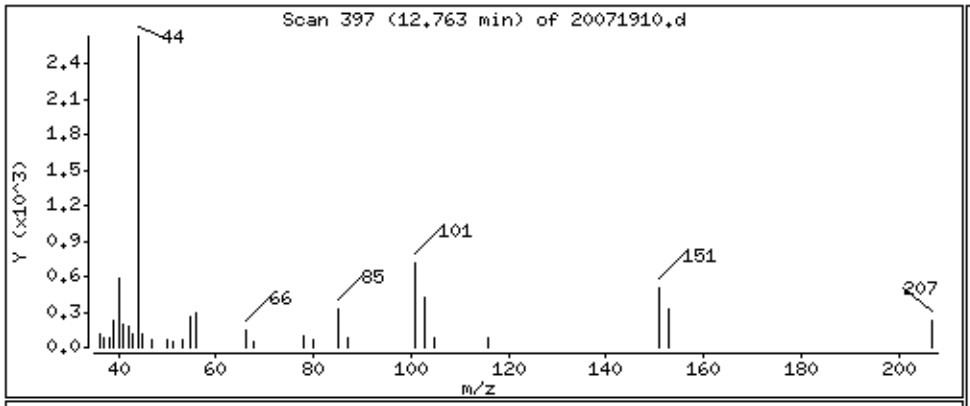
Operator: ef

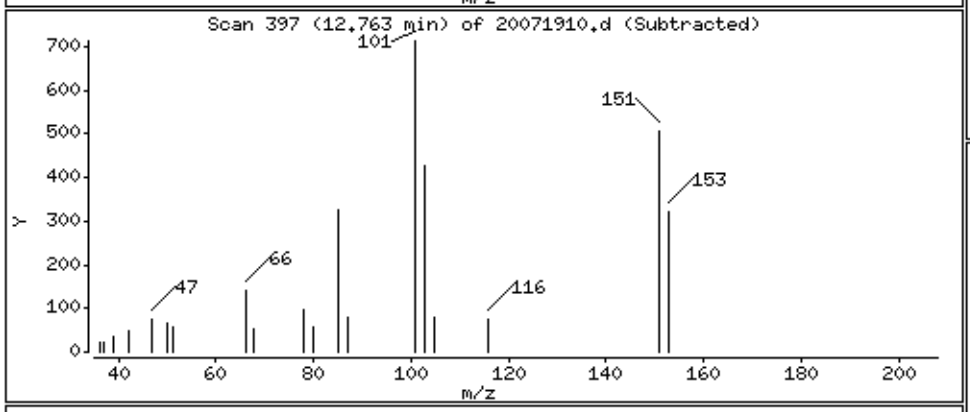
Column phase: RTX-624

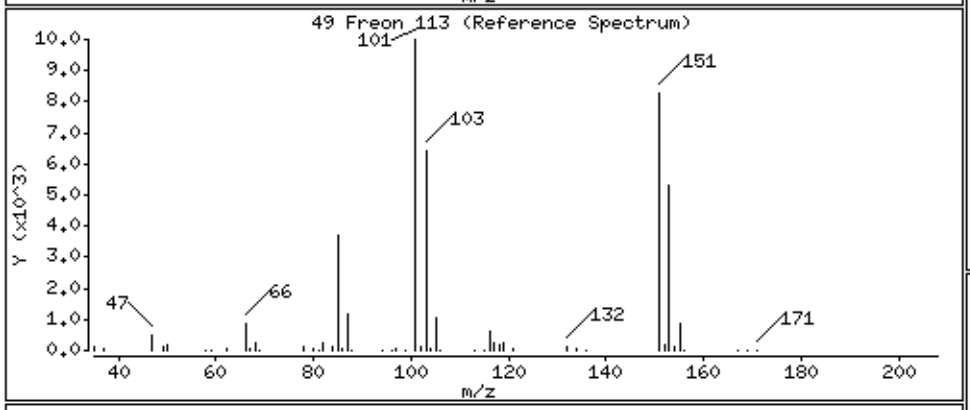
Column diameter: 0.32

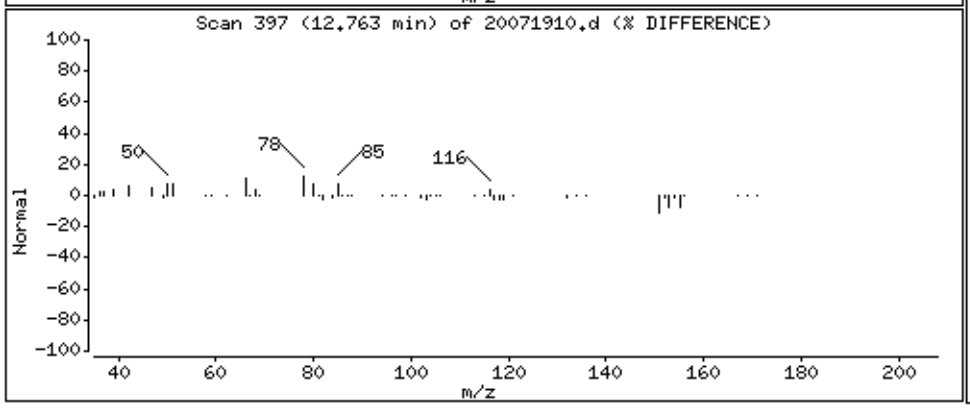
49 Freon 113

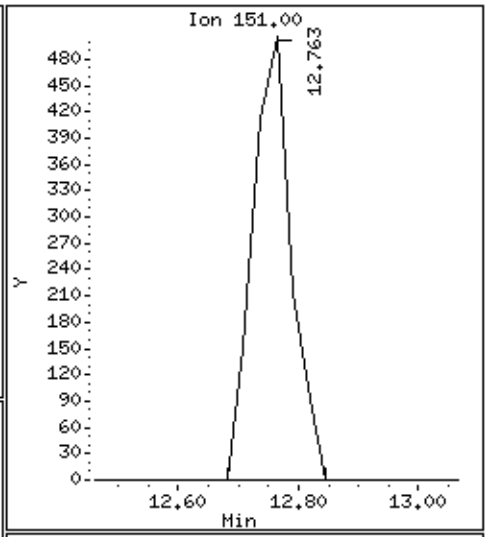
Concentration: 0.07522 PPBV

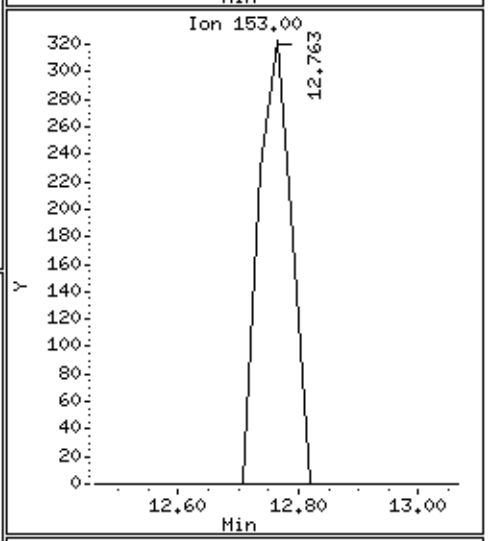


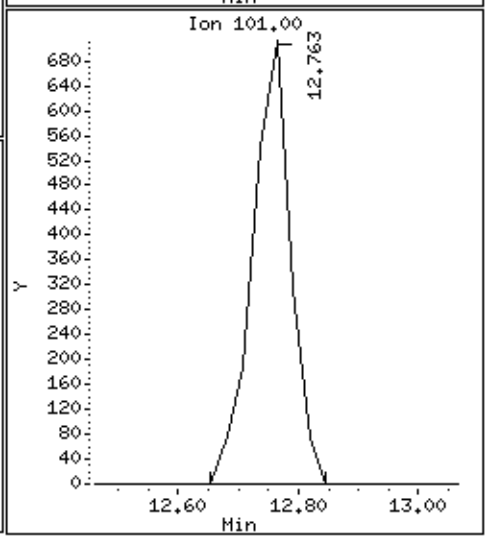












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

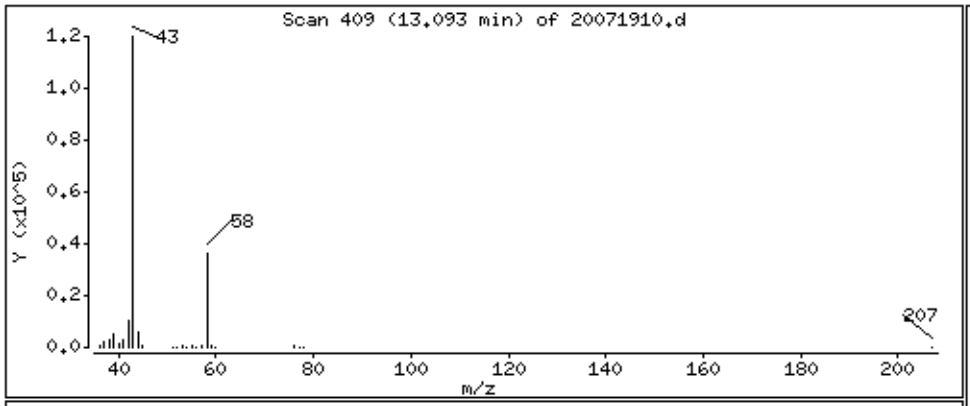
Operator: ef

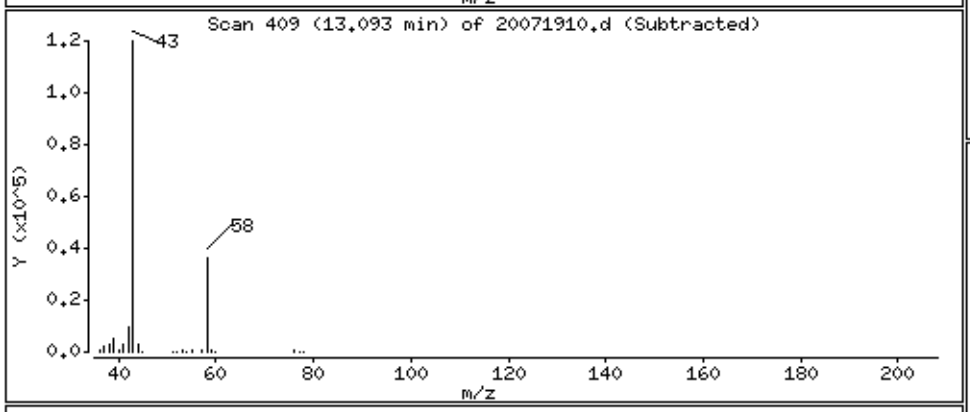
Column phase: RTX-624

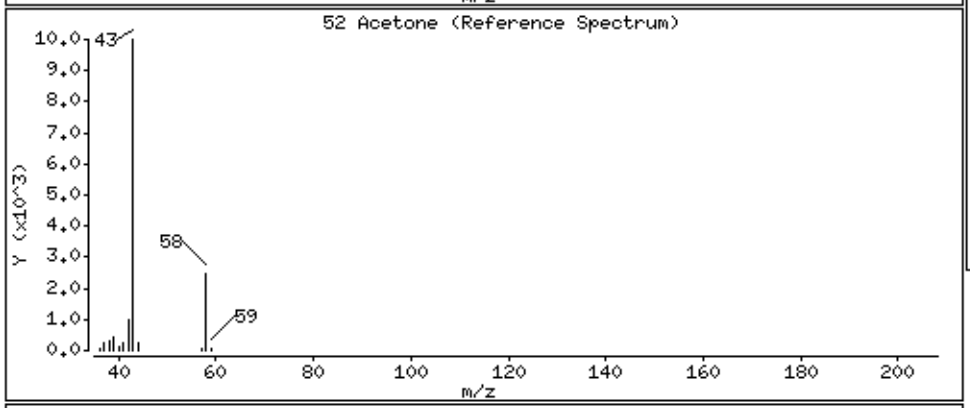
Column diameter: 0.32

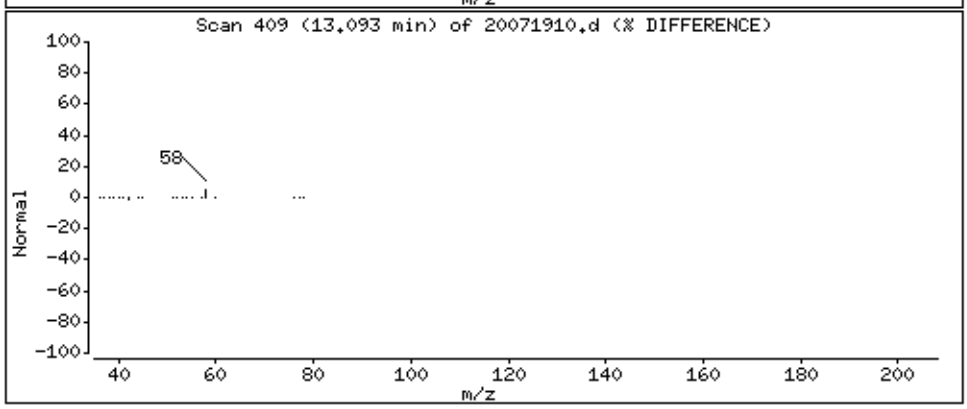
52 Acetone

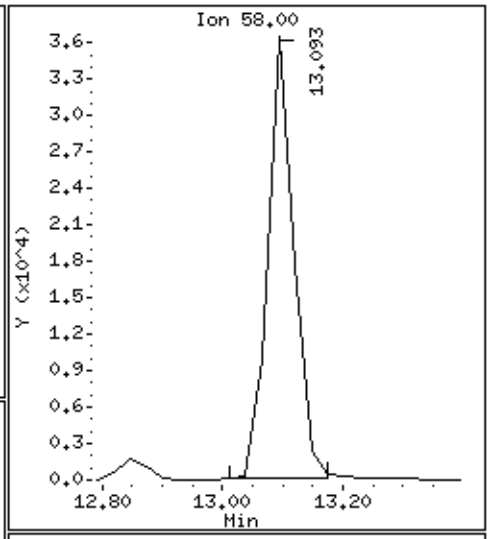
Concentration: 13.269 PPBV

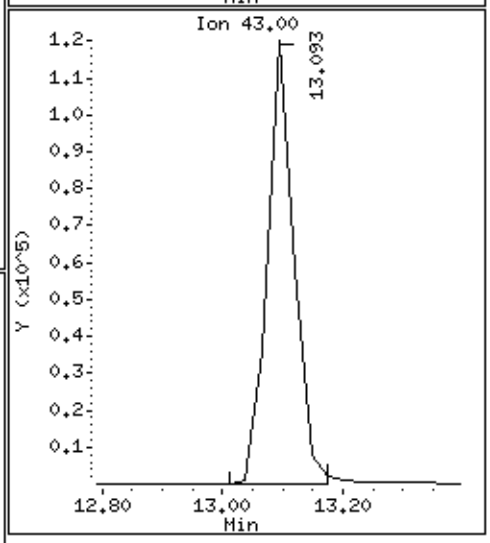












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

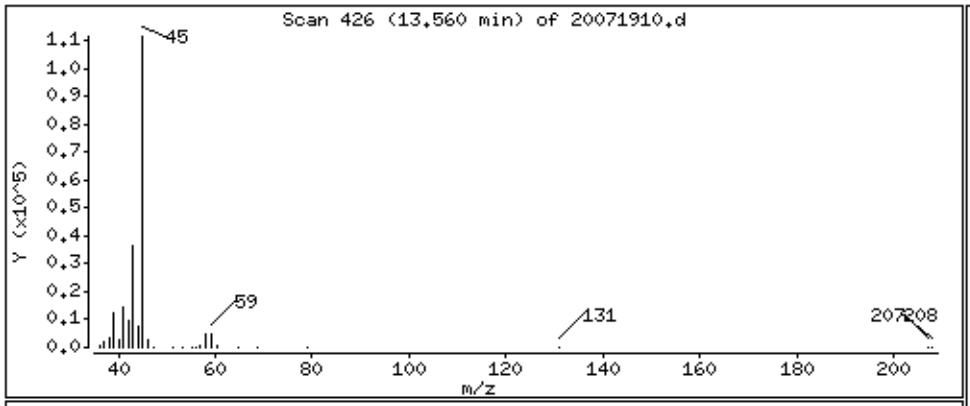
Operator: ef

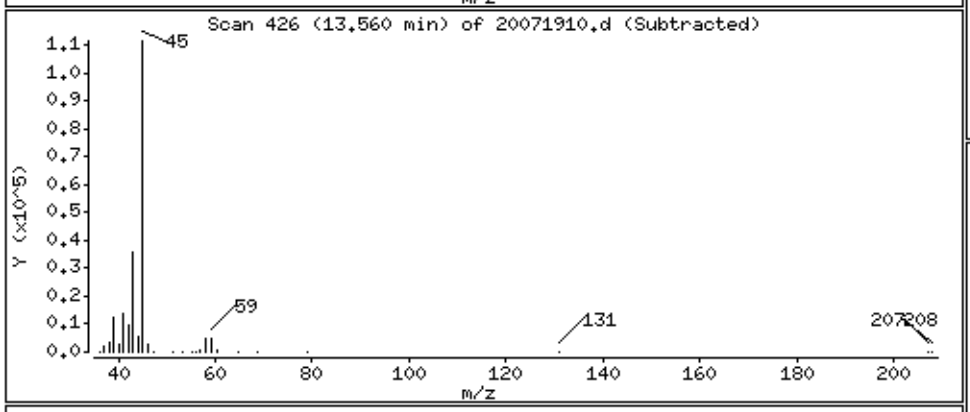
Column phase: RTX-624

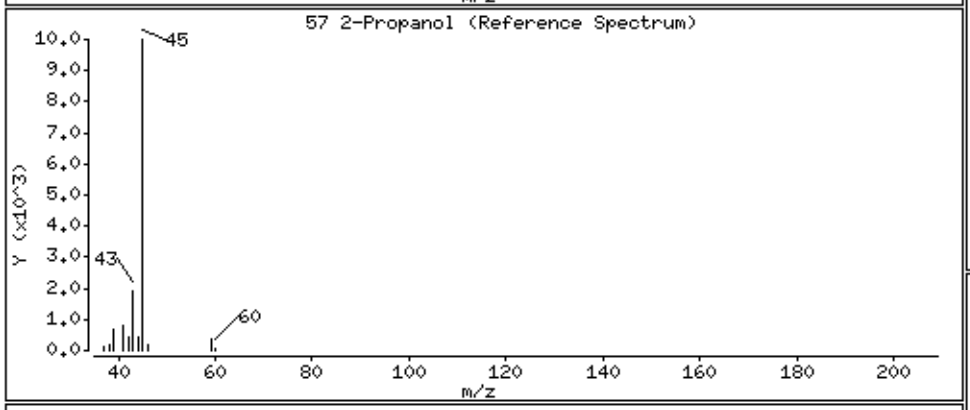
Column diameter: 0.32

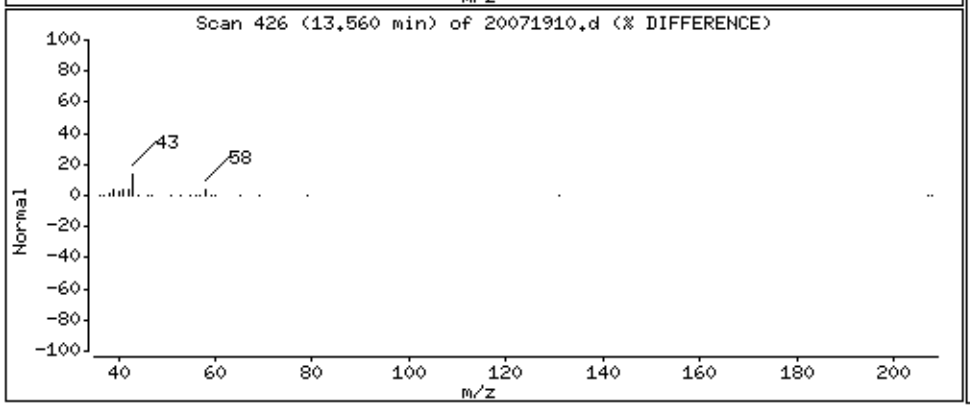
57 2-Propanol

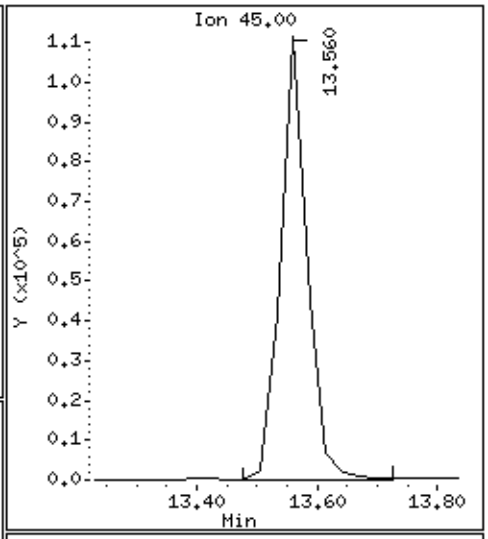
Concentration: 13.549 PPBV

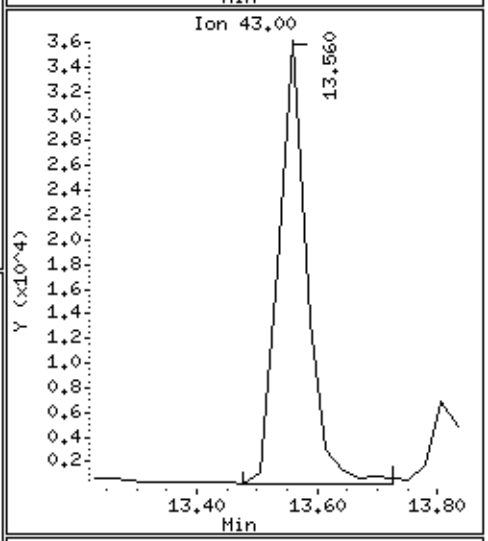


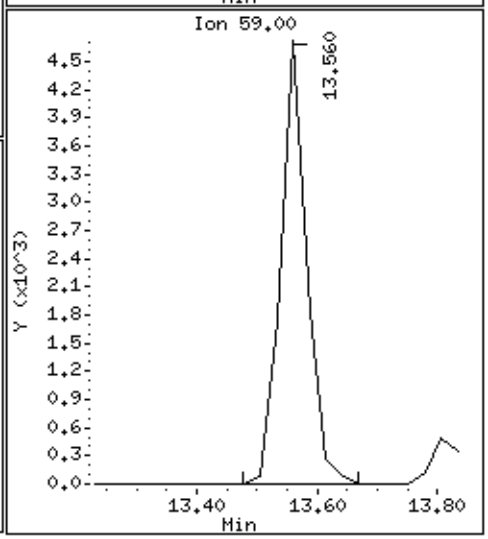












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

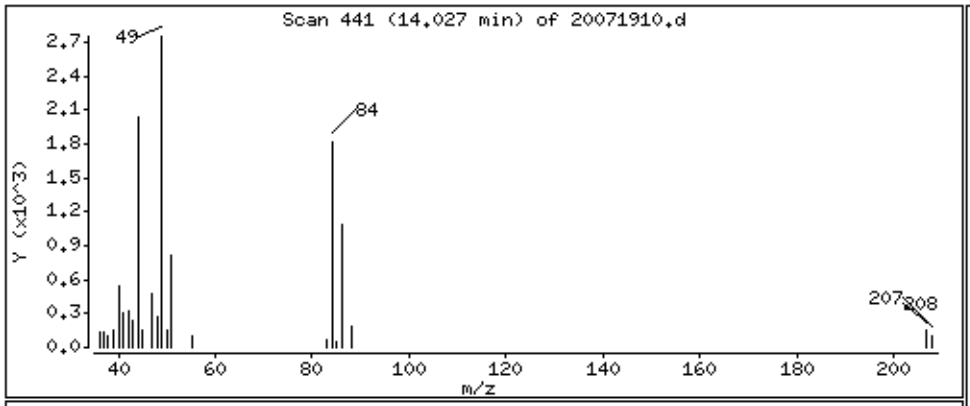
Operator: ef

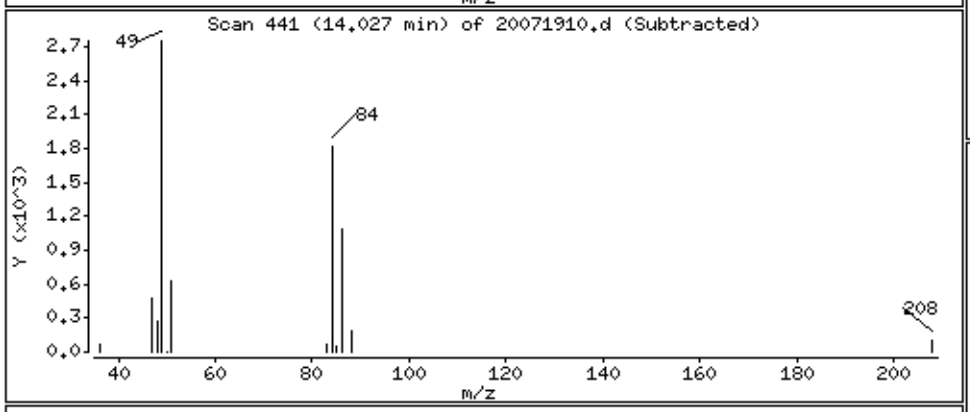
Column phase: RTX-624

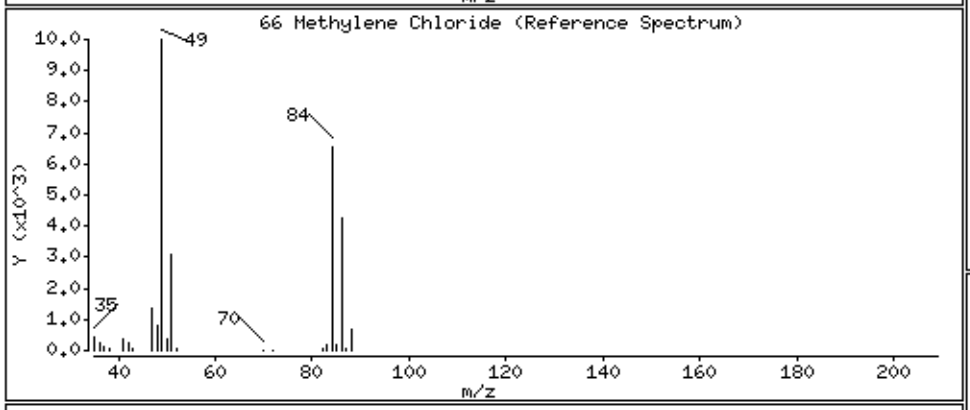
Column diameter: 0.32

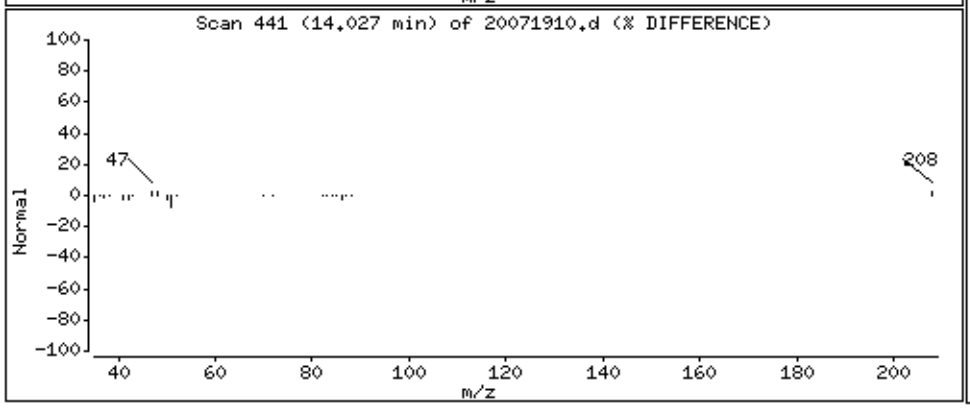
66 Methylene Chloride

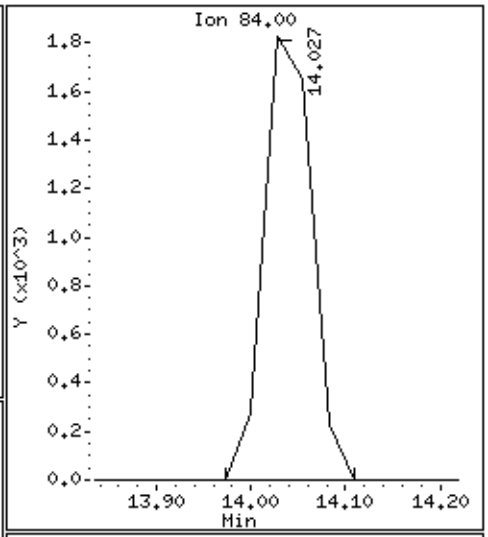
Concentration: 0.3887 PPBV

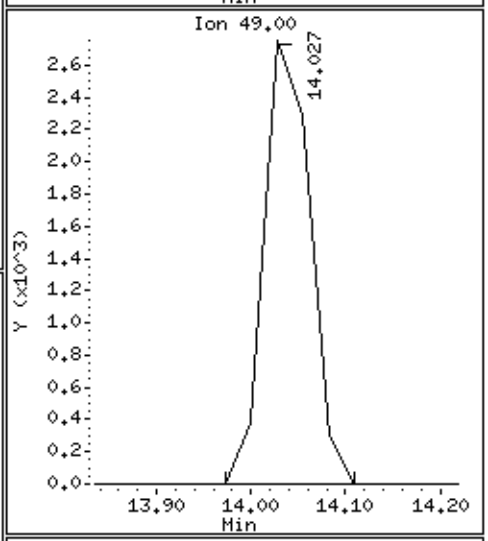


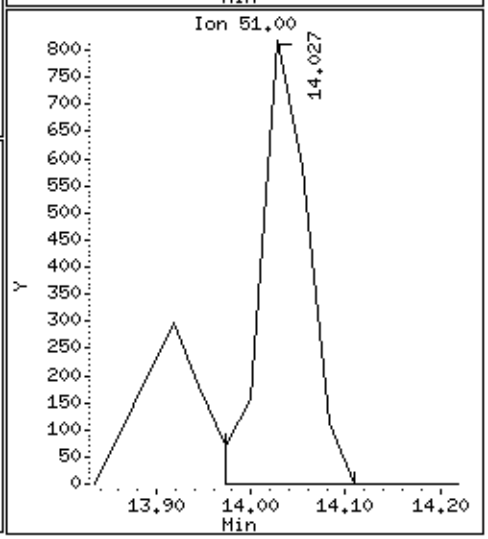












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

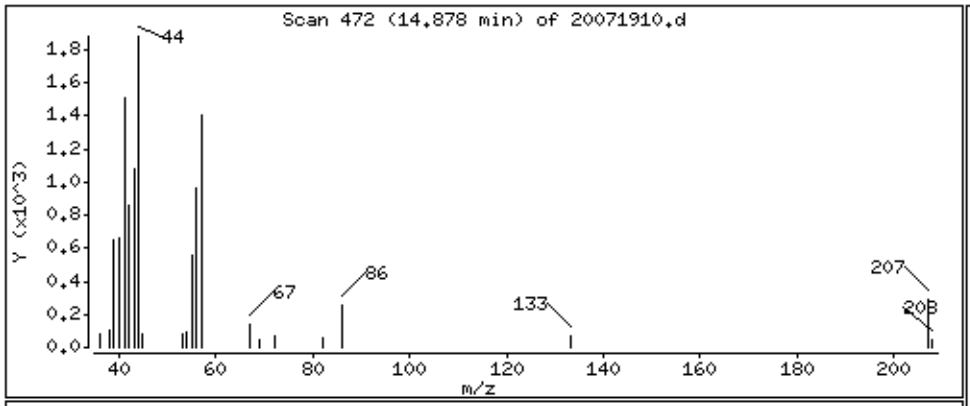
Operator: ef

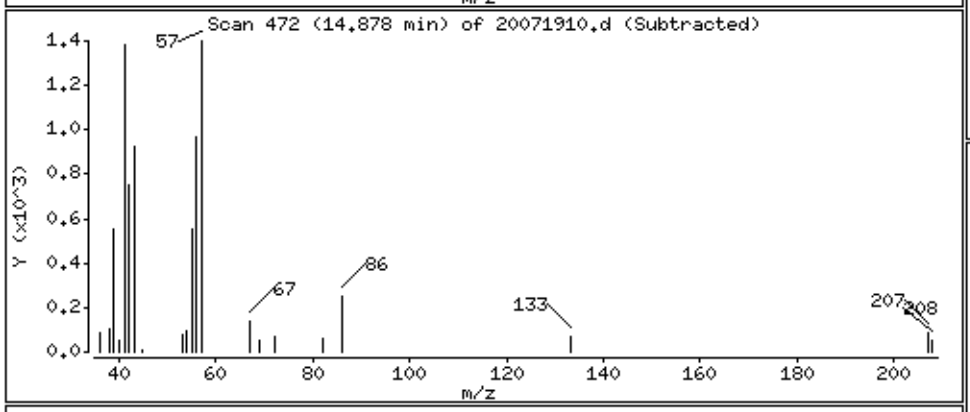
Column phase: RTX-624

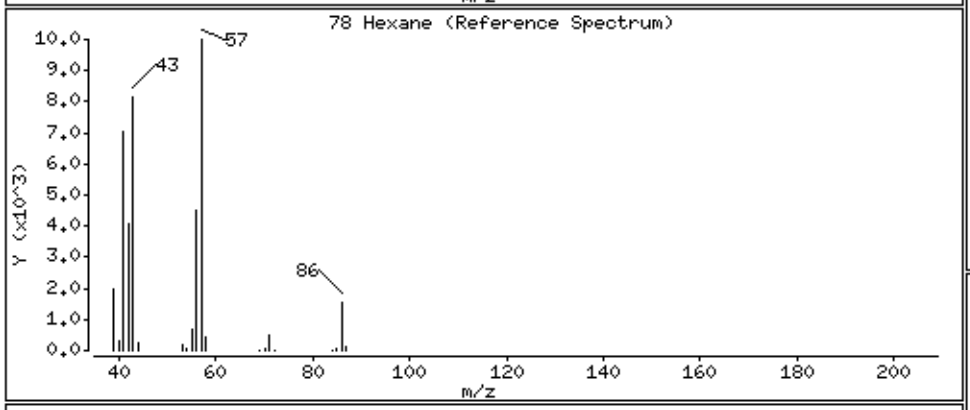
Column diameter: 0.32

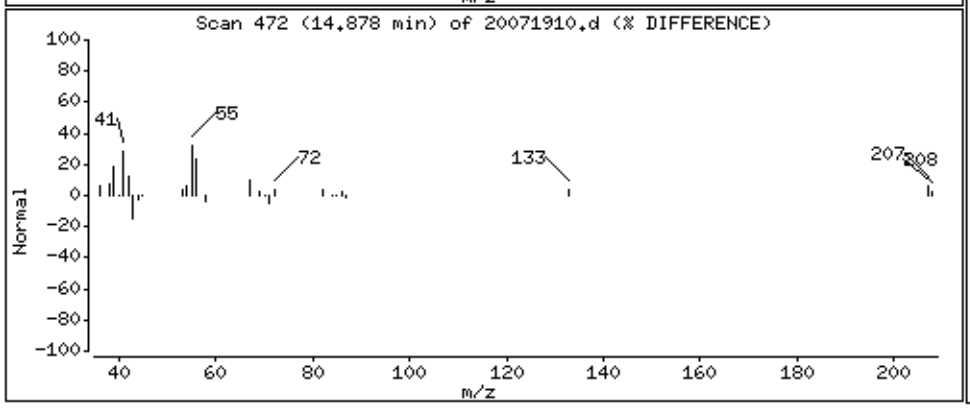
78 Hexane

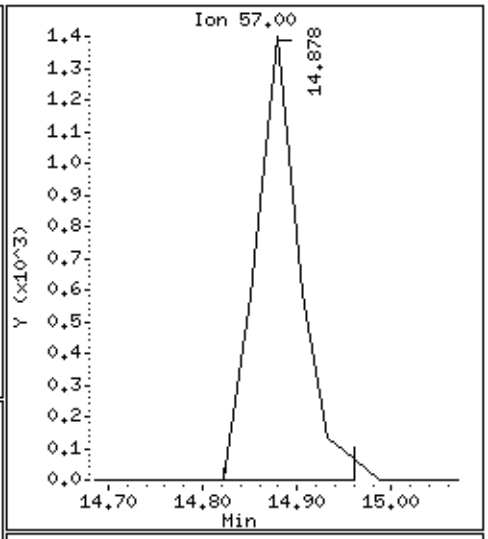
Concentration: 0.1734 PPBV

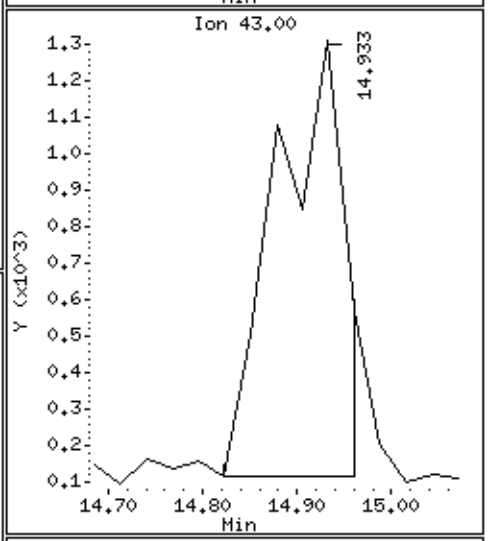


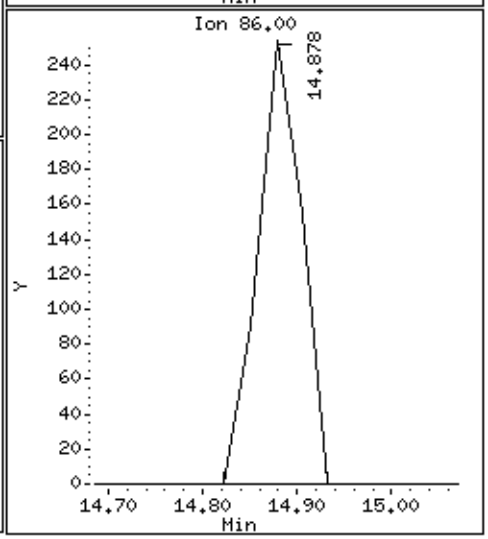












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

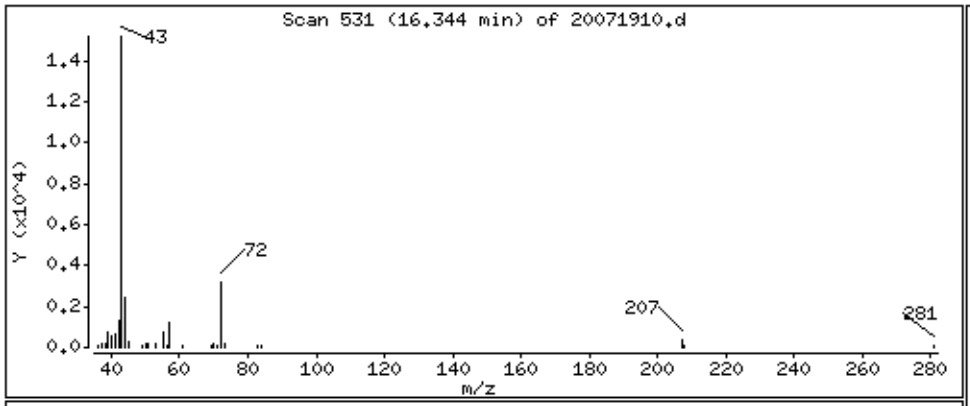
Operator: ef

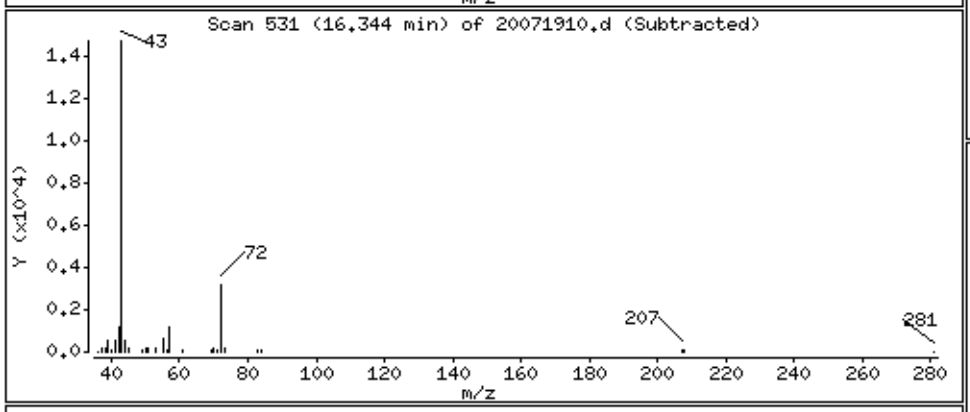
Column phase: RTX-624

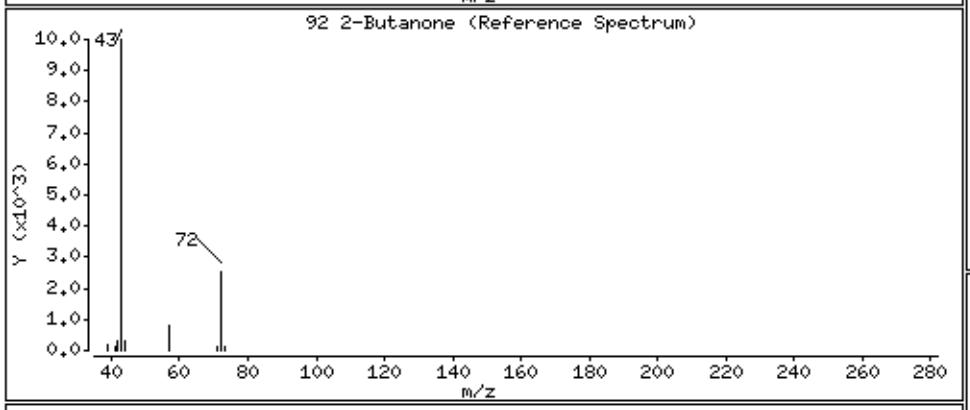
Column diameter: 0.32

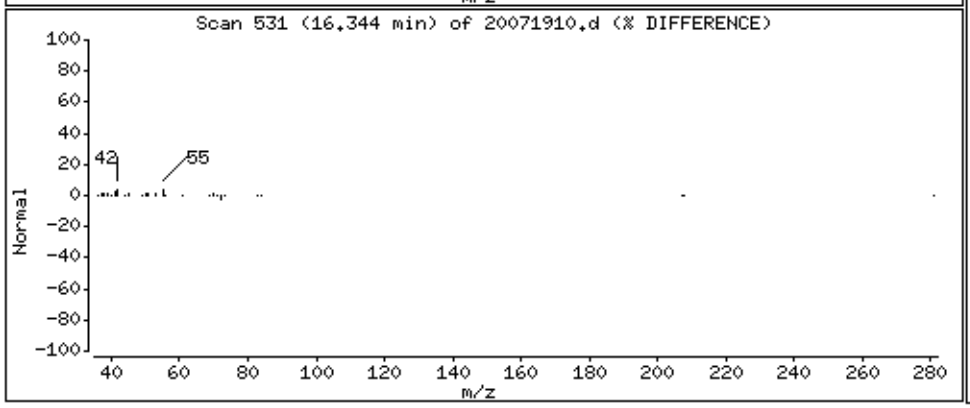
92 2-Butanone

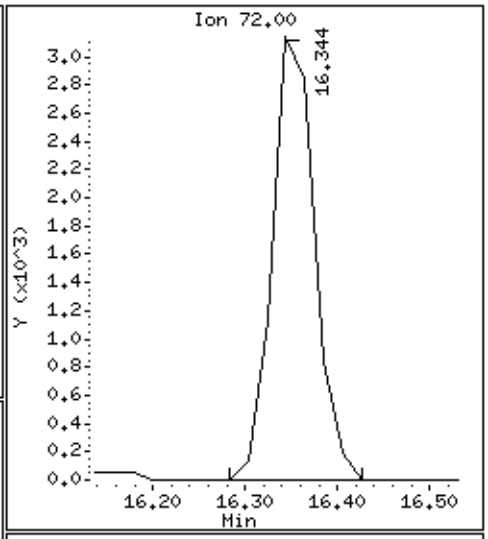
Concentration: 1.226 PPBV

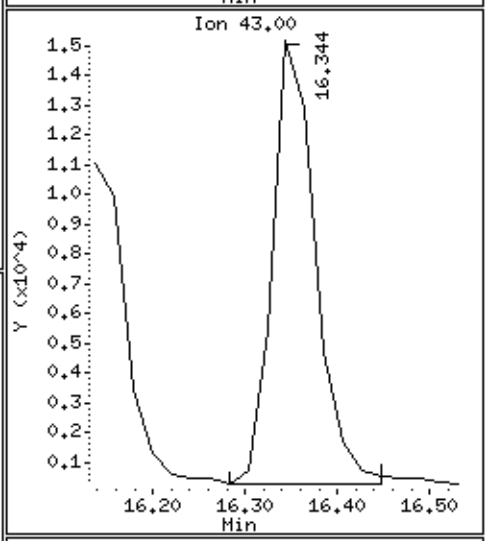


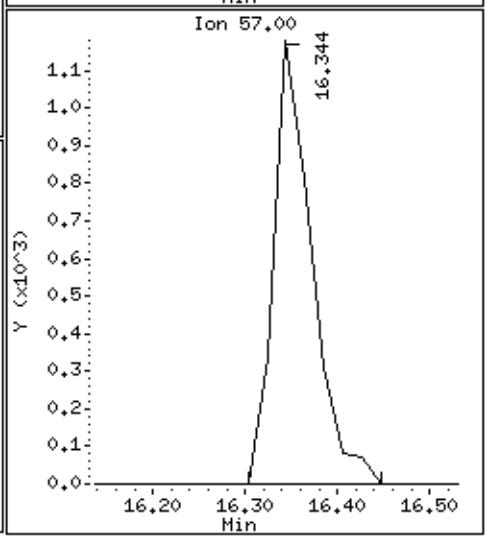












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

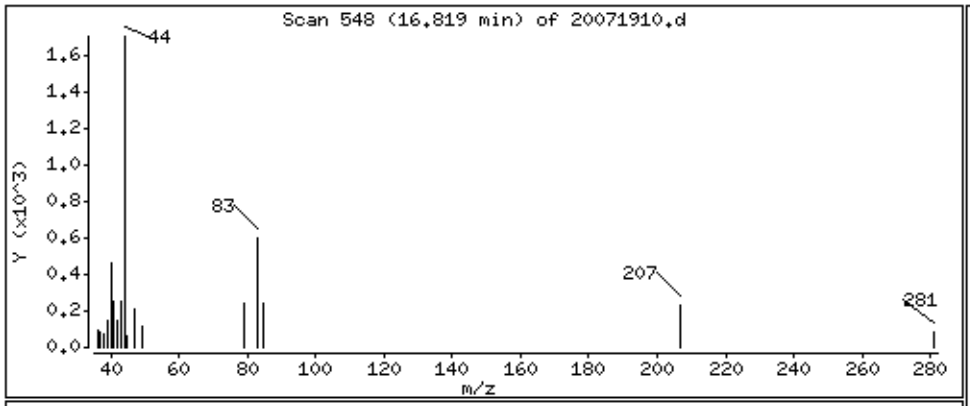
Operator: ef

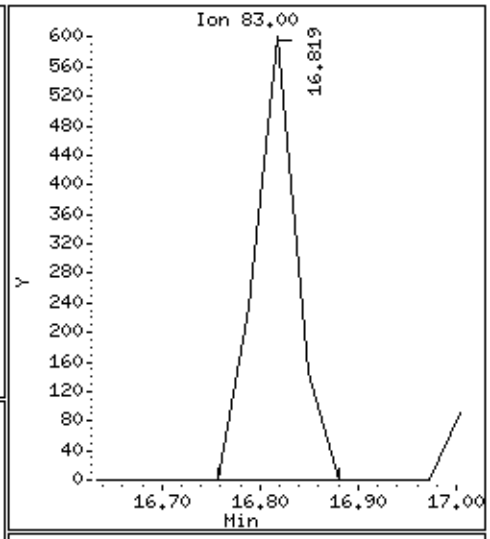
Column phase: RTX-624

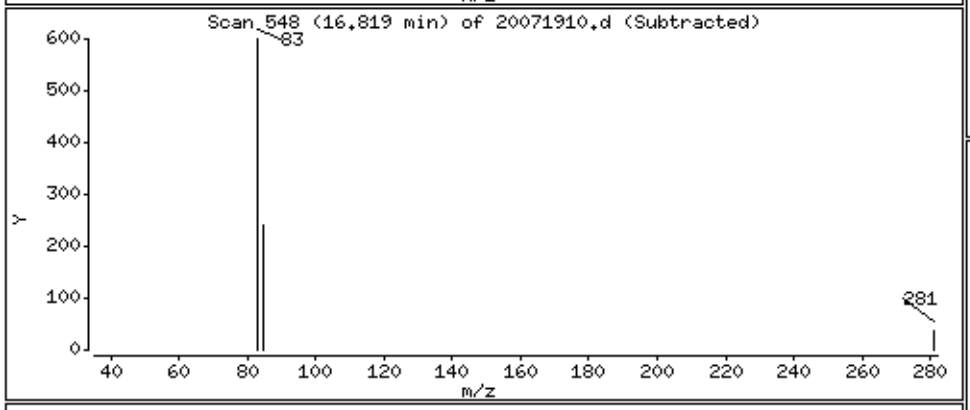
Column diameter: 0.32

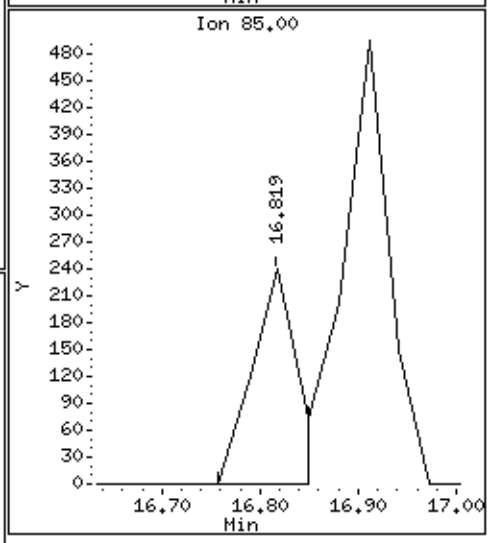
100 Chloroform

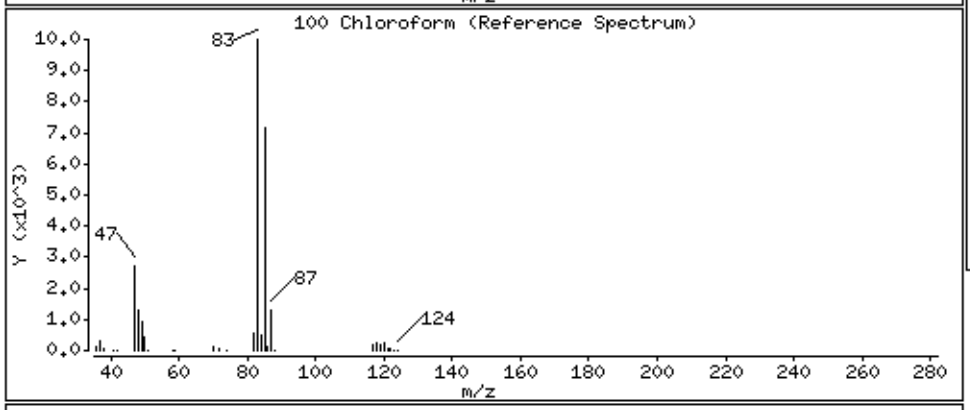
Concentration: 0.04947 PPBV

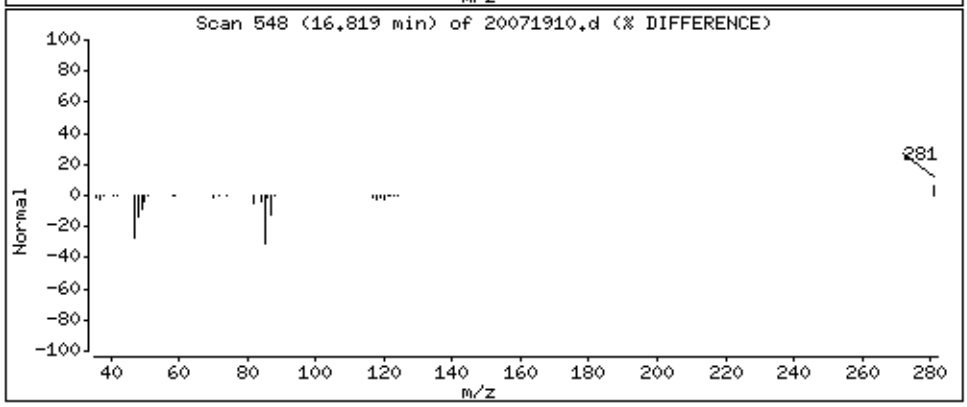












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

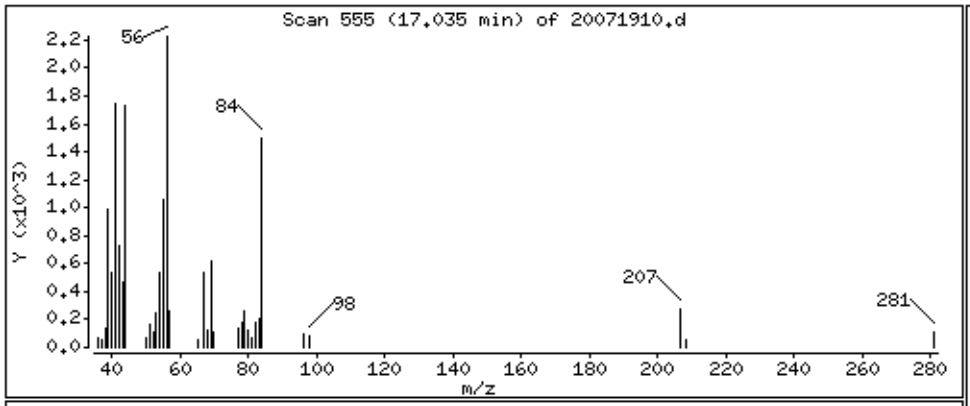
Operator: ef

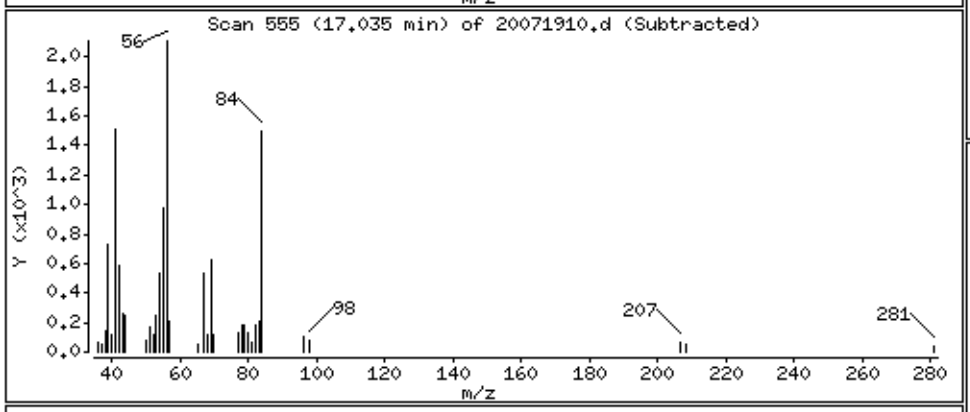
Column phase: RTX-624

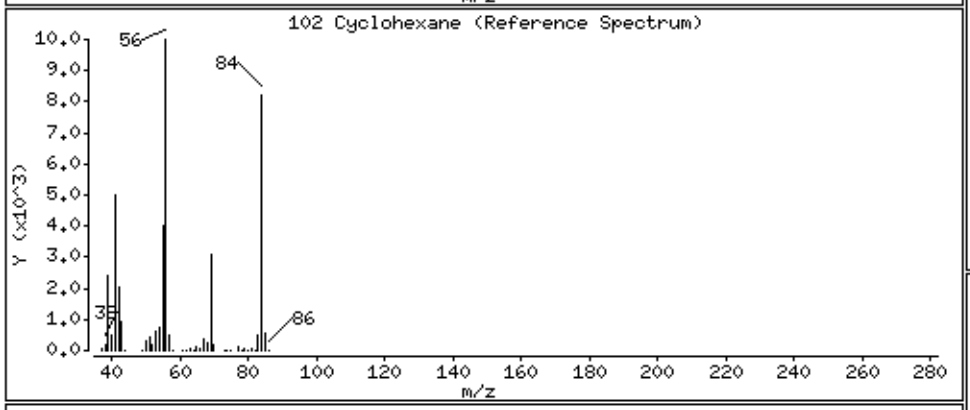
Column diameter: 0.32

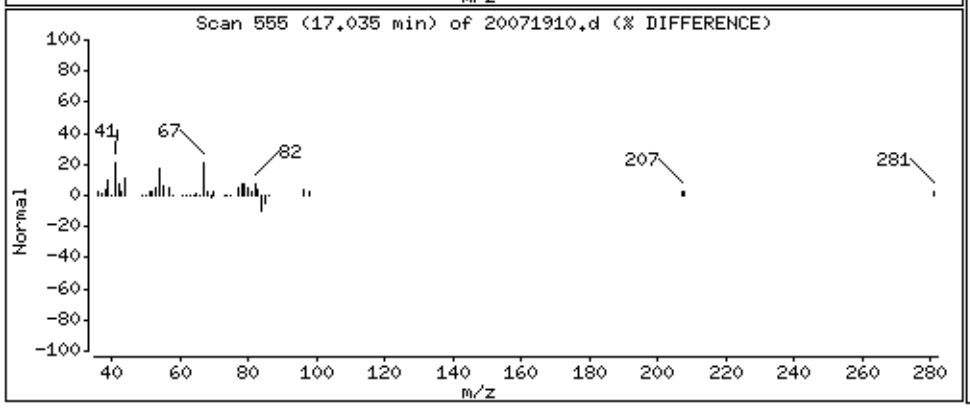
102 Cyclohexane

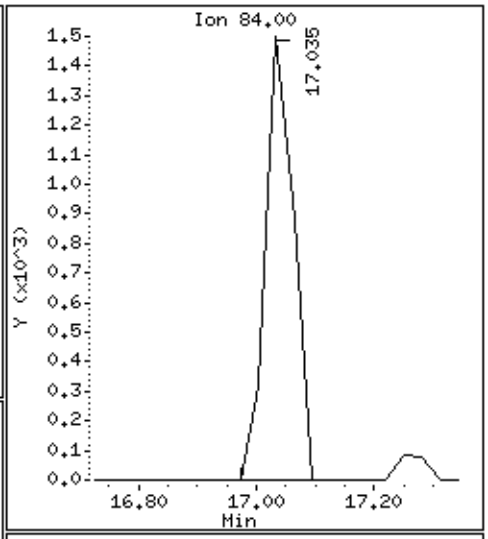
Concentration: 0.1984 PPBV

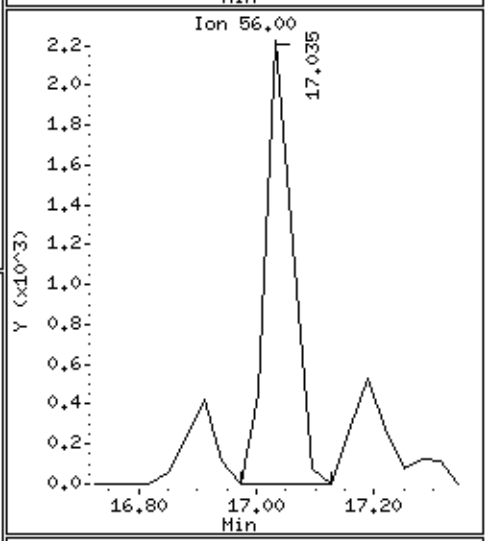


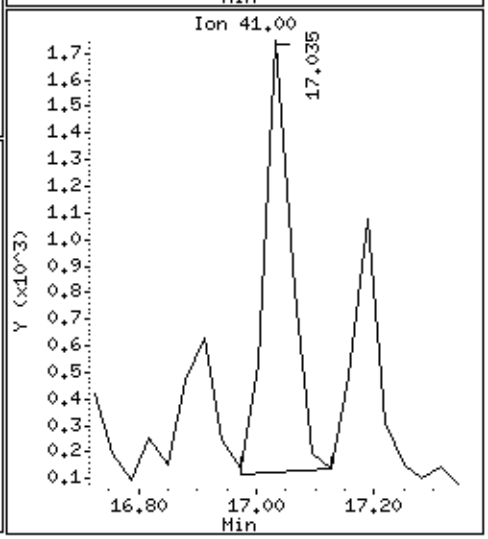












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

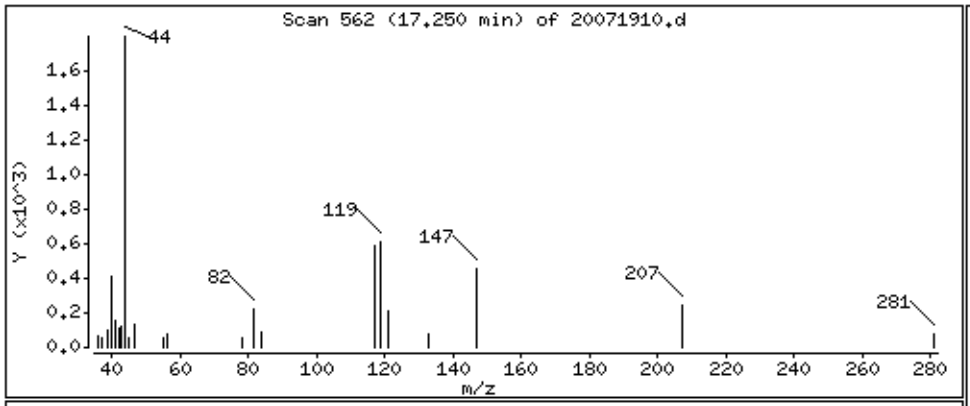
Operator: ef

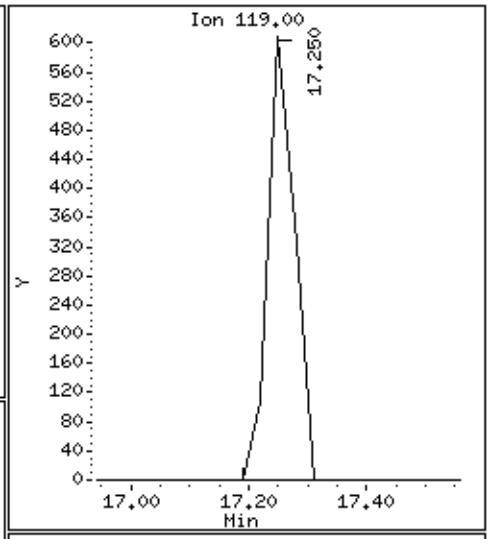
Column phase: RTX-624

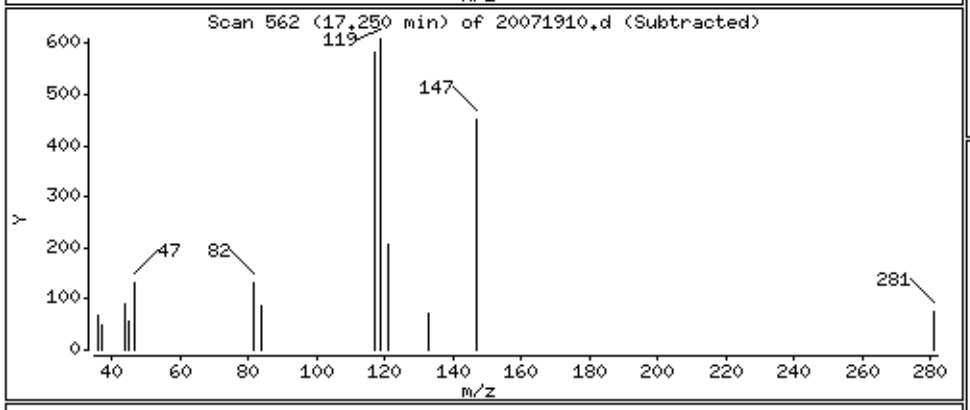
Column diameter: 0.32

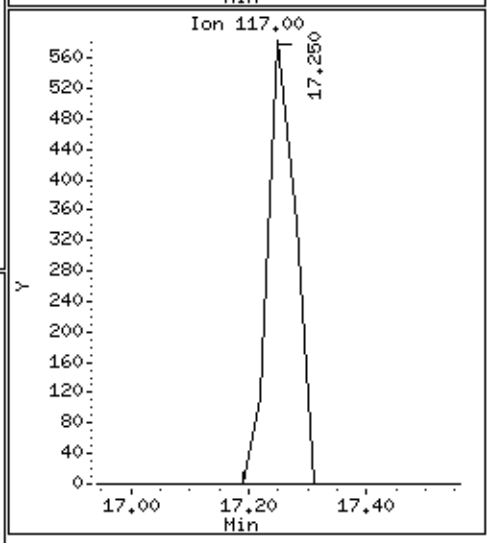
106 Carbon Tetrachloride

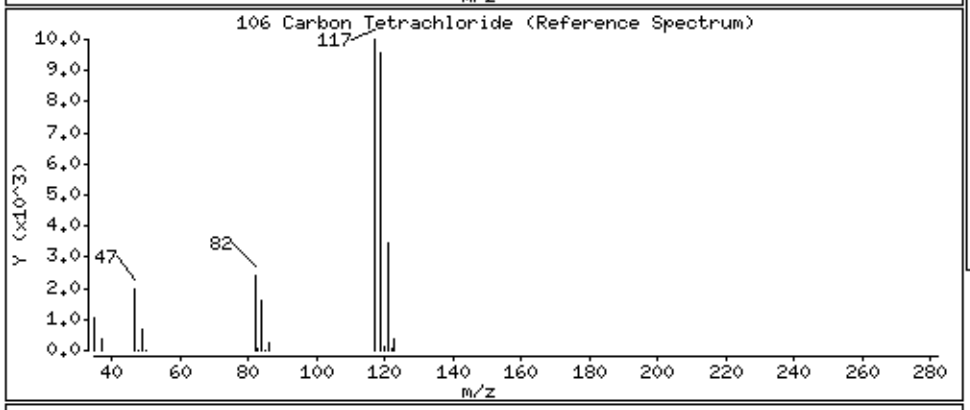
Concentration: 0.06076 PPBV

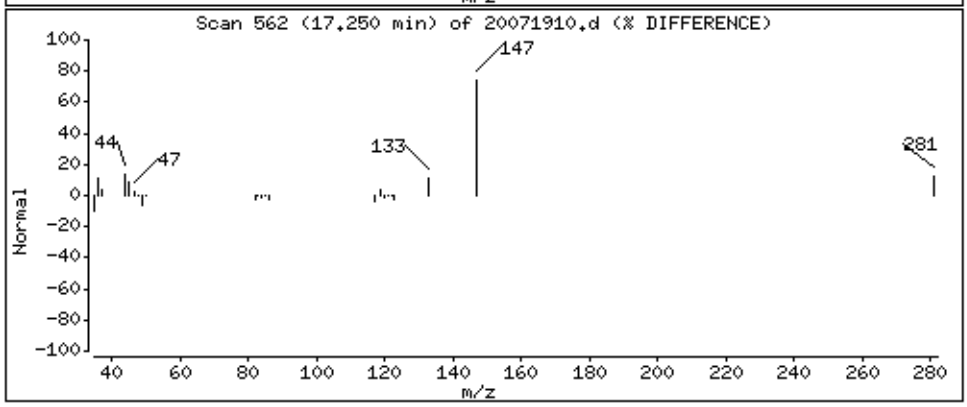












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

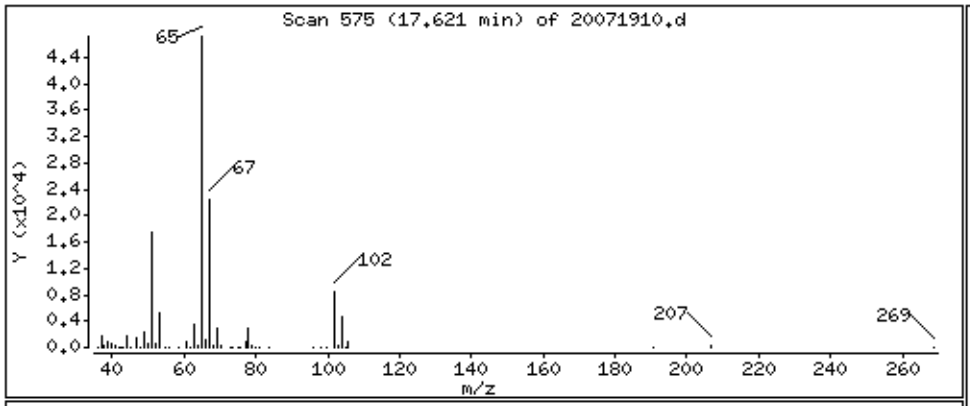
Operator: ef

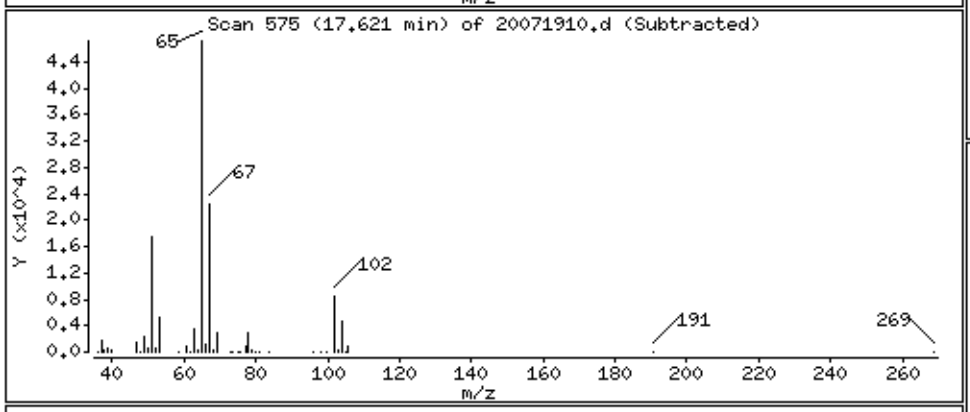
Column phase: RTX-624

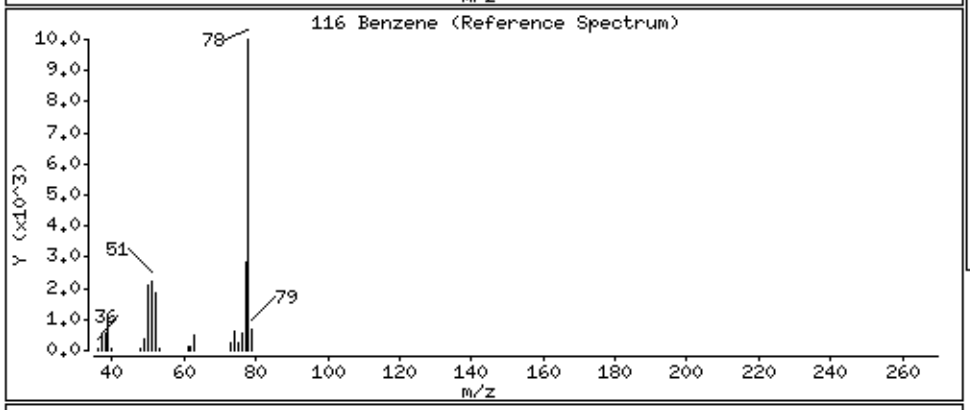
Column diameter: 0.32

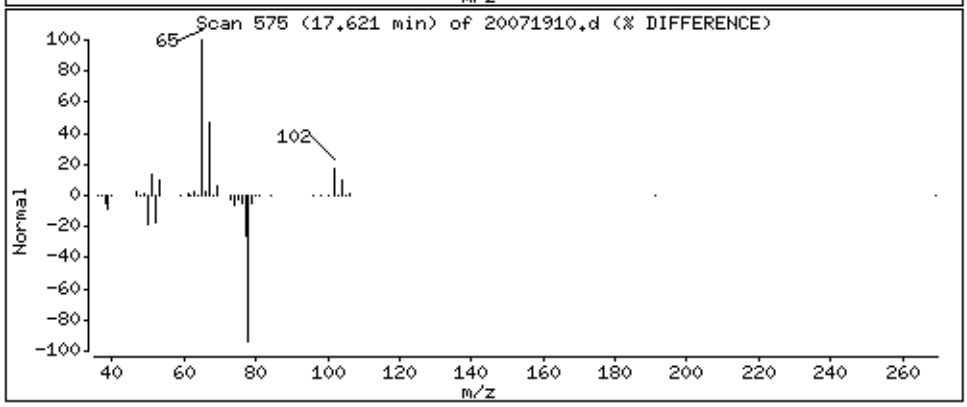
116 Benzene

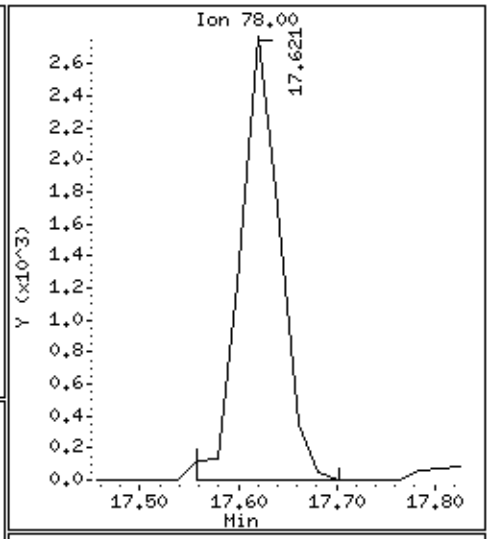
Concentration: 0.1766 PPBV

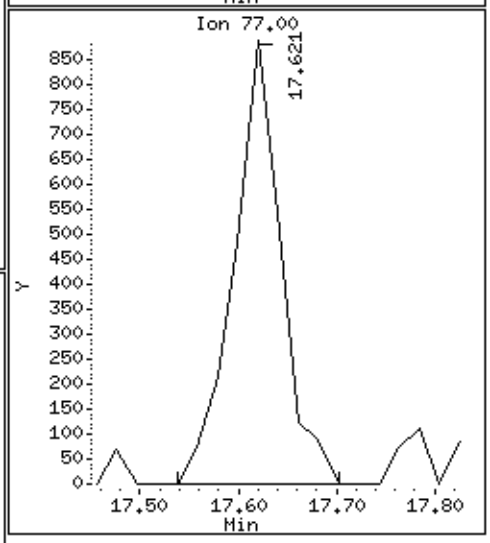












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

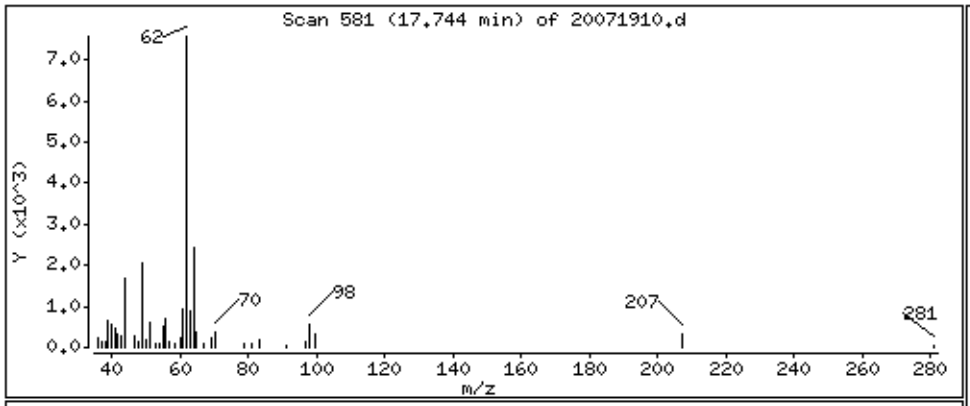
Operator: ef

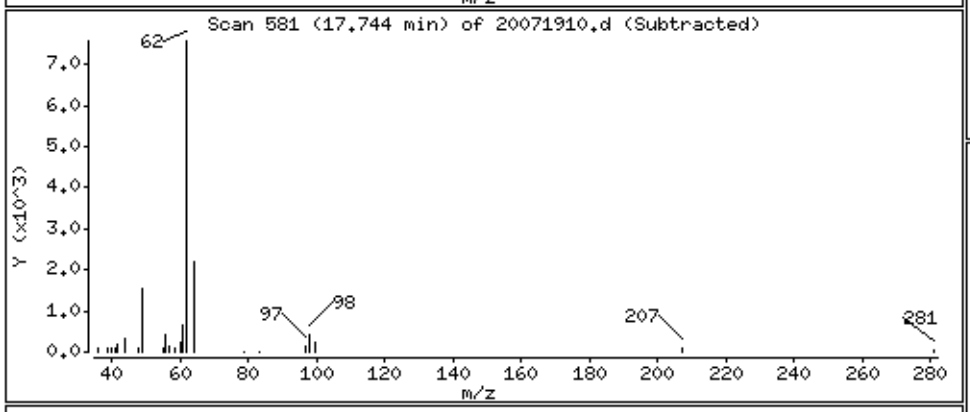
Column phase: RTX-624

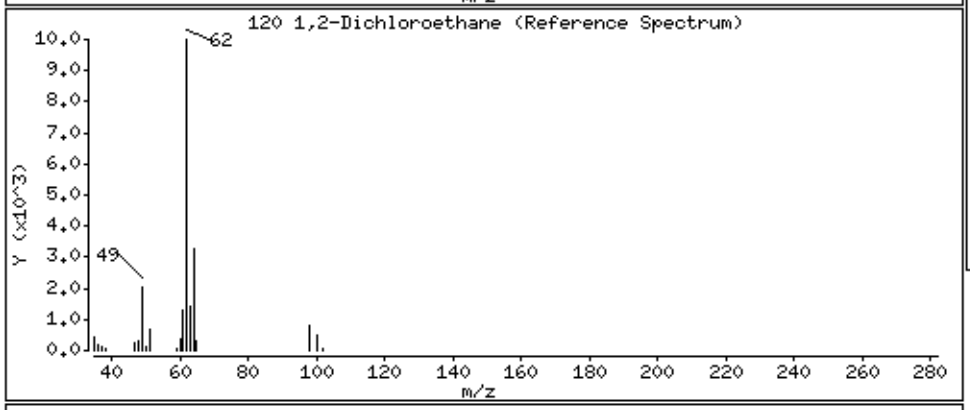
Column diameter: 0.32

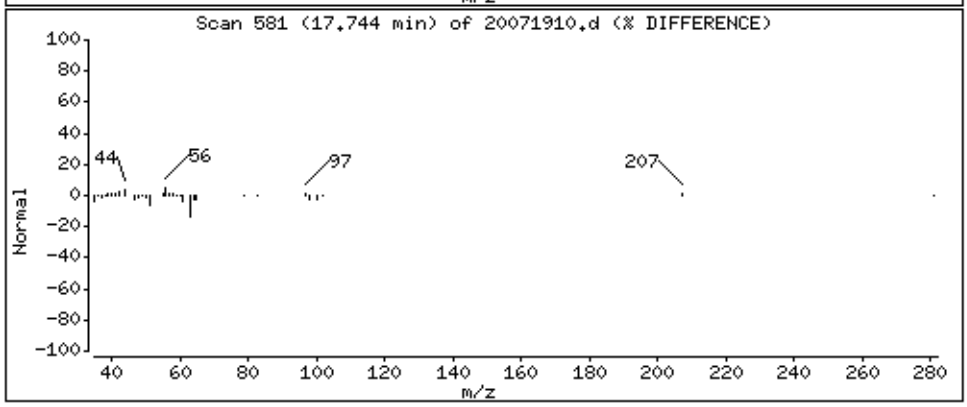
120 1,2-Dichloroethane

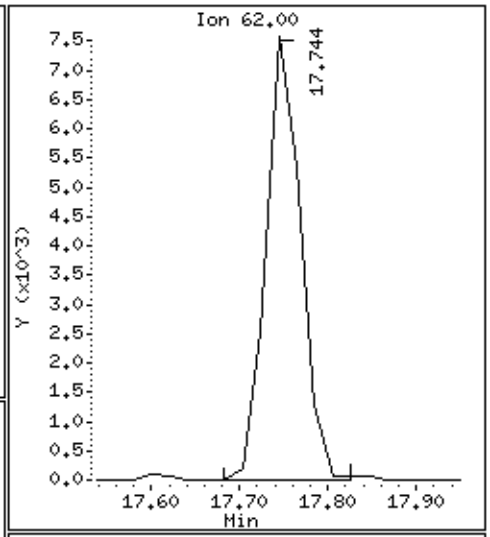
Concentration: 1.077 PPBV

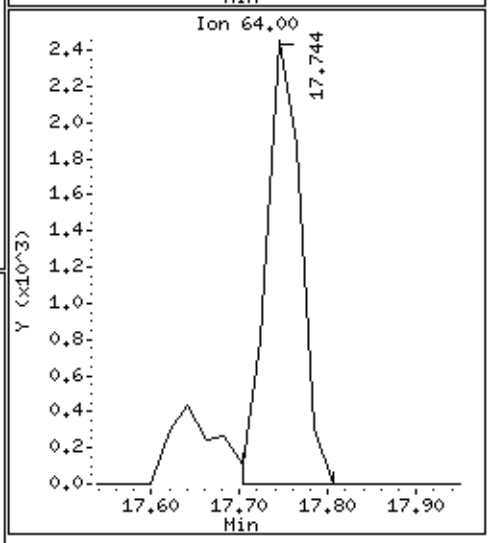












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

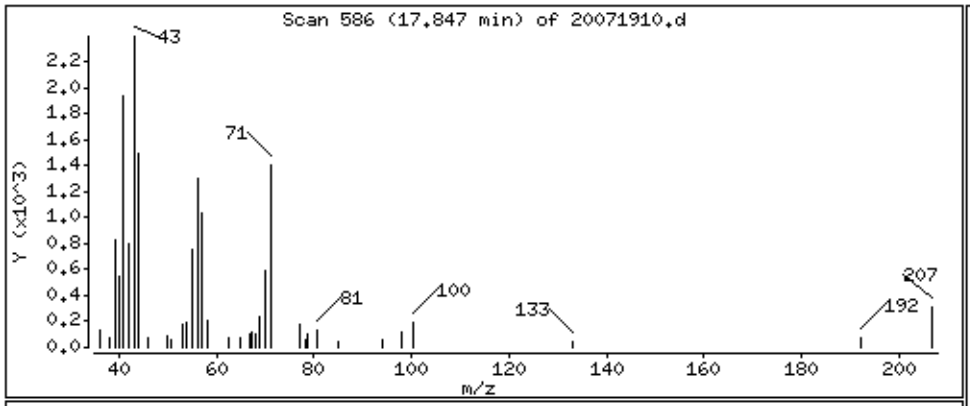
Operator: ef

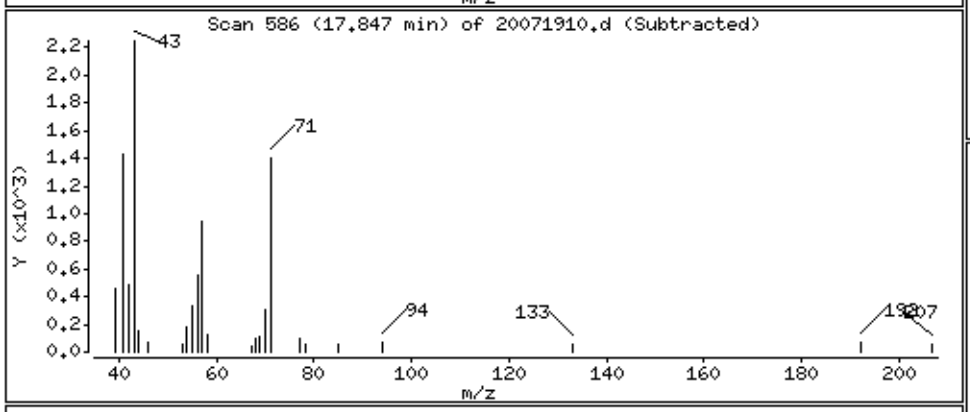
Column phase: RTX-624

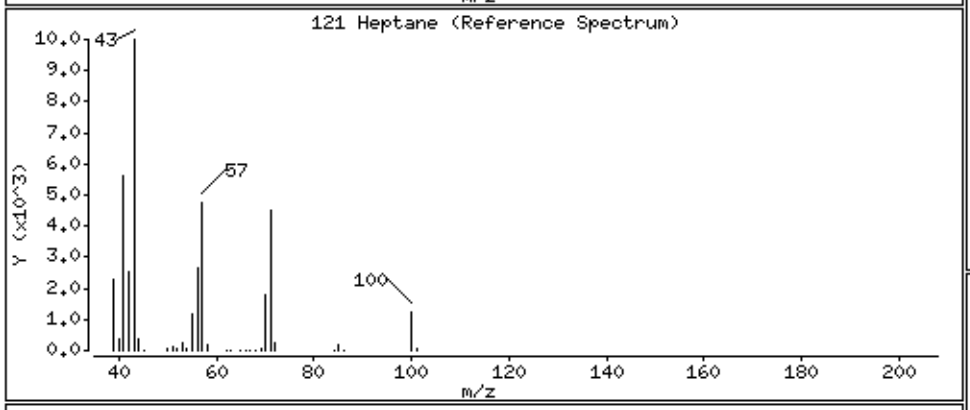
Column diameter: 0.32

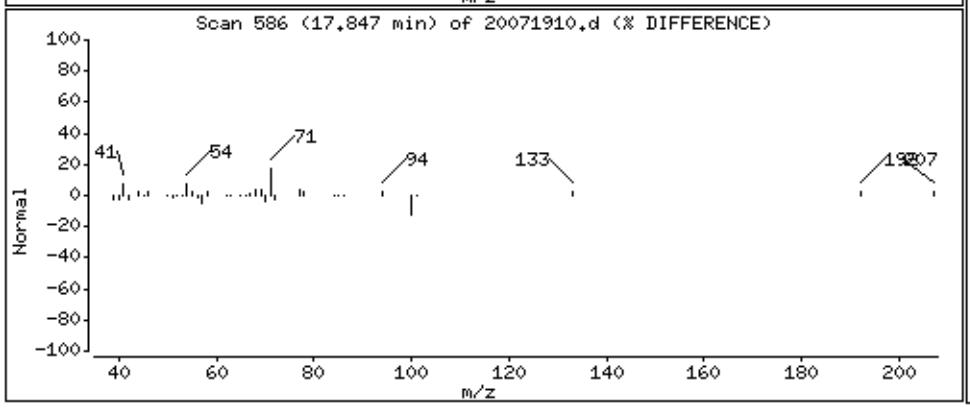
121 Heptane

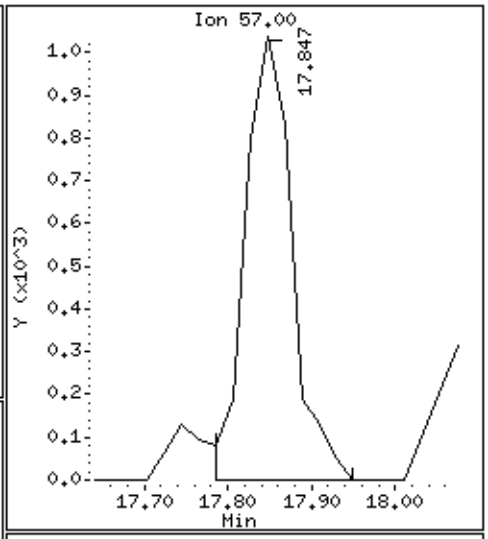
Concentration: 0.3365 PPBV

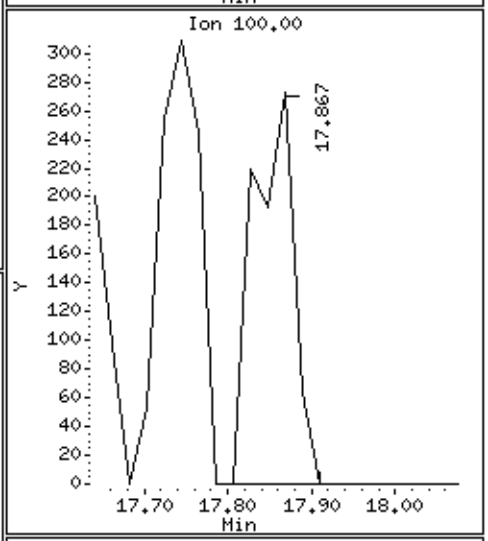


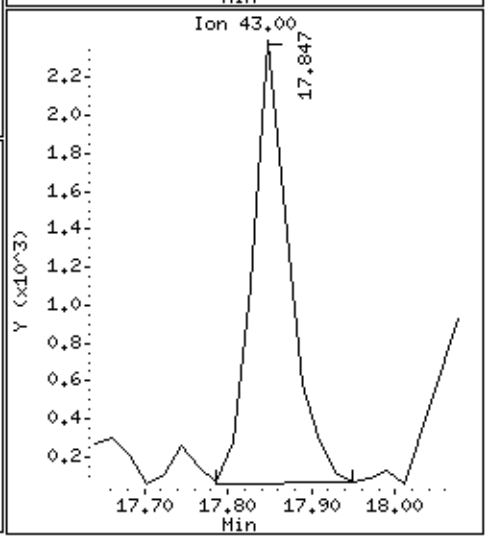












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

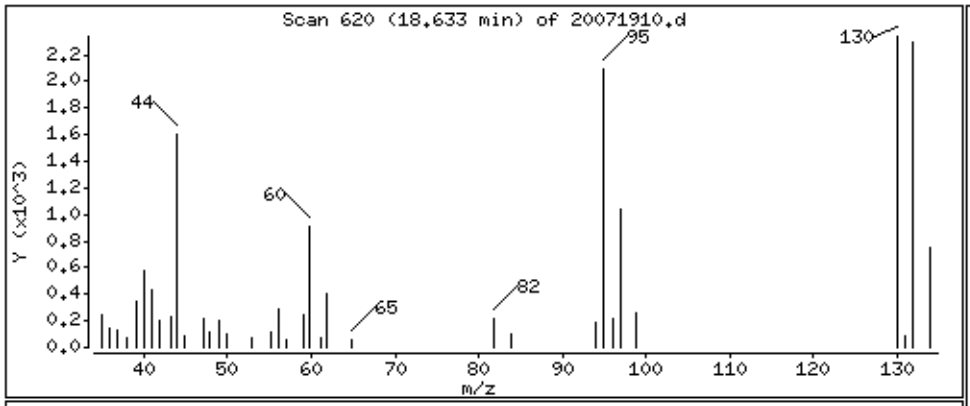
Operator: ef

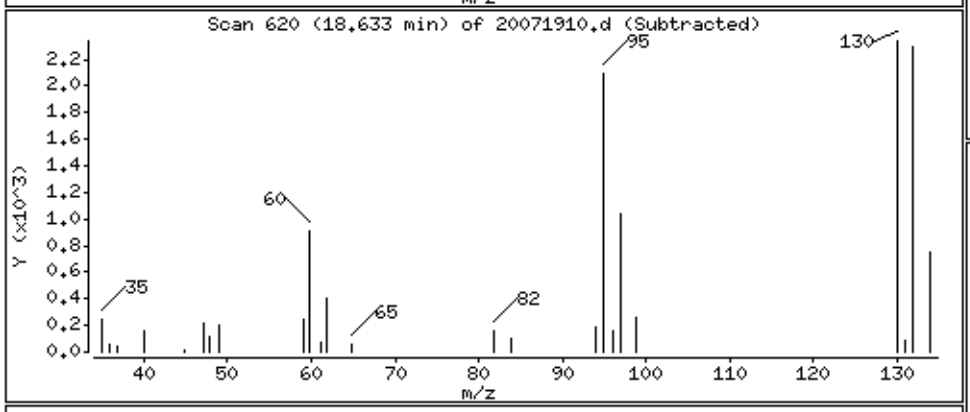
Column phase: RTX-624

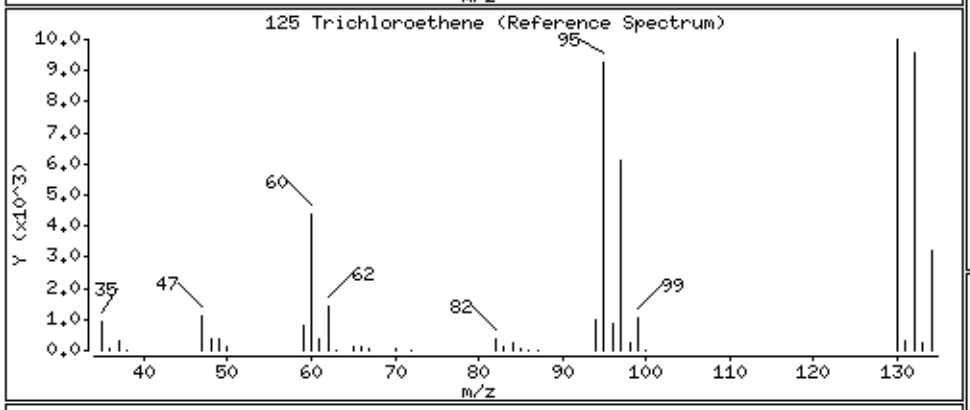
Column diameter: 0.32

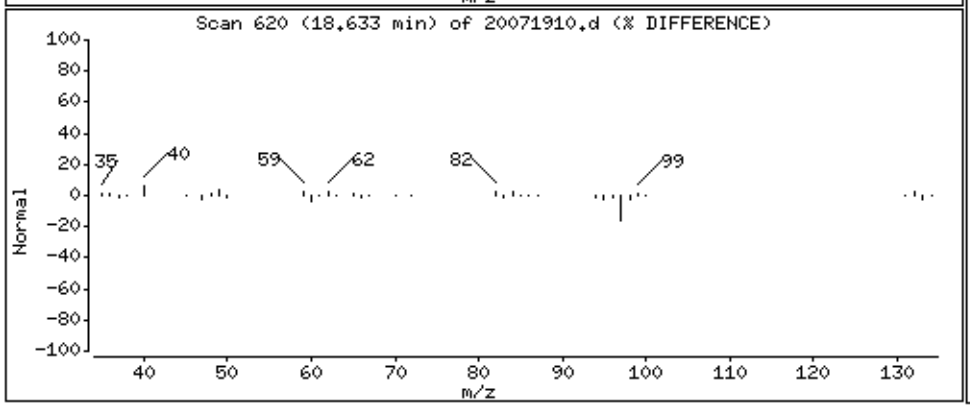
125 Trichloroethene

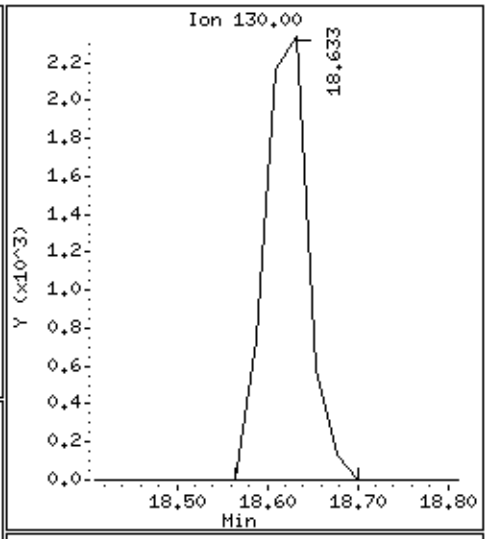
Concentration: 0.3932 PPBV

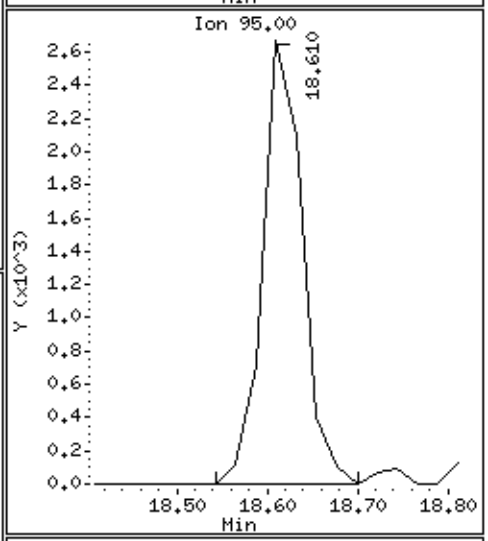


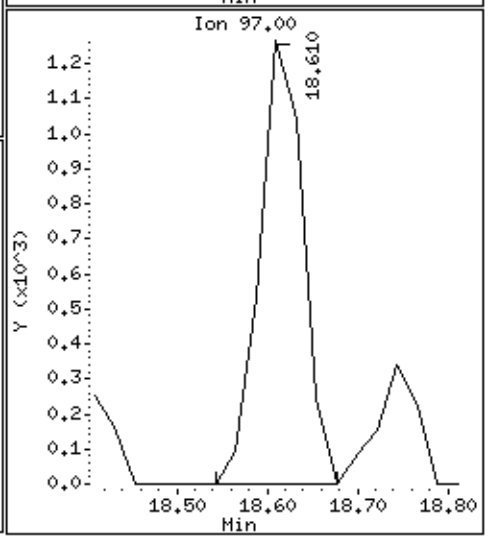












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

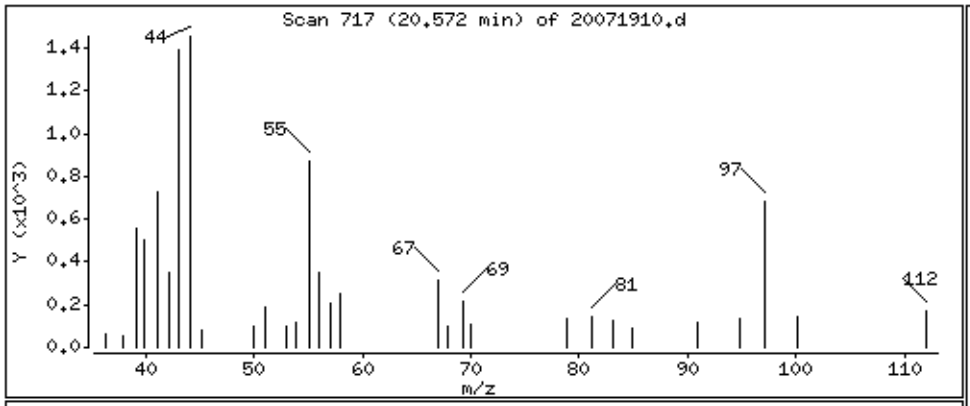
Operator: ef

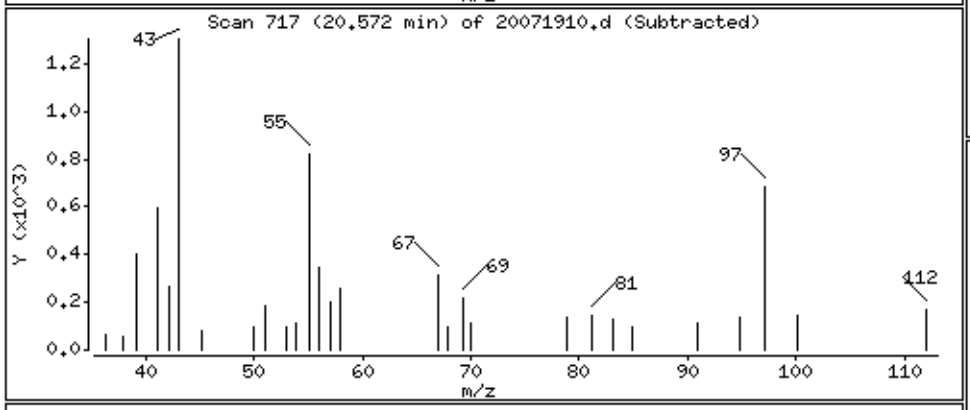
Column phase: RTX-624

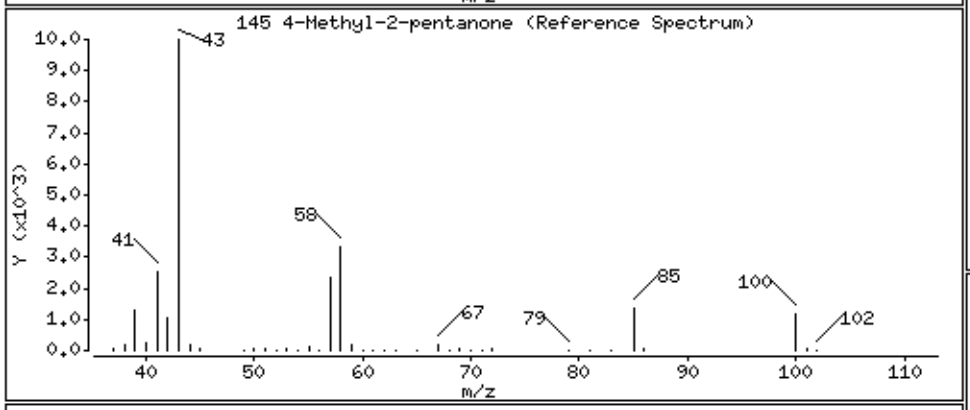
Column diameter: 0.32

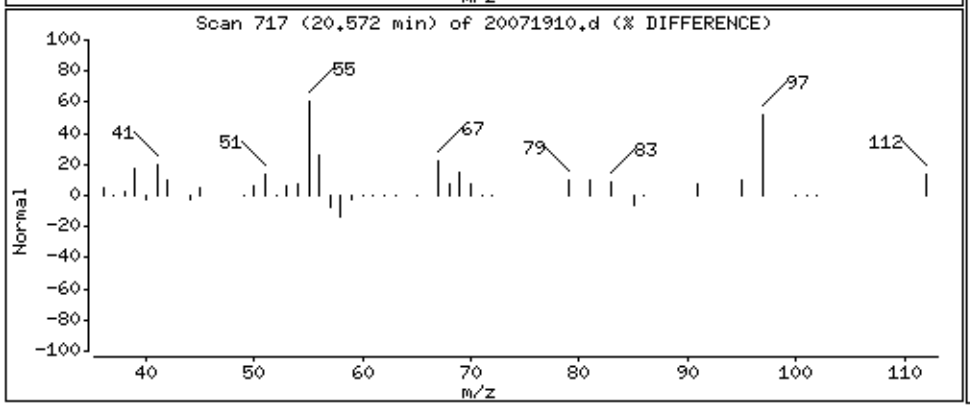
145 4-Methyl-2-pentanone

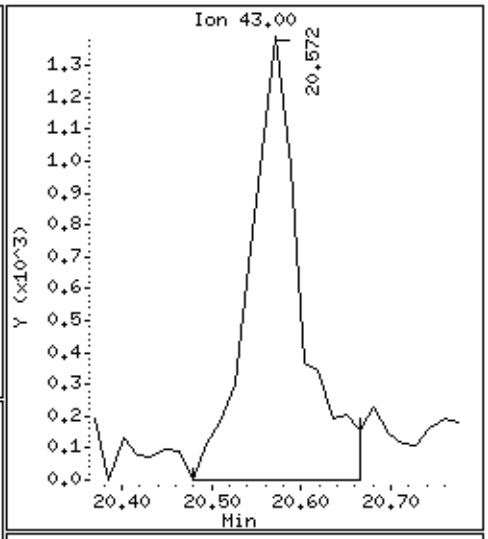
Concentration: 0.1827 PPBV

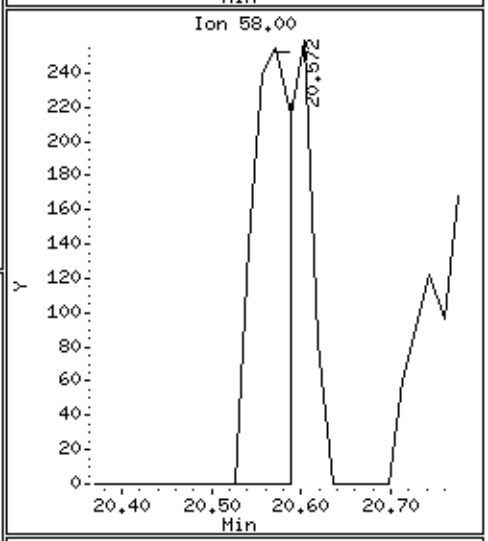


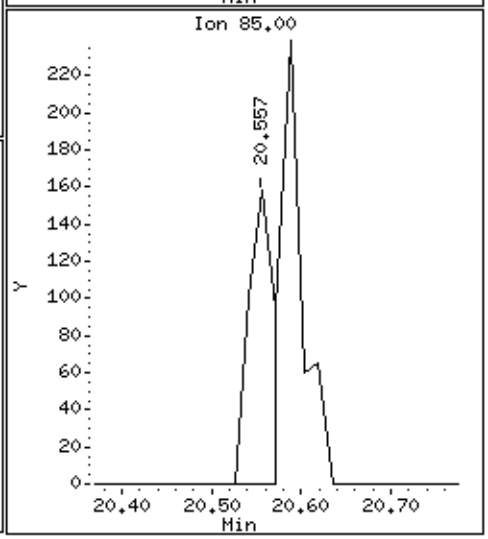












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

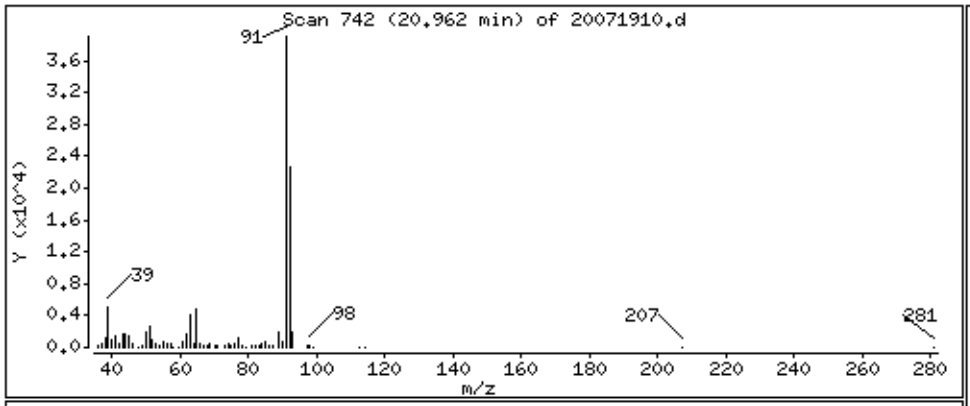
Operator: ef

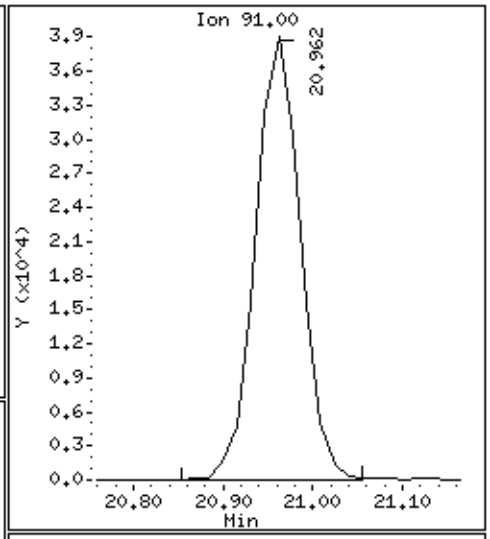
Column phase: RTX-624

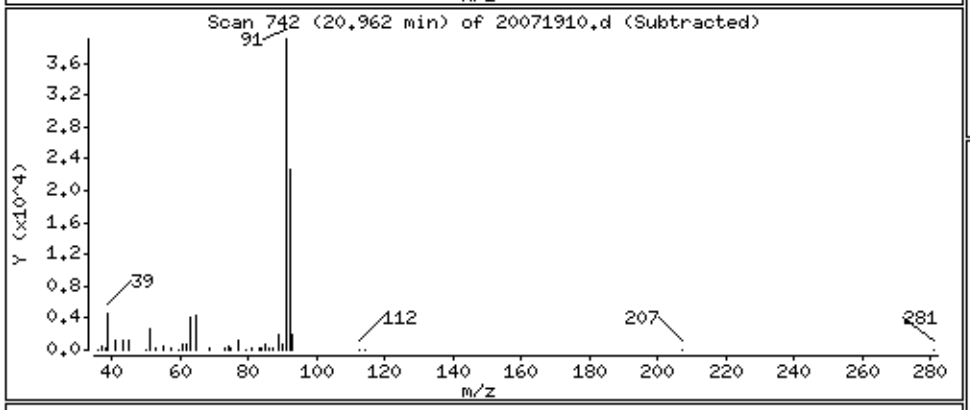
Column diameter: 0.32

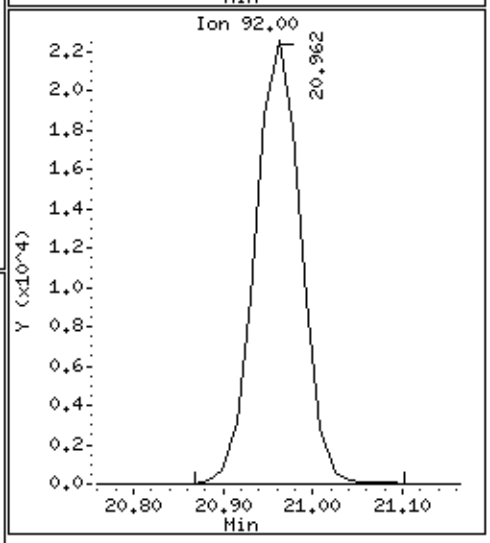
147 Toluene

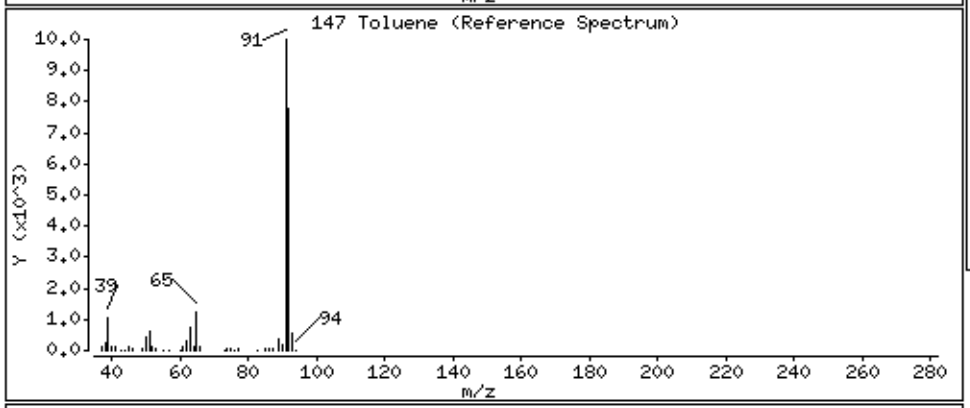
Concentration: 2.864 PPBV

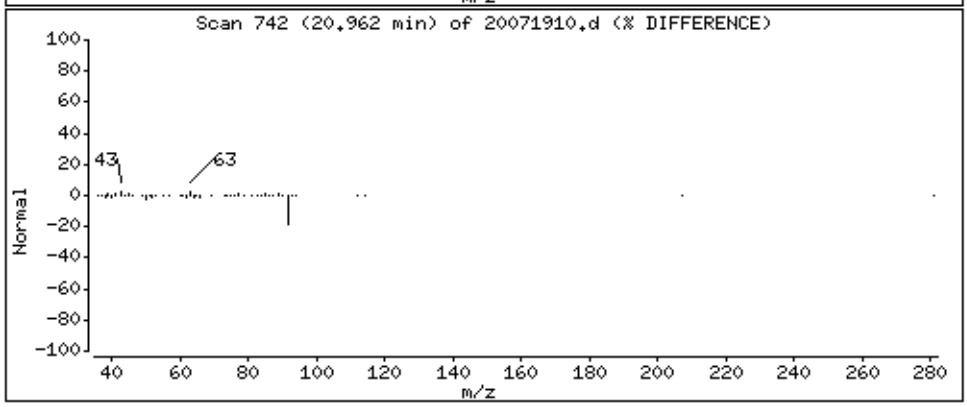












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

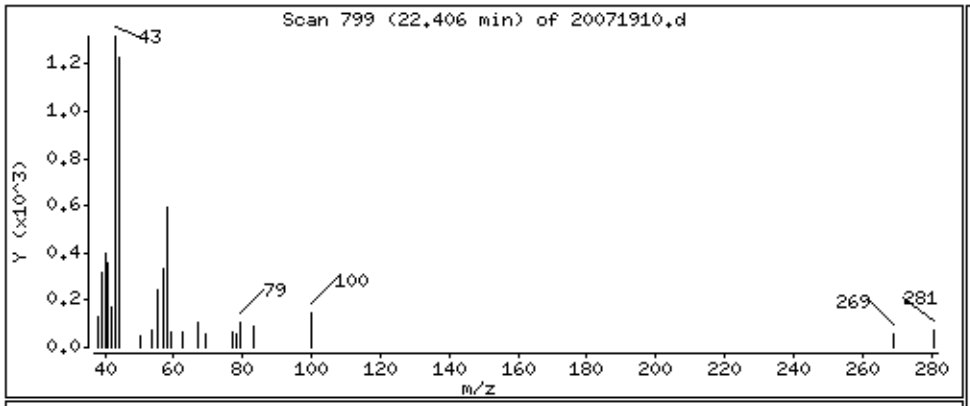
Operator: ef

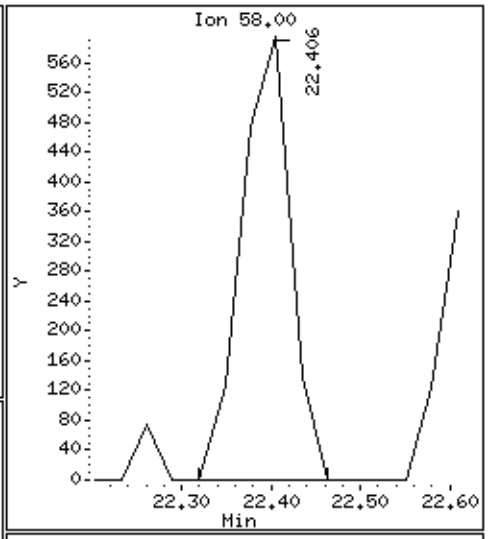
Column phase: RTX-624

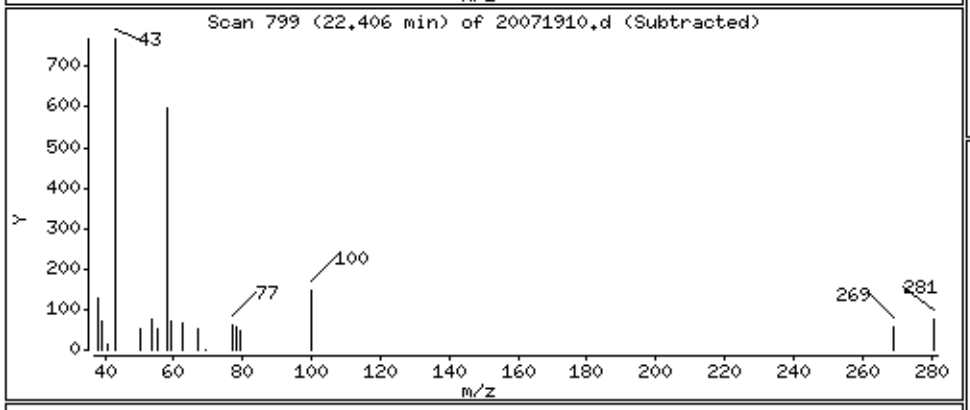
Column diameter: 0.32

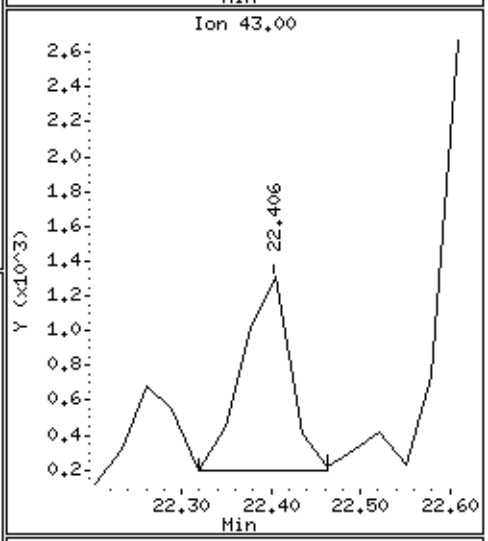
158 2-Hexanone

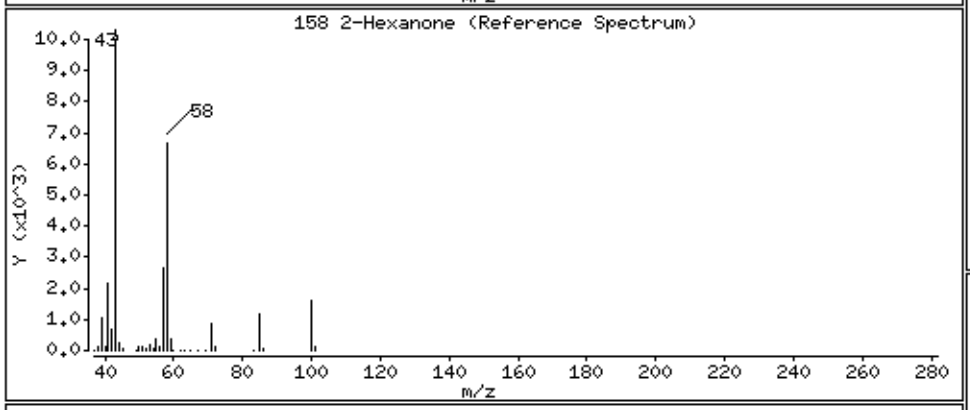
Concentration: 0.1318 PPBV

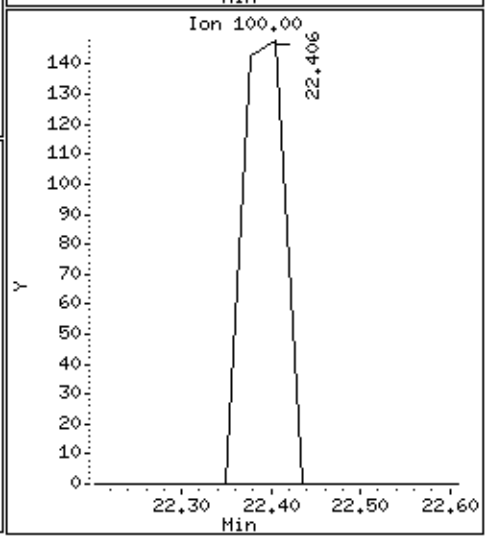


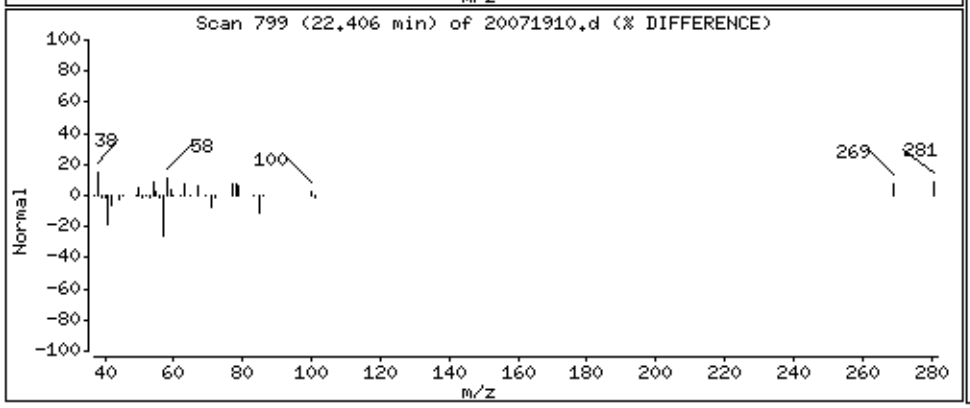












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

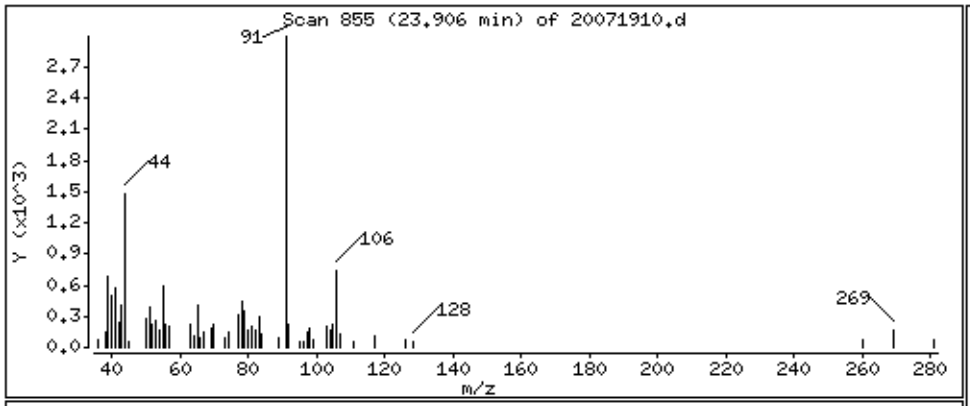
Operator: ef

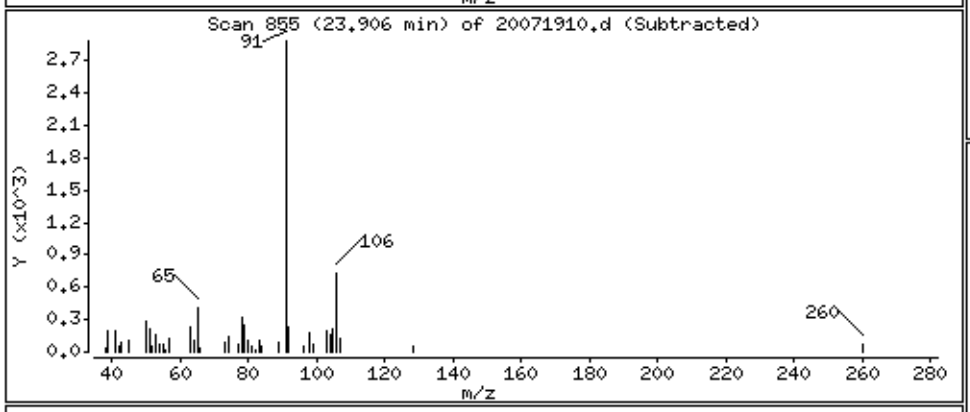
Column phase: RTX-624

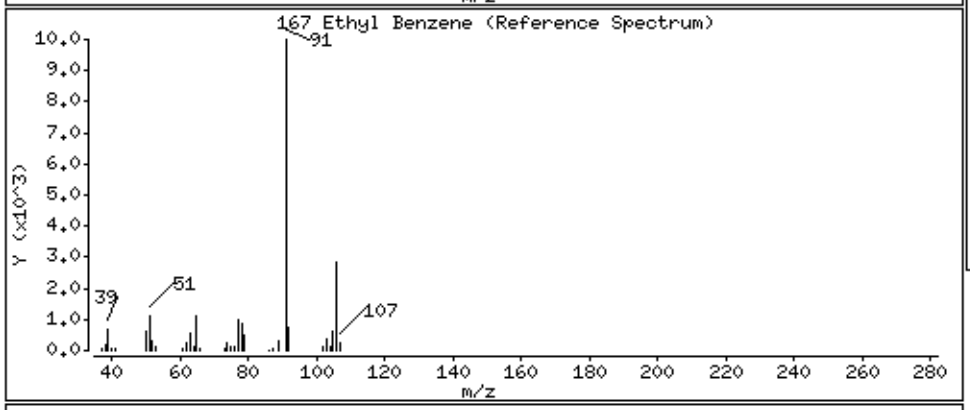
Column diameter: 0.32

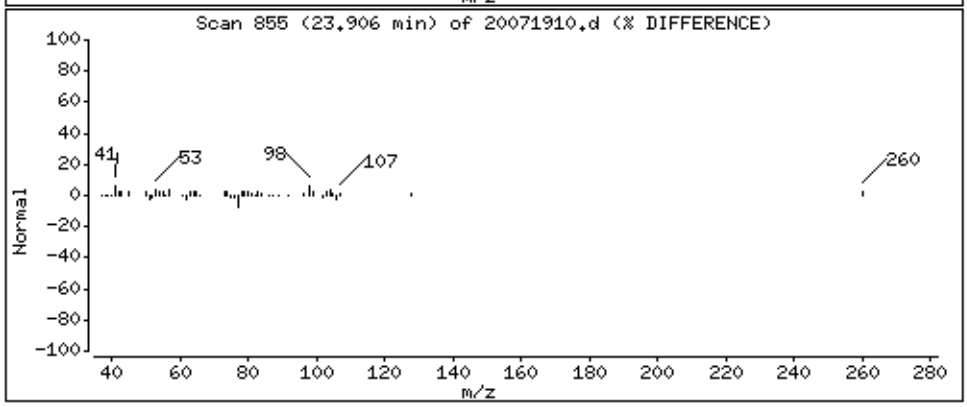
167 Ethyl Benzene

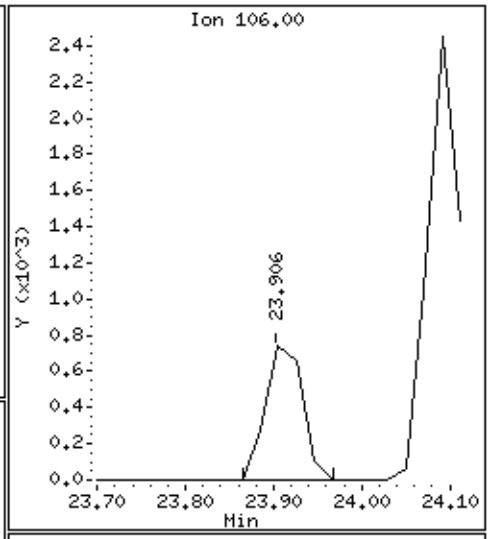
Concentration: 0.1067 PPBV

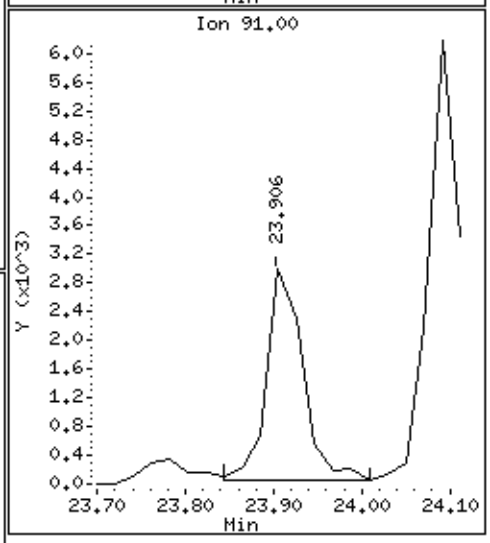












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

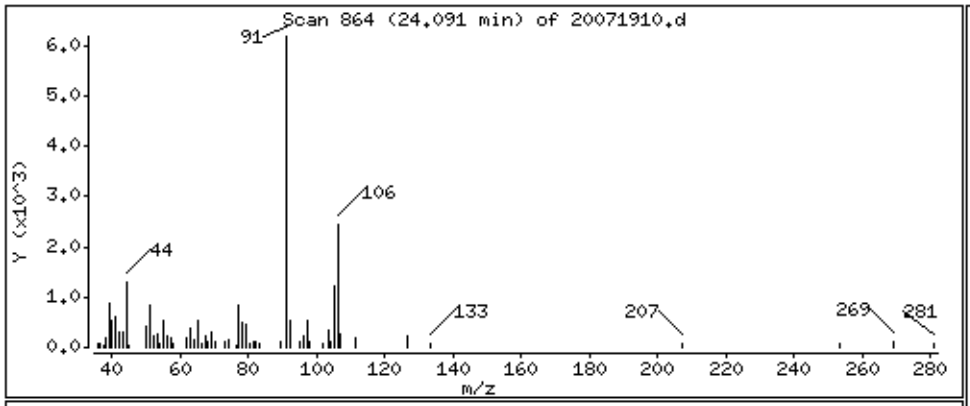
Operator: ef

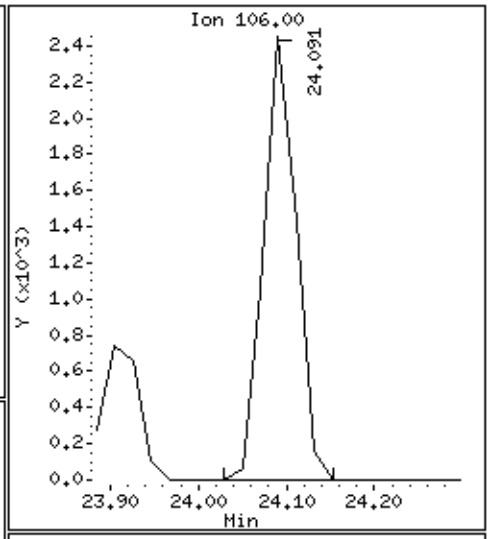
Column phase: RTX-624

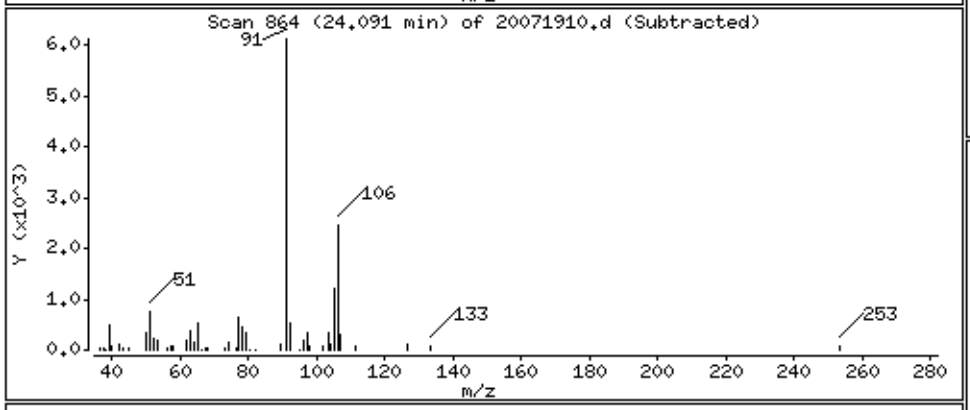
Column diameter: 0.32

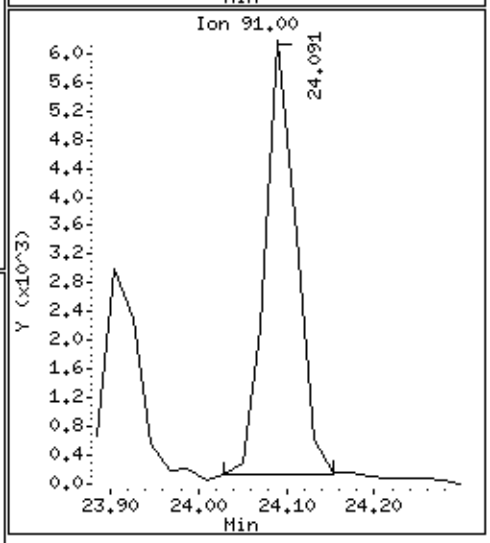
169 m,p-Xylene

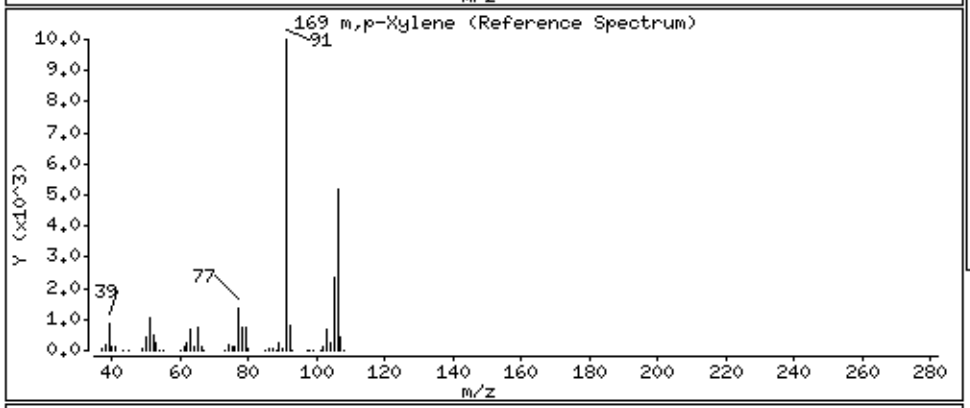
Concentration: 0.2885 PPBV

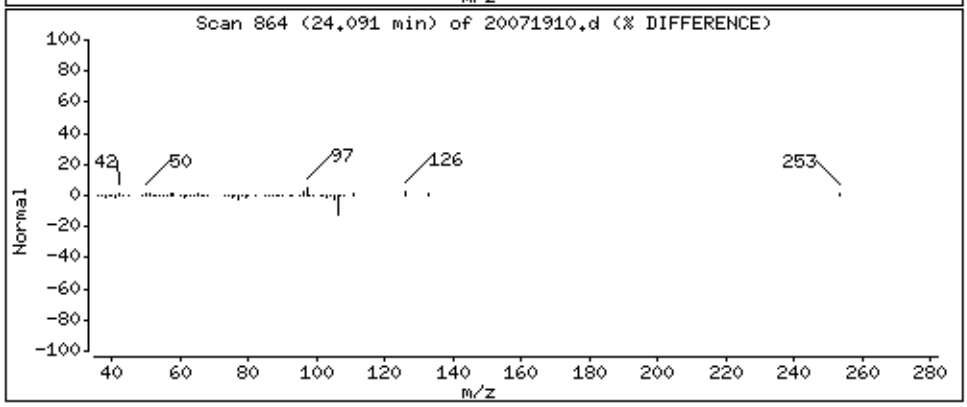












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

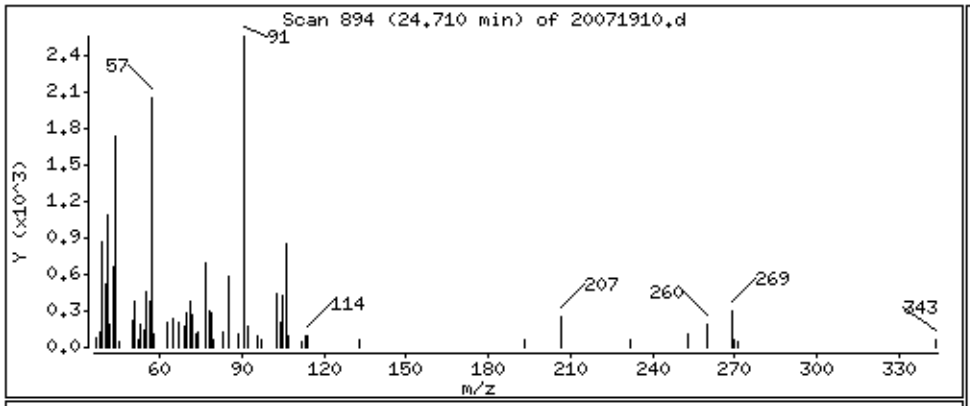
Operator: ef

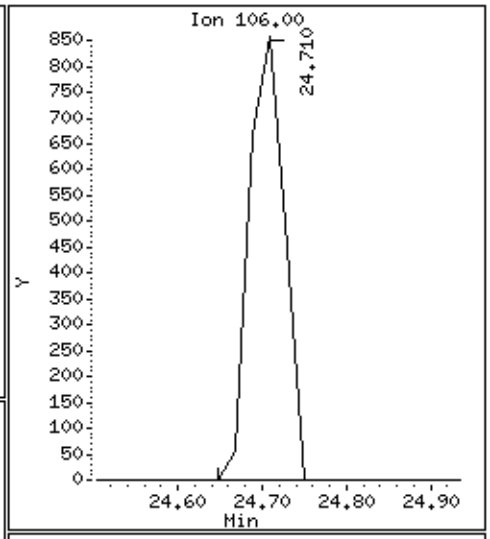
Column phase: RTX-624

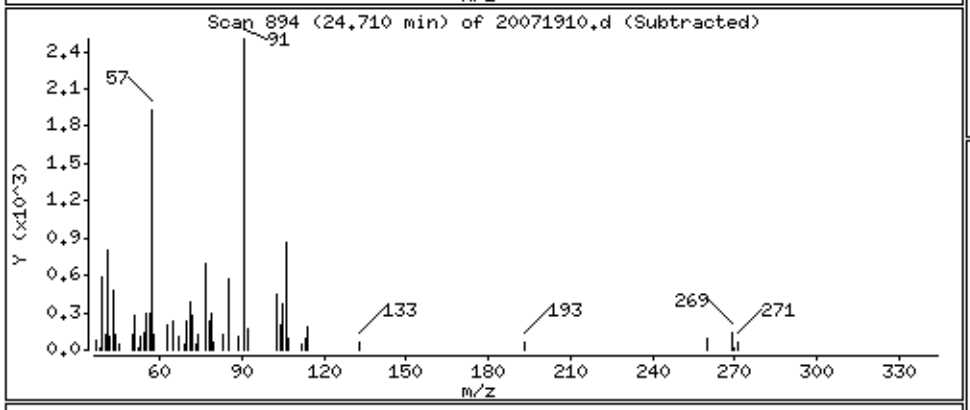
Column diameter: 0.32

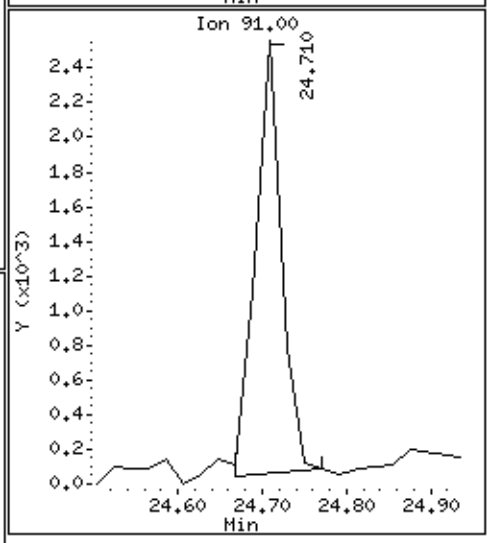
171 o-Xylene

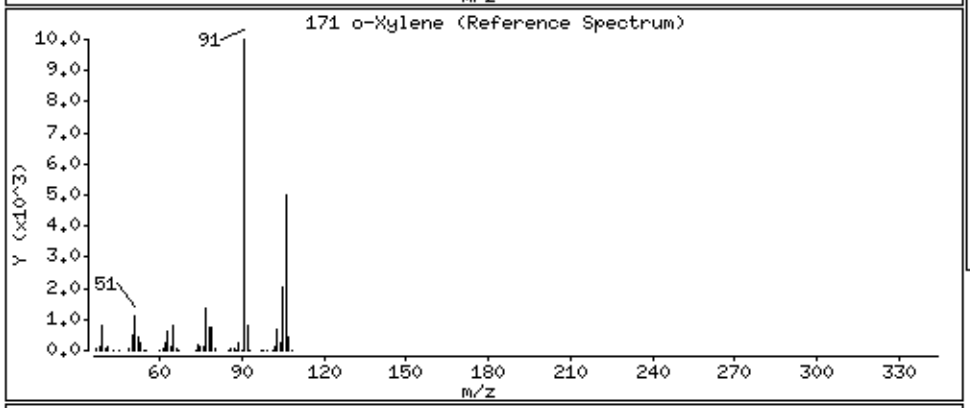
Concentration: 0.1203 PPBV

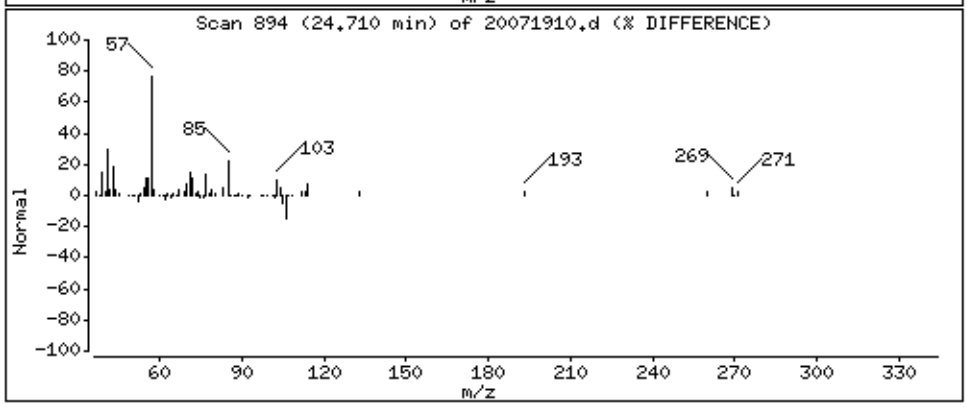












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

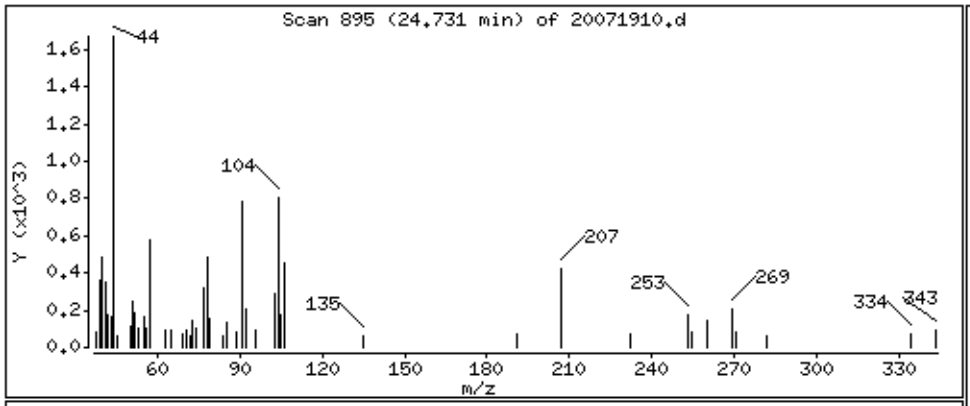
Operator: ef

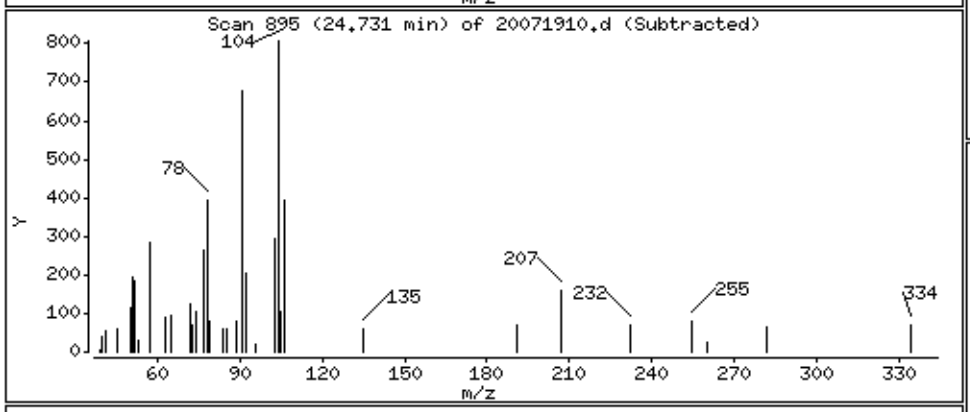
Column phase: RTX-624

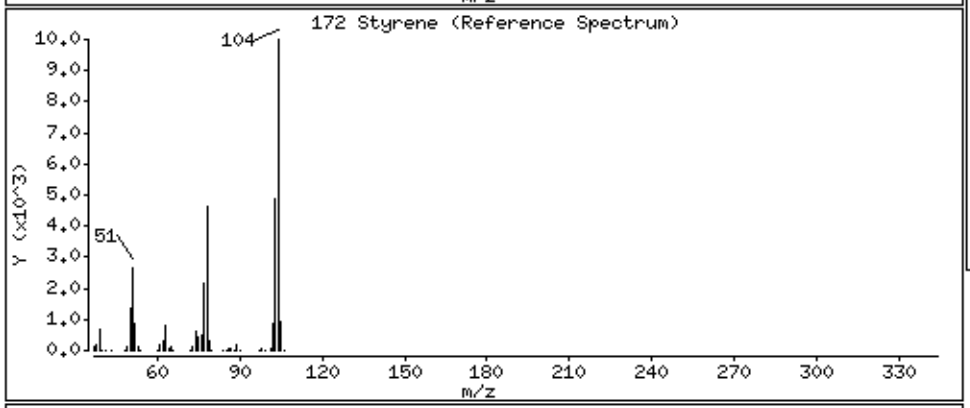
Column diameter: 0.32

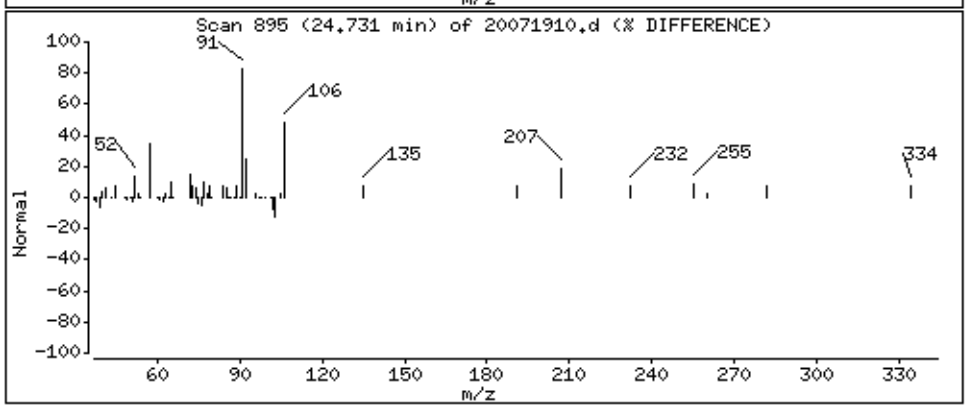
172 Styrene

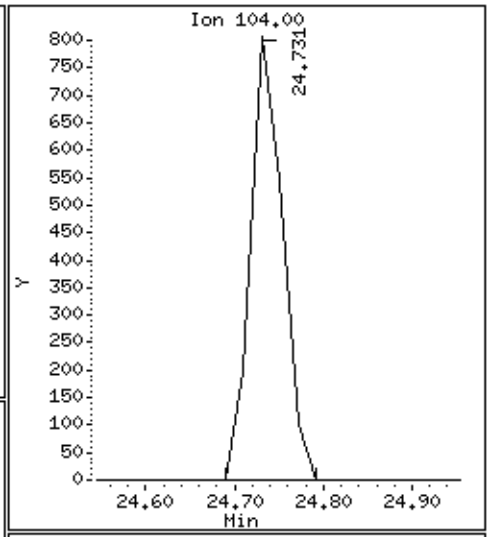
Concentration: 0.06864 PPBV

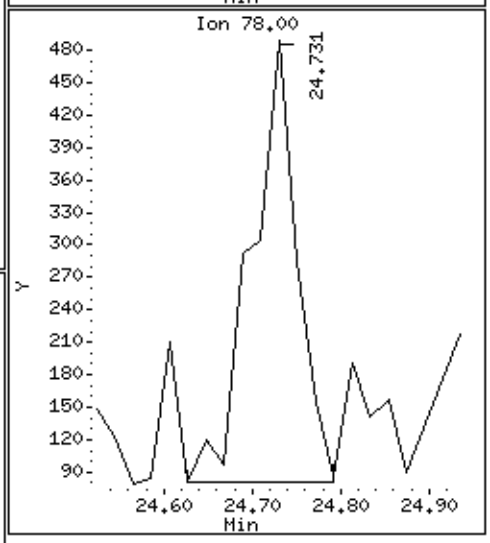












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

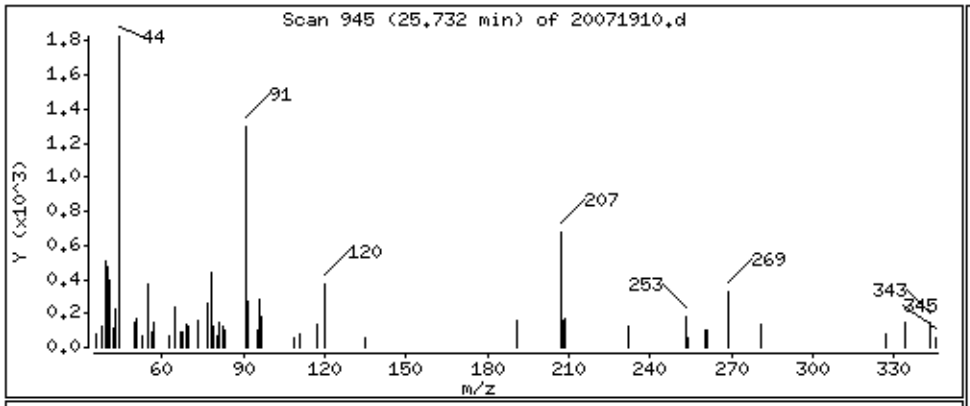
Operator: ef

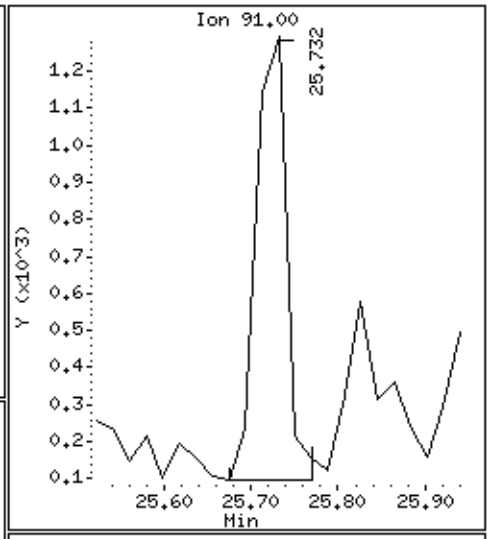
Column phase: RTX-624

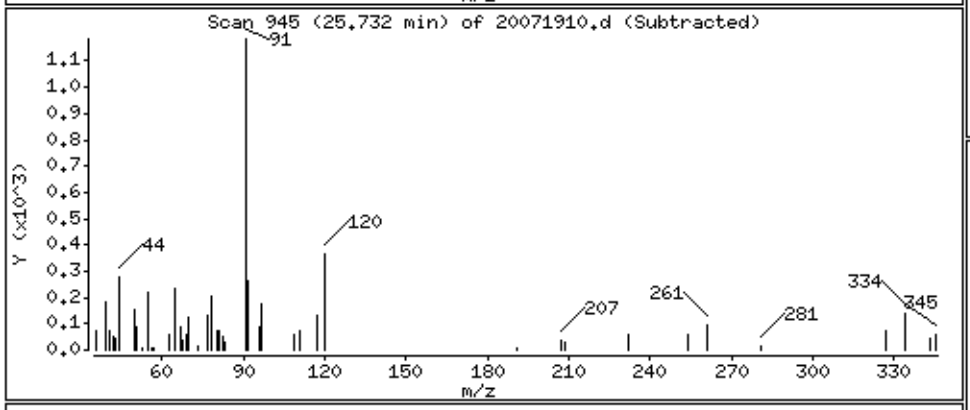
Column diameter: 0.32

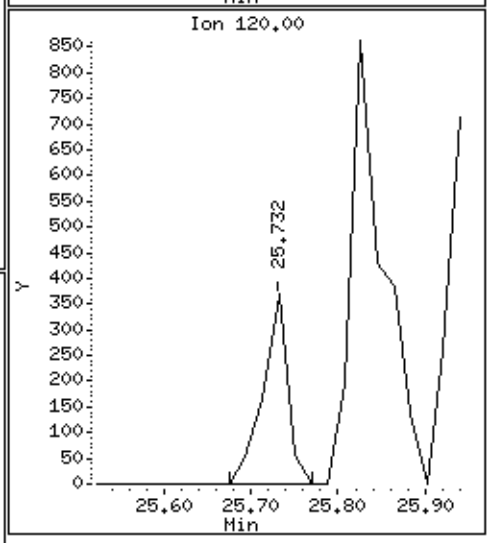
182 Propylbenzene

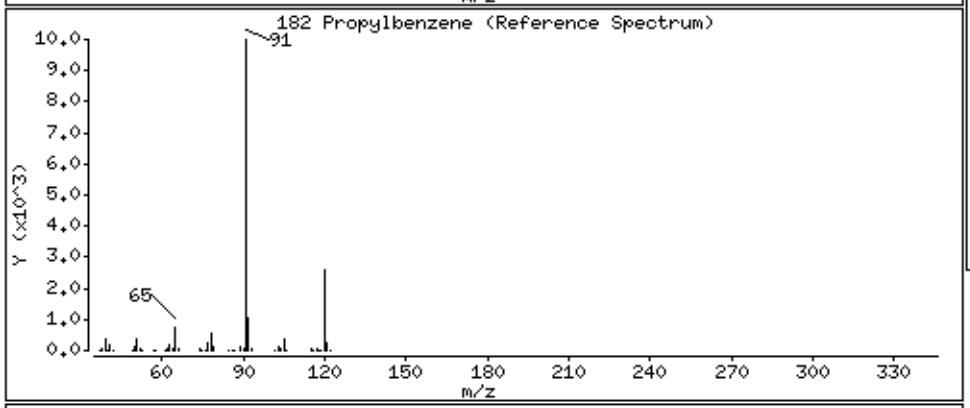
Concentration: 0.04360 PPBV

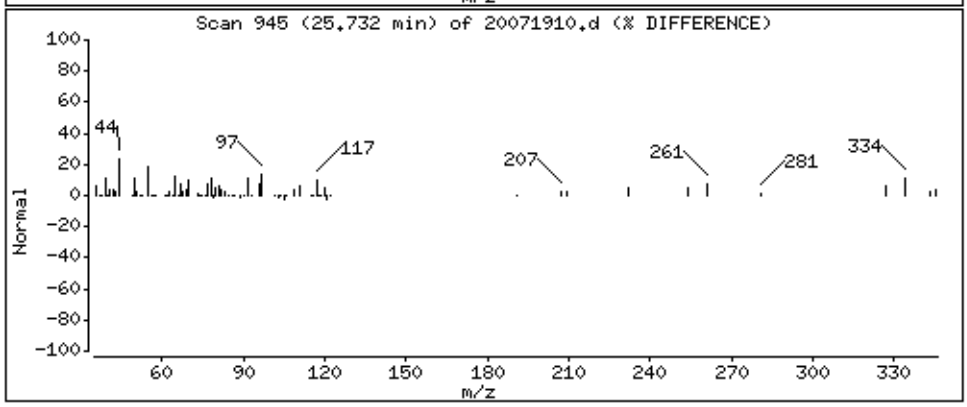












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

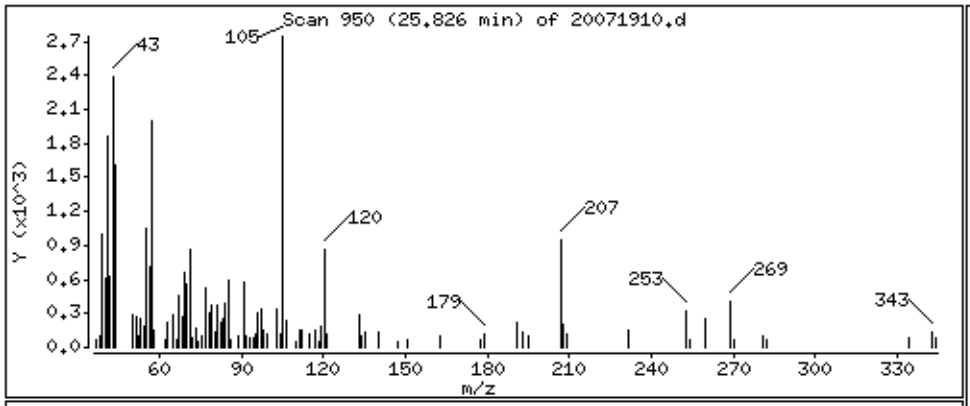
Operator: ef

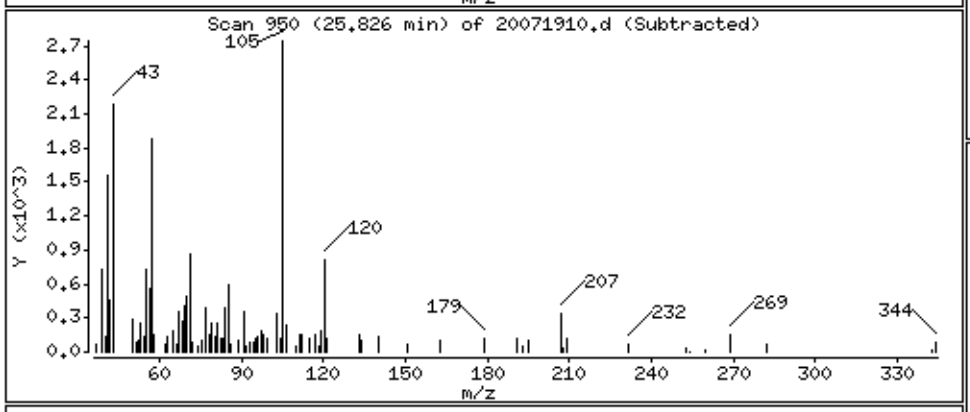
Column phase: RTX-624

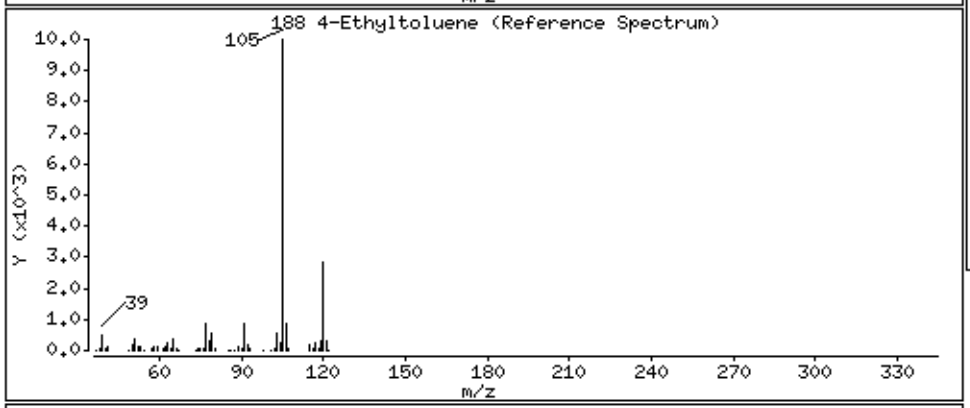
Column diameter: 0.32

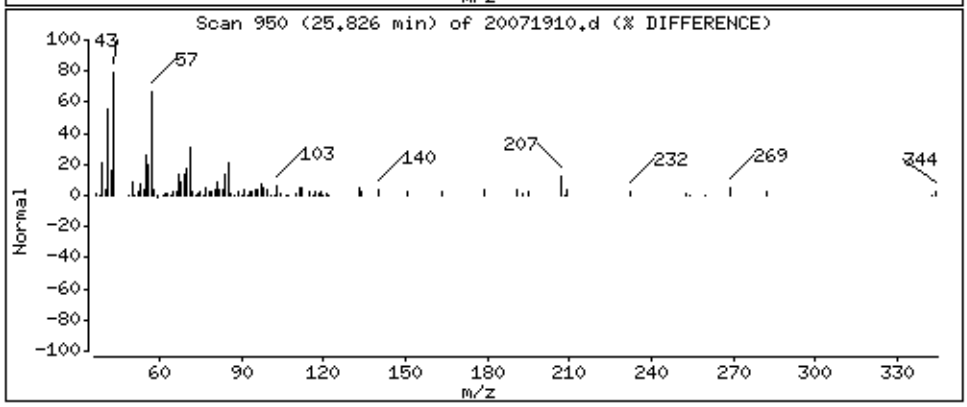
188 4-Ethyltoluene

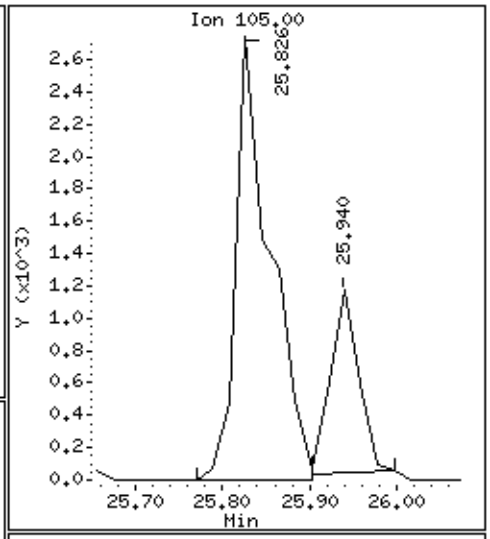
Concentration: 0.1340 PPBV

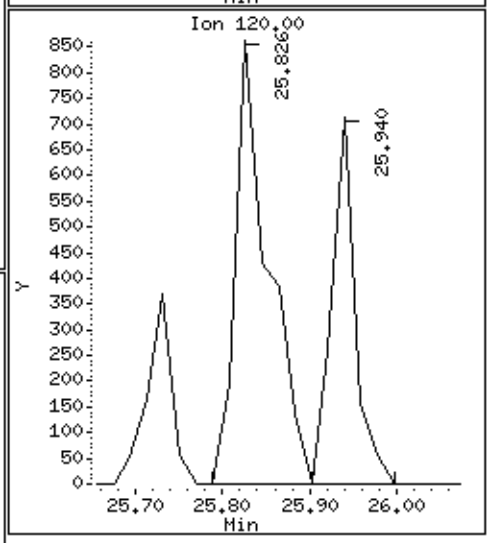












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

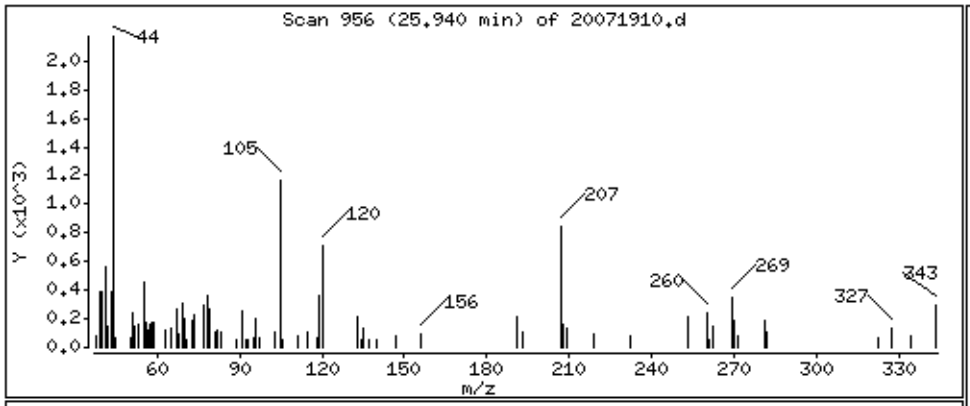
Operator: ef

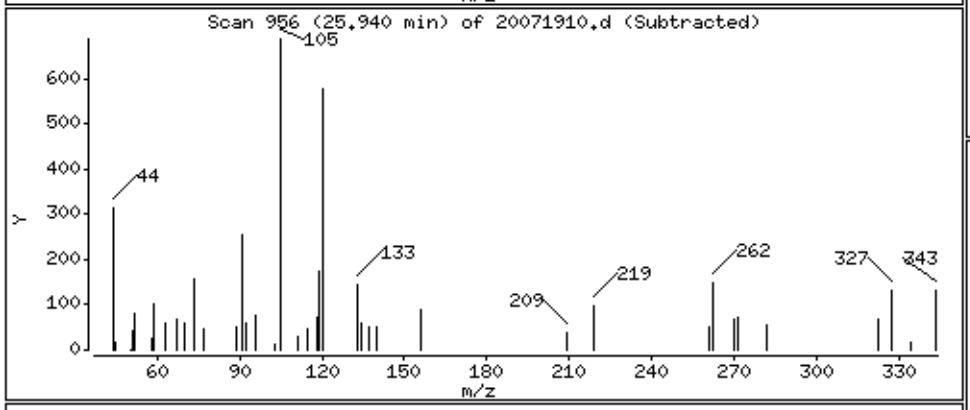
Column phase: RTX-624

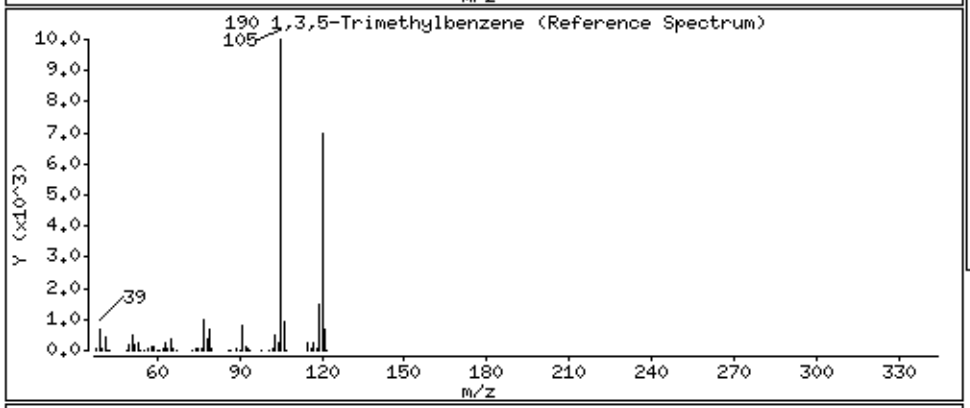
Column diameter: 0.32

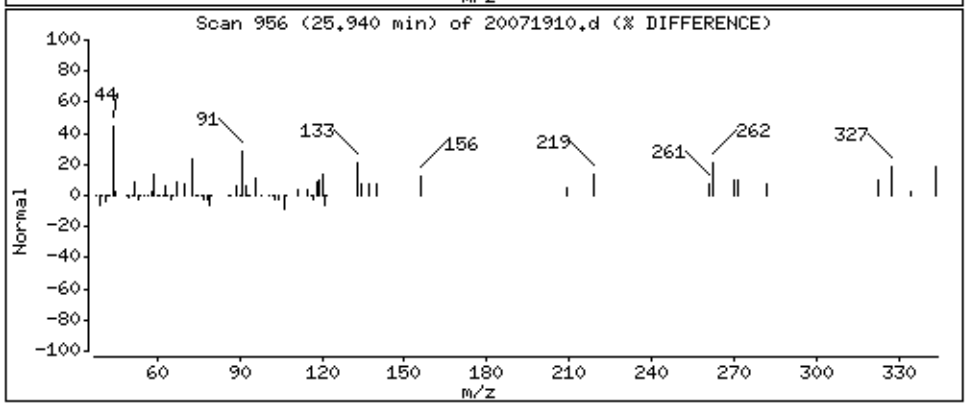
190 1,3,5-Trimethylbenzene

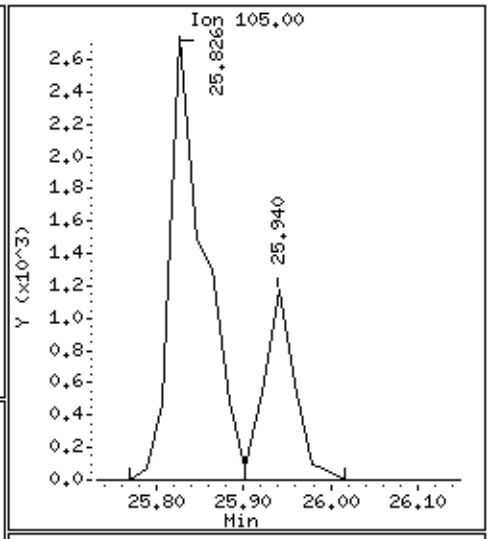
Concentration: 0.06059 PPBV

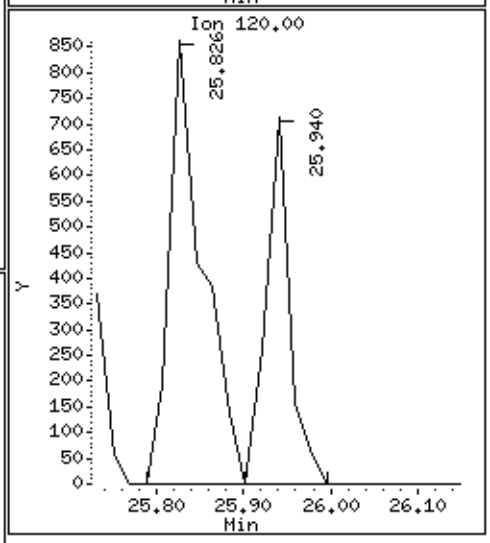












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

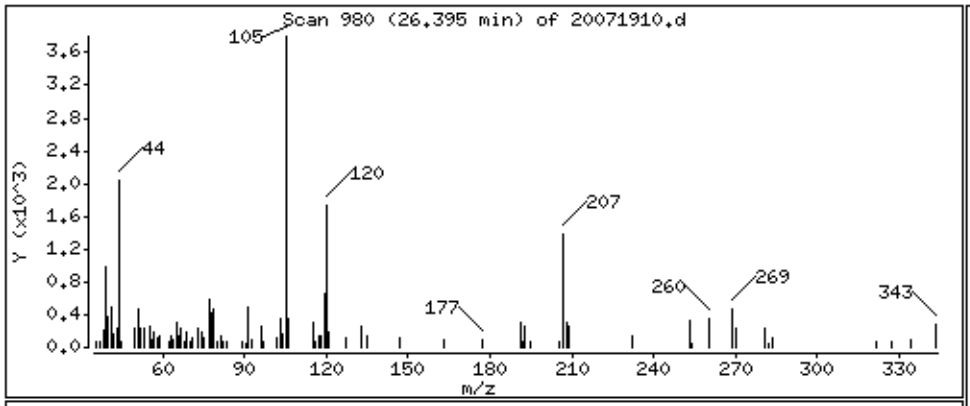
Operator: ef

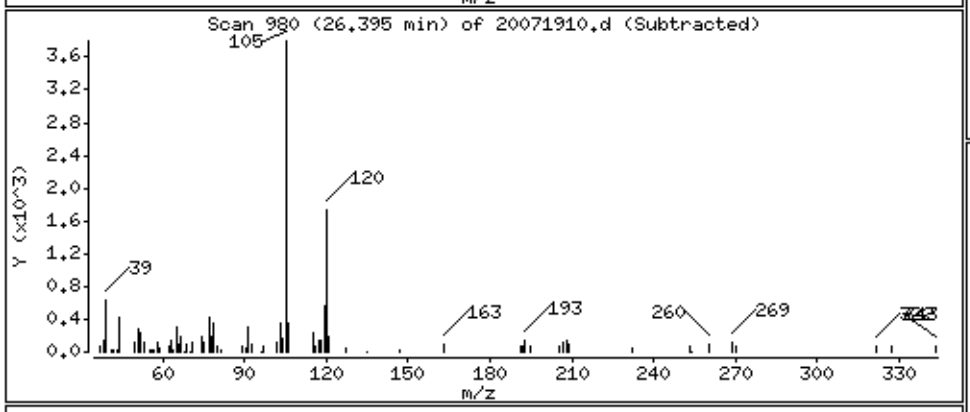
Column phase: RTX-624

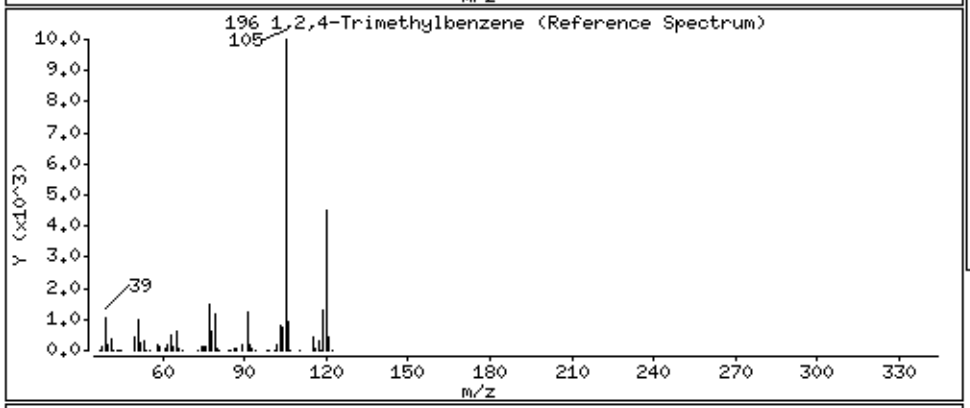
Column diameter: 0.32

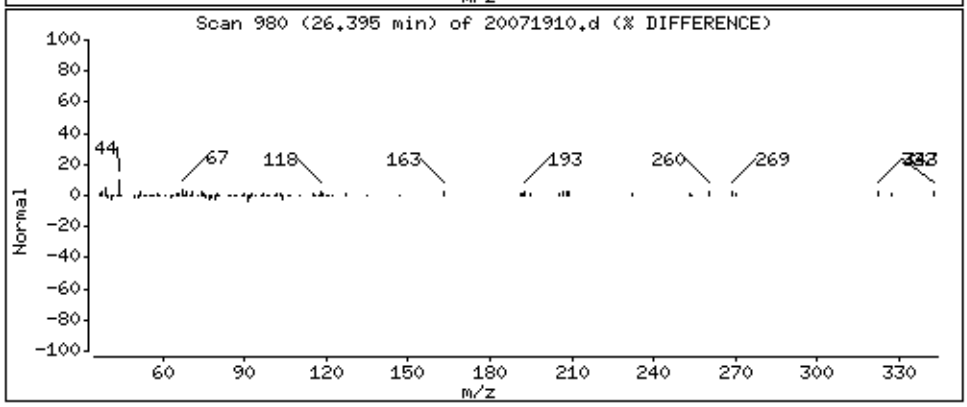
196 1,2,4-Trimethylbenzene

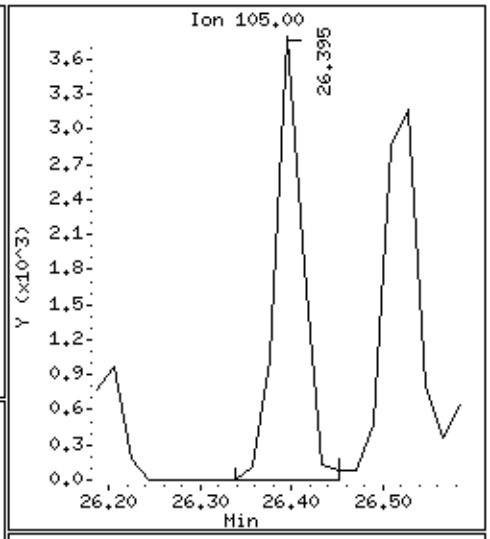
Concentration: 0.1660 PPBV

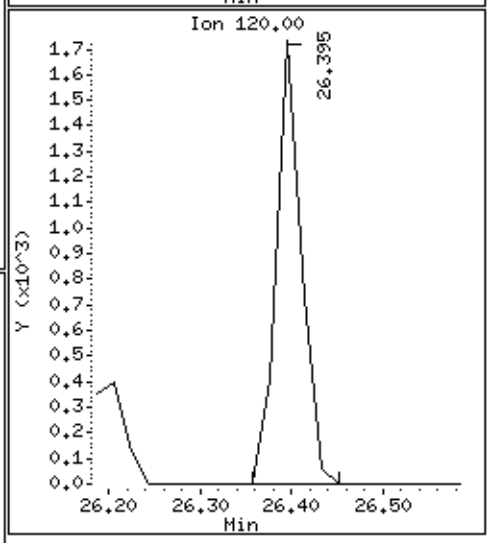












Data File: /chem/msd20.i/19Jul2016.b/20071910.d

Date : 19-JUL-2016 14:24

Client ID:

Instrument: msd20.i

Sample Info: 250mL# 6L0015

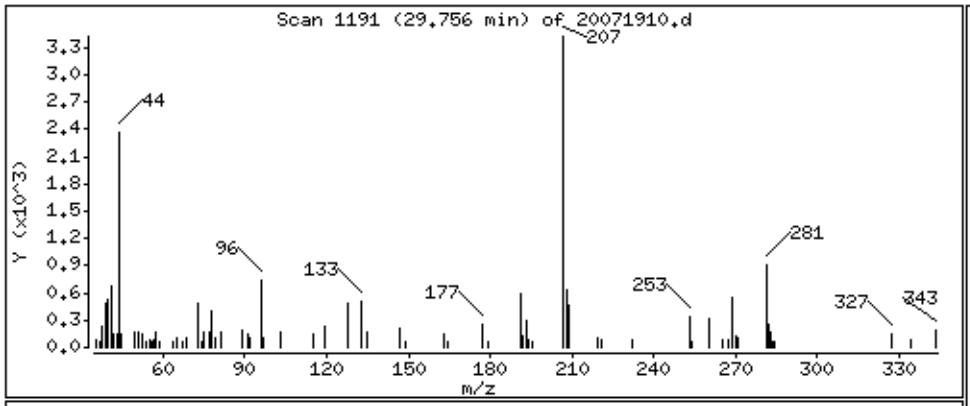
Operator: ef

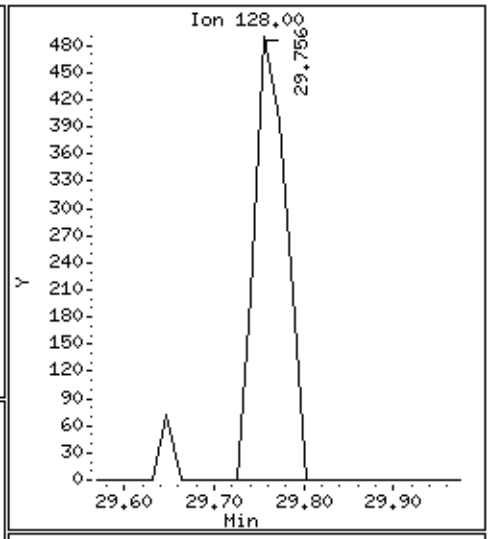
Column phase: RTX-624

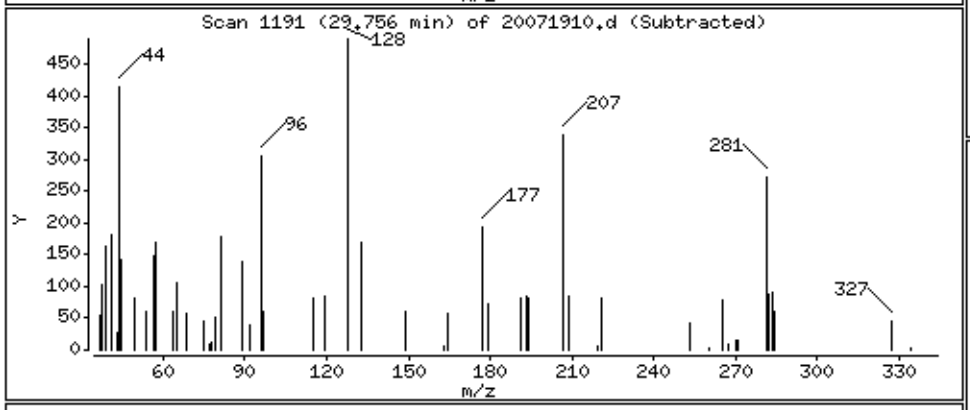
Column diameter: 0.32

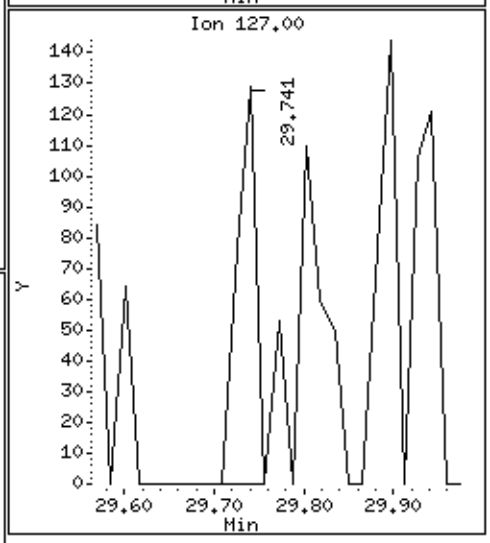
228 Naphthalene

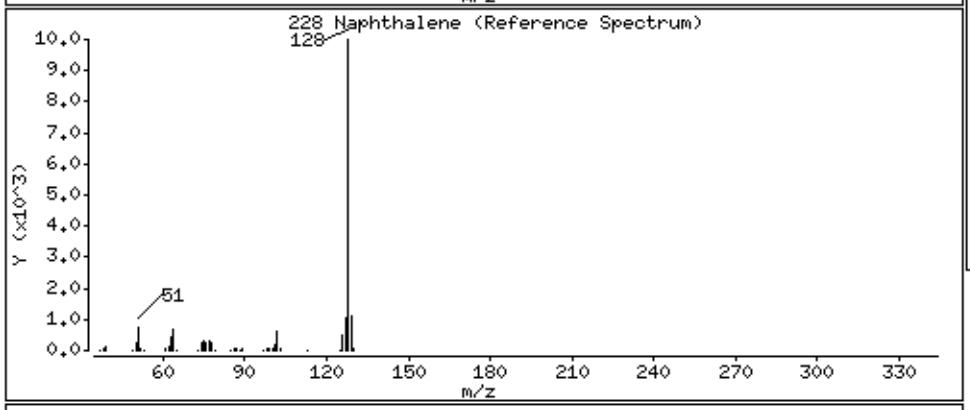
Concentration: 0.03027 PPBV

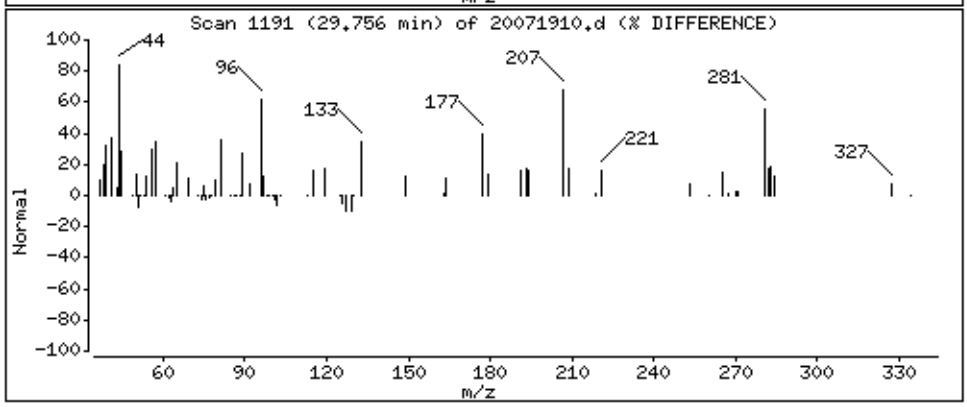












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-3

Lab ID#: 1607235D-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.80	3.0
Chloromethane	0.80	0.85	1.7	1.8
Freon 11	0.16	2.4	0.90	14
Ethanol	0.80	12	1.5	24
Freon 113	0.16	0.12 J	1.2	0.92 J
Acetone	0.80	9.9	1.9	24
2-Propanol	0.80	4.2	2.0	10
Carbon Disulfide	0.80	0.086 J	2.5	0.27 J
Methylene Chloride	0.32	0.19 J	1.1	0.66 J
Hexane	0.16	0.044 J	0.57	0.15 J
2-Butanone (Methyl Ethyl Ketone)	0.80	1.1	2.4	3.2
Carbon Tetrachloride	0.16	0.072 J	1.0	0.46 J
Benzene	0.16	0.052 J	0.51	0.17 J
1,2-Dichloroethane	0.16	0.37	0.65	1.5
Trichloroethene	0.16	0.28	0.86	1.5
Toluene	0.16	1.2	0.61	4.3
2-Hexanone	0.80	0.10 J	3.3	0.43 J
m,p-Xylene	0.16	0.14 J	0.70	0.60 J
o-Xylene	0.16	0.067 J	0.70	0.29 J
Styrene	0.16	0.030 J	0.68	0.12 J
Naphthalene	0.80	0.024 J	4.2	0.12 J

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Client Sample ID: B18IA-3

Lab ID#: 1607235D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071911**	**Date of Collection:**	**7/9/16 6:27:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**7/19/16 03:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.80	3.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	0.85	1.7	1.8
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	2.4	0.90	14
Ethanol	0.80	12	1.5	24
Freon 113	0.16	0.12 J	1.2	0.92 J
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	9.9	1.9	24
2-Propanol	0.80	4.2	2.0	10
Carbon Disulfide	0.80	0.086 J	2.5	0.27 J
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.19 J	1.1	0.66 J
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	0.044 J	0.57	0.15 J
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	1.1	2.4	3.2
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
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	0.072 J	1.0	0.46 J
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Benzene	0.16	0.052 J	0.51	0.17 J
1,2-Dichloroethane	0.16	0.37	0.65	1.5
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	0.28	0.86	1.5
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
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	1.2	0.61	4.3
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
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	0.10 J	3.3	0.43 J

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Client Sample ID: B18IA-3

Lab ID#: 1607235D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071911**	**Date of Collection:**	**7/9/16 6:27:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**7/19/16 03:11 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	0.14 J	0.70	0.60 J
o-Xylene	0.16	0.067 J	0.70	0.29 J
Styrene	0.16	0.030 J	0.68	0.12 J
Bromoform	0.16	Not Detected	1.7	Not Detected
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	0.024 J	4.2	0.12 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071911.d
Lab Smp Id: 1607235D-03A
Inj Date : 19-JUL-2016 15:11
Operator : gh Inst ID: msd20.i
Smp Info : 250mL#6L0509
Misc Info : 5.1"Hg ->5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	91340	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	67360			47.94- 107.94	73.75
16.726	16.726 (1.000)	49	128008			102.10- 162.10	140.14
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	274159	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	45815			0.00- 45.77	16.71
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	265845	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	159969			26.51- 86.51	60.17
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	158174	5.97023	5.970	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	76657			32.47- 92.47	48.46
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.821	20.822 (1.142)	98	269389	5.08738	5.087	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	36367			0.00- 41.37	13.50

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

$ 146 Toluene-d8 (continued)
 20.821  20.822 (1.142)   100    168745                    36.07-  96.07    62.64
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    146077 5.11779    5.118  80.00- 120.00   100.00
 25.485  25.466 (1.073)    95    183927                   89.67- 149.67   125.91
 25.485  25.485 (1.073)   176    141770                   67.40- 127.40    97.05
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.648   4.672 (0.278)    85     29646 0.38215   0.6153  80.00- 120.00   100.00
  4.696   4.672 (0.281)    87      7598                    2.54-  62.54    25.63
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.601   6.577 (0.395)    50     13694 0.52718   0.8488  80.00- 120.00   100.00
  6.576   6.553 (0.393)    52      5409                    3.03-  63.03    39.50
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101    113025 1.50751    2.427  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103     72330                   34.91-  94.91    63.99
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.296  12.269 (0.735)    45     75454 7.77565   12.519  80.00- 120.00   100.00
 12.296  12.269 (0.735)    46     31172                   11.72-  71.72    41.31
 12.296  12.269 (0.735)    43     20072                    0.00-  52.99    26.60
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.736  12.763 (0.761)   151      3769 0.07446   0.1199  80.00- 120.00   100.00(a)
 12.763  12.763 (0.763)   153      2594                   34.49-  94.49    68.82
 12.736  12.763 (0.761)   101      3255                   96.39- 156.39    86.36
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58     85788 6.16120    9.920  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43    289311                  278.33- 338.33   337.24
-------------------------------------------------------------------------------
   56 Carbon Disulfide                              CAS #: 75-15-0
 13.120  13.121 (0.784)    76      4190 0.05324  0.08571  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 13.587  13.533 (0.812)    45    111837 2.59705    4.181  80.00- 120.00   100.00
 13.587  13.533 (0.812)    43     51429                    0.00-  52.04    45.99
 13.587  13.533 (0.812)    59      4843                    0.00-  34.17     4.33
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 14.027  14.027 (0.839)    84      3377 0.11895   0.1915  80.00- 120.00   100.00(a)
 14.027  14.027 (0.839)    49      4546                   97.79- 157.79   134.63
 14.027  14.027 (0.839)    51      1878                    9.84-  69.84    55.61
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	1200	0.02714	0.04369	80.00- 120.00	100.00(a)
14.933	14.878 (0.893)	43	3212			33.20- 93.20	267.49
0.000	14.878 (0.000)	86	0			0.00- 48.21	0.00
92 2-Butanone					CAS #: 78-93-3		
16.365	16.344 (0.978)	72	9666	0.68434	1.102	80.00- 120.00	100.00
16.365	16.344 (0.978)	43	43221			345.54- 405.54	447.13
16.365	16.344 (0.978)	57	3257			0.00- 59.64	33.70
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	2394	0.04498	0.07241	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	2418			75.13- 135.13	101.00
116 Benzene					CAS #: 71-43-2		
17.620	17.621 (0.966)	78	2170	0.03263	0.05254	80.00- 120.00	100.00(a)
17.620	17.621 (0.966)	77	403			0.00- 54.04	18.60
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	6729	0.23014	0.3705	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	2366			2.26- 62.26	35.17
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	5359	0.17657	0.2843	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	6148			67.33- 127.33	114.72
18.610	18.610 (1.021)	97	4163			32.56- 92.56	77.67
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	51105	0.71689	1.154	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	28338			30.04- 90.04	55.45
158 2-Hexanone					CAS #: 591-78-6		
22.377	22.406 (0.942)	58	1740	0.06542	0.1053	80.00- 120.00	100.00(a)
22.406	22.406 (0.943)	43	4786			153.17- 213.17	274.92
22.406	22.406 (0.943)	100	479			0.00- 52.35	27.53
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	2877	0.08624	0.1388	80.00- 120.00	100.00(a)
24.091	24.091 (1.014)	91	6598			170.44- 230.44	229.33
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	1319	0.04180	0.06730	80.00- 120.00	100.00(a)
24.710	24.710 (1.040)	91	2809			177.28- 237.28	212.95
172 Styrene					CAS #: 100-42-5		
24.730	24.751 (1.041)	104	824	0.01832	0.02950	80.00- 120.00	100.00(a)

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
172 Styrene (continued)							
24.710	24.731 (1.040)	78	1633			22.29- 82.29	198.20
228 Naphthalene					CAS #: 91-20-3		
29.756	29.772 (1.252)	128	888	0.01470	0.02367	80.00- 120.00	100.00(a)
29.772	29.772 (1.253)	127	363			0.00- 42.99	40.95

QC Flag Legend

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

Report Date: 27-Jul-2016 15:12

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071911.d
Lab Smp Id: 1607235D-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.1"Hg ->5.0psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	91340	-21.18
123 1,4-Difluorobenze	406395	243837	568953	274159	-32.54
163 Chlorobenzene-d5	363239	217943	508535	265845	-26.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:12

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-03A
Level: LOW Operator: gh
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.1"Hg ->5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.970	119.40	70-130
$ 146 Toluene-d8	5.000	5.087	101.75	70-130
$ 177 4-Bromofluorobenze	5.000	5.118	102.36	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

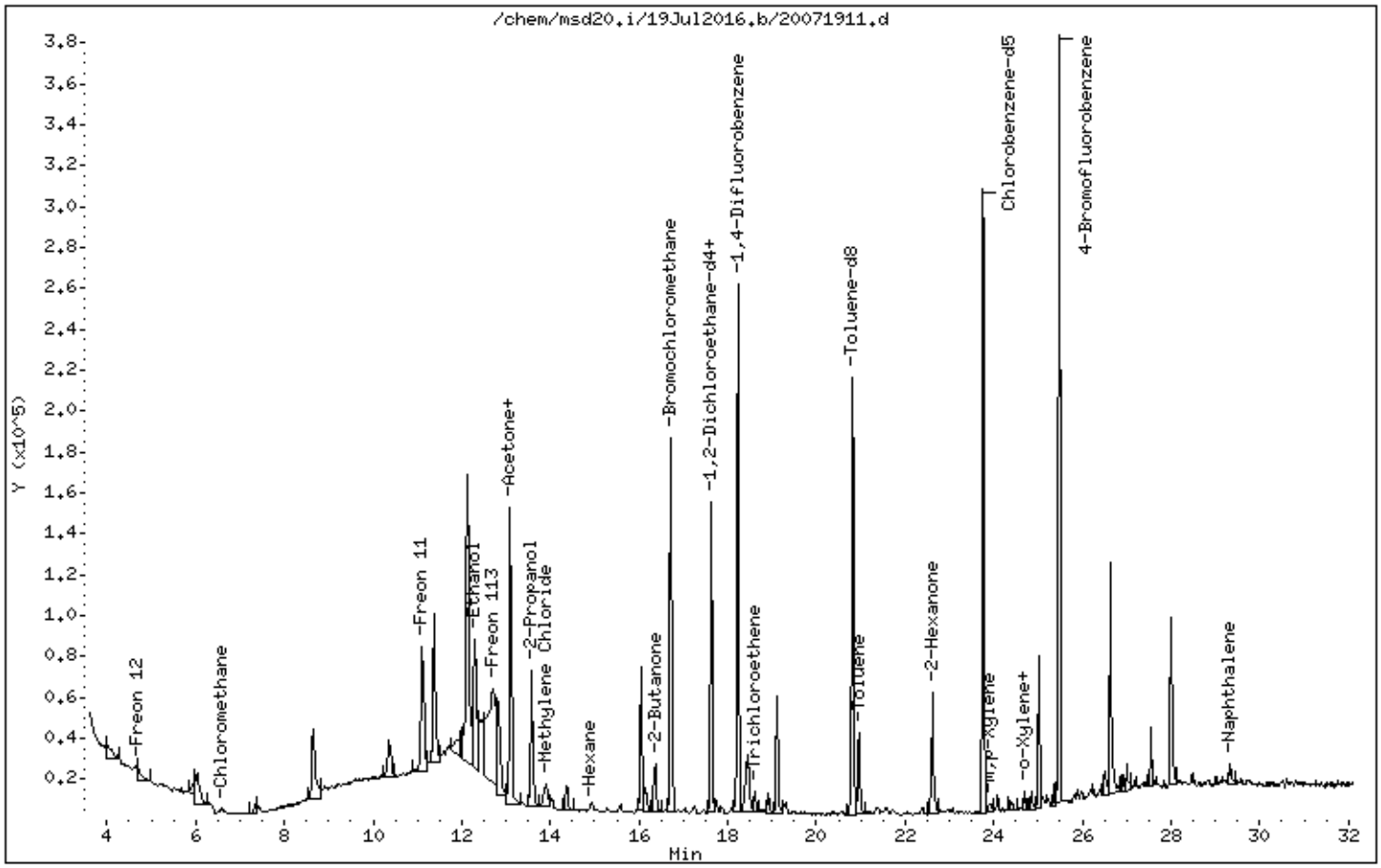
Instrument: msd20.i

Sample Info: 250mL#6L0509

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

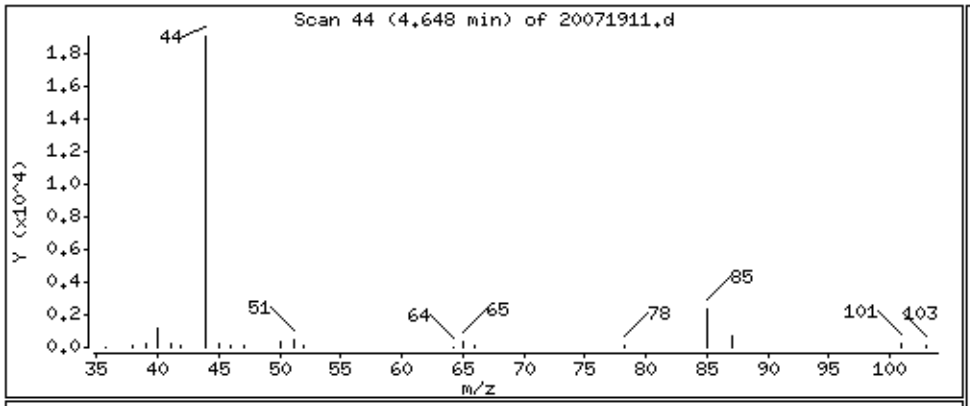
Operator: gh

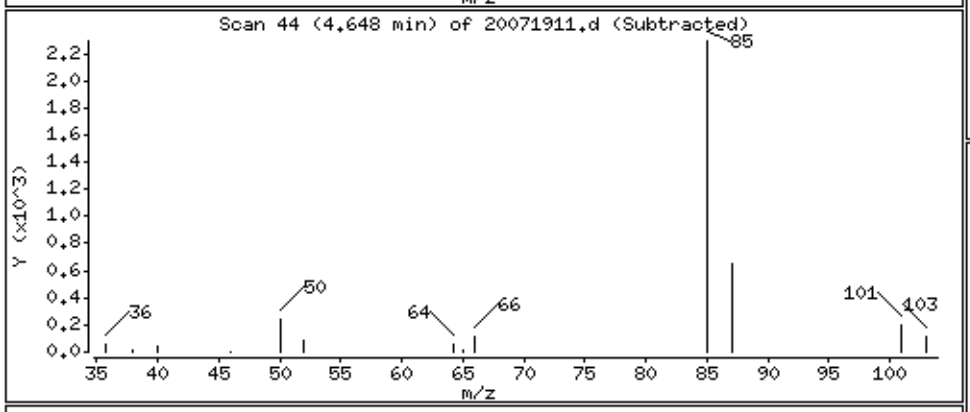
Column phase: RTX-624

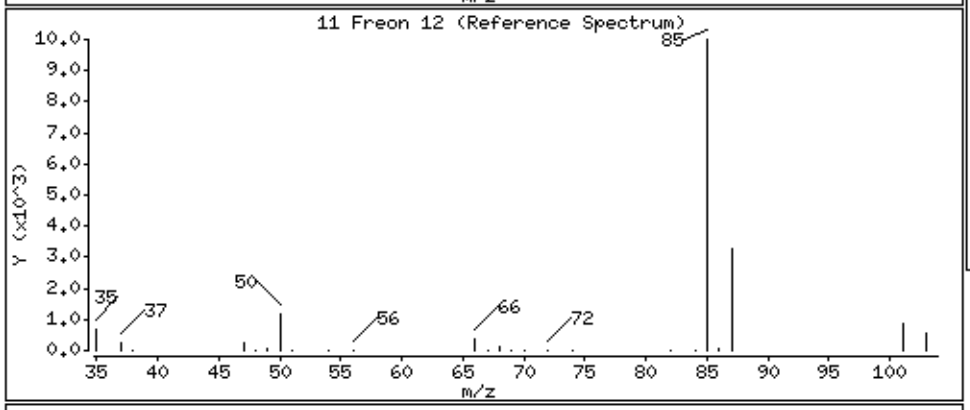
Column diameter: 0.32

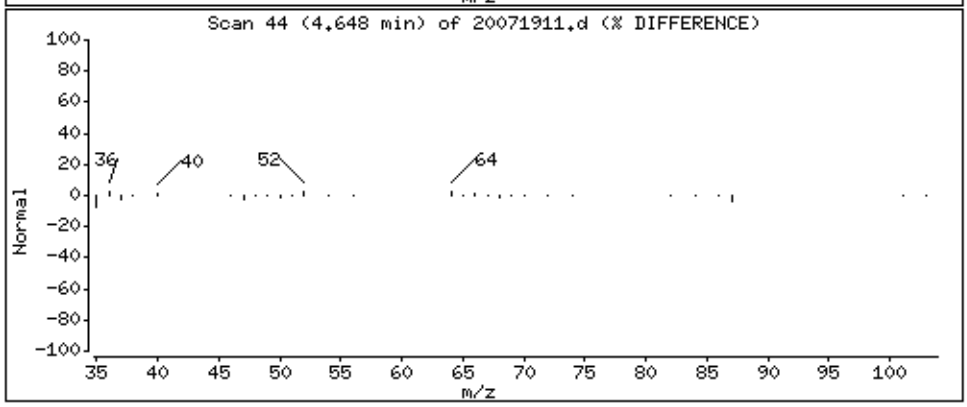
11 Freon 12

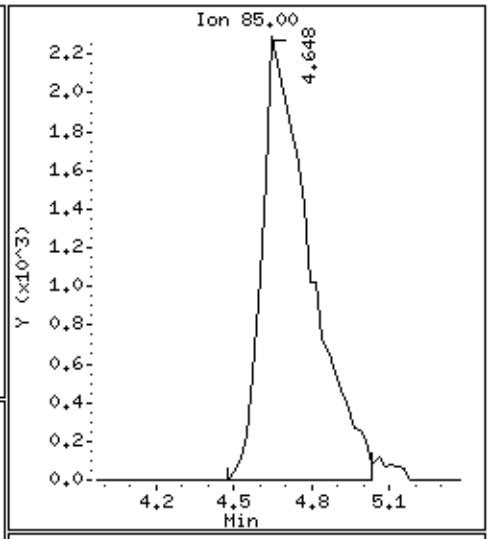
Concentration: 0.6153 PPBV

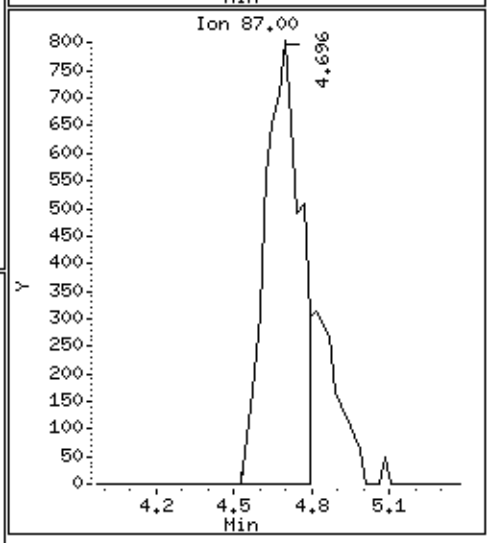












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

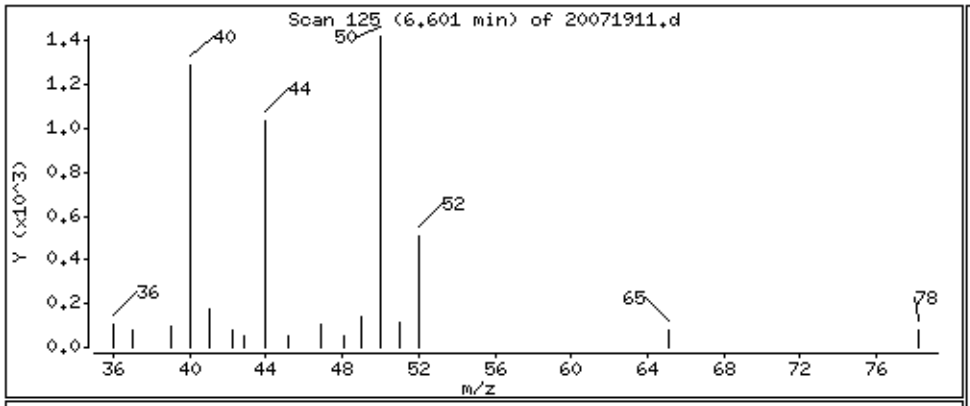
Operator: gh

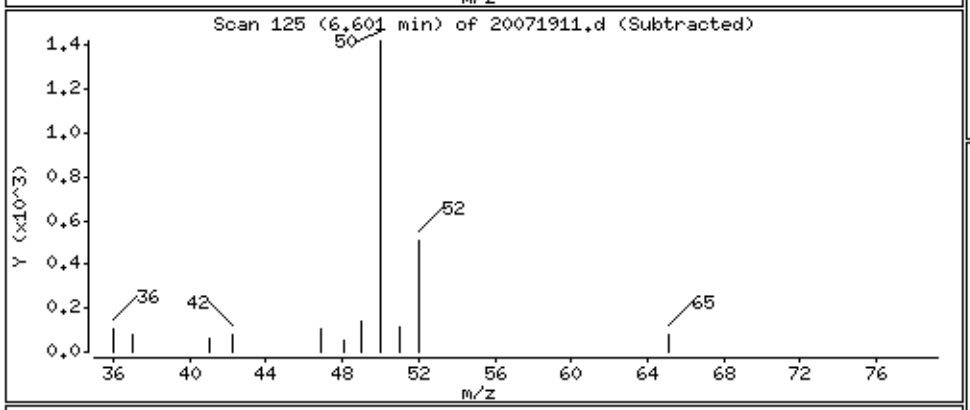
Column phase: RTX-624

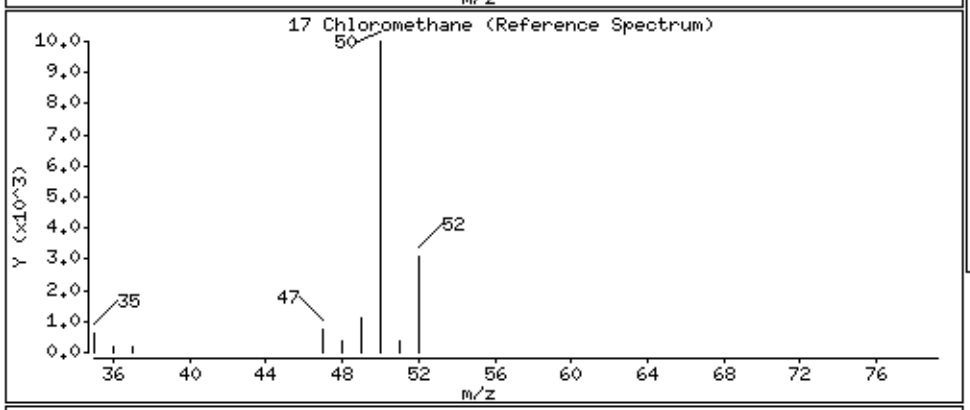
Column diameter: 0.32

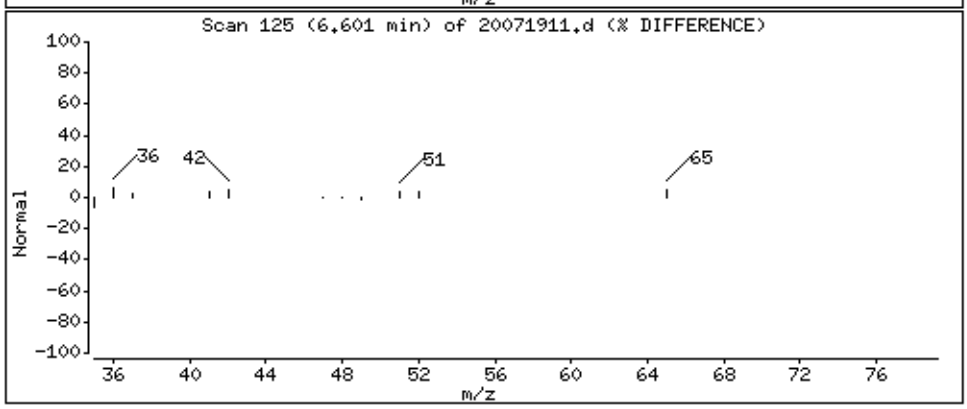
17 Chloromethane

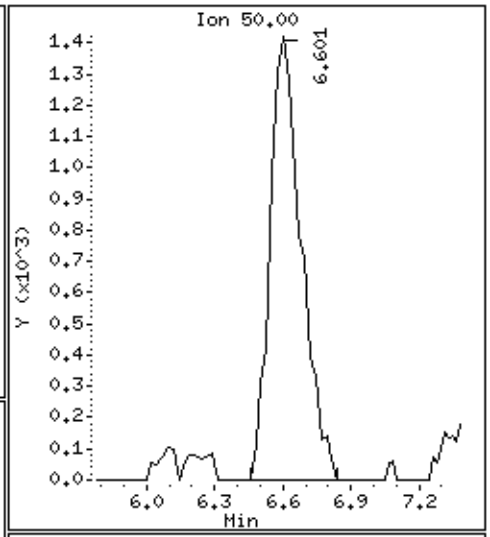
Concentration: 0.8488 PPBV

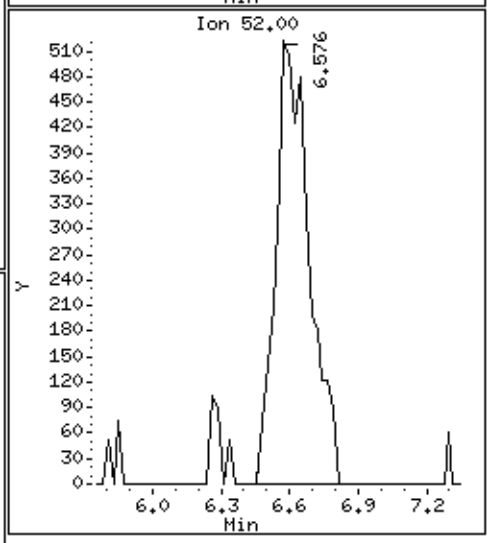












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

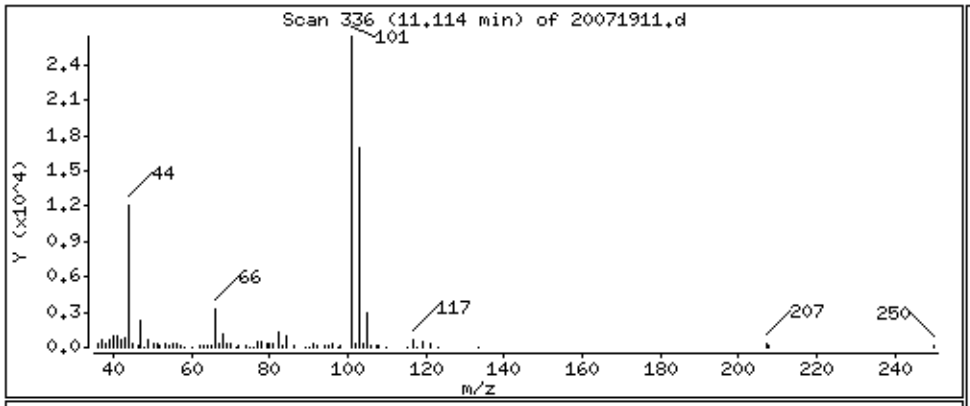
Operator: gh

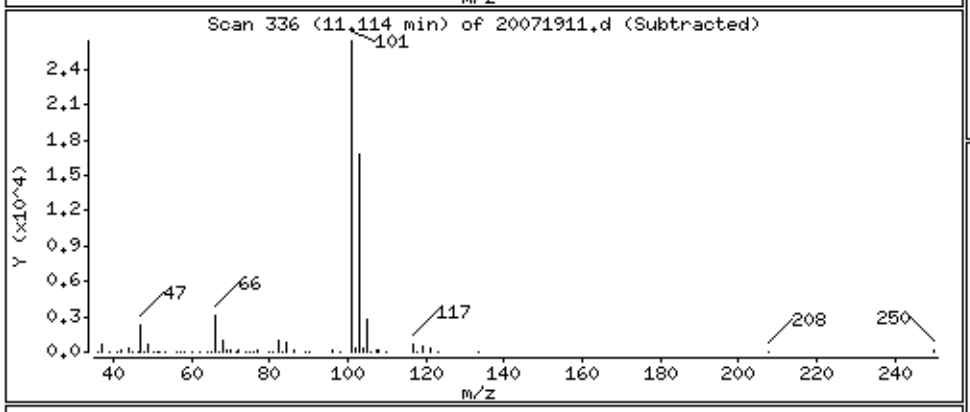
Column phase: RTX-624

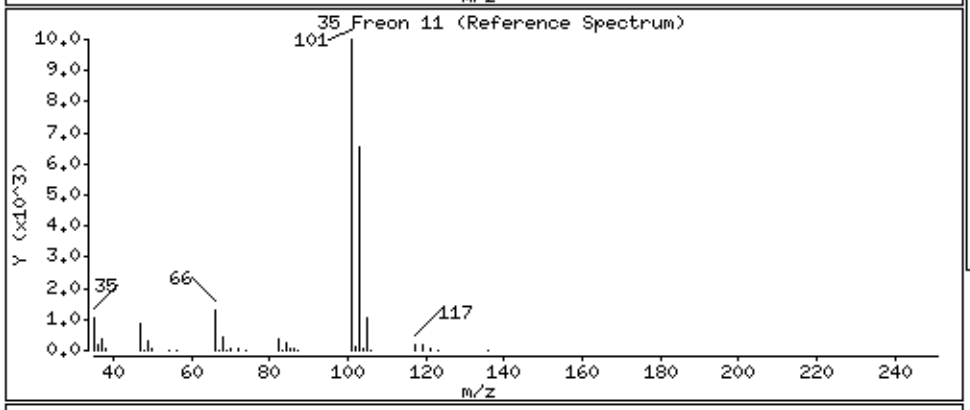
Column diameter: 0.32

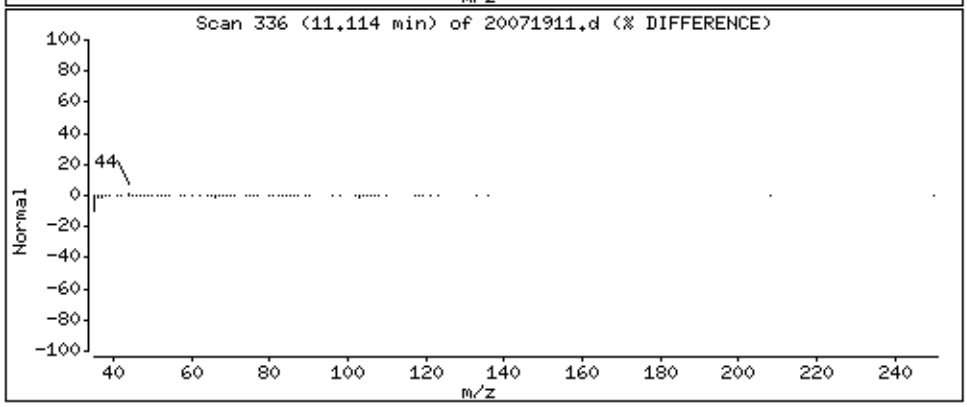
35 Freon 11

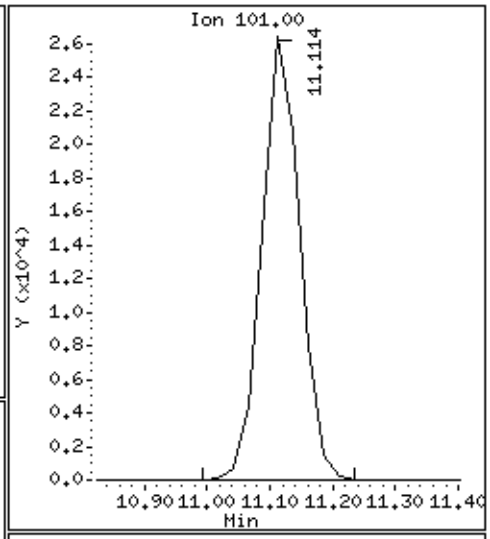
Concentration: 2.427 PPBV

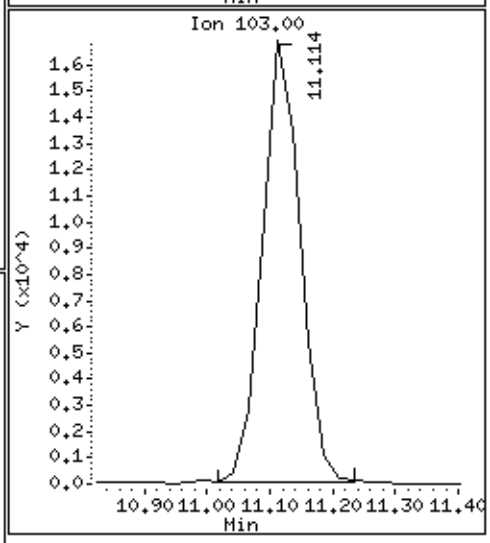












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

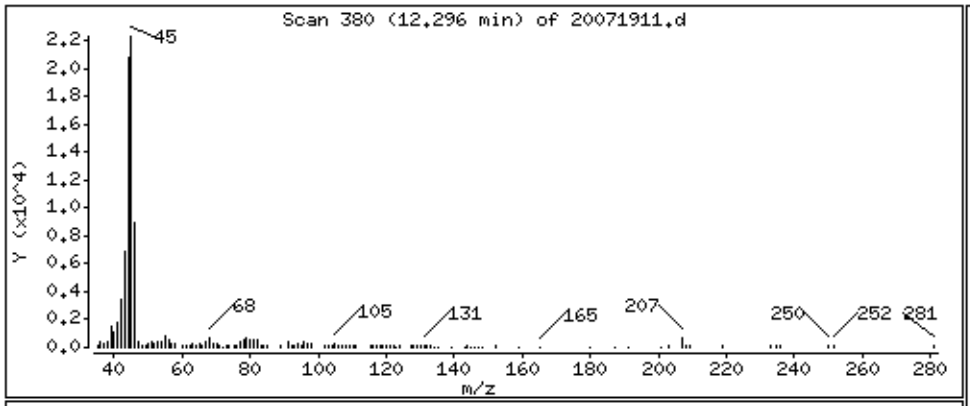
Operator: gh

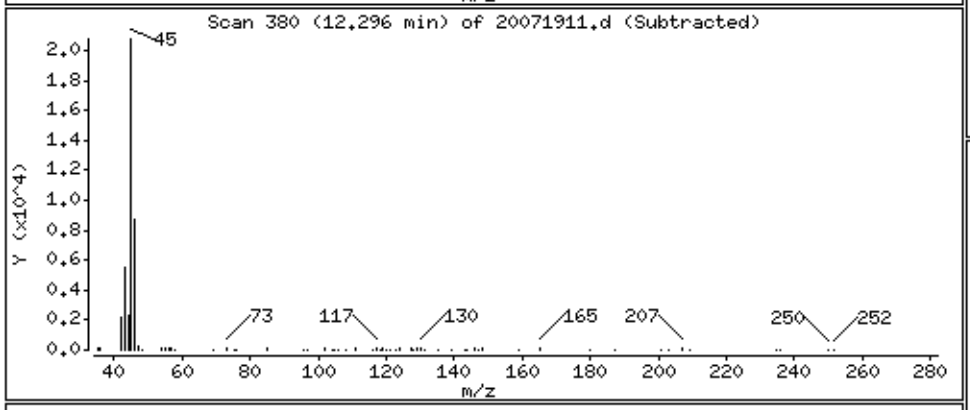
Column phase: RTX-624

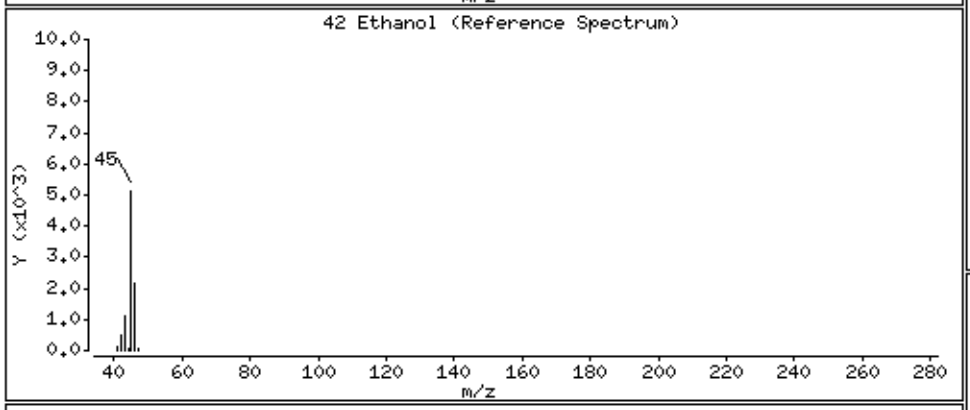
Column diameter: 0.32

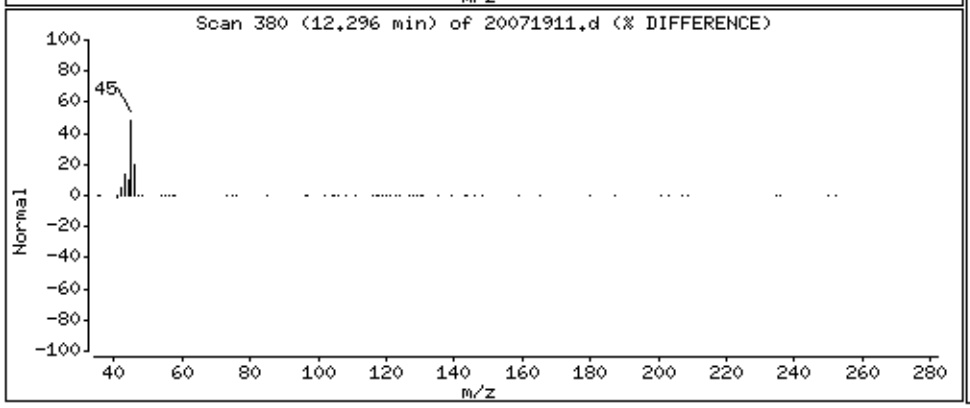
42 Ethanol

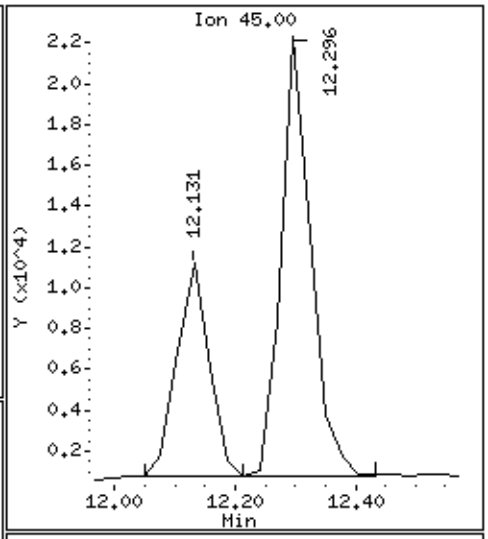
Concentration: 12.519 PPBV

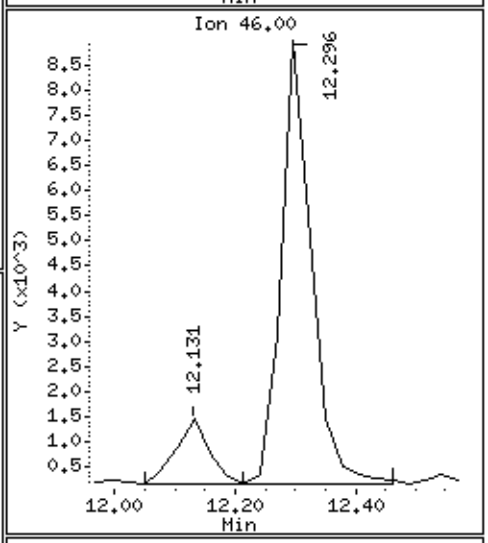


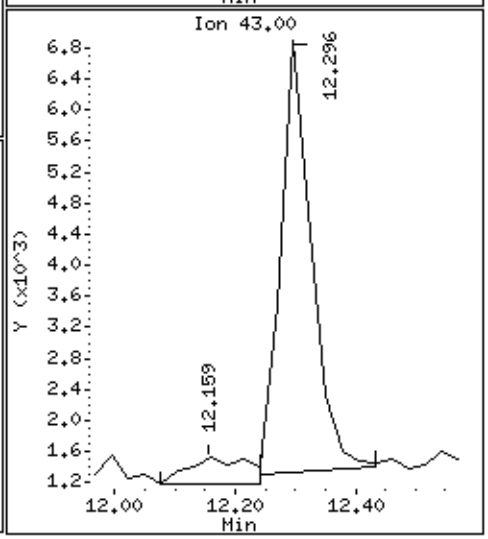












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

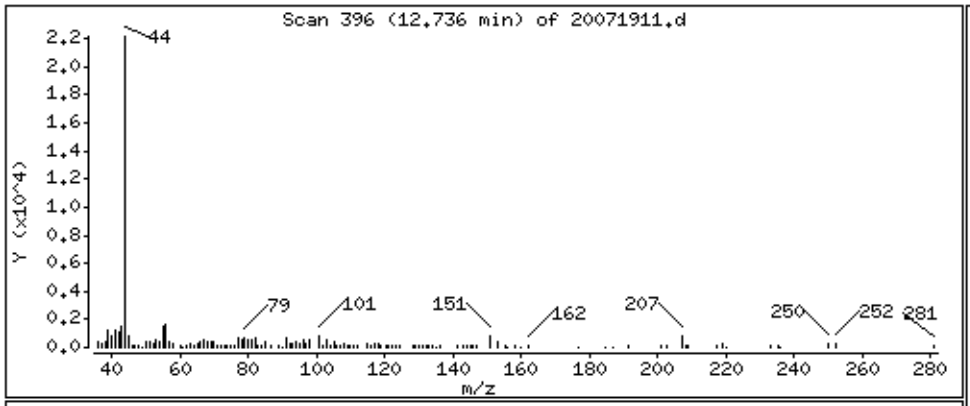
Operator: gh

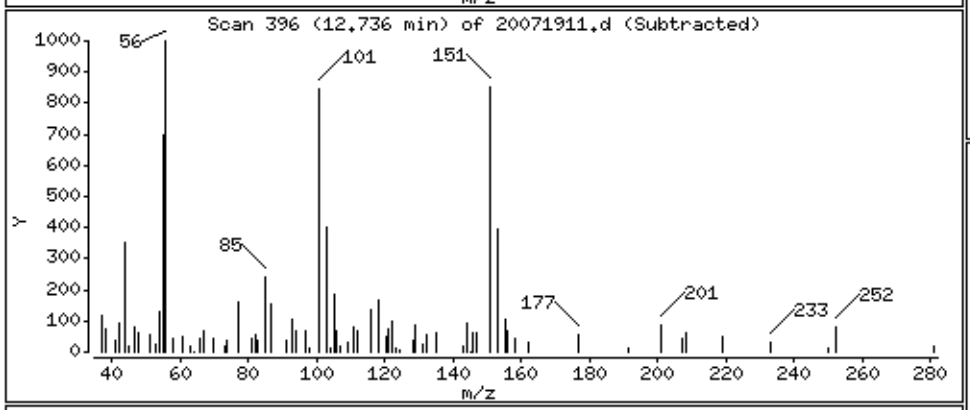
Column phase: RTX-624

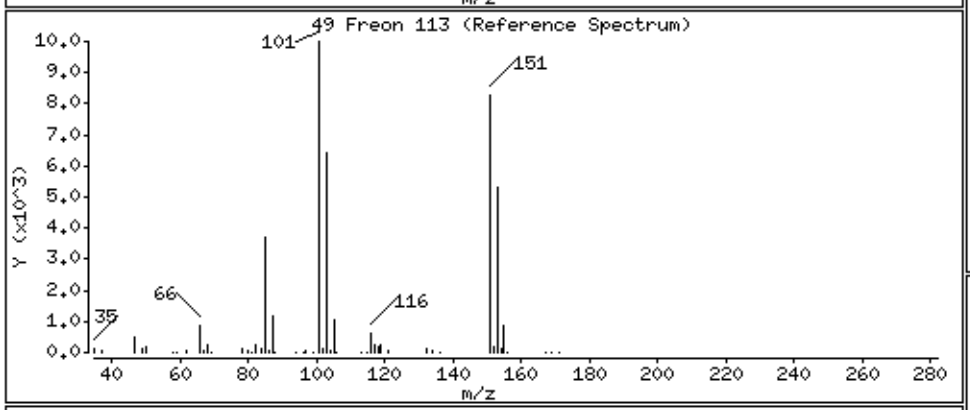
Column diameter: 0.32

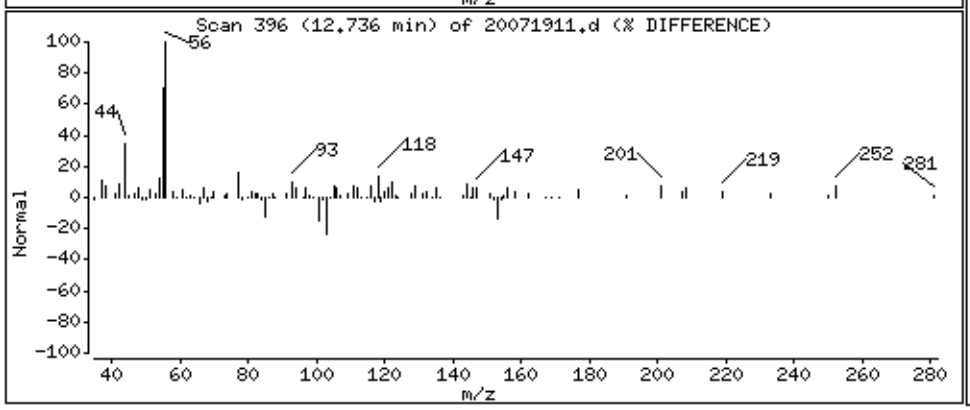
49 Freon 113

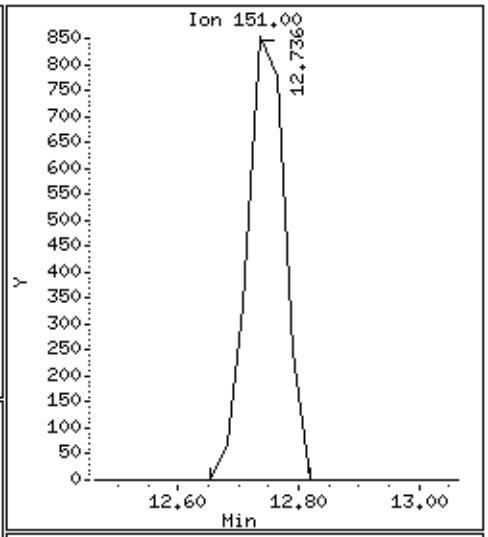
Concentration: 0.1199 PPBV

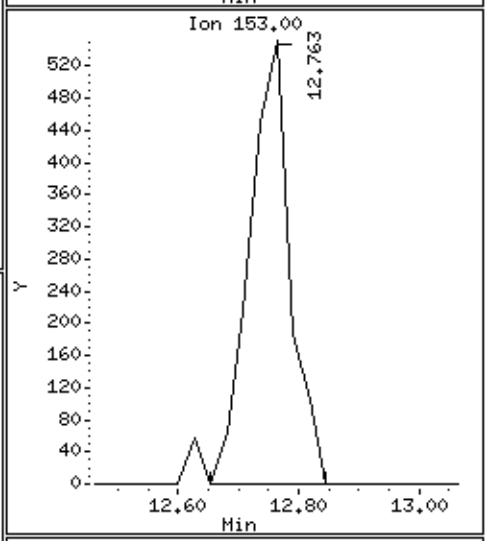


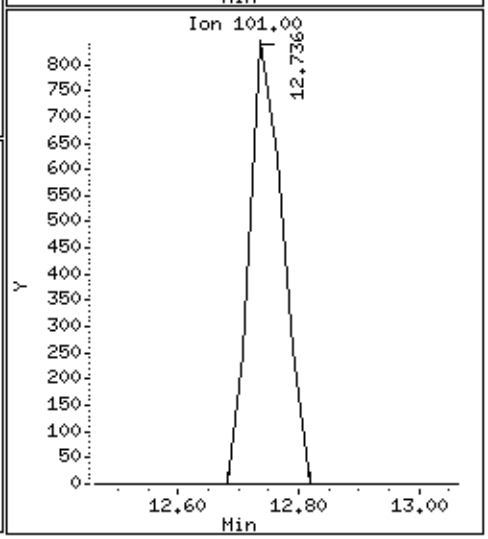












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

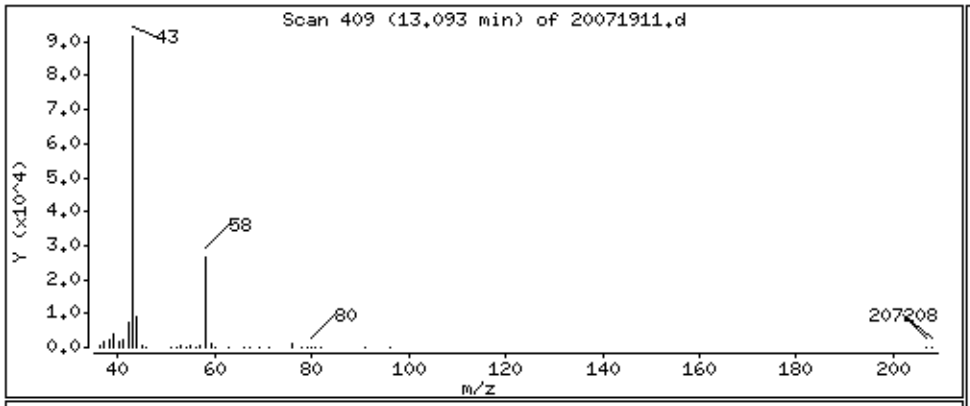
Operator: gh

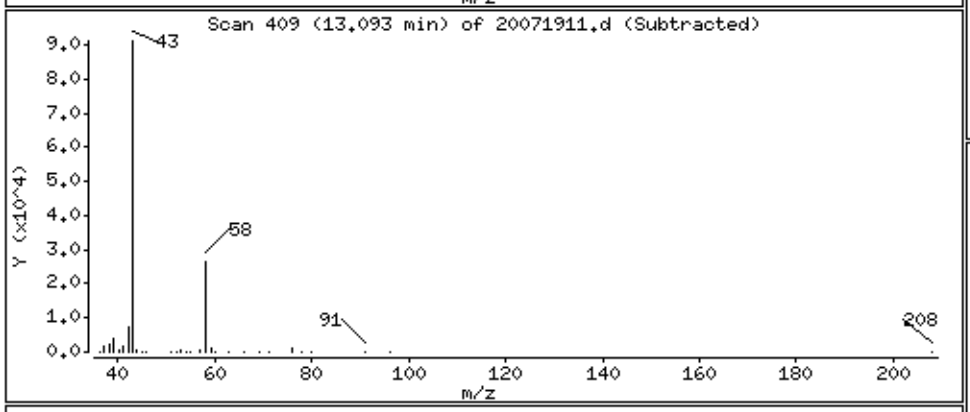
Column phase: RTX-624

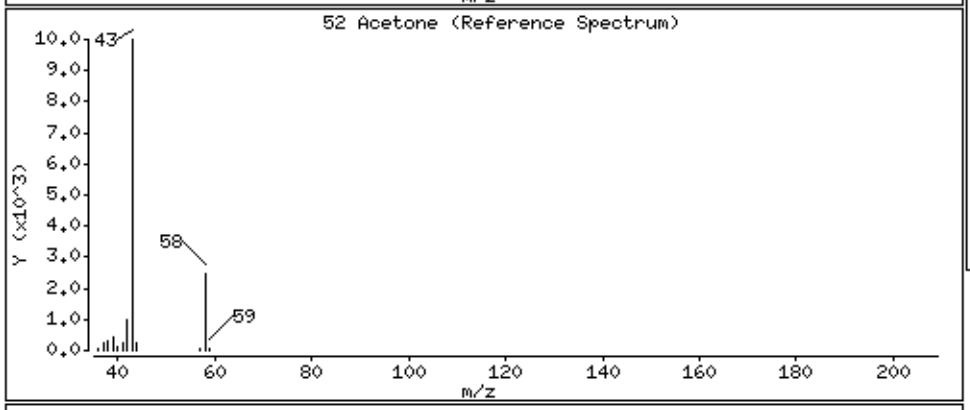
Column diameter: 0.32

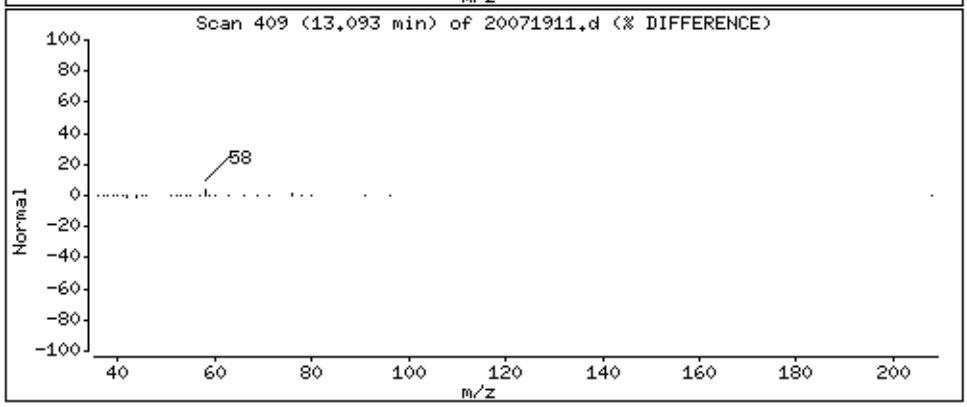
52 Acetone

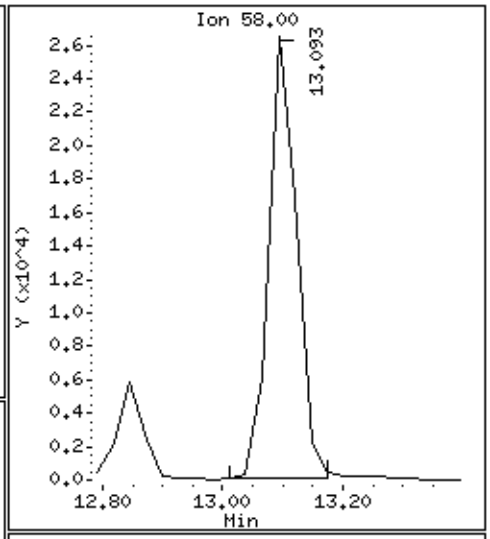
Concentration: 9.920 PPBV

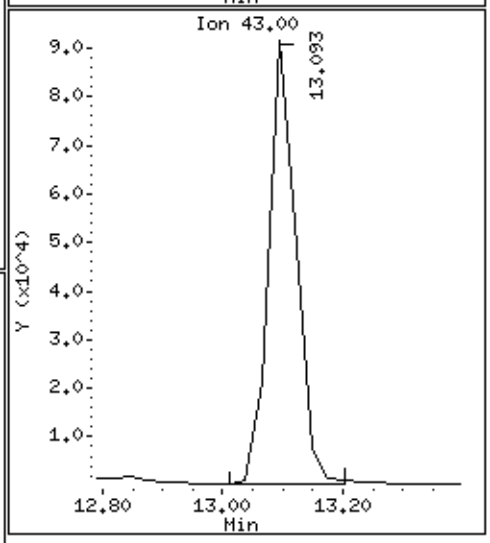












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

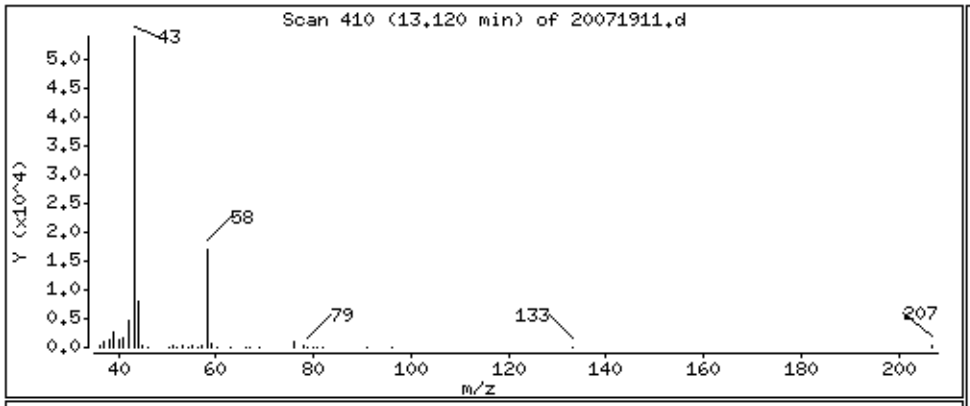
Operator: gh

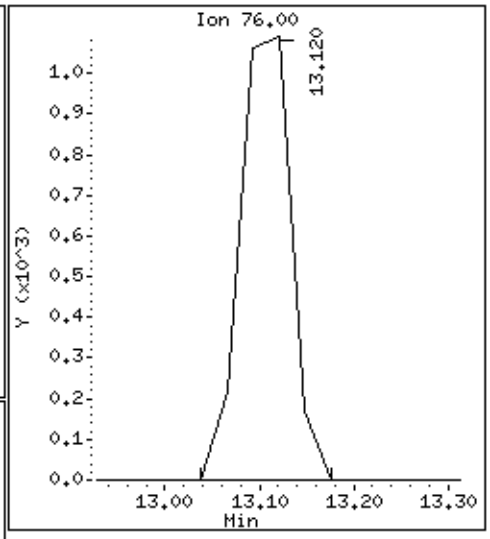
Column phase: RTX-624

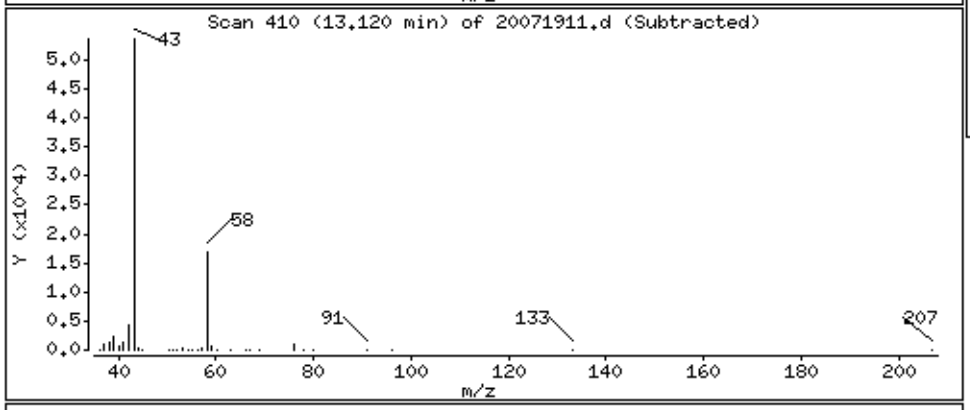
Column diameter: 0.32

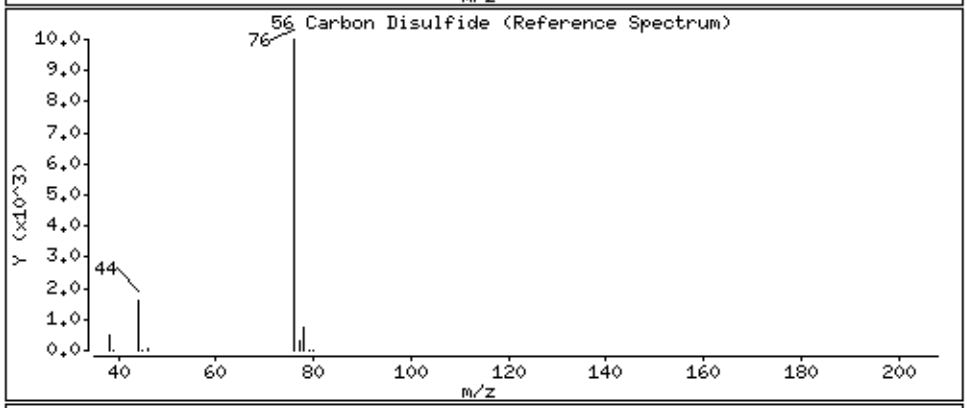
56 Carbon Disulfide

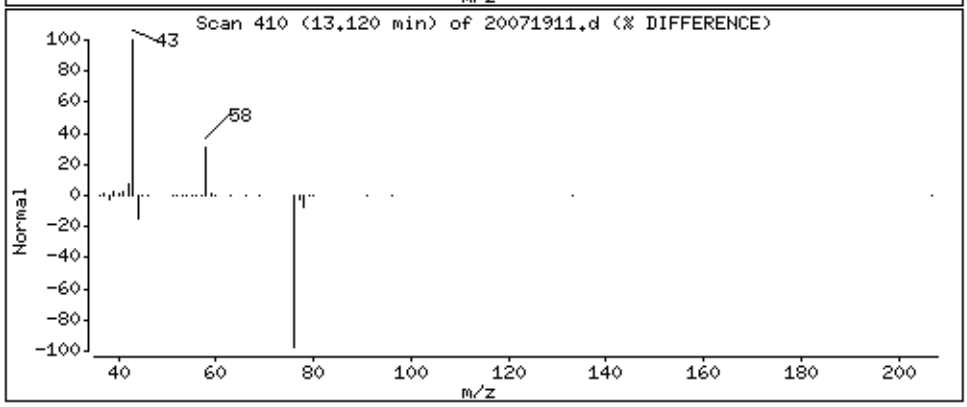
Concentration: 0.08571 PPBV











Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

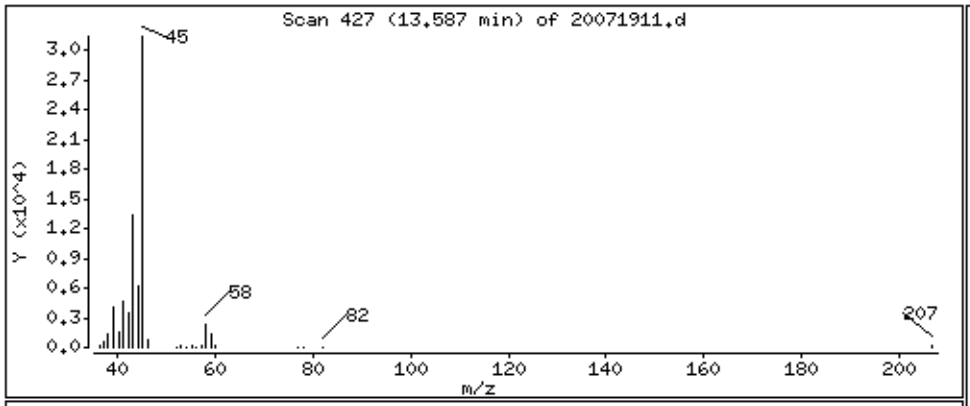
Operator: gh

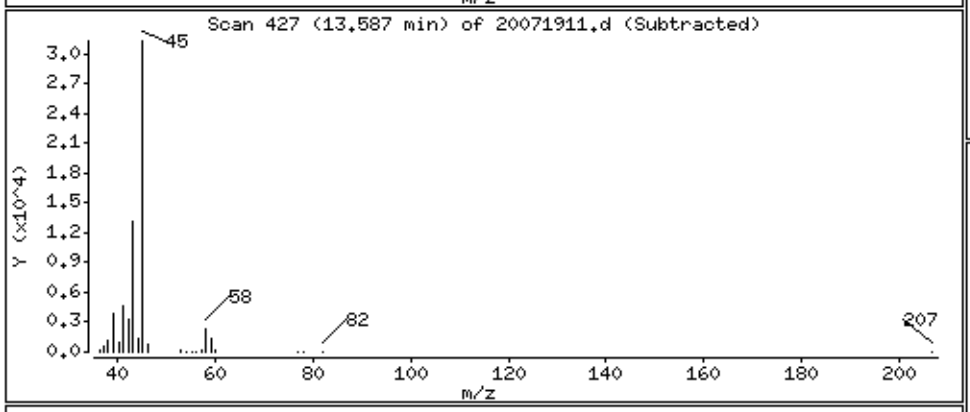
Column phase: RTX-624

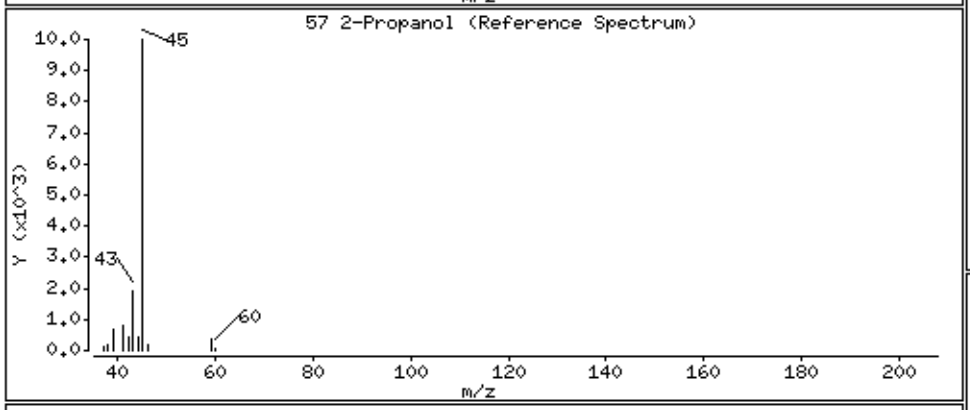
Column diameter: 0.32

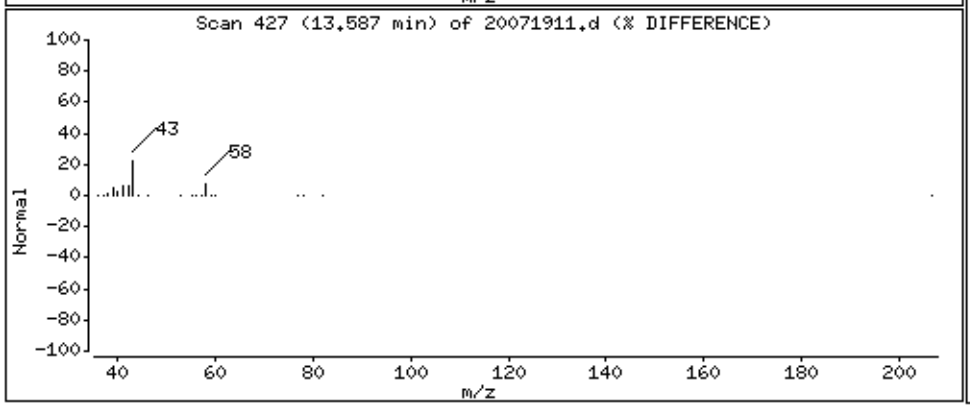
57 2-Propanol

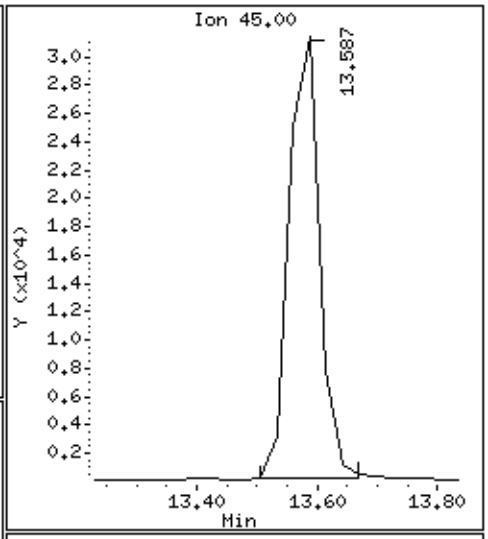
Concentration: 4.181 PPBV

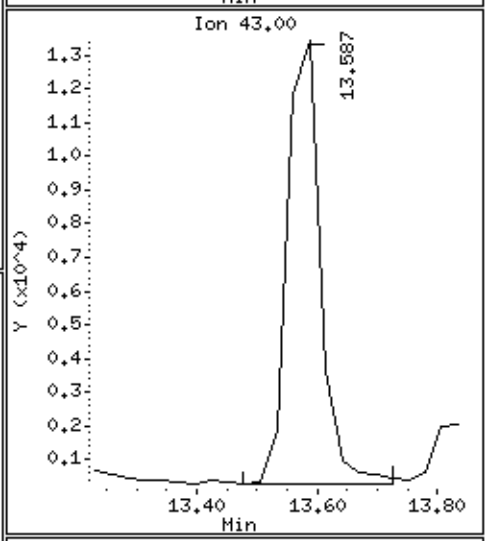


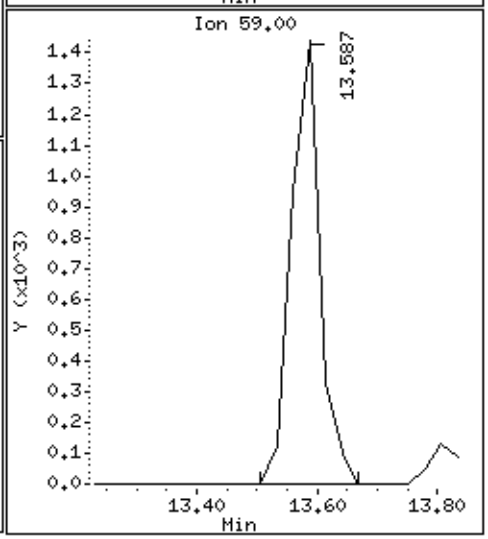












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

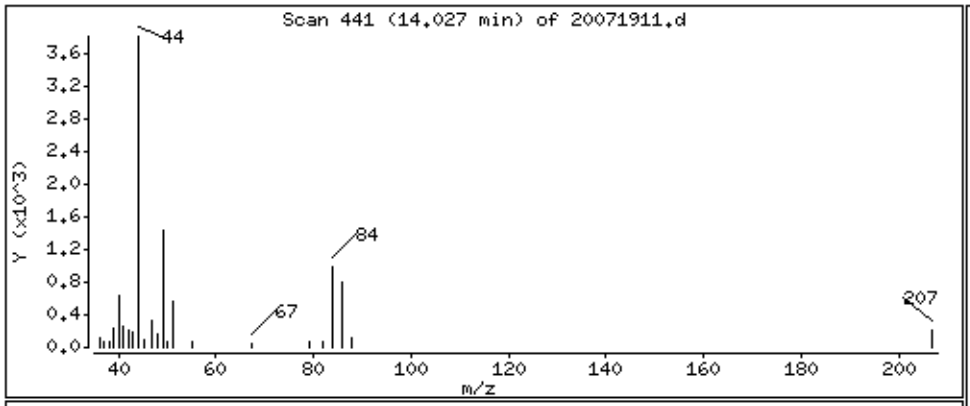
Operator: gh

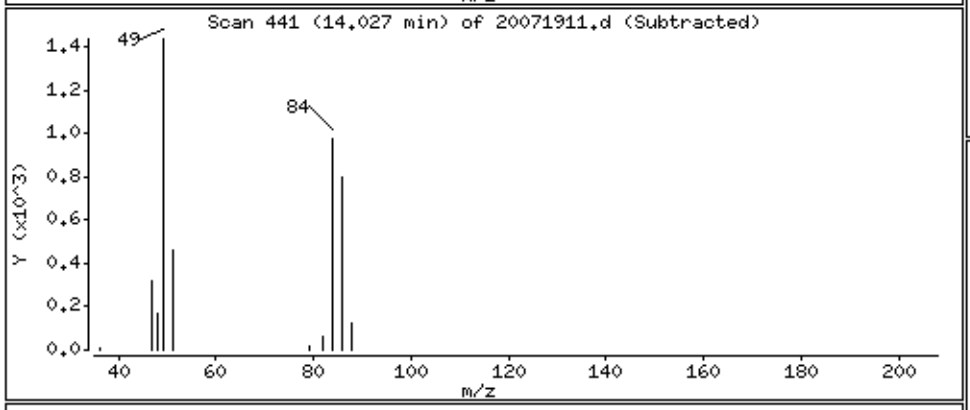
Column phase: RTX-624

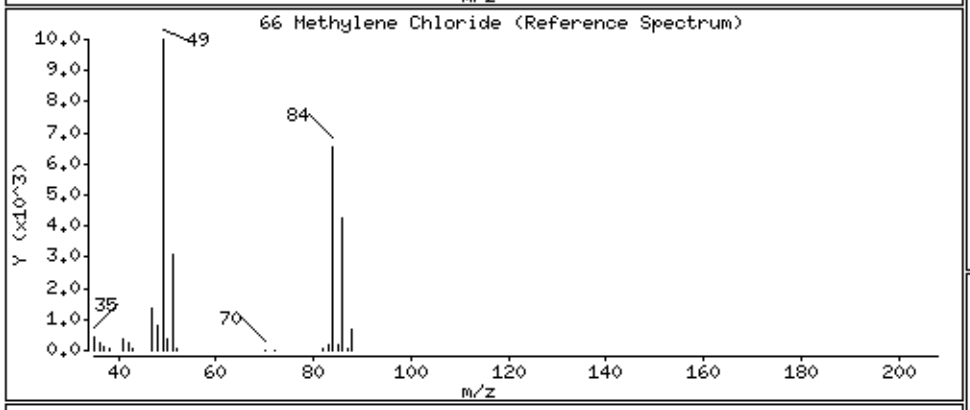
Column diameter: 0.32

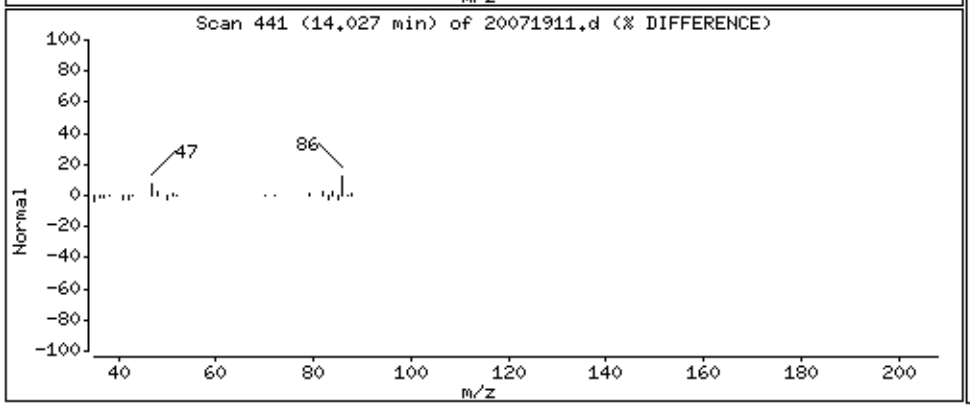
66 Methylene Chloride

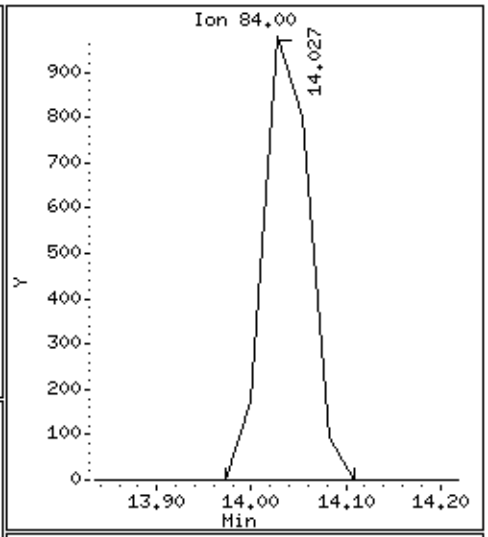
Concentration: 0.1915 PPBV

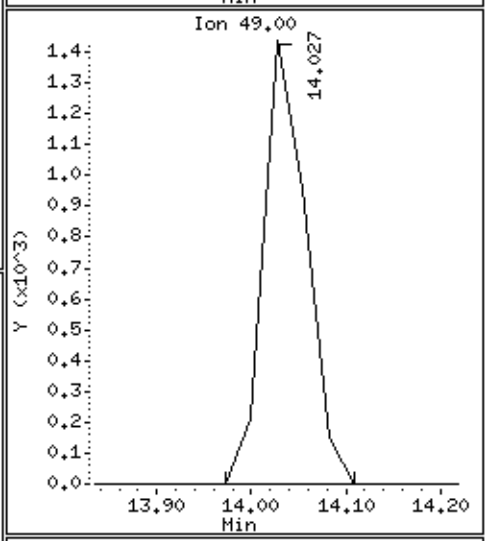


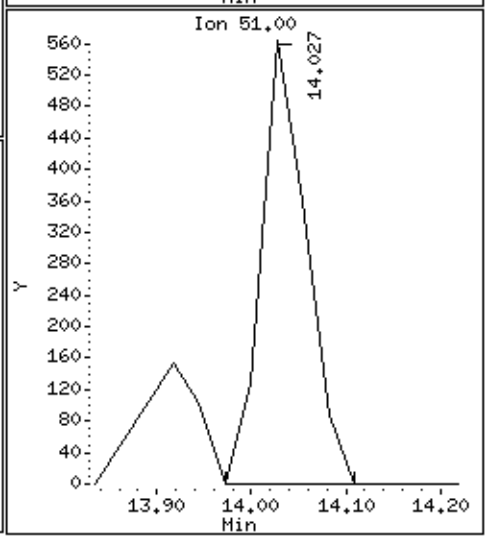












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

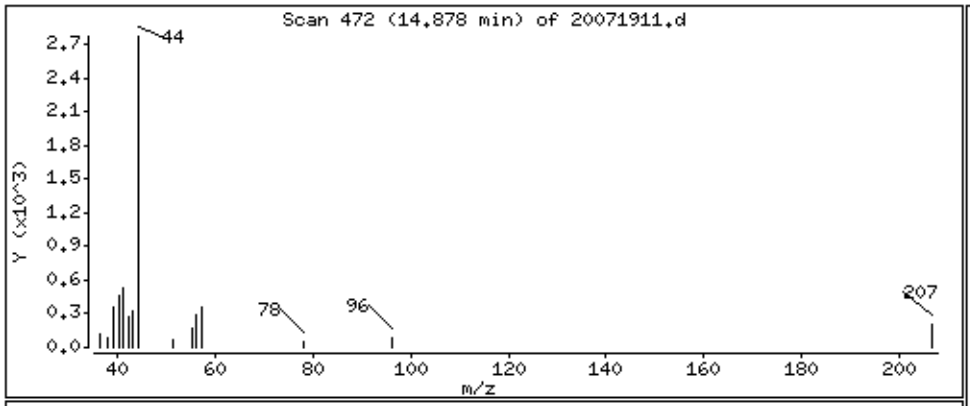
Operator: gh

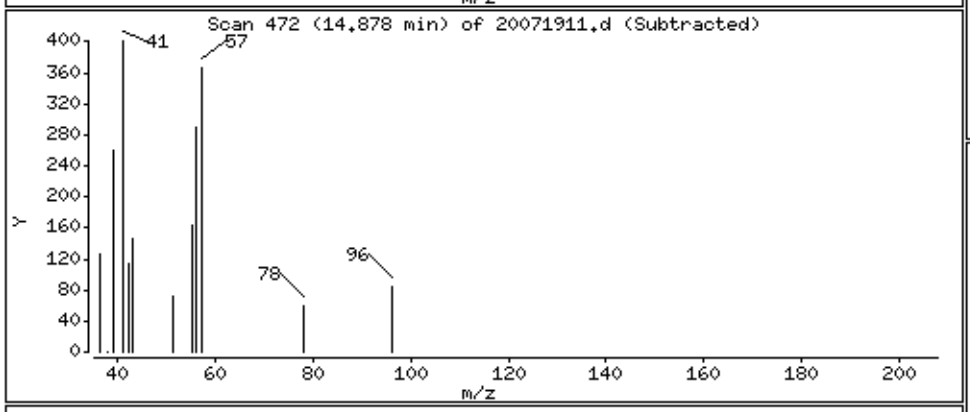
Column phase: RTX-624

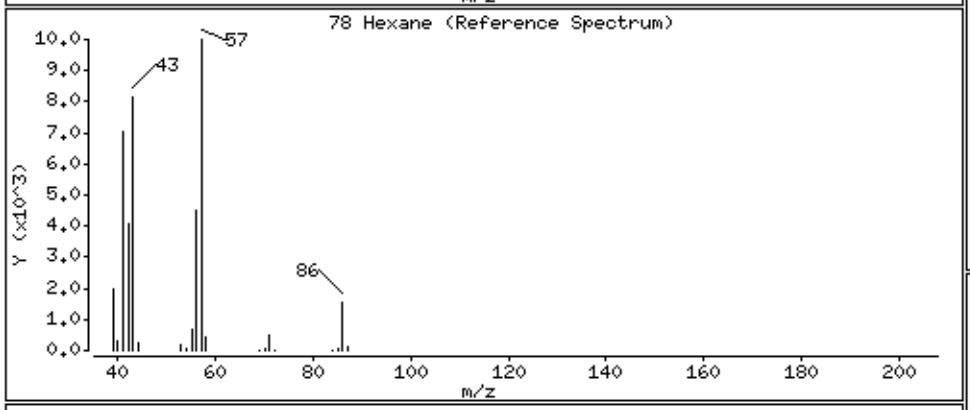
Column diameter: 0.32

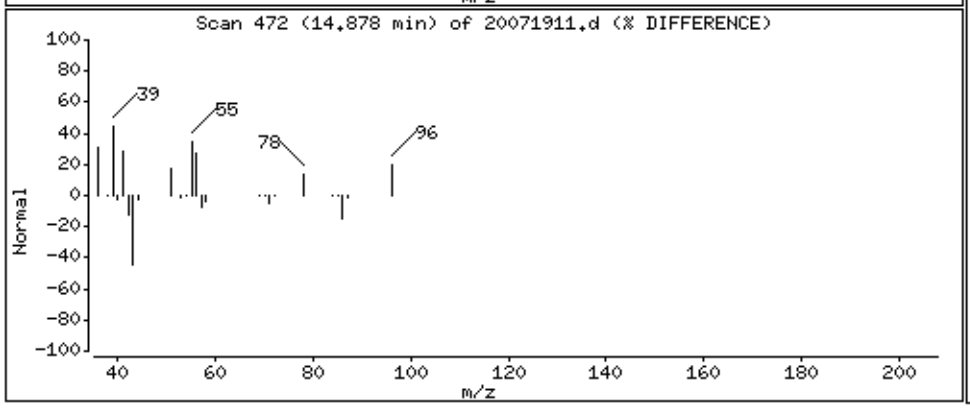
78 Hexane

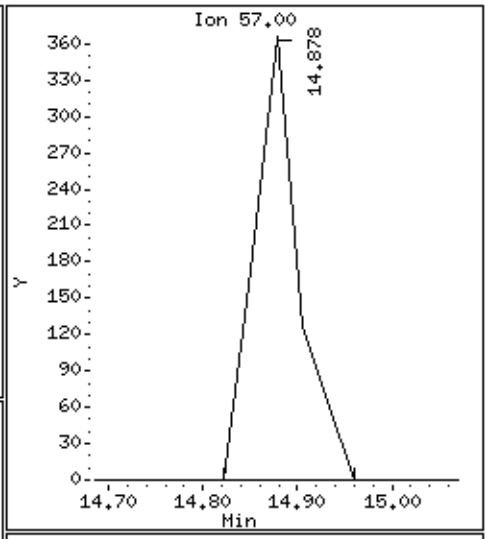
Concentration: 0.04369 PPBV

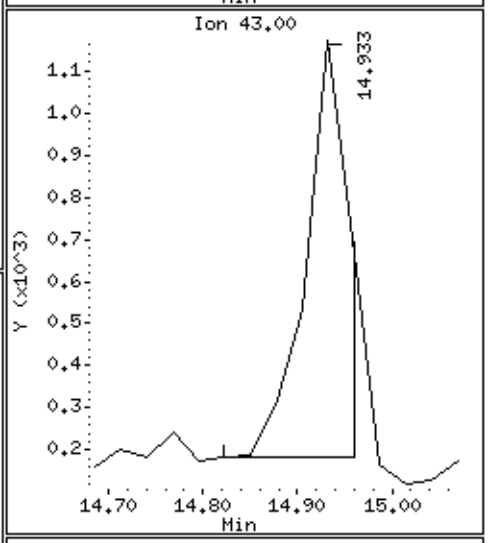


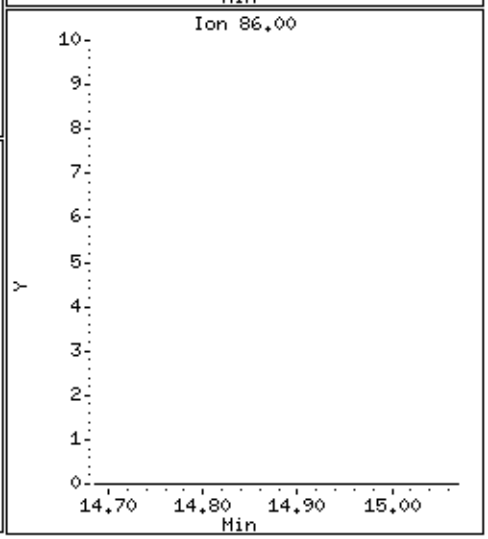












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

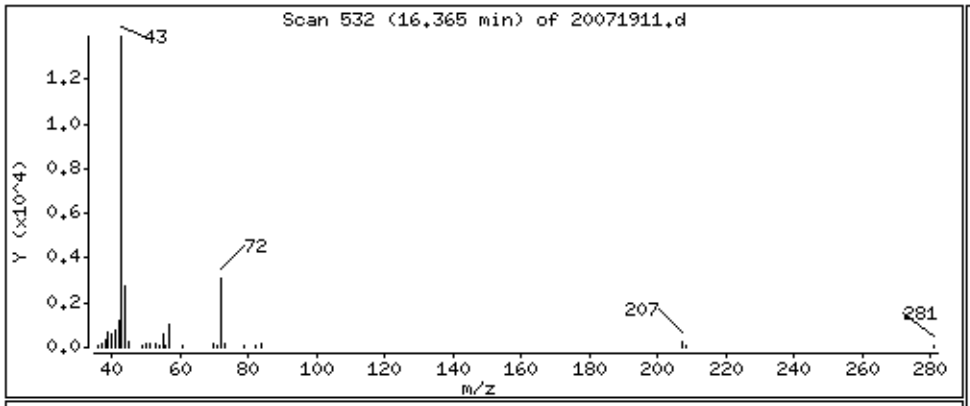
Operator: gh

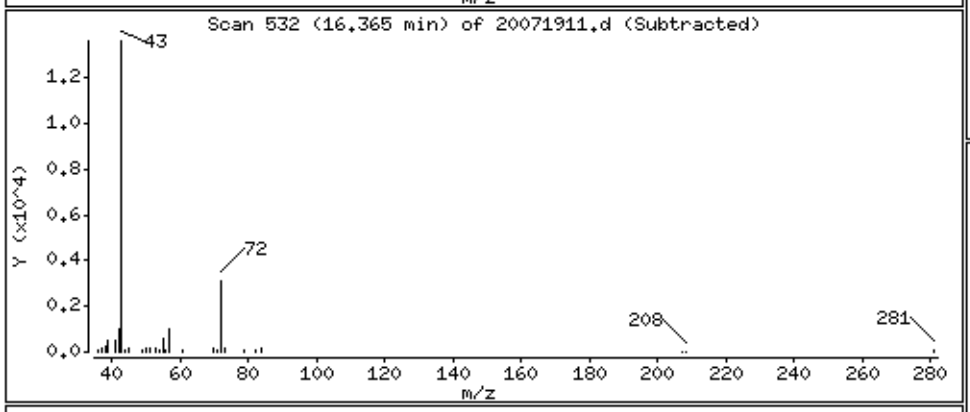
Column phase: RTX-624

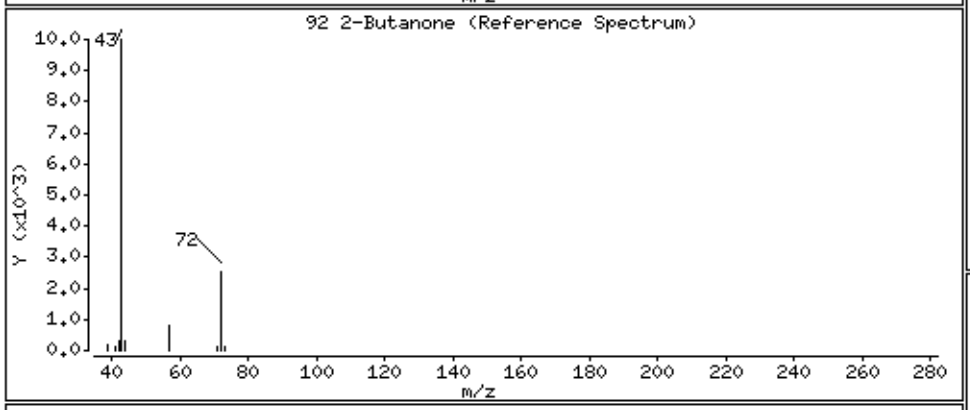
Column diameter: 0.32

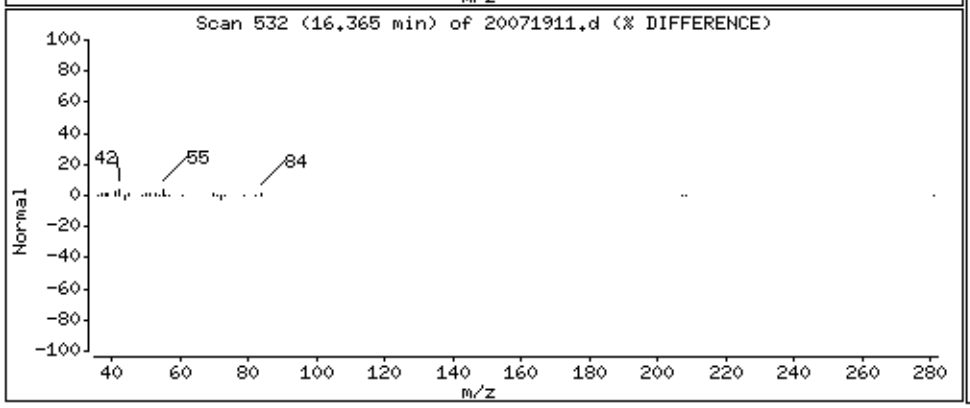
92 2-Butanone

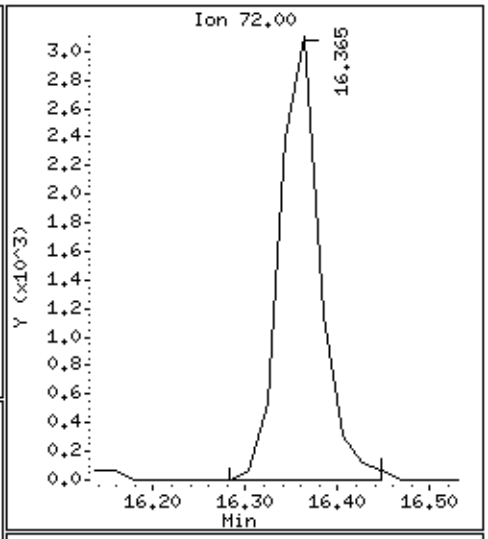
Concentration: 1.102 PPBV

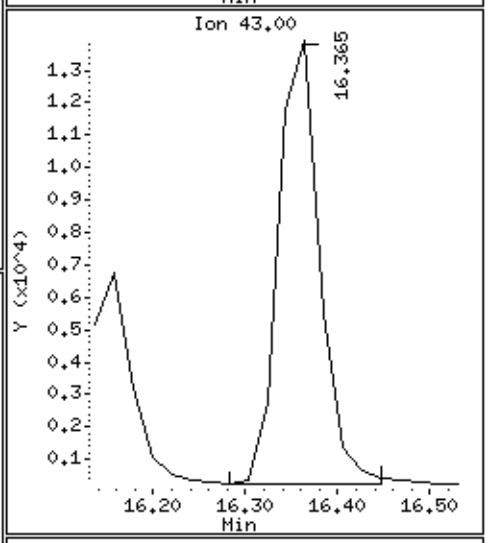


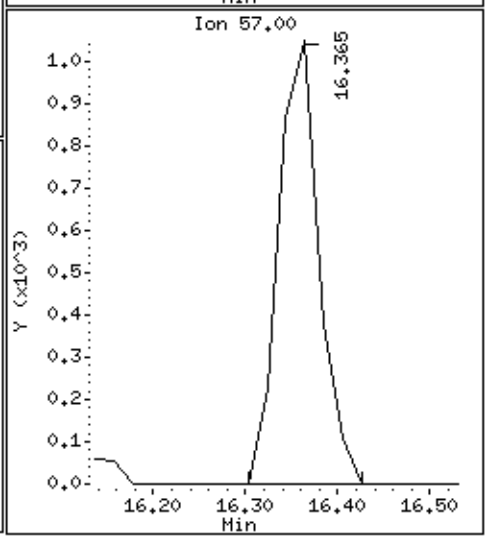












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

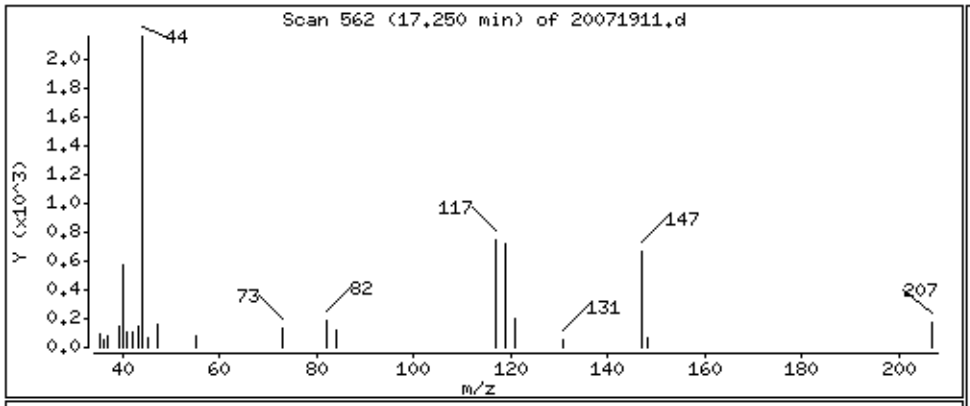
Operator: gh

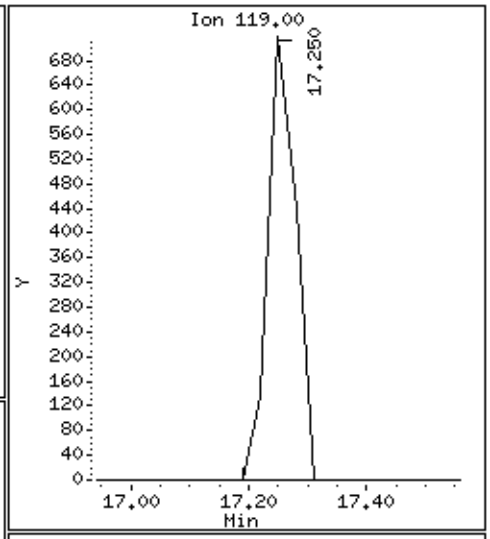
Column phase: RTX-624

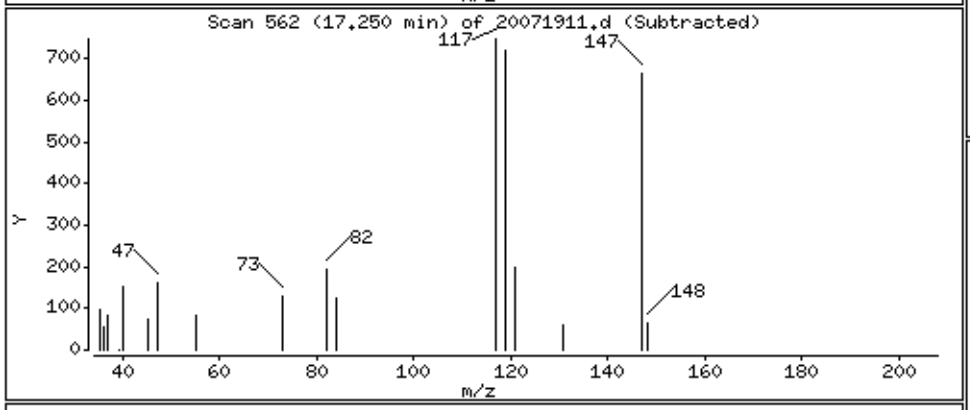
Column diameter: 0.32

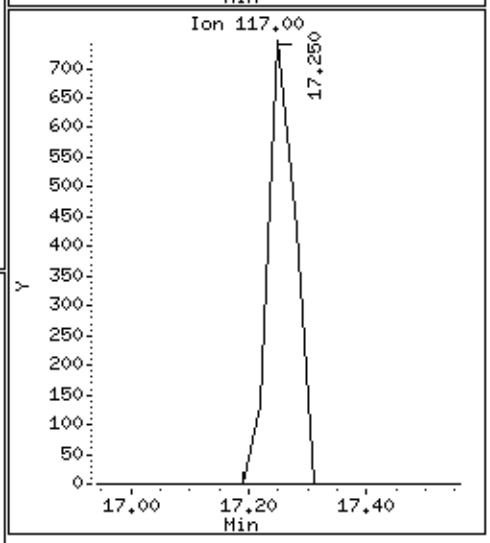
106 Carbon Tetrachloride

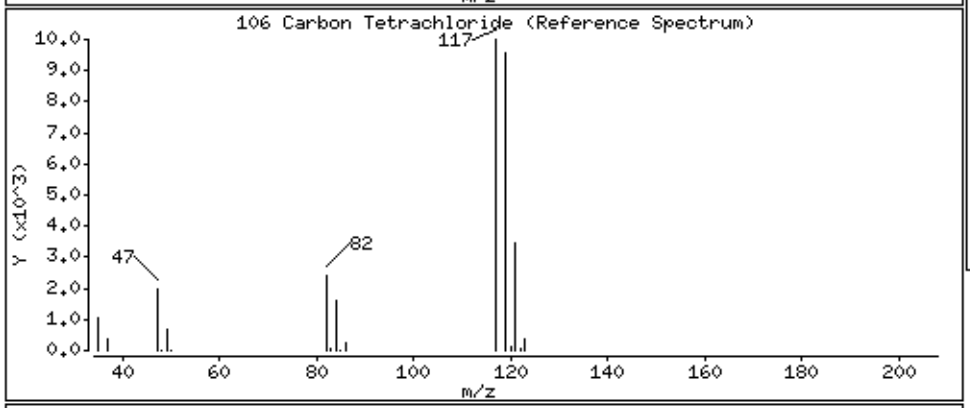
Concentration: 0.07241 PPBV

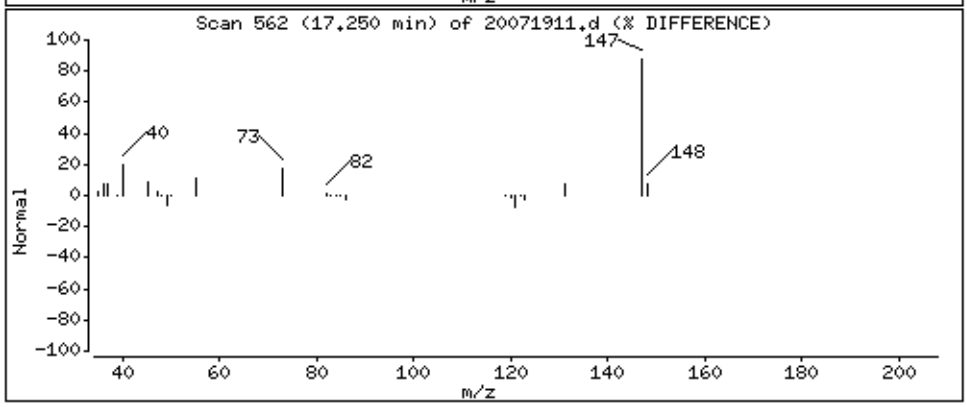












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

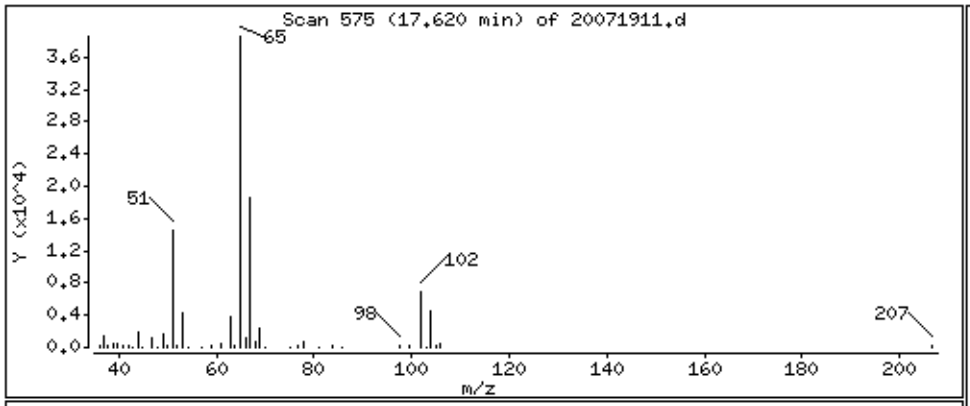
Operator: gh

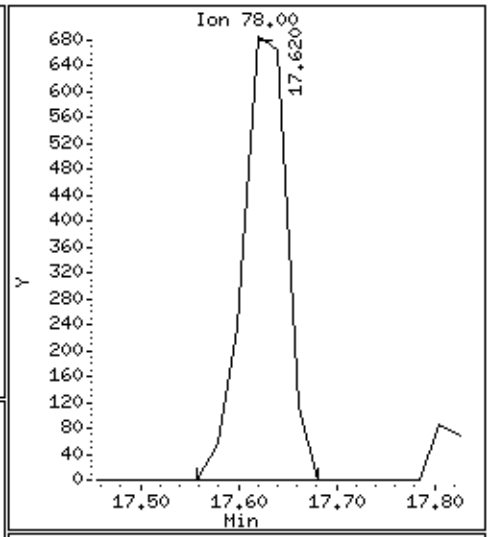
Column phase: RTX-624

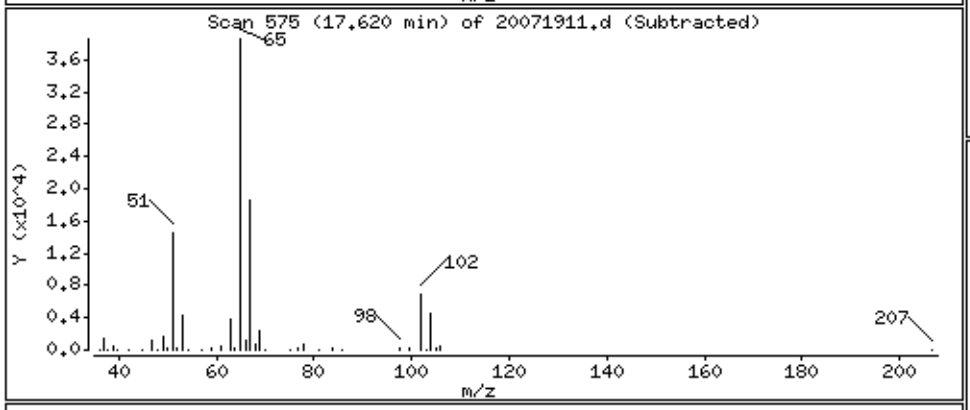
Column diameter: 0.32

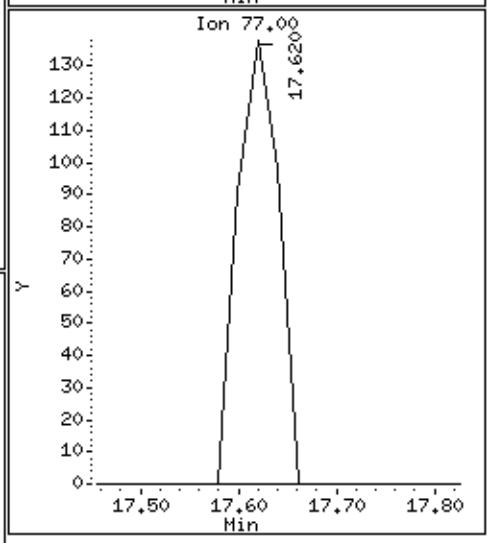
116 Benzene

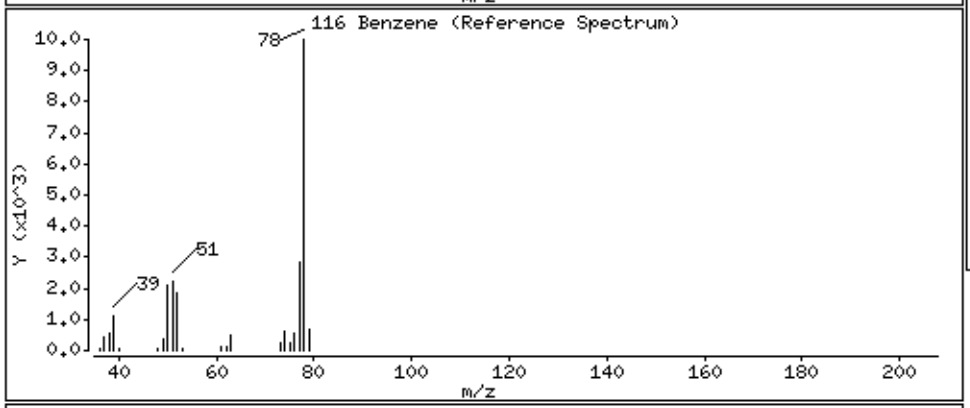
Concentration: 0.05254 PPBV

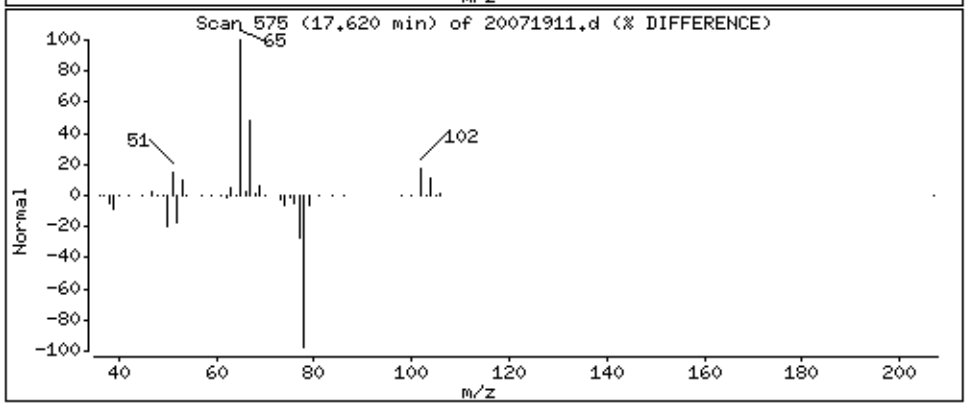












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

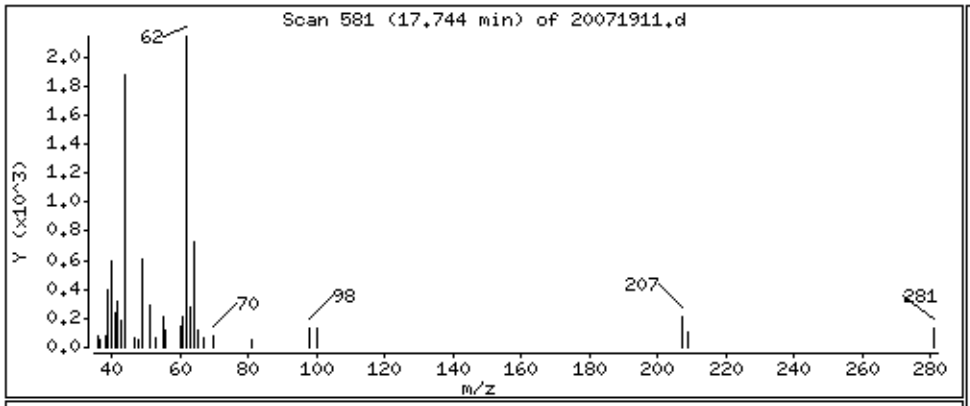
Operator: gh

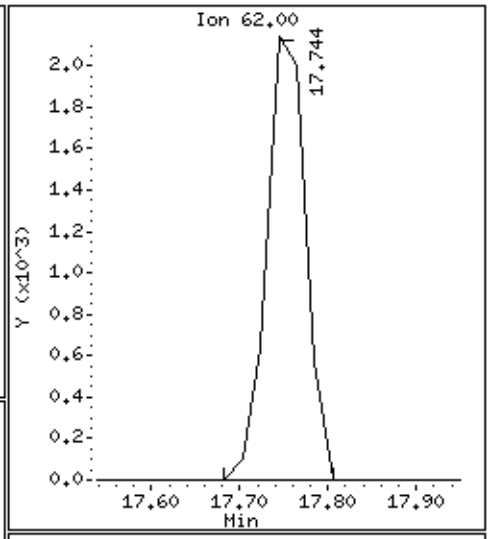
Column phase: RTX-624

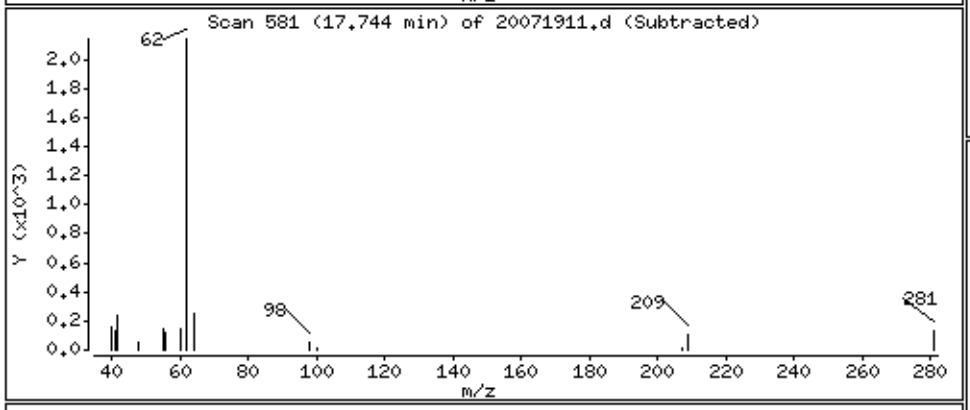
Column diameter: 0.32

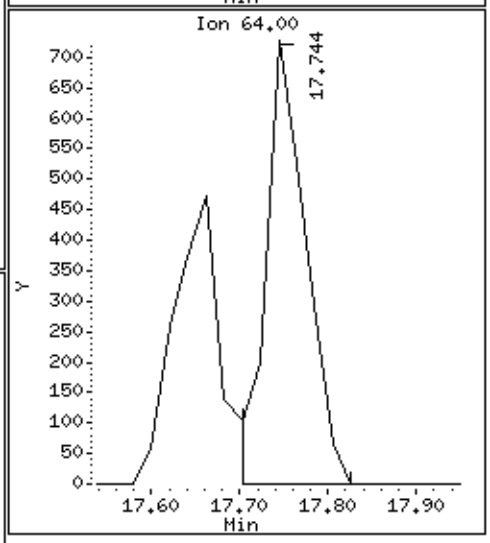
120 1,2-Dichloroethane

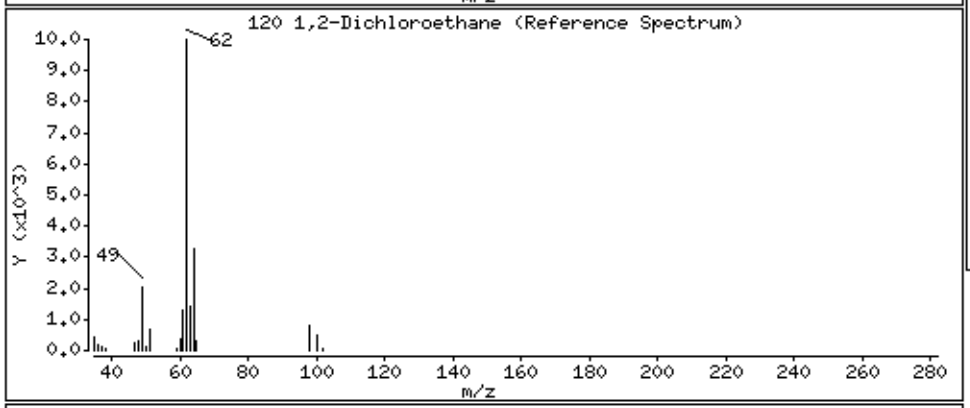
Concentration: 0.3705 PPBV

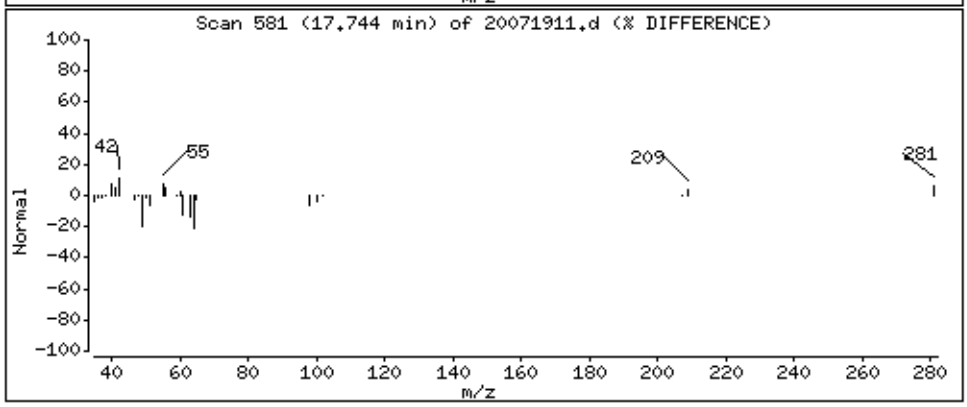












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

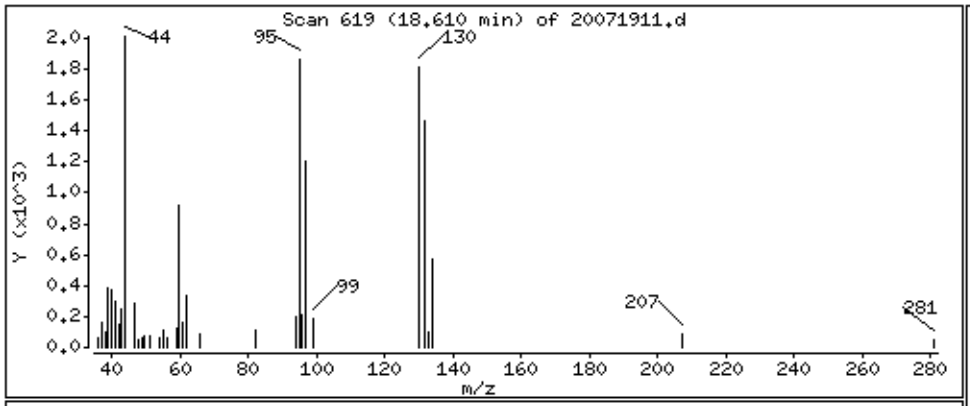
Operator: gh

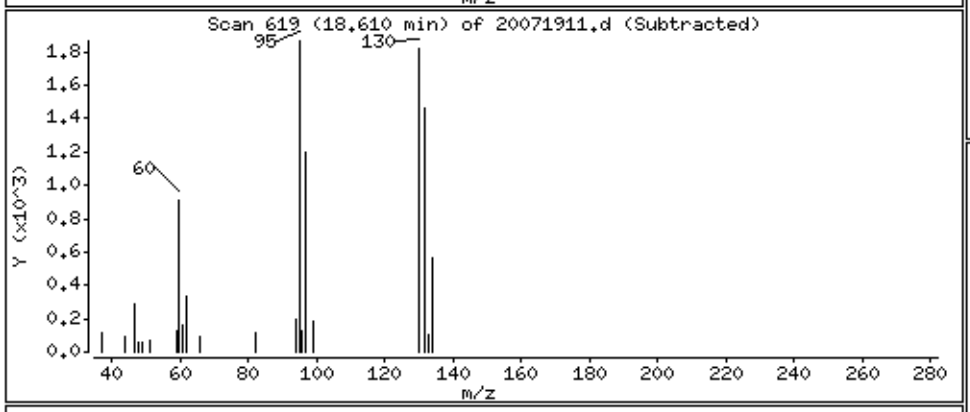
Column phase: RTX-624

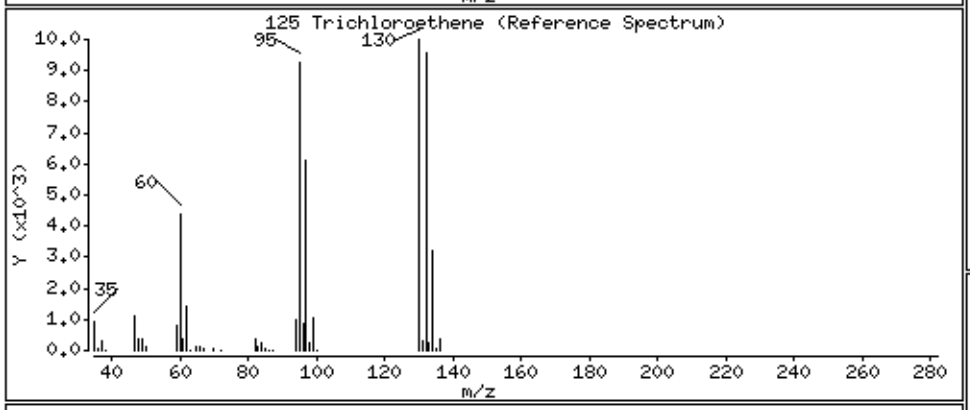
Column diameter: 0.32

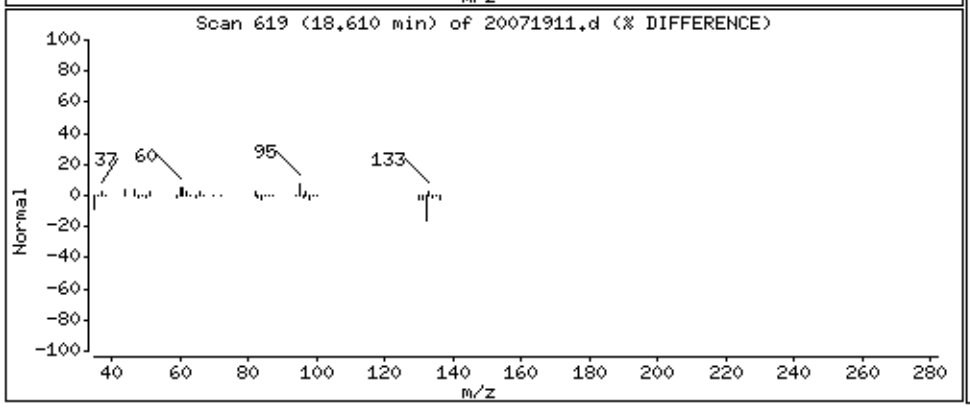
125 Trichloroethene

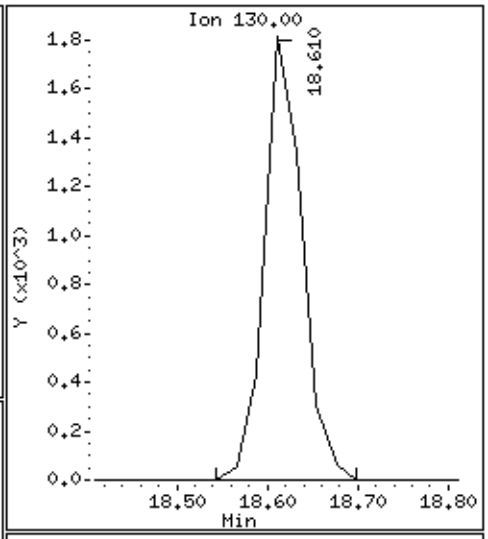
Concentration: 0.2843 PPBV

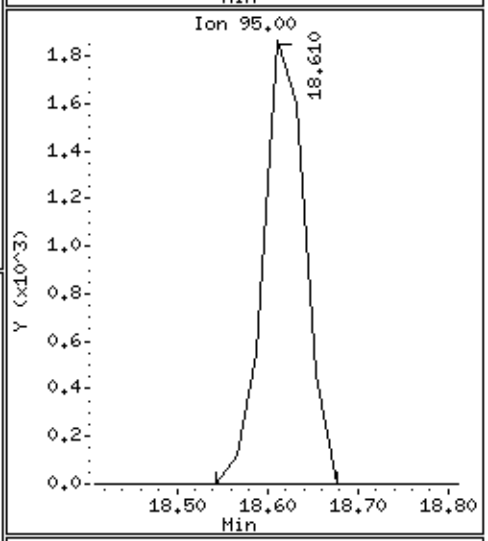


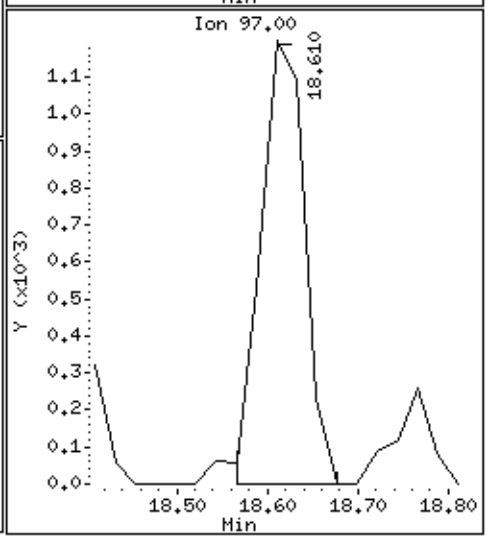












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

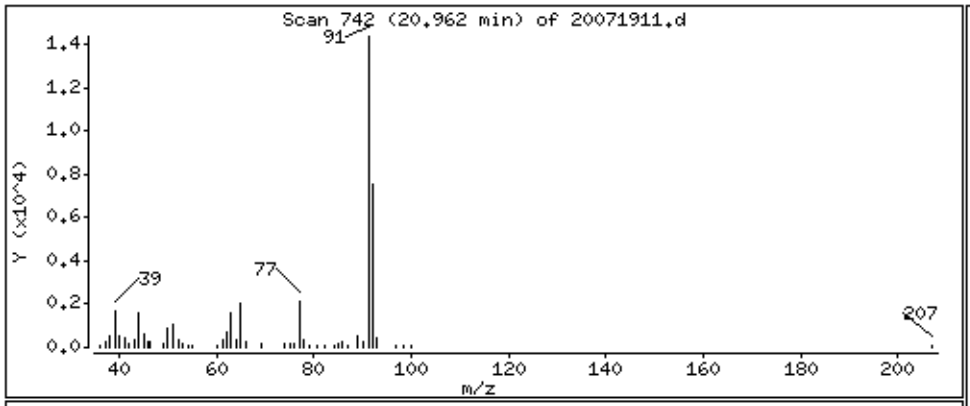
Operator: gh

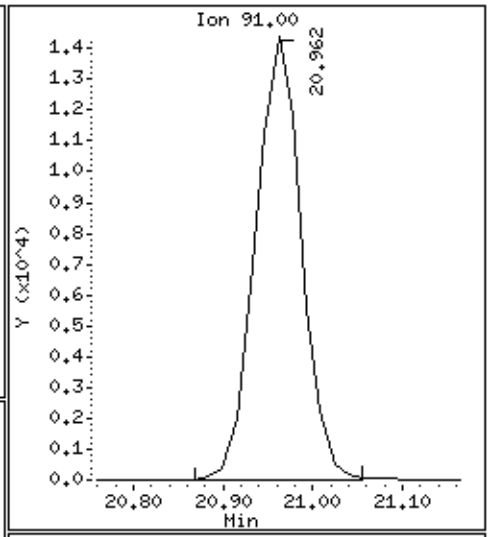
Column phase: RTX-624

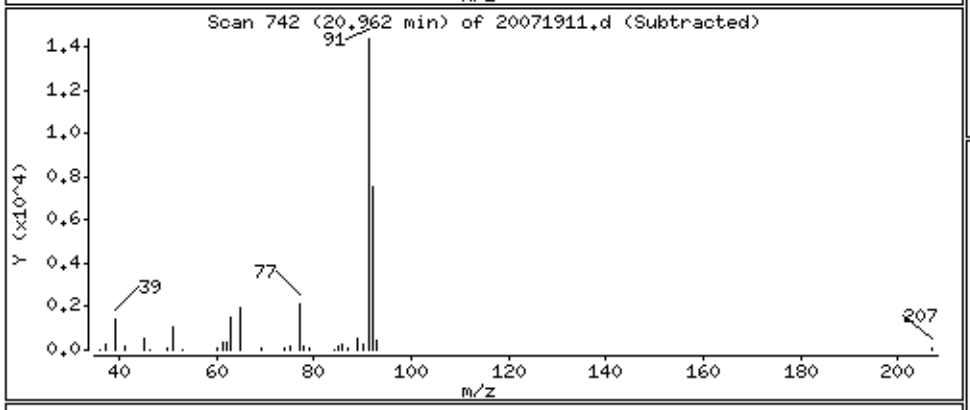
Column diameter: 0.32

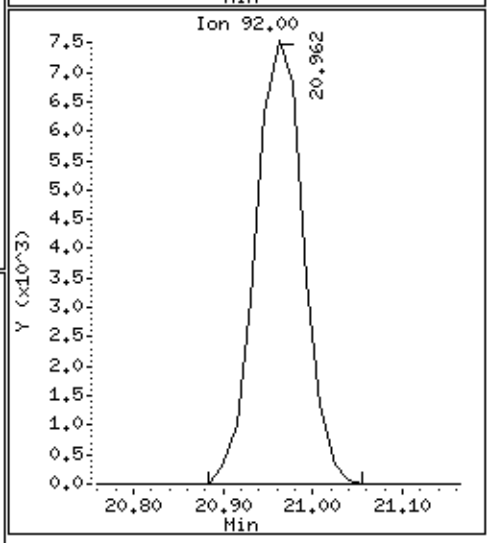
147 Toluene

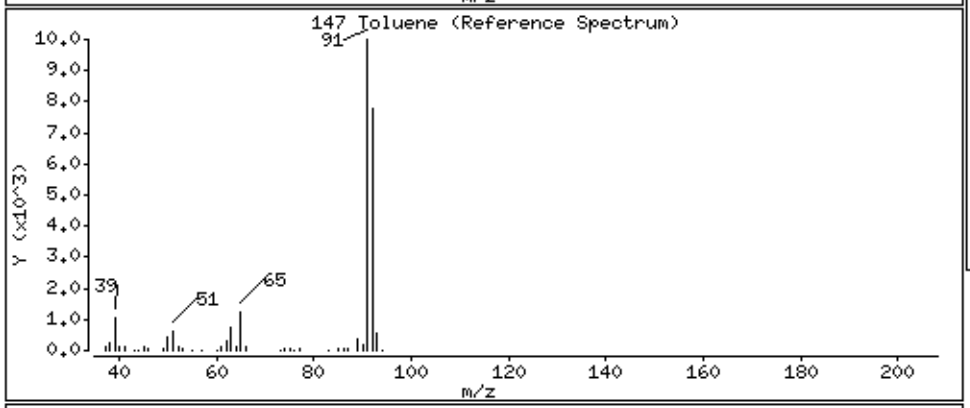
Concentration: 1.154 PPBV

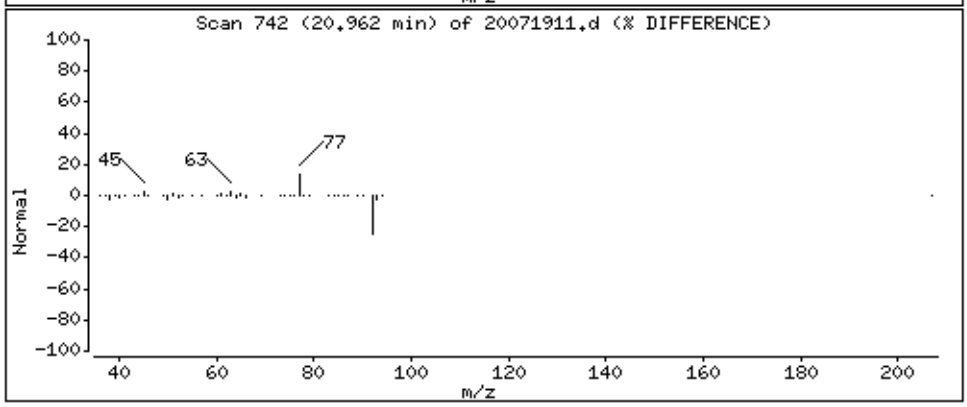












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

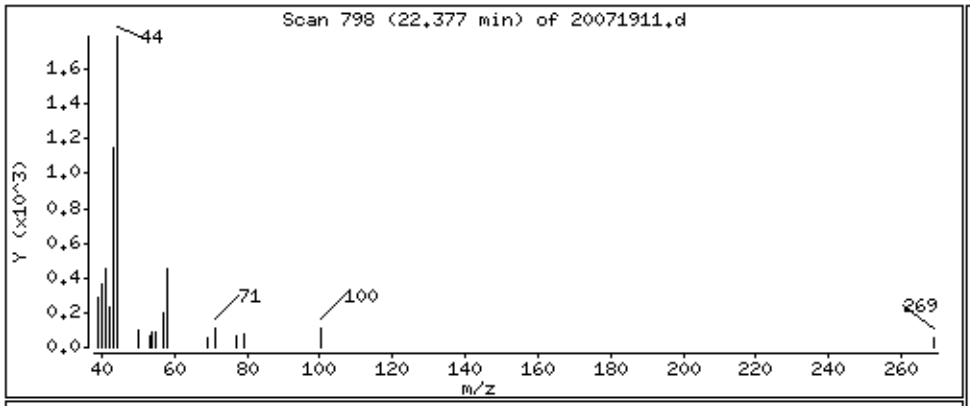
Operator: gh

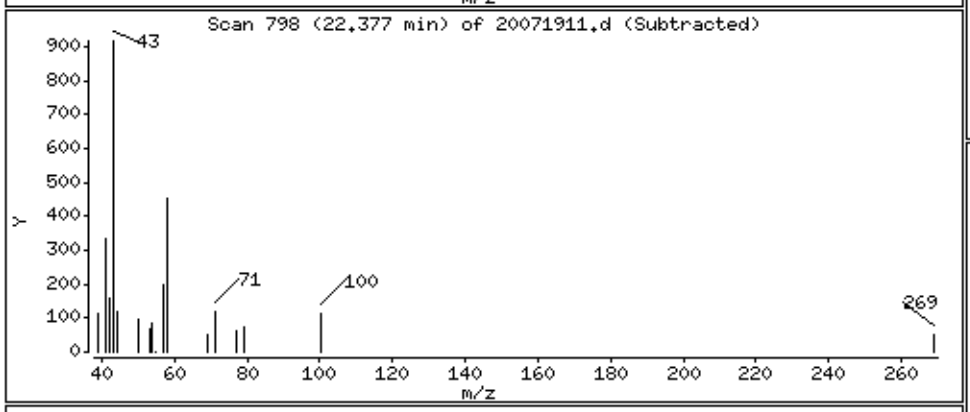
Column phase: RTX-624

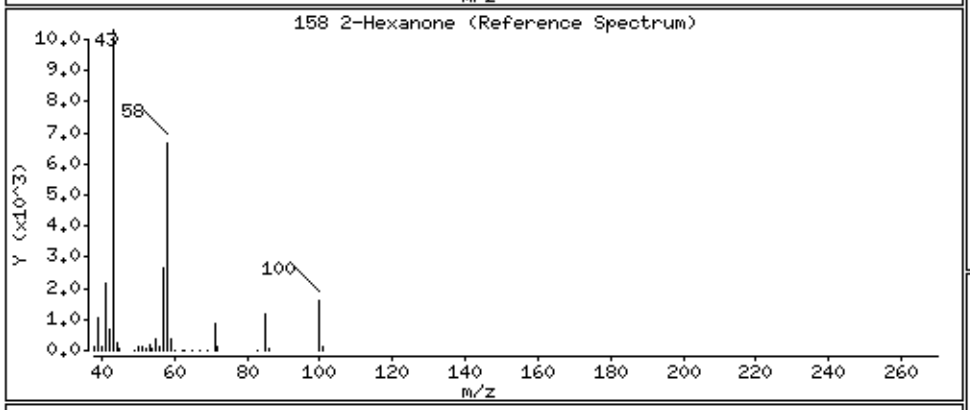
Column diameter: 0.32

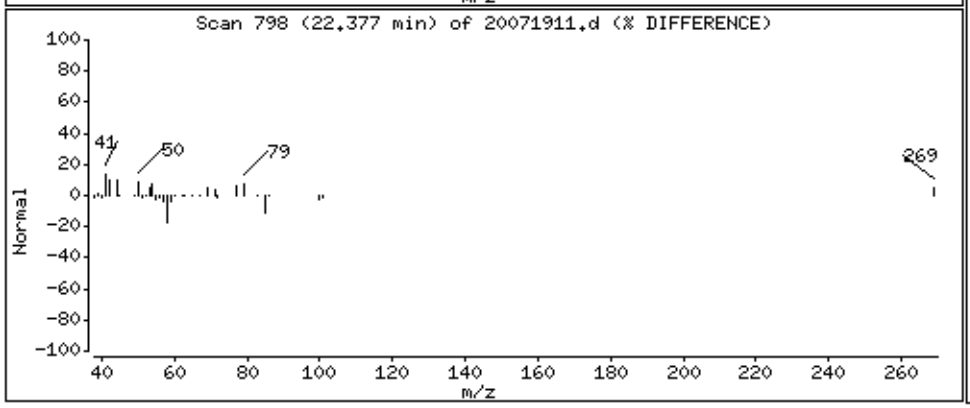
158 2-Hexanone

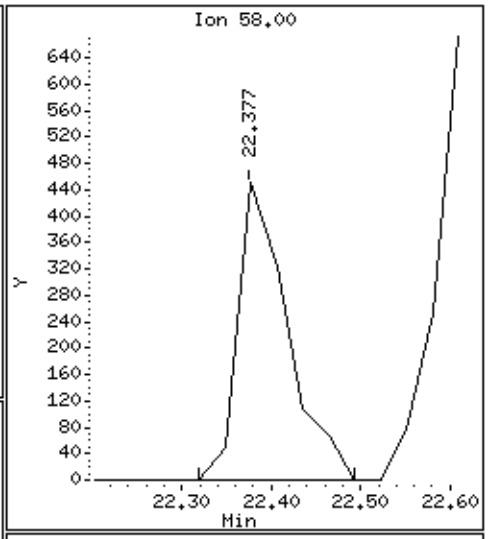
Concentration: 0.1053 PPBV

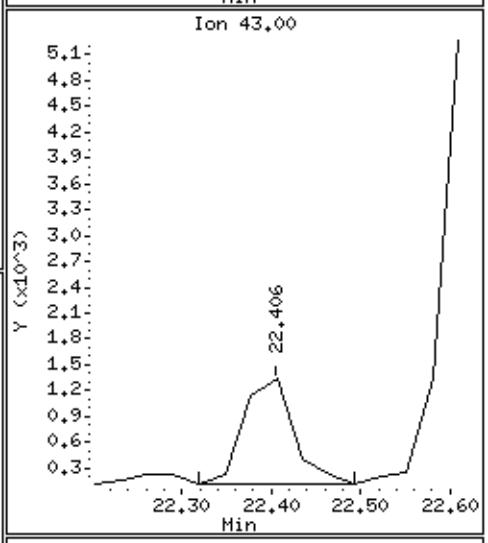


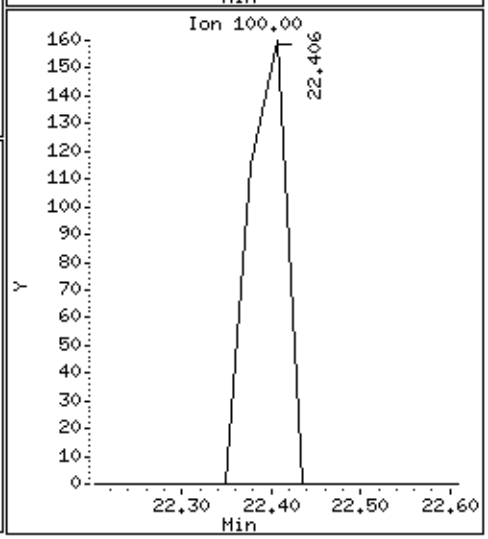












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

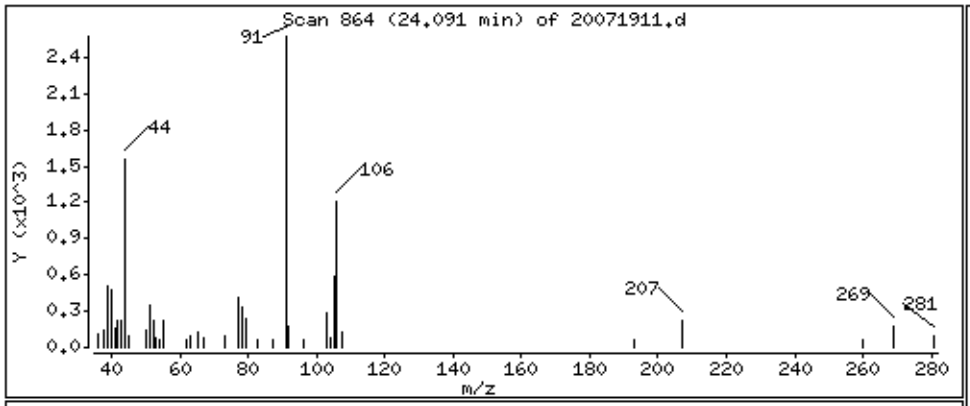
Operator: gh

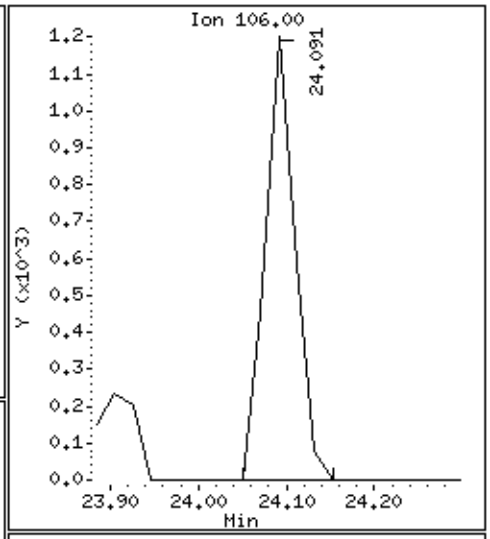
Column phase: RTX-624

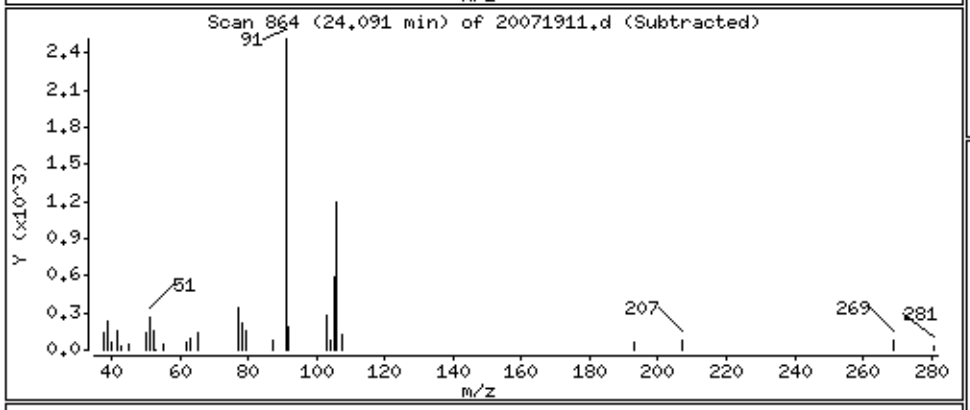
Column diameter: 0.32

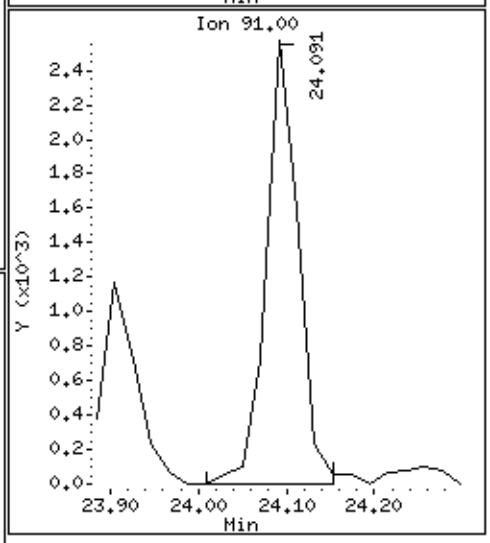
169 m,p-Xylene

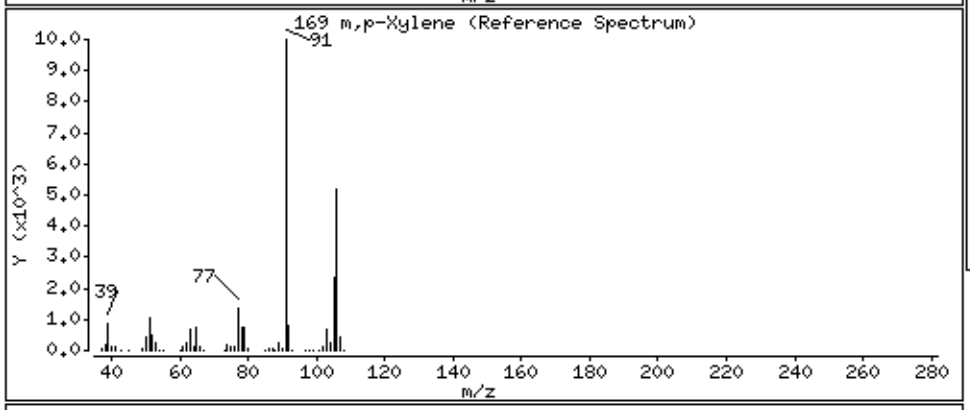
Concentration: 0.1388 PPBV

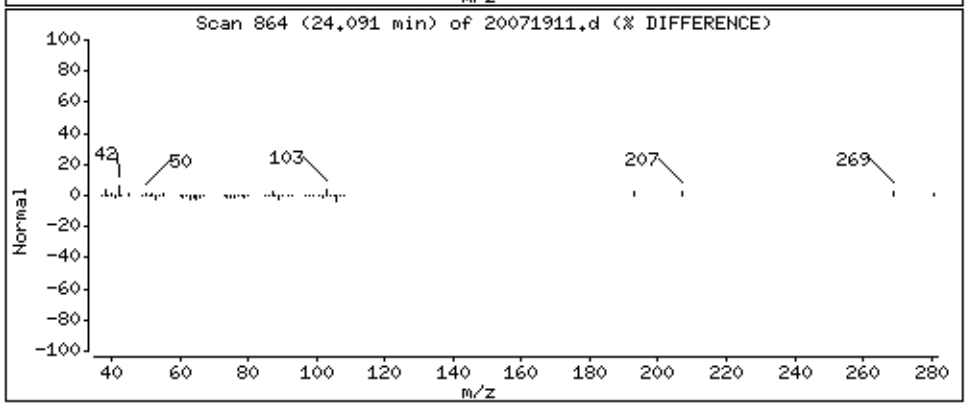












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

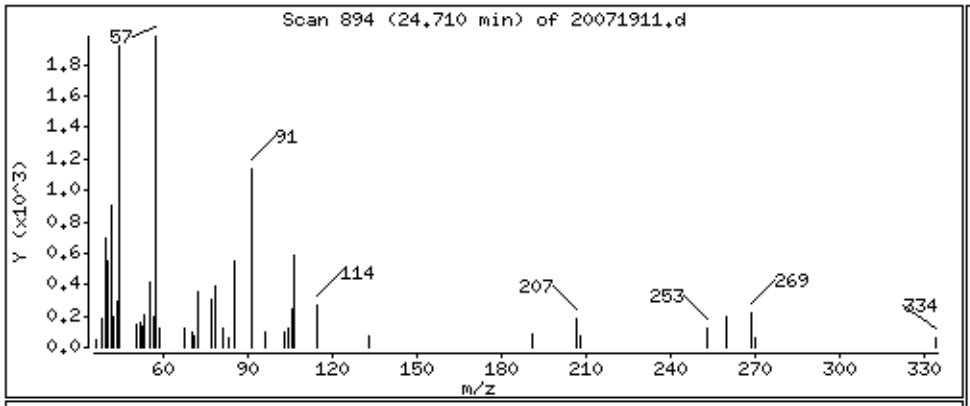
Operator: gh

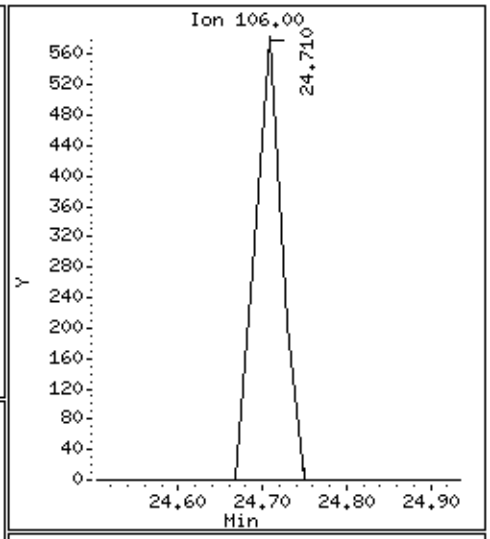
Column phase: RTX-624

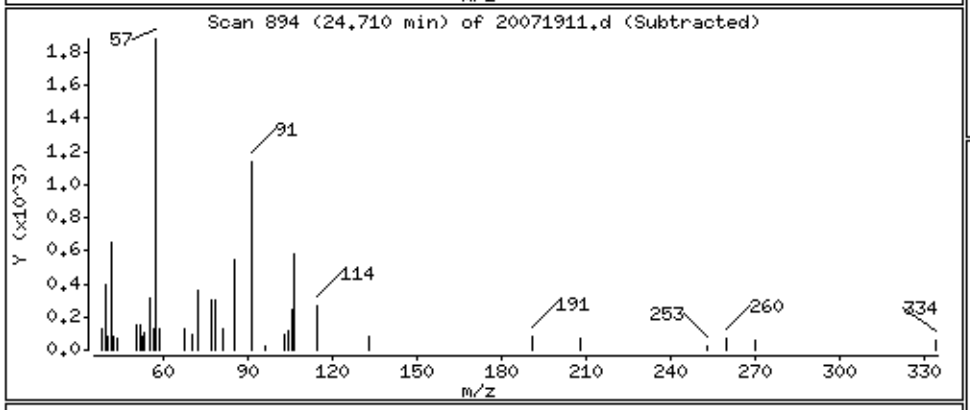
Column diameter: 0.32

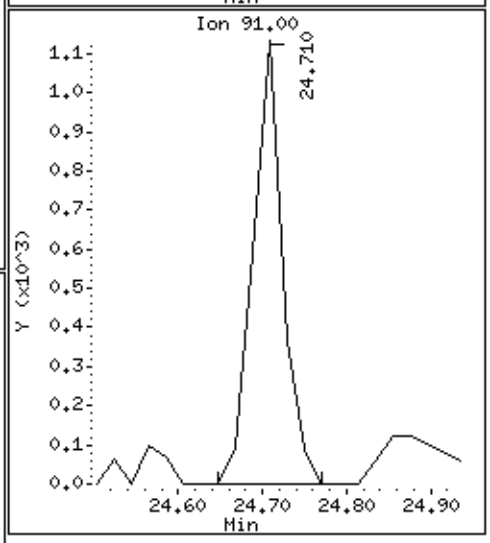
171 o-Xylene

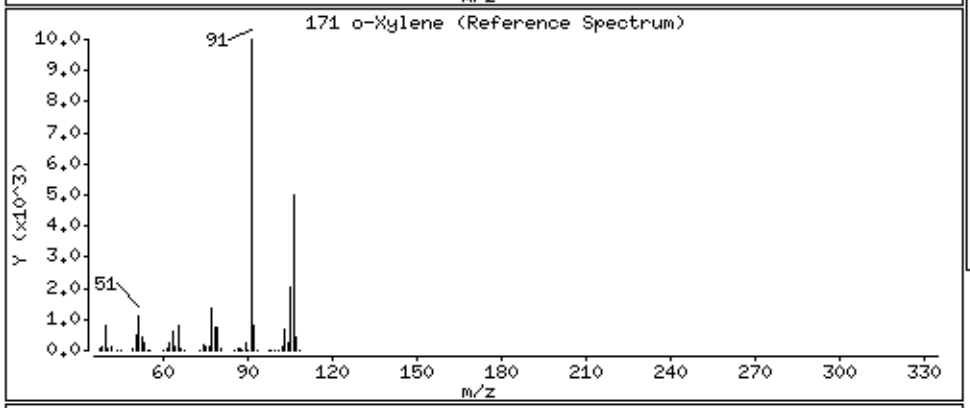
Concentration: 0.06730 PPBV

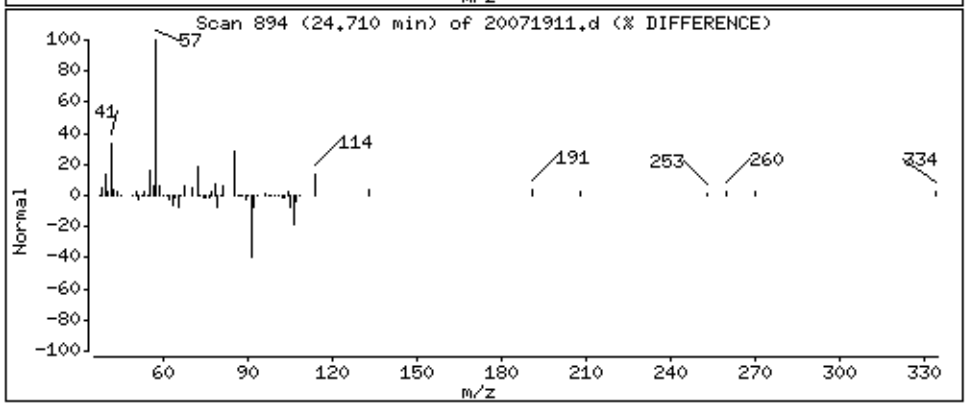












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

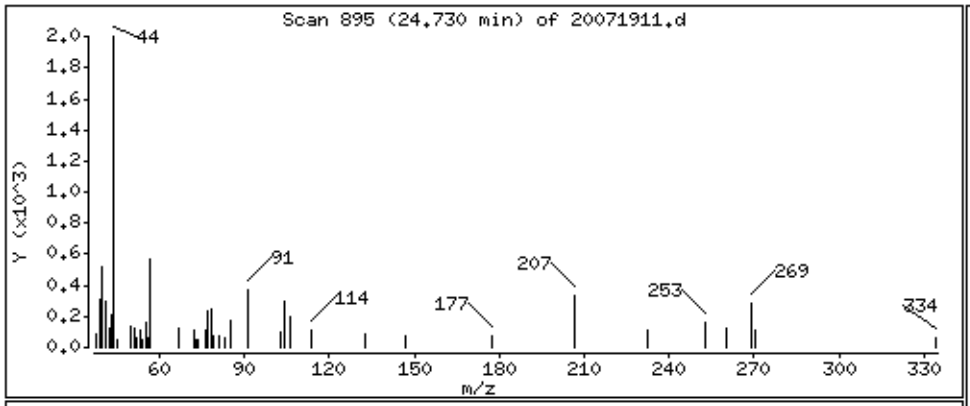
Operator: gh

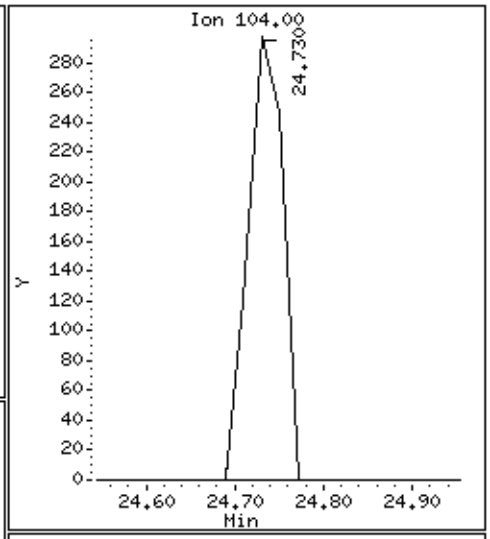
Column phase: RTX-624

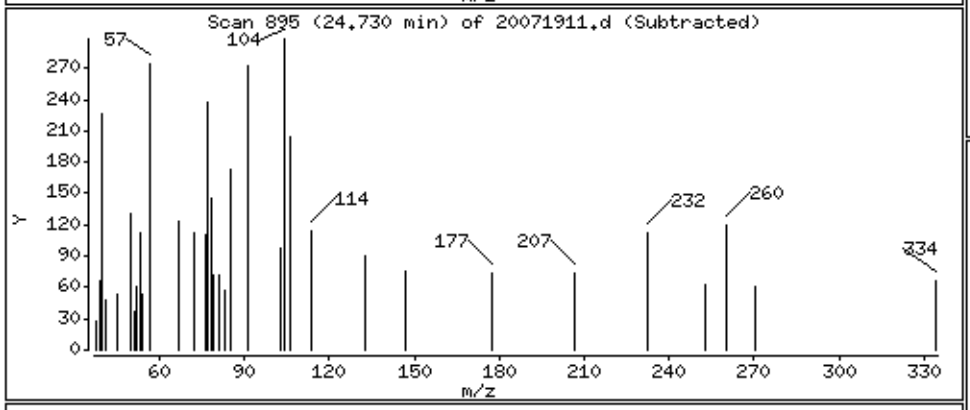
Column diameter: 0.32

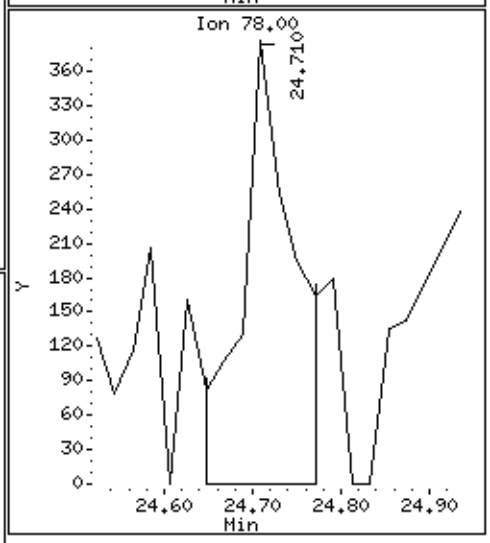
172 Styrene

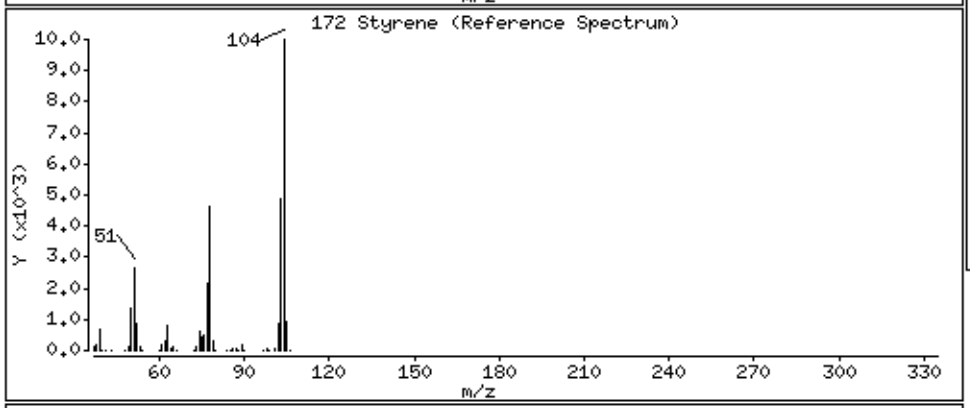
Concentration: 0.02950 PPBV

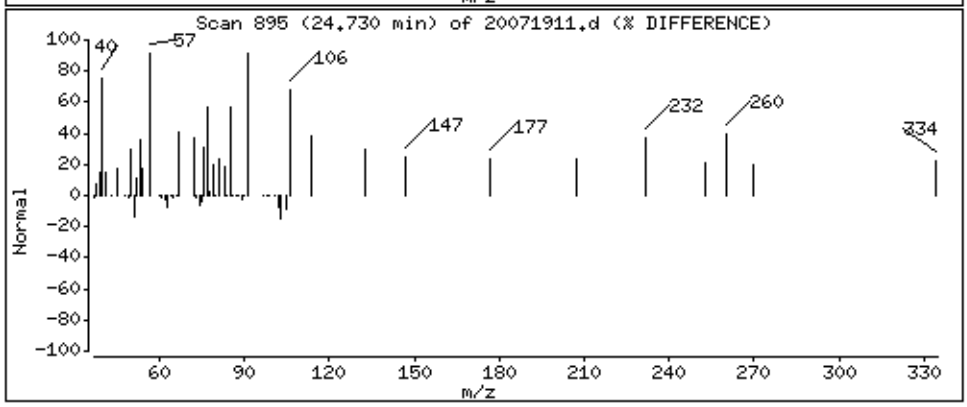












Data File: /chem/msd20.i/19Jul2016.b/20071911.d

Date : 19-JUL-2016 15:11

Client ID:

Instrument: msd20.i

Sample Info: 250mL#6L0509

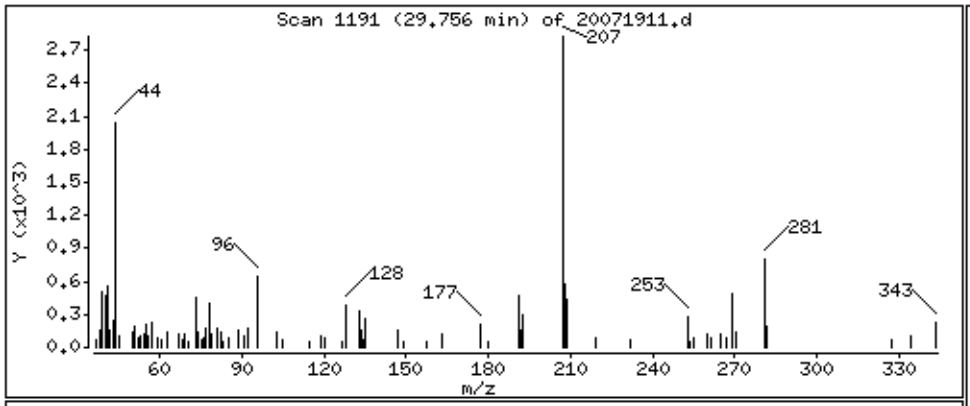
Operator: gh

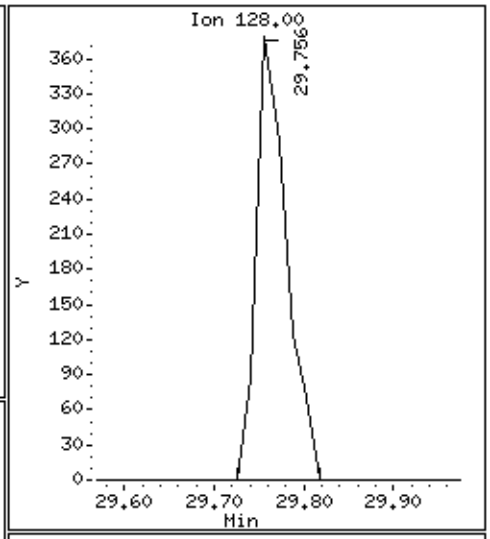
Column phase: RTX-624

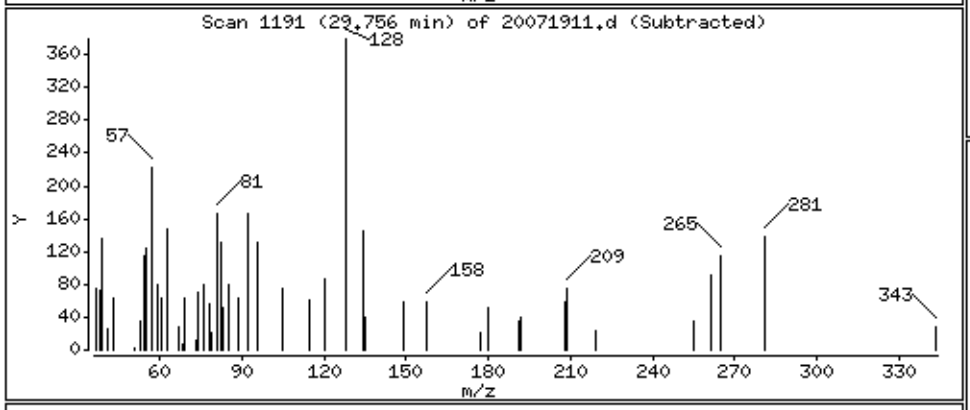
Column diameter: 0.32

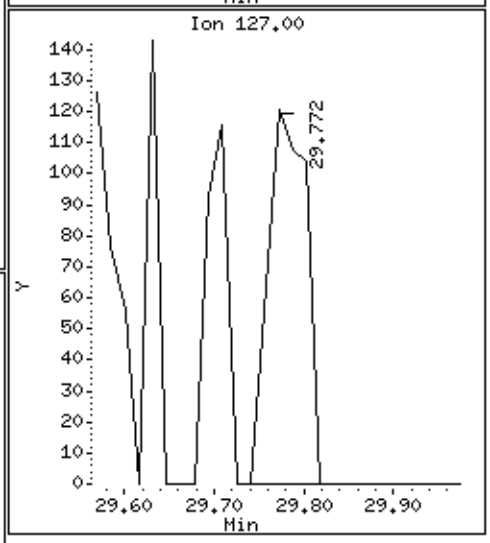
228 Naphthalene

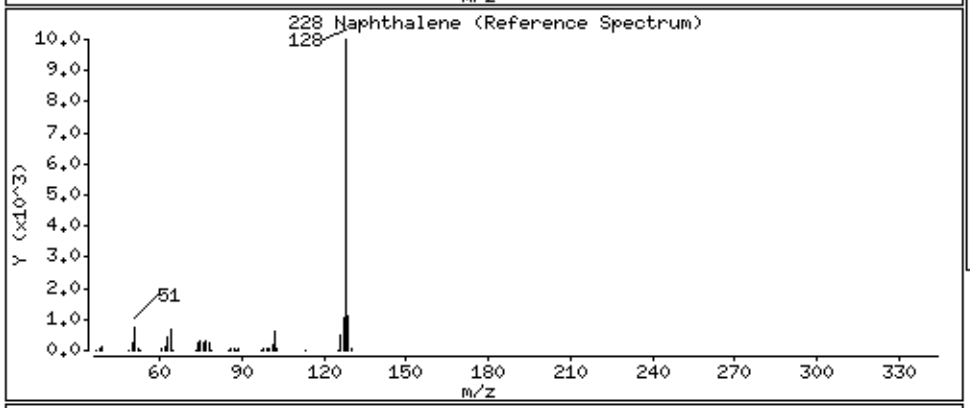
Concentration: 0.02367 PPBV

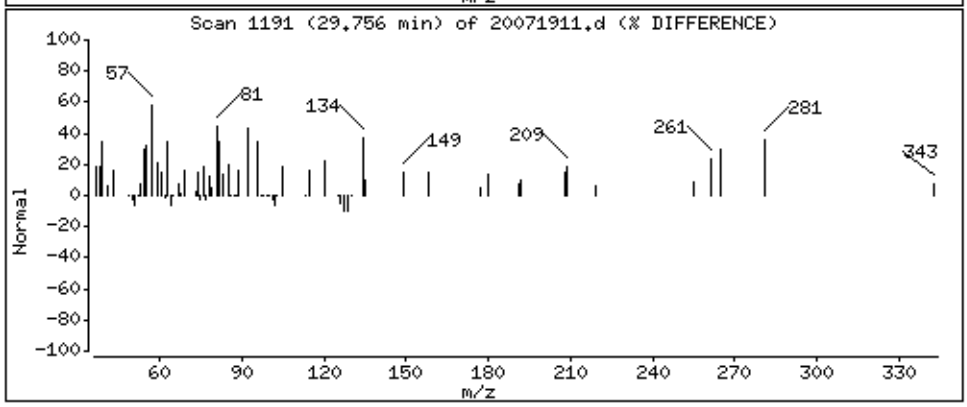












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-4

Lab ID#: 1607235D-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.65	0.79	3.2
Chloromethane	0.80	0.96	1.6	2.0
Freon 11	0.16	3.3	0.90	18
Ethanol	0.80	29	1.5	54
Freon 113	0.16	0.082 J	1.2	0.63 J
Acetone	0.80	13	1.9	32
2-Propanol	0.80	20	2.0	50
Methylene Chloride	0.32	0.22 J	1.1	0.75 J
Hexane	0.16	0.044 J	0.56	0.16 J
2-Butanone (Methyl Ethyl Ketone)	0.80	0.74 J	2.4	2.2 J
Chloroform	0.16	0.032 J	0.78	0.16 J
Carbon Tetrachloride	0.16	0.11 J	1.0	0.69 J
Benzene	0.16	0.054 J	0.51	0.17 J
1,2-Dichloroethane	0.16	0.88	0.65	3.6
Trichloroethene	0.16	0.66	0.86	3.6
Toluene	0.16	4.0	0.60	15
Ethyl Benzene	0.16	0.18	0.69	0.79
m,p-Xylene	0.16	0.47	0.69	2.0
o-Xylene	0.16	0.17	0.69	0.76
Styrene	0.16	0.052 J	0.68	0.22 J
4-Ethyltoluene	0.16	0.041 J	0.79	0.20 J
1,2,4-Trimethylbenzene	0.16	0.042 J	0.79	0.20 J
Naphthalene	0.80	0.045 J	4.2	0.24 J

eurofins | Air Toxics

Client Sample ID: B18IA-4

Lab ID#: 1607235D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071912**	**Date of Collection:**	**7/9/16 6:35:00 PM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**7/19/16 03:50 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.65	0.79	3.2
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	0.96	1.6	2.0
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	3.3	0.90	18
Ethanol	0.80	29	1.5	54
Freon 113	0.16	0.082 J	1.2	0.63 J
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	13	1.9	32
2-Propanol	0.80	20	2.0	50
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.22 J	1.1	0.75 J
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.044 J	0.56	0.16 J
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	0.74 J	2.4	2.2 J
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	0.032 J	0.78	0.16 J
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	0.11 J	1.0	0.69 J
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.054 J	0.51	0.17 J
1,2-Dichloroethane	0.16	0.88	0.65	3.6
Heptane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	0.66	0.86	3.6
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
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	4.0	0.60	15
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	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: B18IA-4

Lab ID#: 1607235D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071912**	**Date of Collection:**	**7/9/16 6:35:00 PM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**7/19/16 03:50 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	0.18	0.69	0.79
m,p-Xylene	0.16	0.47	0.69	2.0
o-Xylene	0.16	0.17	0.69	0.76
Styrene	0.16	0.052 J	0.68	0.22 J
Bromoform	0.16	Not Detected	1.6	Not Detected
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	0.041 J	0.79	0.20 J
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	0.042 J	0.79	0.20 J
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected
Naphthalene	0.80	0.045 J	4.2	0.24 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	93	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071912.d
Lab Smp Id: 1607235D-04A
Inj Date : 19-JUL-2016 15:50
Operator : gh Inst ID: msd20.i
Smp Info : 250mL#12082
Misc Info : 4.7"Hg ->5.2psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
Dil Factor: 1.60000
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	88835	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	71542			47.94- 107.94	80.53
16.726	16.726 (1.000)	49	128864			102.10- 162.10	145.06
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	272672	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	45573			0.00- 45.77	16.71
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	267501	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	156353			26.51- 86.51	58.45
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	162934	6.32332	6.323	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	79636			32.47- 92.47	48.88
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.822	20.822 (1.142)	98	271039	5.14645	5.146	80.00- 120.00	100.00
20.822	20.822 (1.142)	70	35817			0.00- 41.37	13.21

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

$ 146 Toluene-d8 (continued)
 20.822  20.822 (1.142)   100    175335                    36.07-  96.07    64.69
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    133426 4.64562    4.646  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    166178                   89.67- 149.67   124.55
 25.485  25.485 (1.073)   176    128148                   67.40- 127.40    96.04
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.745   4.672 (0.284)    85     30674 0.40656   0.6505  80.00- 120.00   100.00(M)
  4.697   4.672 (0.281)    87      9539                    2.54-  62.54    31.10
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.625   6.577 (0.396)    50     15237 0.60312   0.9650  80.00- 120.00   100.00
  6.601   6.553 (0.395)    52      5456                    3.03-  63.03    35.81
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101    150015 2.05729    3.292  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103     97129                   34.91-  94.91    64.75
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.296  12.269 (0.735)    45    170454 18.0609   28.897  80.00- 120.00   100.00
 12.296  12.269 (0.735)    46     69057                   11.72-  71.72    40.51
 12.296  12.269 (0.735)    43     51279                    0.00-  52.99    30.08
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.763  12.763 (0.763)   151      2536 0.05151  0.08242  80.00- 120.00   100.00(a)
 12.763  12.763 (0.763)   153      1613                   34.49-  94.49    63.61
 12.763  12.763 (0.763)   101      3689                   96.39- 156.39   145.48
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58    112508 8.30804   13.293  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43    372684                  278.33- 338.33   331.25
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 13.560  13.533 (0.811)    45    528814 12.6262   20.202  80.00- 120.00   100.00
 13.560  13.533 (0.811)    43    181748                    0.00-  52.04    34.37
 13.560  13.533 (0.811)    59     21145                    0.00-  34.17     4.00
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 14.054  14.027 (0.840)    84      3749 0.13577   0.2172  80.00- 120.00   100.00(a)
 14.027  14.027 (0.839)    49      4981                   97.79- 157.79   132.86
 14.027  14.027 (0.839)    51      1836                    9.84-  69.84    48.99
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 14.878  14.878 (0.889)    57      1194 0.02777  0.04442  80.00- 120.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane (continued)							
14.933	14.878 (0.893)	43	3172			33.20- 93.20	265.67
0.000	14.878 (0.000)	86	0			0.00- 48.21	0.00
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	6343	0.46174	0.7388	80.00- 120.00	100.00(a)
16.344	16.344 (0.977)	43	29665			345.54- 405.54	467.63
16.344	16.344 (0.977)	57	2154			0.00- 59.64	33.96
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	1202	0.02008	0.03213	80.00- 120.00	100.00(a)
16.819	16.819 (1.006)	85	852			35.08- 95.08	70.92
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	3556	0.06869	0.1099	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	2670			75.13- 135.13	75.08
116 Benzene					CAS #: 71-43-2		
17.621	17.621 (0.966)	78	2250	0.03402	0.05444	80.00- 120.00	100.00(a)
17.641	17.621 (0.968)	77	341			0.00- 54.04	15.19
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	16046	0.55178	0.8828	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	5461			2.26- 62.26	34.04
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	12562	0.41616	0.6658	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	11060			67.33- 127.33	88.04
18.610	18.610 (1.021)	97	6915			32.56- 92.56	55.05
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	179554	2.53249	4.052	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	104879			30.04- 90.04	58.41
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	3577	0.11417	0.1827	80.00- 120.00	100.00
23.906	23.906 (1.006)	91	9928			282.65- 342.65	277.51
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	9840	0.29314	0.4690	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	19356			170.44- 230.44	196.70
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	3456	0.10884	0.1741	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	7910			177.28- 237.28	228.84

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
172 Styrene					CAS #: 100-42-5		
24.751	24.751 (1.042)	104	1483	0.03277	0.05243	80.00- 120.00	100.00(a)
24.710	24.731 (1.040)	78	935			22.29- 82.29	63.05
188 4-Ethyltoluene					CAS #: 622-96-8		
25.826	25.864 (1.087)	105	2201	0.02570	0.04111	80.00- 120.00	100.00(a)
25.826	25.864 (1.087)	120	769			0.21- 60.21	34.93
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	1897	0.02612	0.04179	80.00- 120.00	100.00(a)
26.395	26.395 (1.111)	120	580			17.68- 77.68	30.57
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	1727	0.02842	0.04547	80.00- 120.00	100.00(a)
29.787	29.772 (1.254)	127	148			0.00- 42.99	8.61

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071912.d
Lab Smp Id: 1607235D-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 4.7"Hg ->5.2psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	88835	-23.34
123 1,4-Difluorobenze	406395	243837	568953	272672	-32.90
163 Chlorobenzene-d5	363239	217943	508535	267501	-26.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:14

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-04A
Level: LOW Operator: gh
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 4.7"Hg ->5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	6.323	126.47	70-130
$ 146 Toluene-d8	5.000	5.146	102.93	70-130
$ 177 4-Bromofluorobenze	5.000	4.646	92.91	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

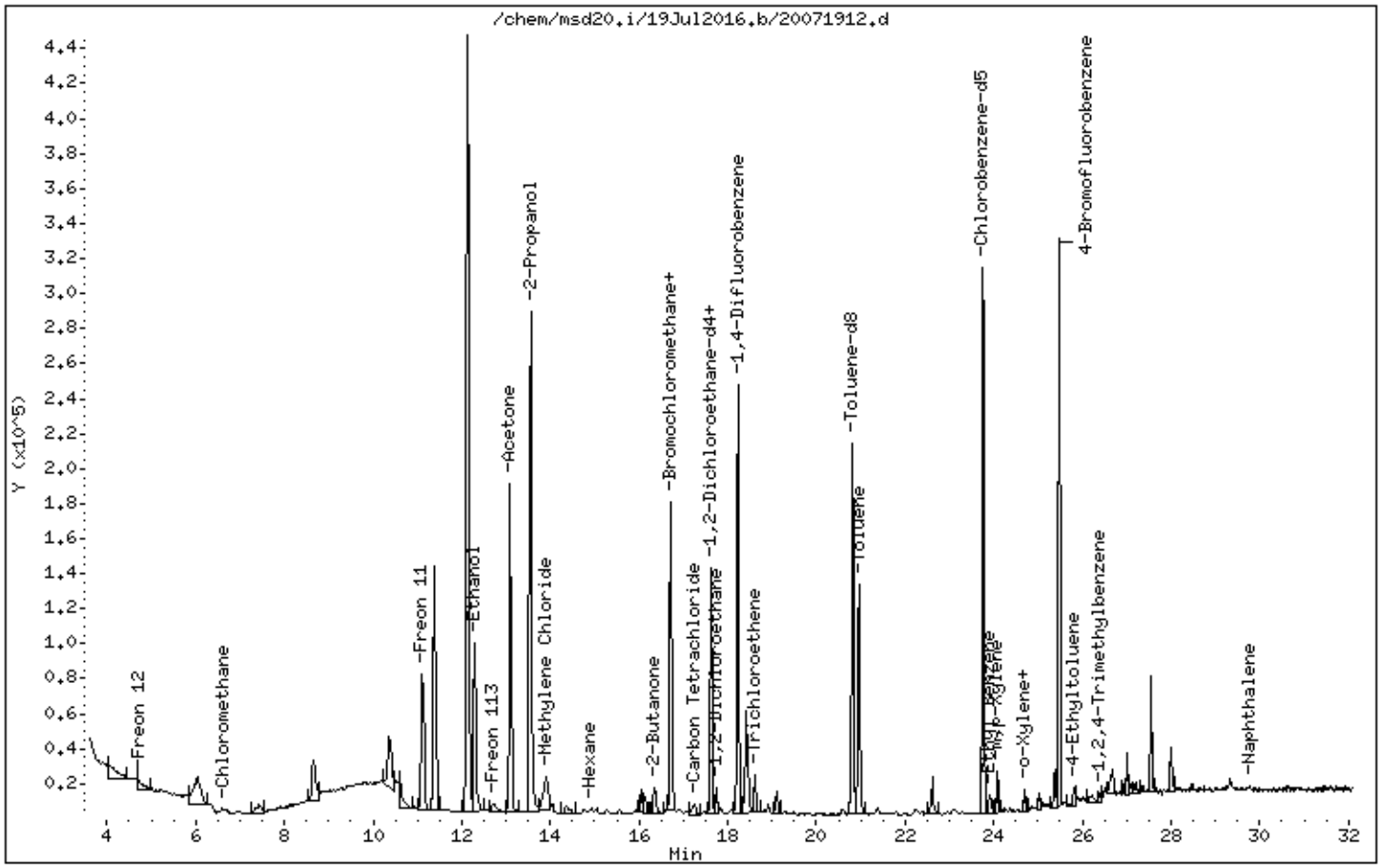
Instrument: msd20.i

Sample Info: 250mL#12082

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

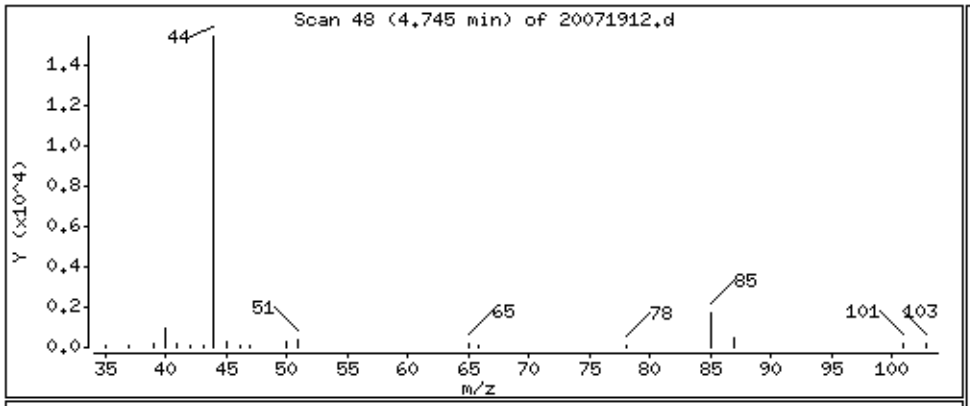
Operator: gh

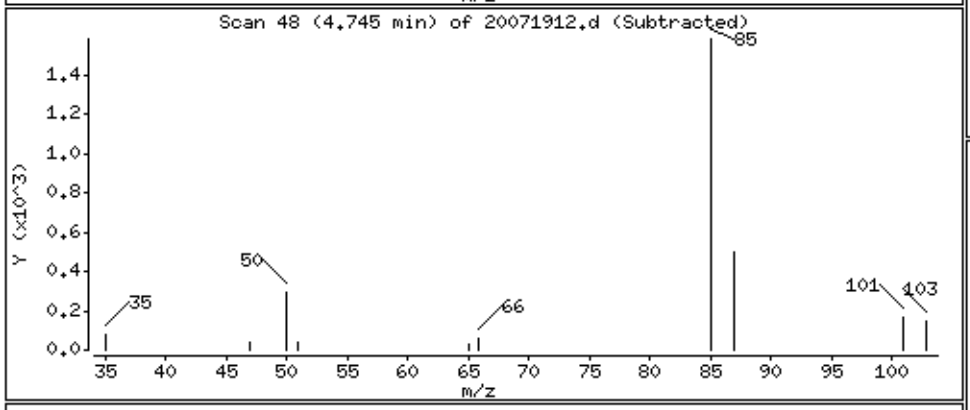
Column phase: RTX-624

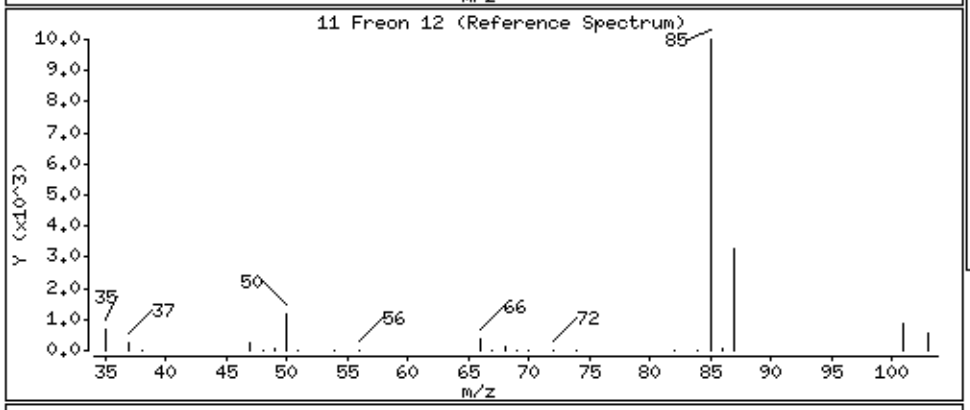
Column diameter: 0.32

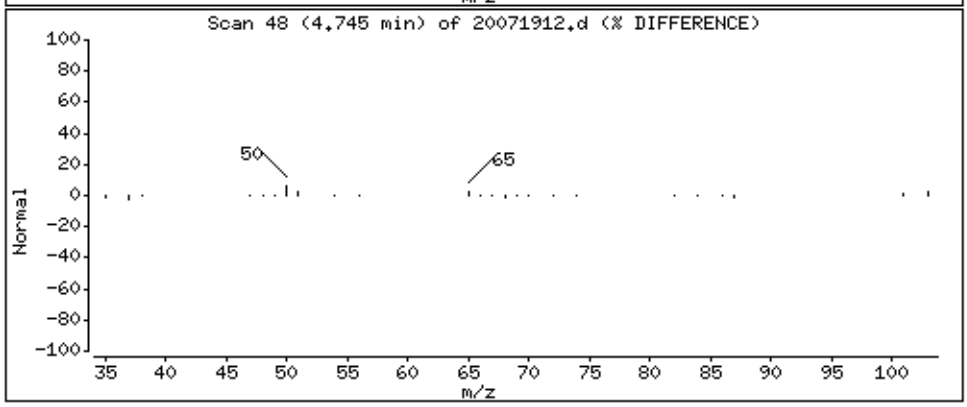
11 Freon 12

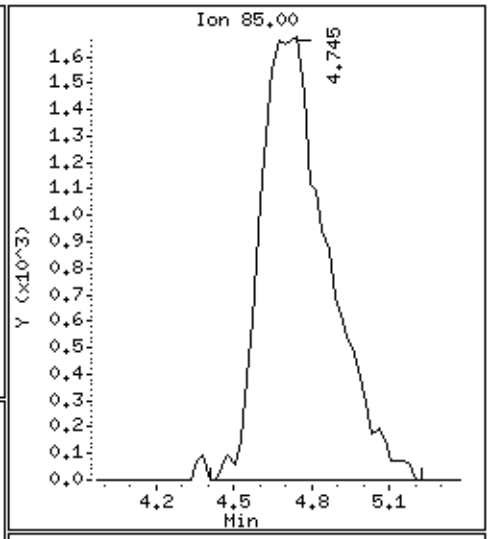
Concentration: 0.6505 PPBV

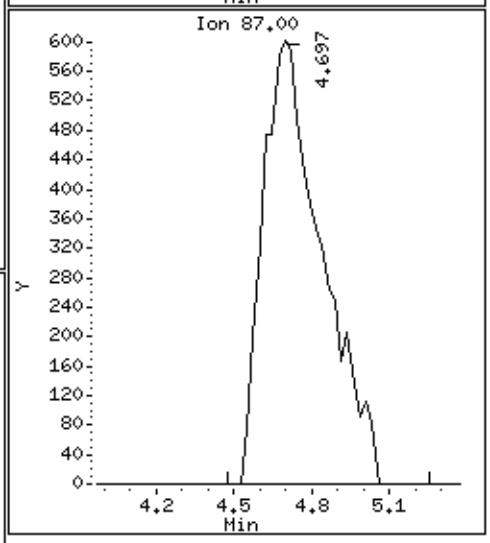












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

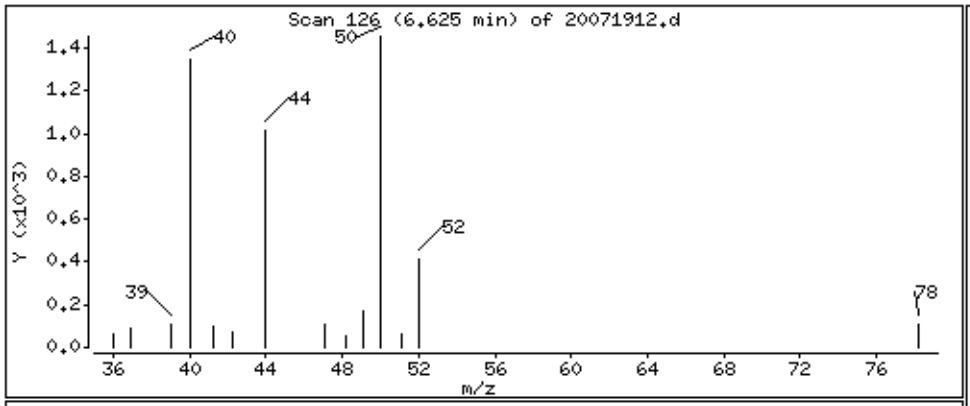
Operator: gh

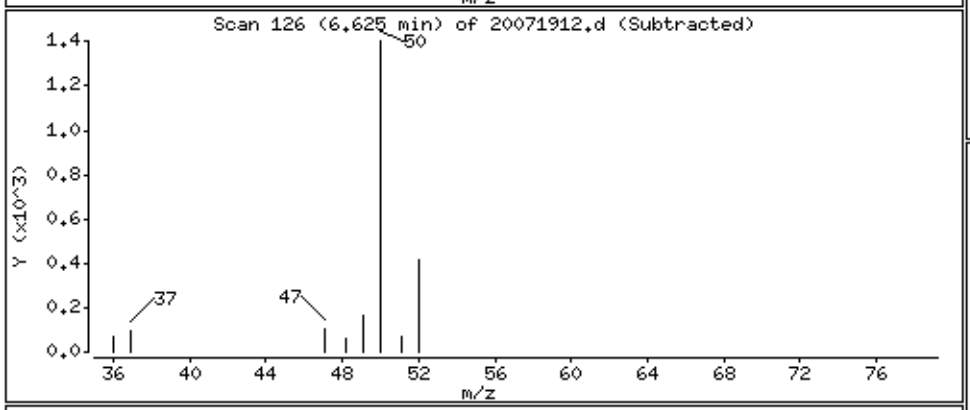
Column phase: RTX-624

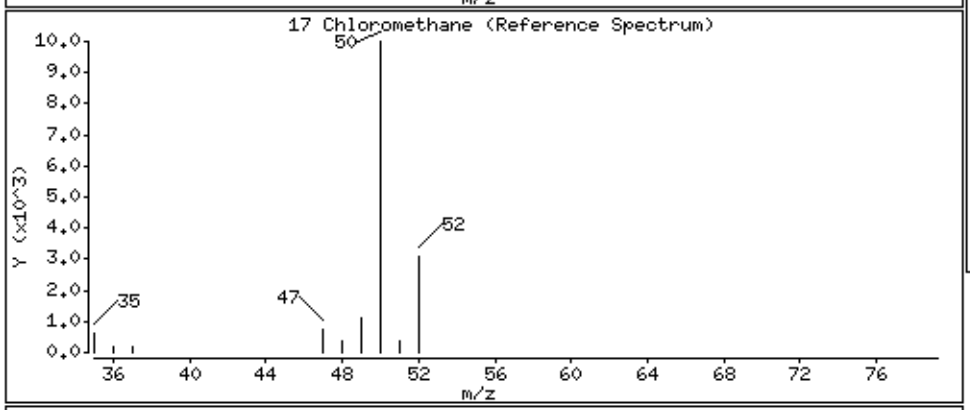
Column diameter: 0.32

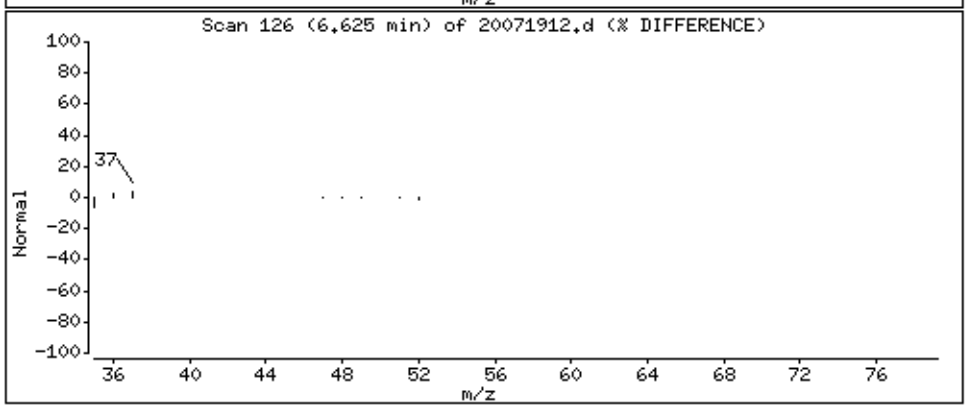
17 Chloromethane

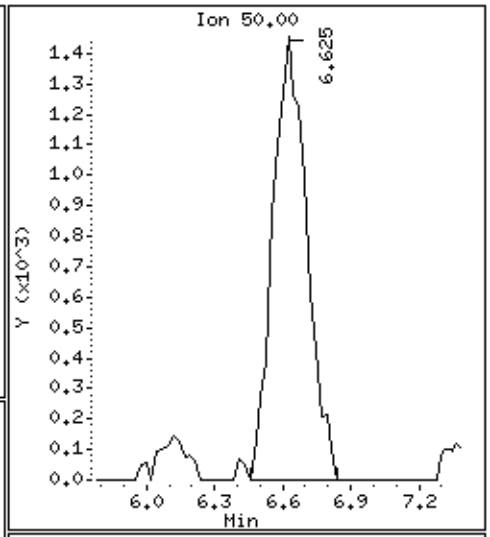
Concentration: 0.9650 PPBV

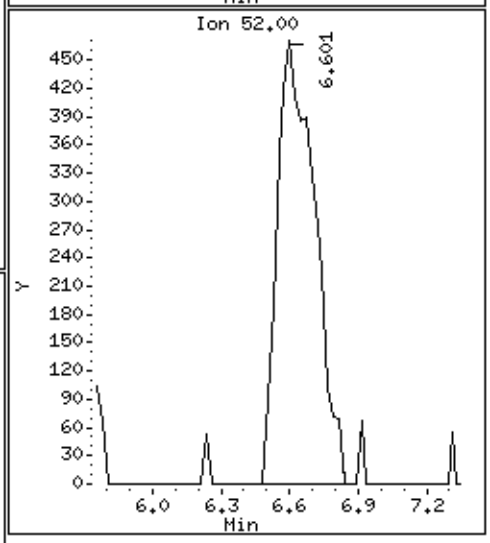












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

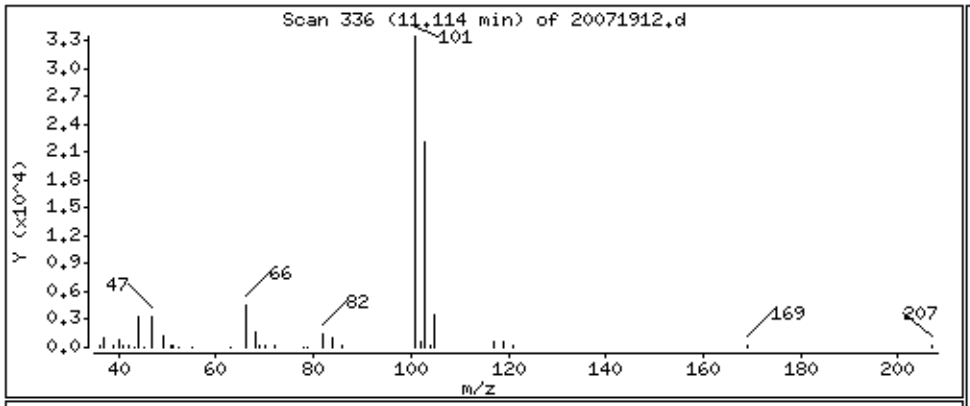
Operator: gh

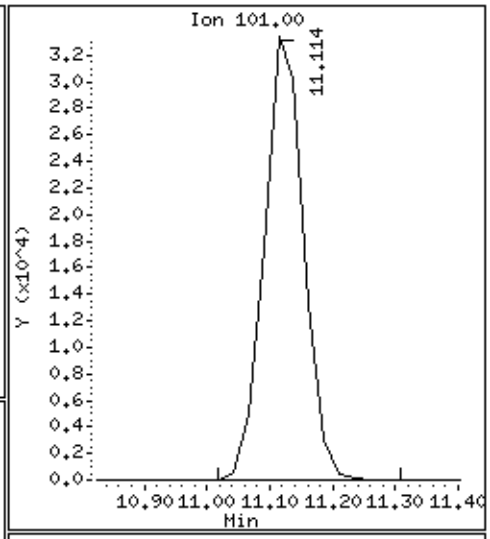
Column phase: RTX-624

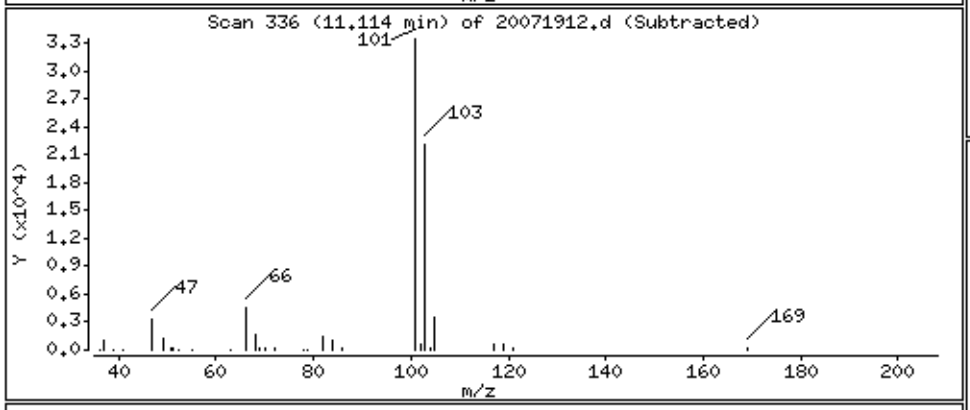
Column diameter: 0.32

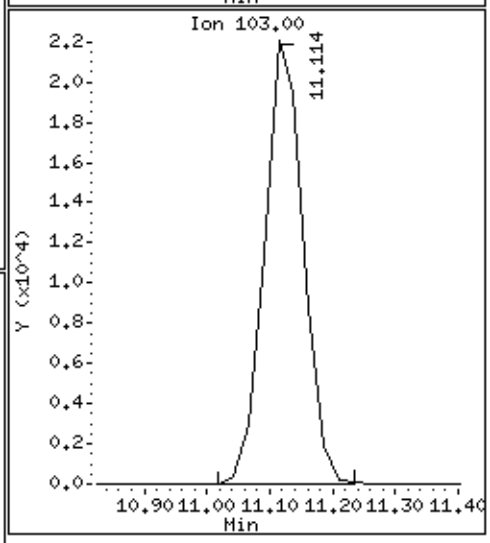
35 Freon 11

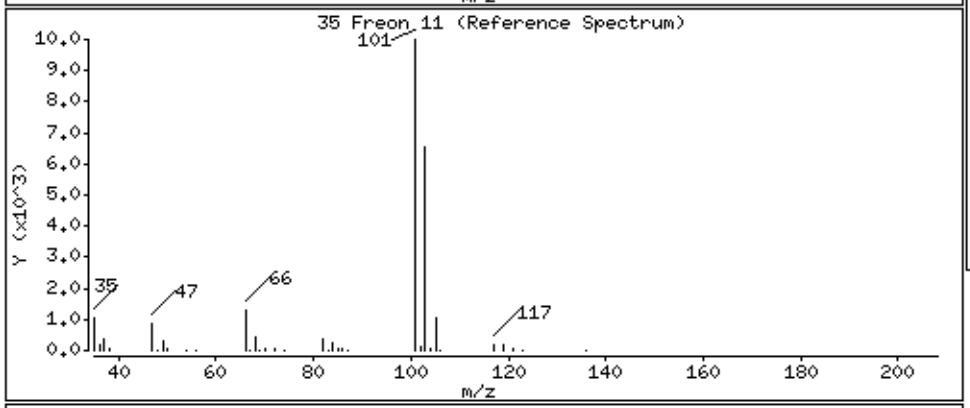
Concentration: 3.292 PPBV

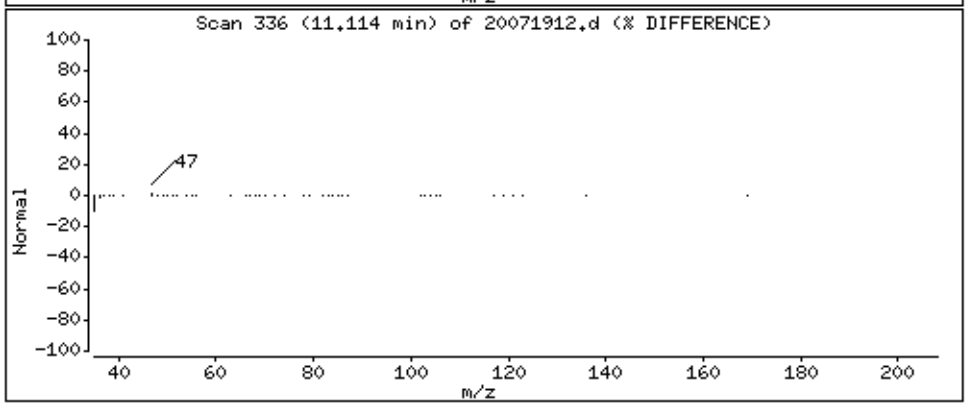












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

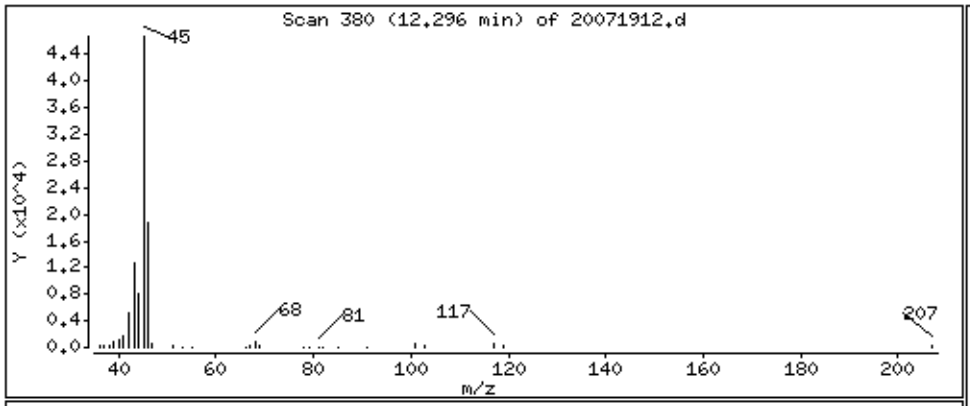
Operator: gh

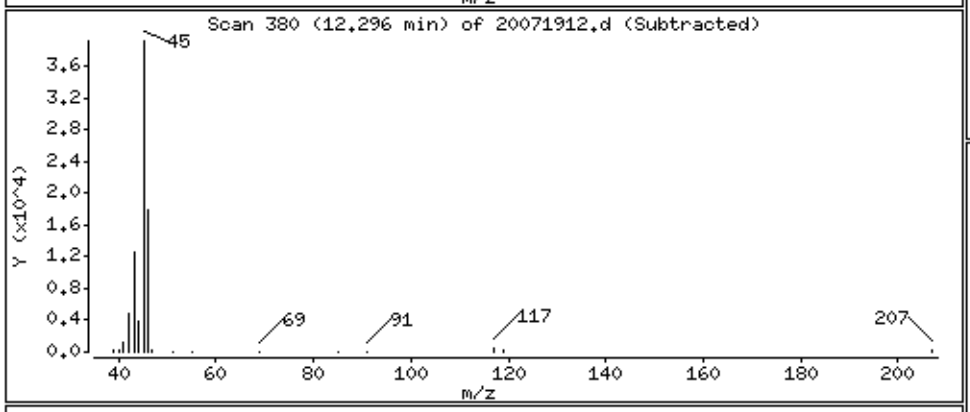
Column phase: RTX-624

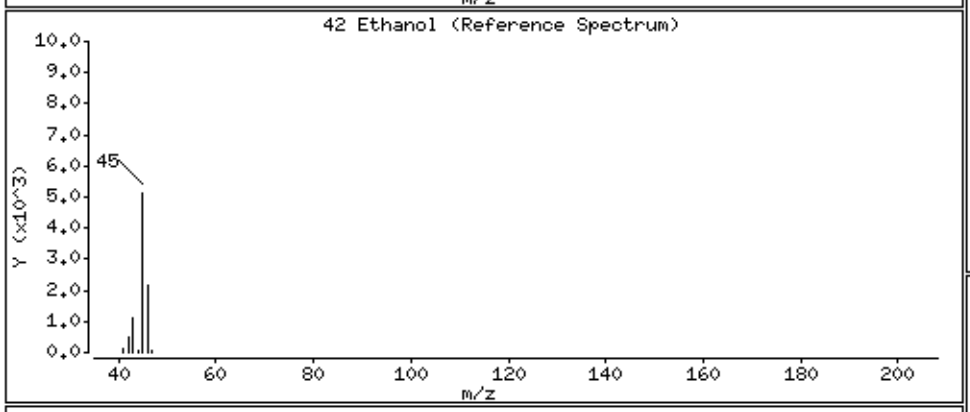
Column diameter: 0.32

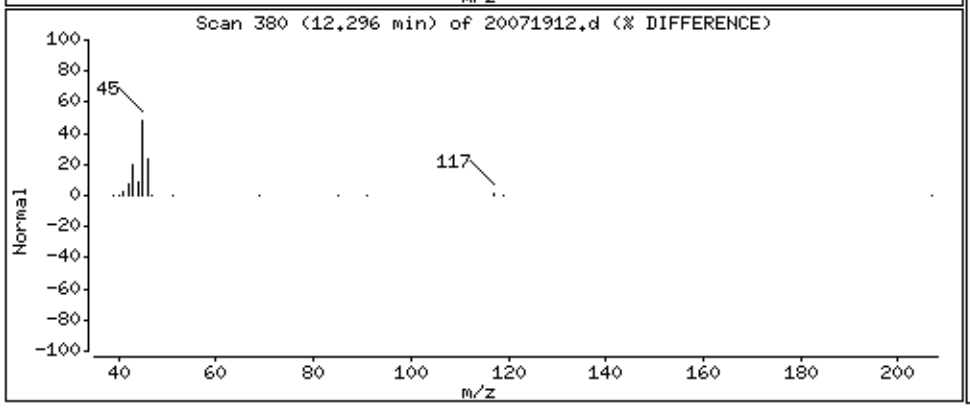
42 Ethanol

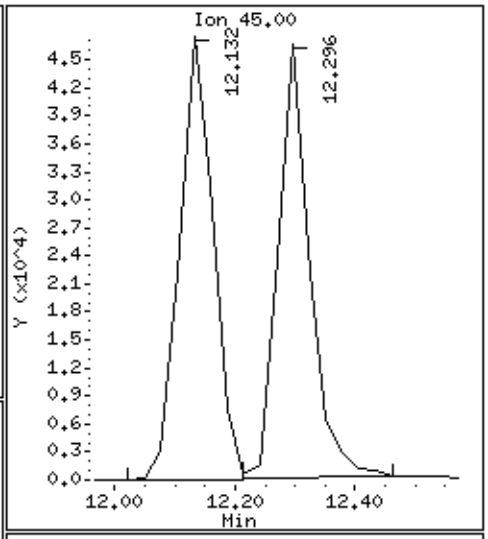
Concentration: 28.897 PPBV

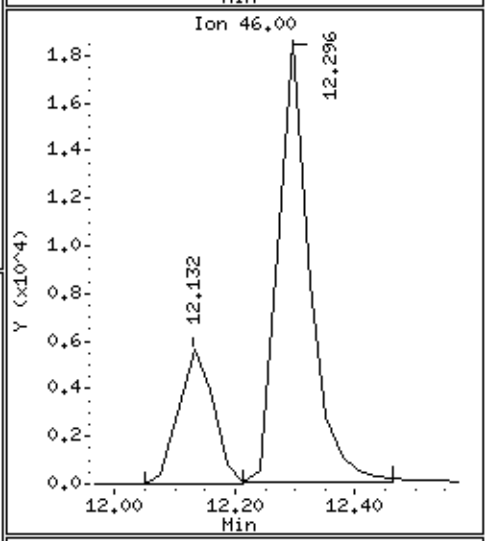


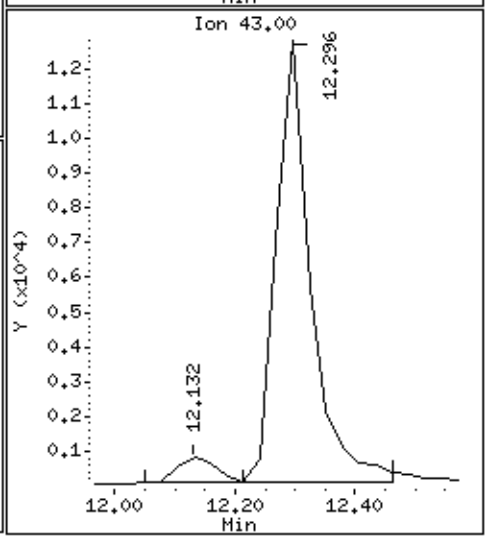












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

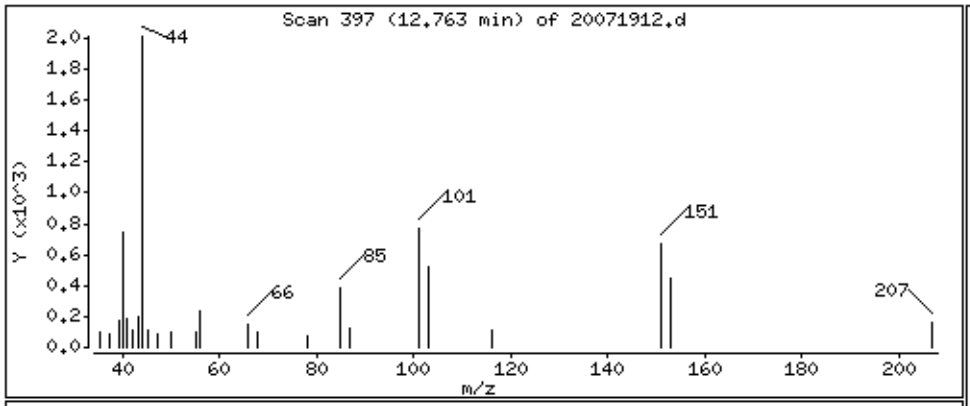
Operator: gh

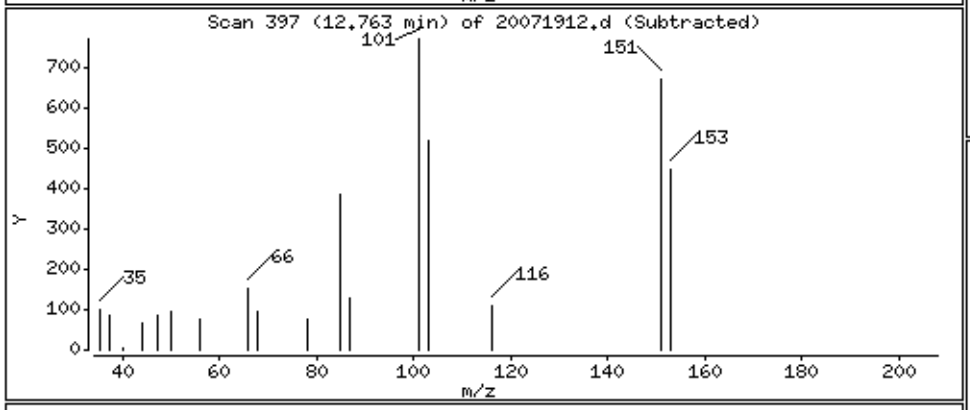
Column phase: RTX-624

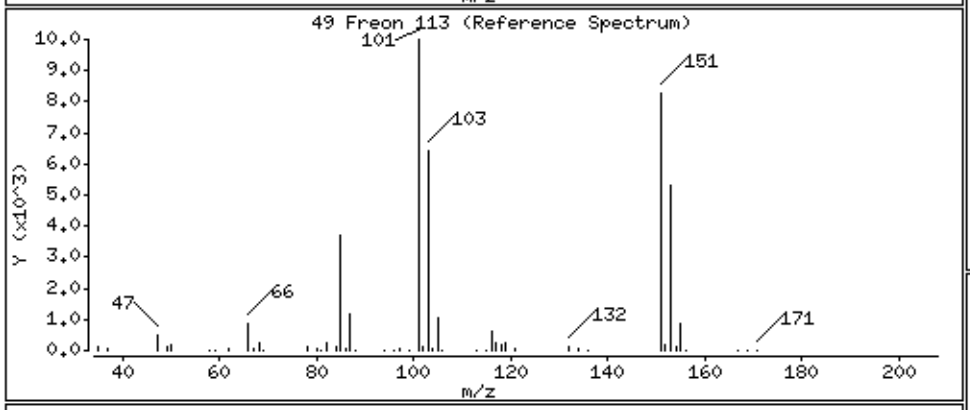
Column diameter: 0.32

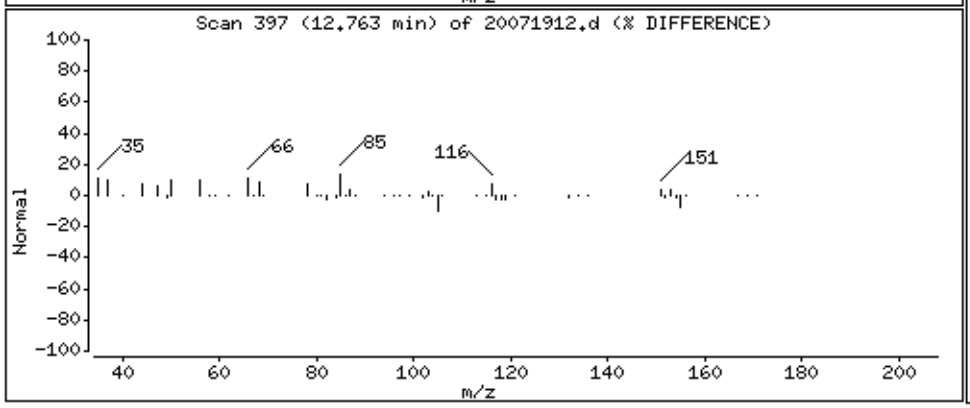
49 Freon 113

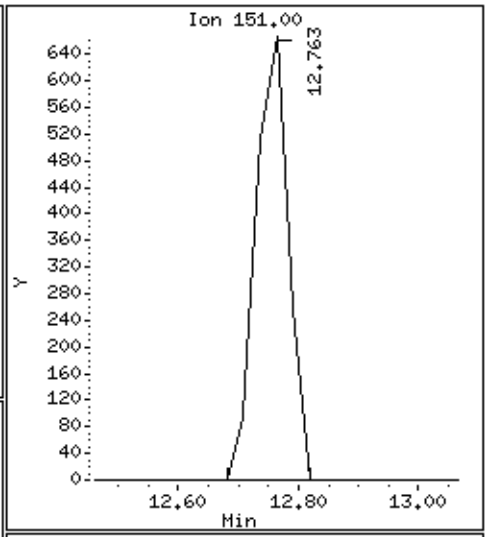
Concentration: 0.08242 PPBV

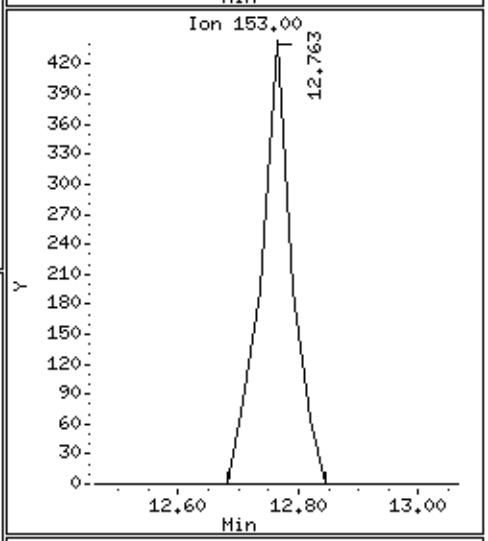


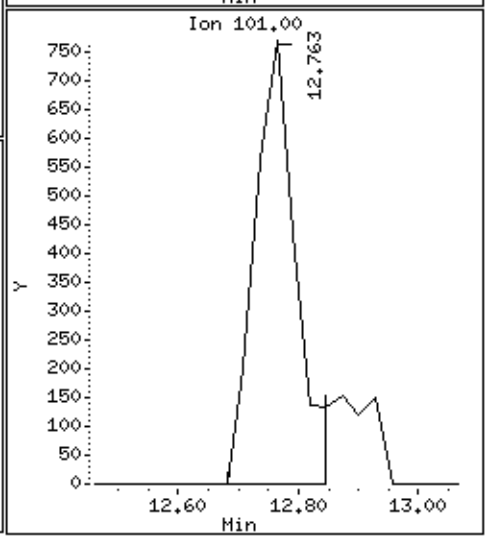












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

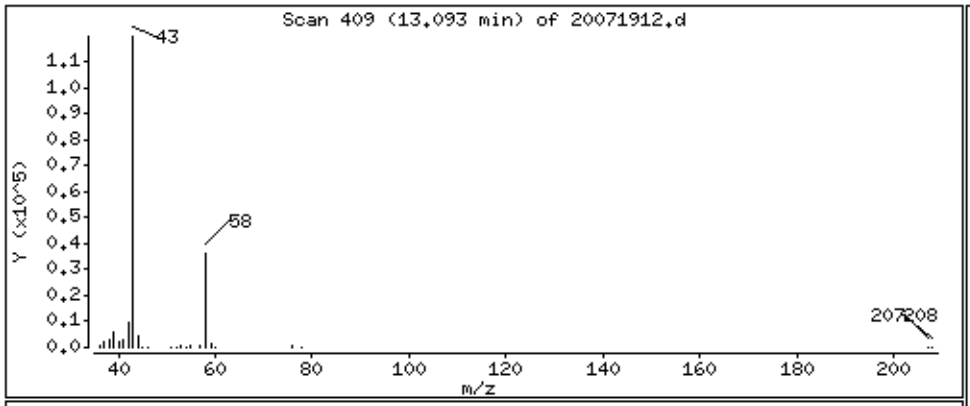
Operator: gh

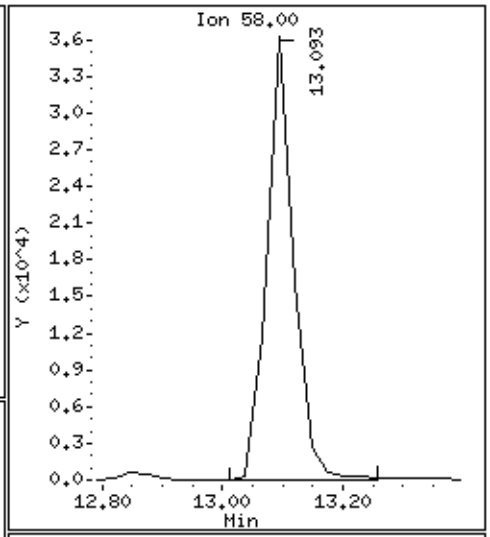
Column phase: RTX-624

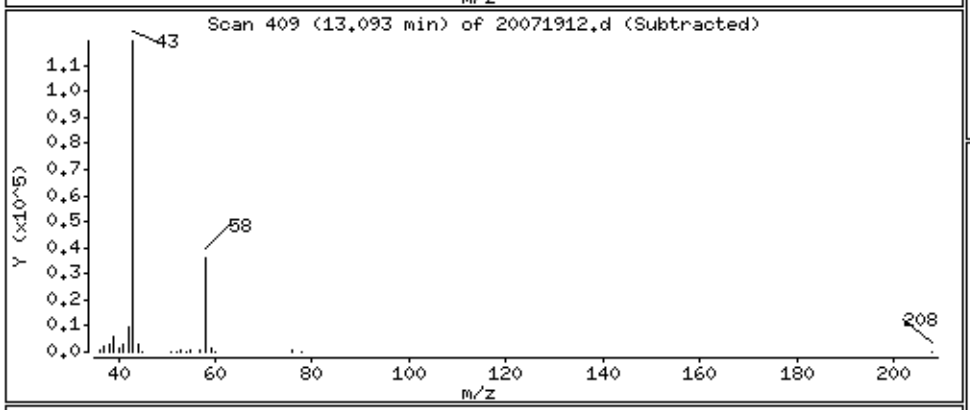
Column diameter: 0.32

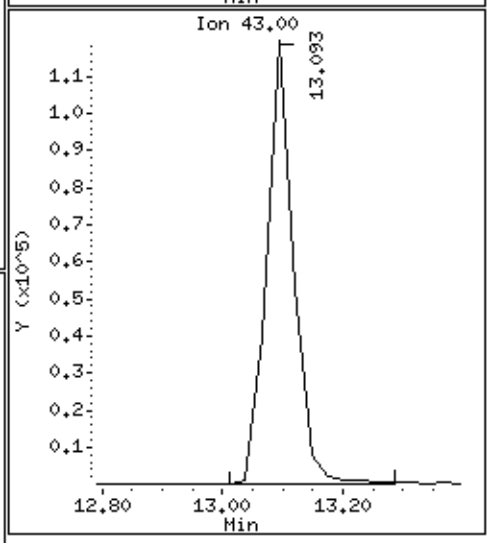
52 Acetone

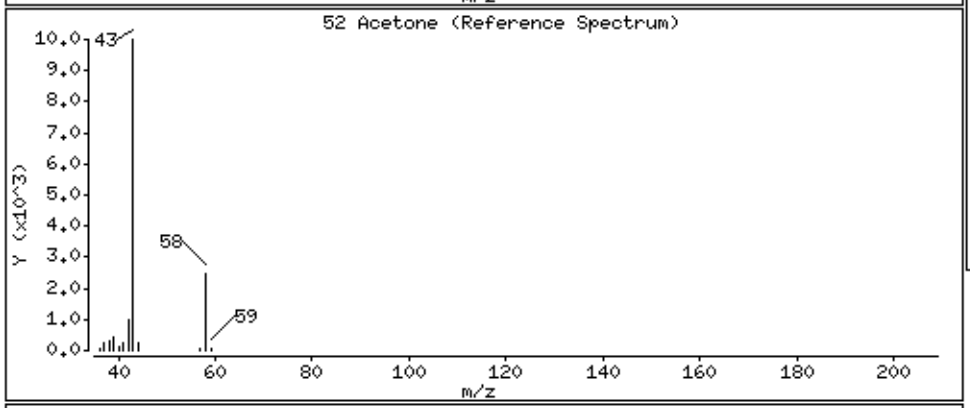
Concentration: 13.293 PPBV

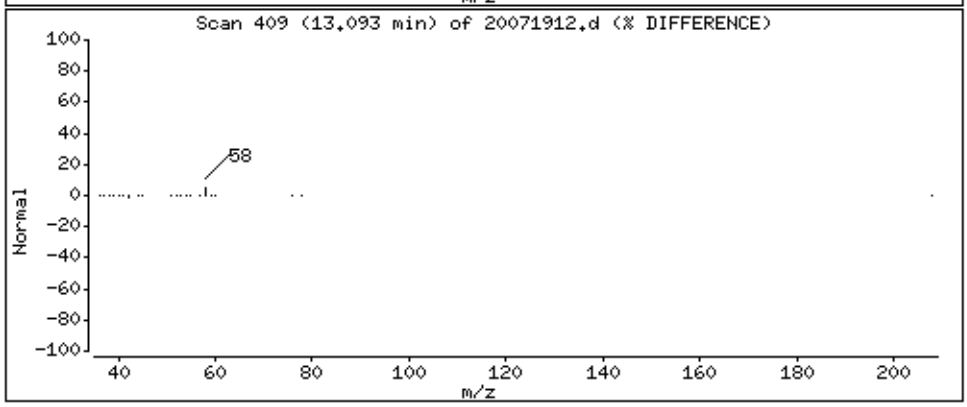












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

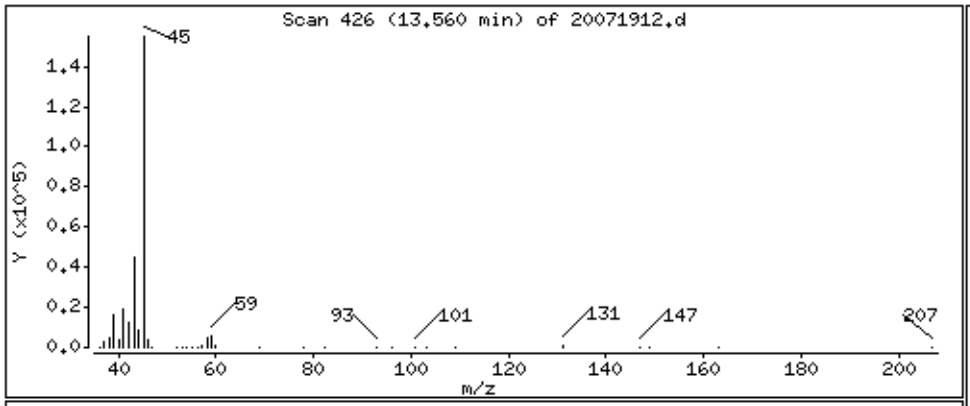
Operator: gh

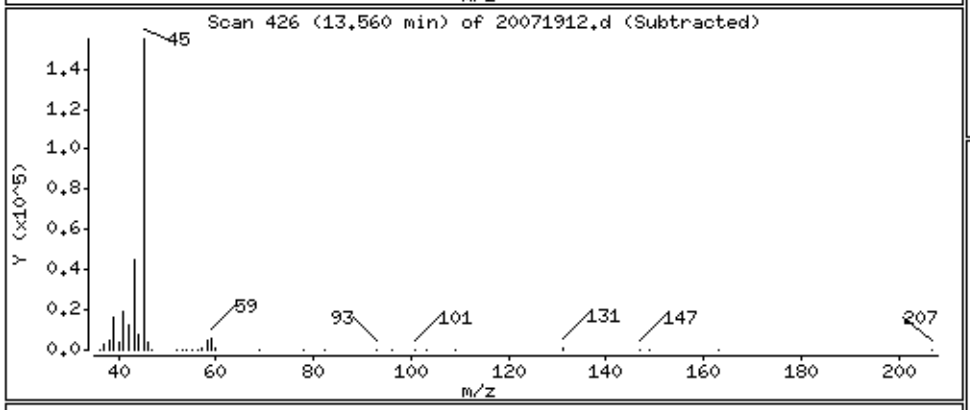
Column phase: RTX-624

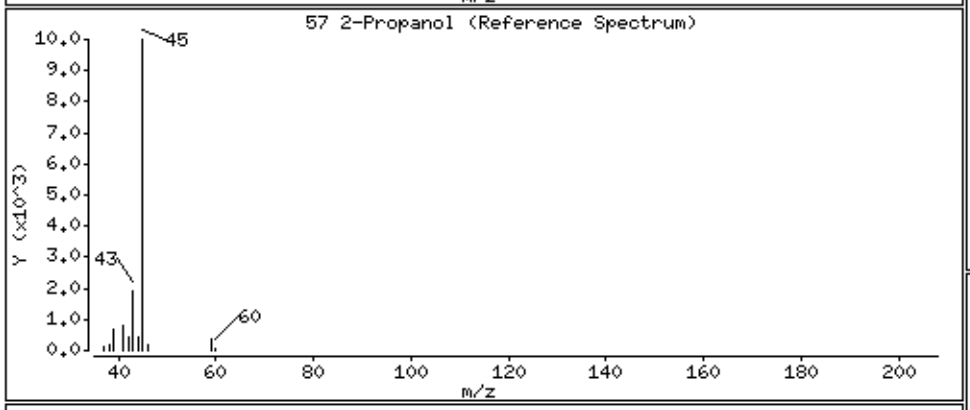
Column diameter: 0.32

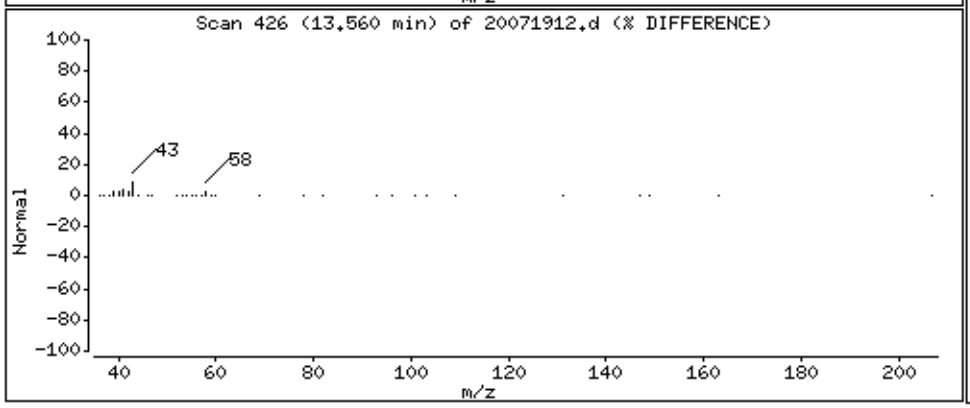
57 2-Propanol

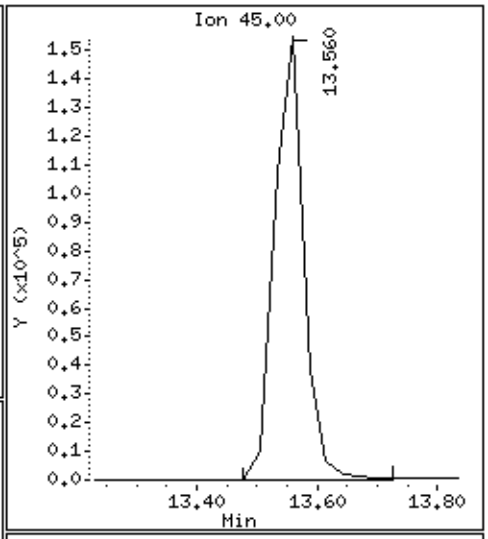
Concentration: 20.202 PPBV

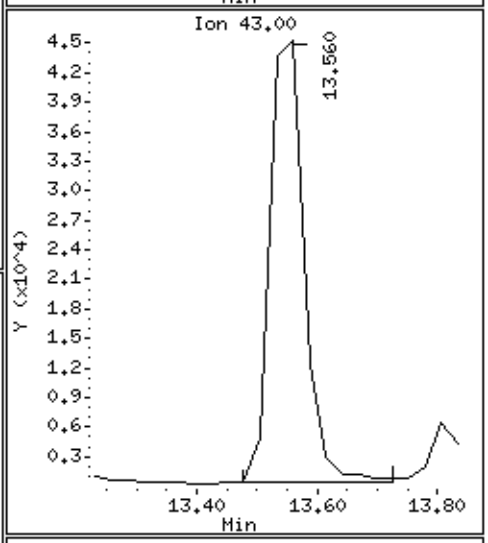


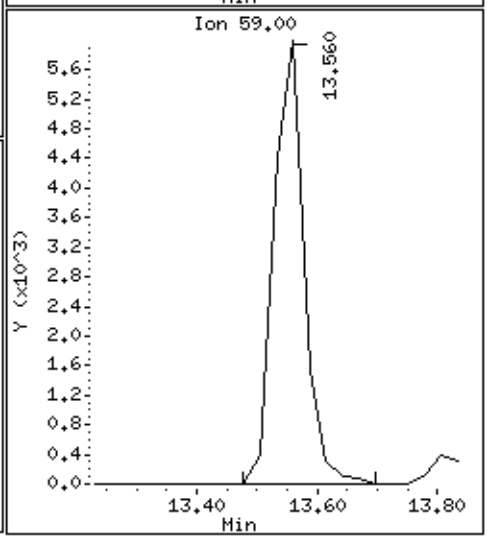












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

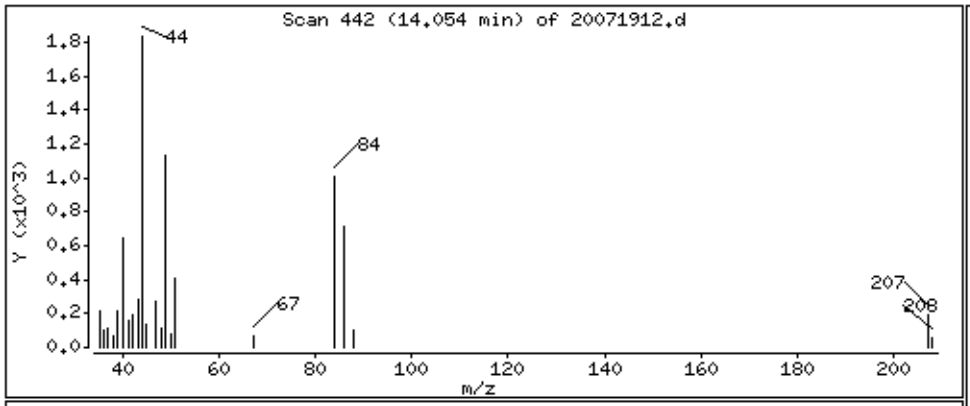
Operator: gh

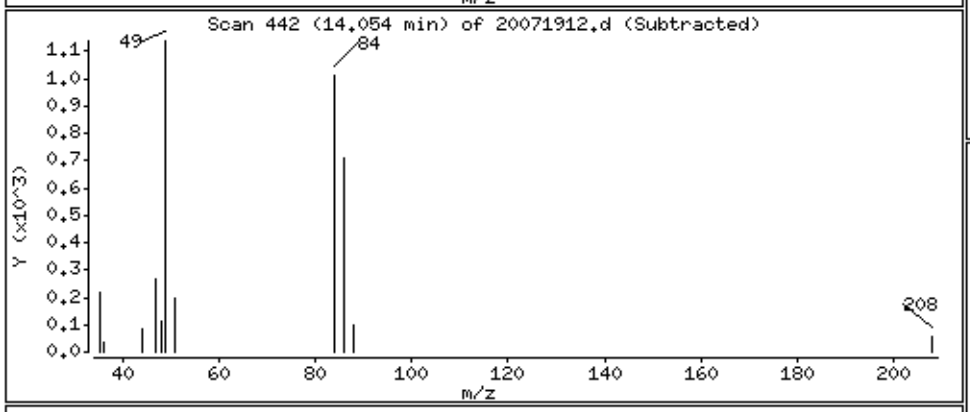
Column phase: RTX-624

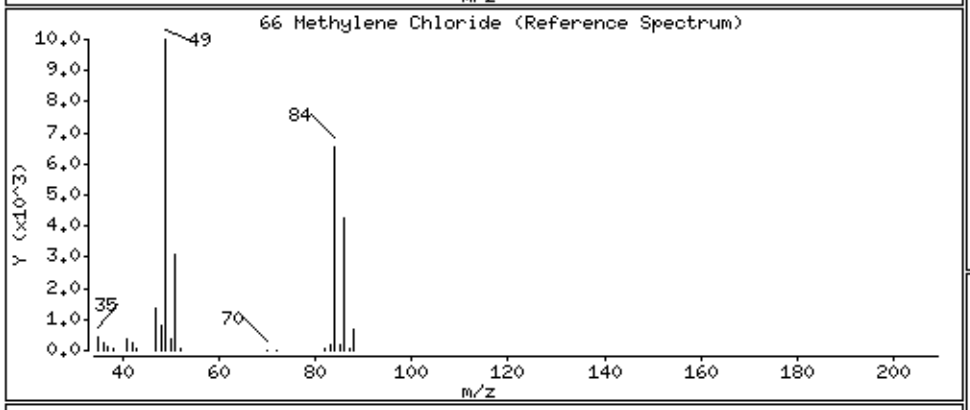
Column diameter: 0.32

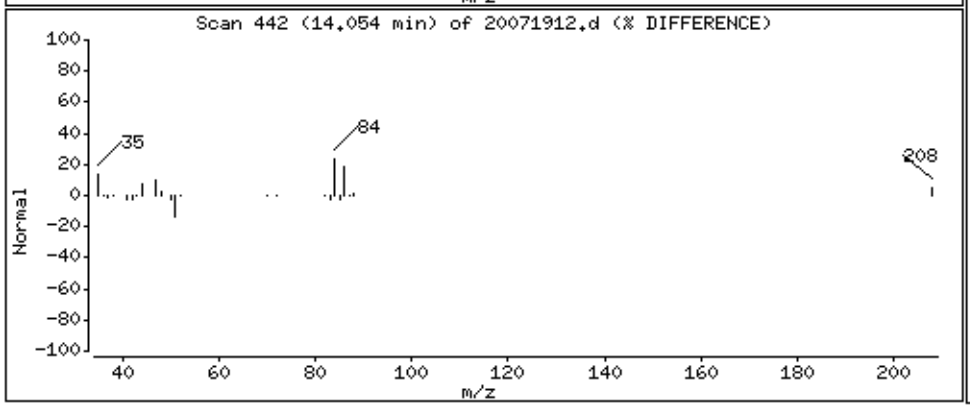
66 Methylene Chloride

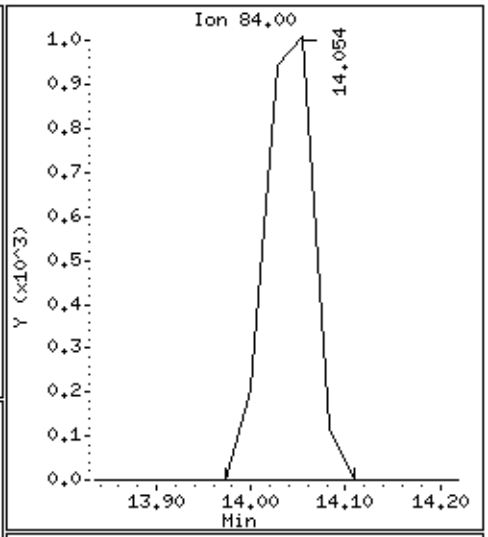
Concentration: 0.2172 PPBV

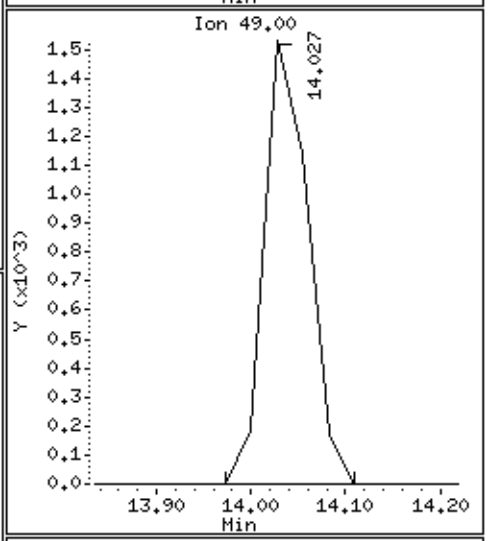


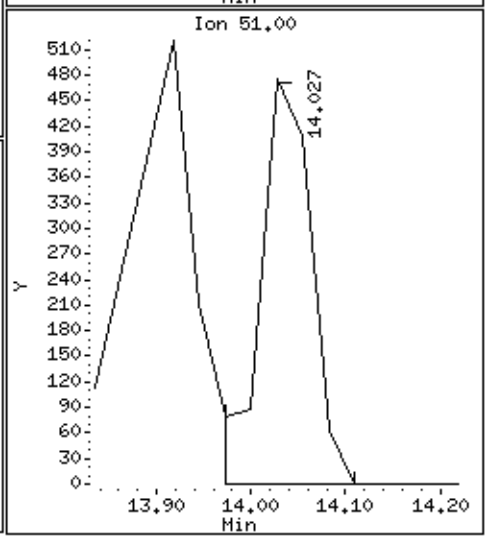












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

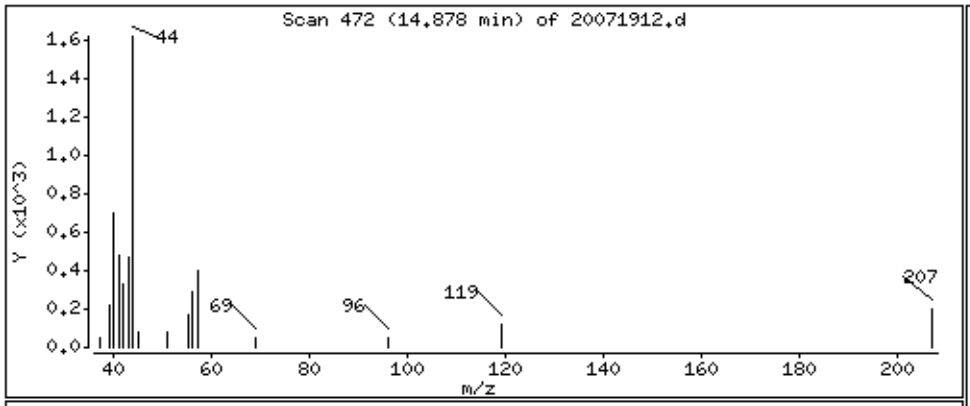
Operator: gh

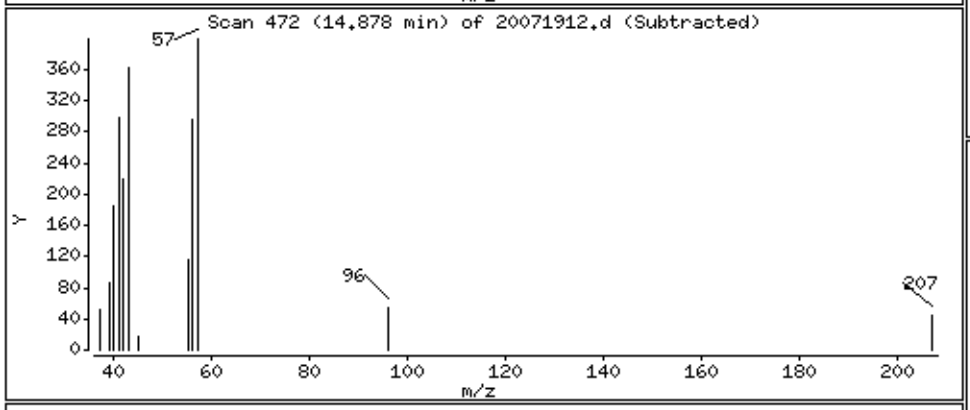
Column phase: RTX-624

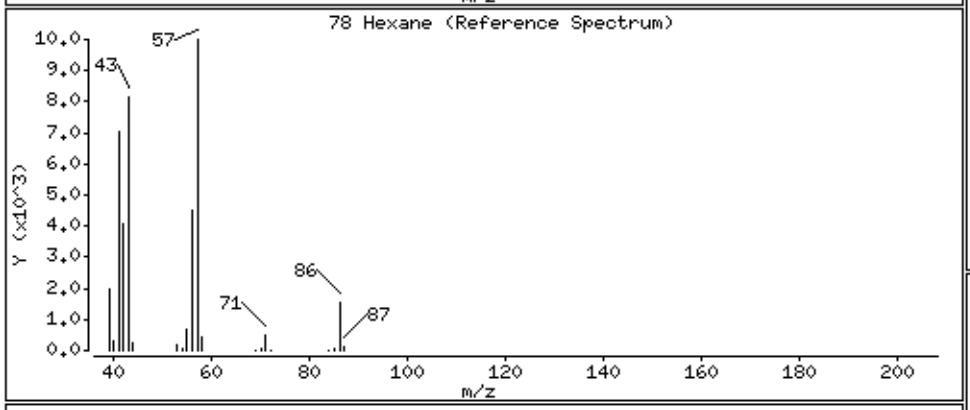
Column diameter: 0.32

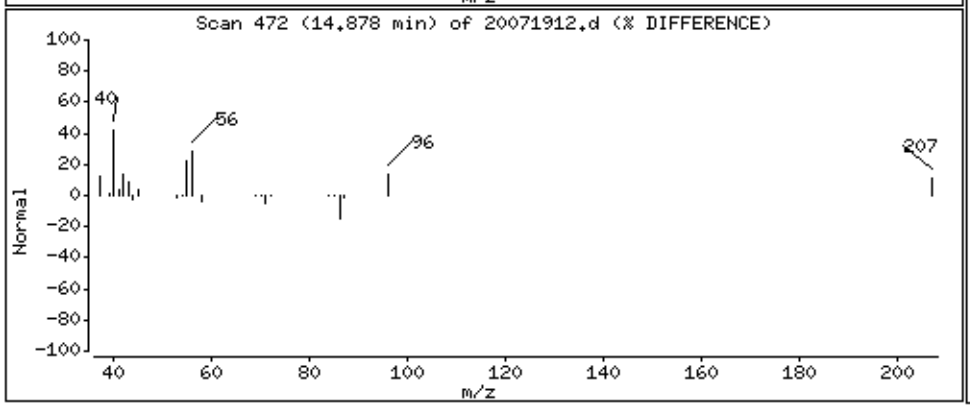
78 Hexane

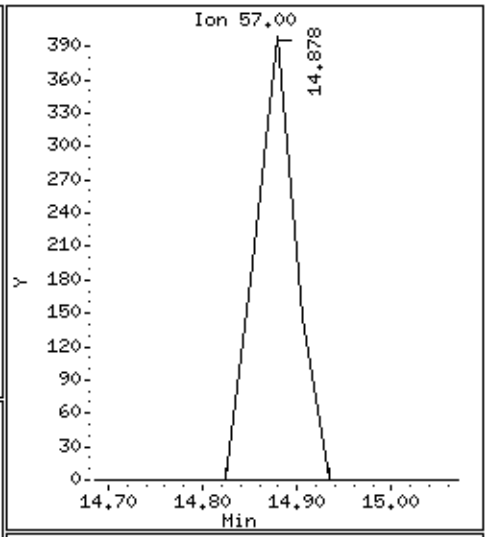
Concentration: 0.04442 PPBV

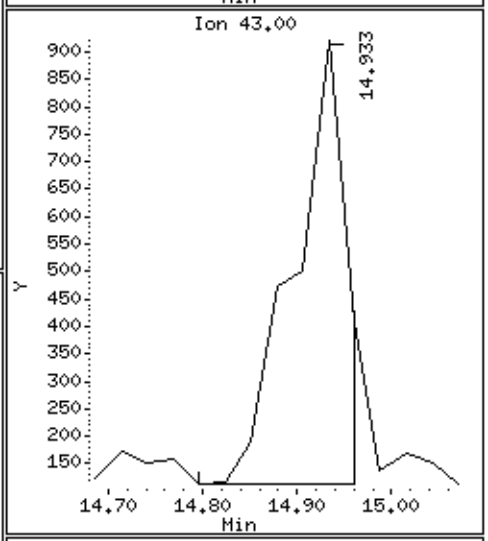


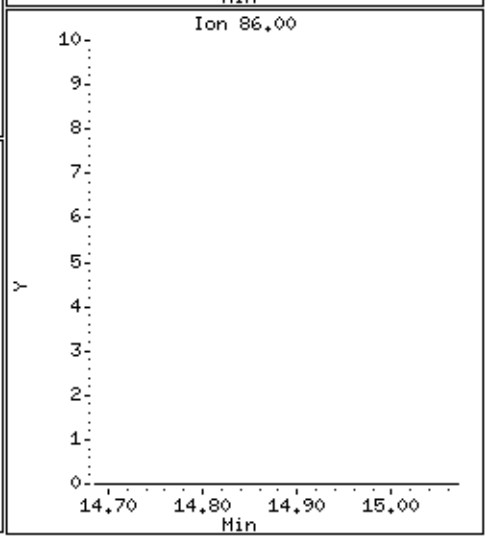












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

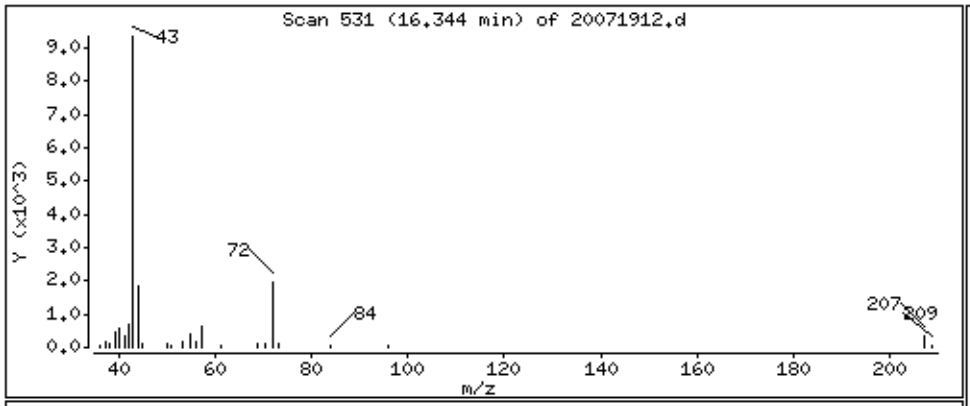
Operator: gh

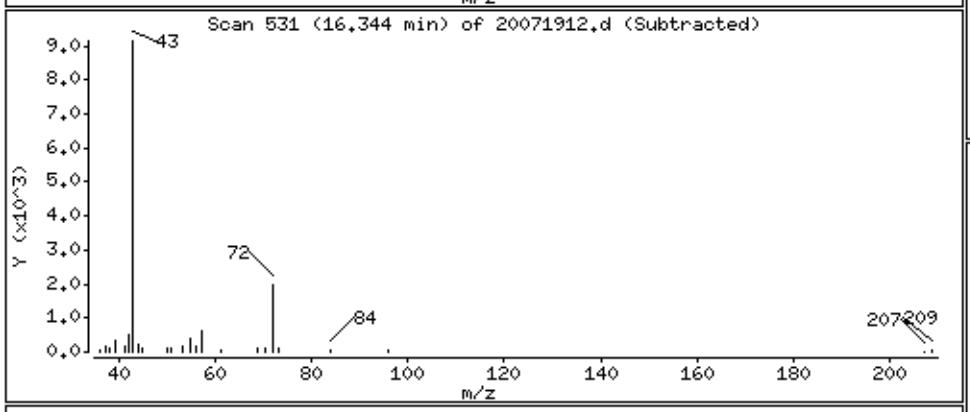
Column phase: RTX-624

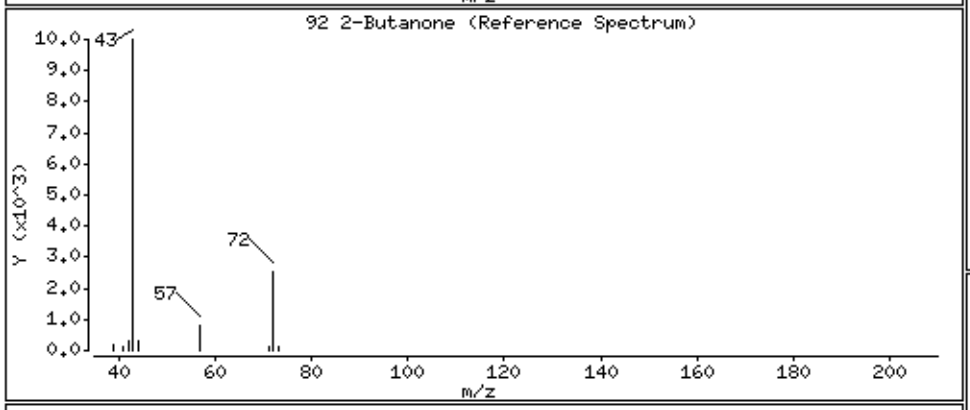
Column diameter: 0.32

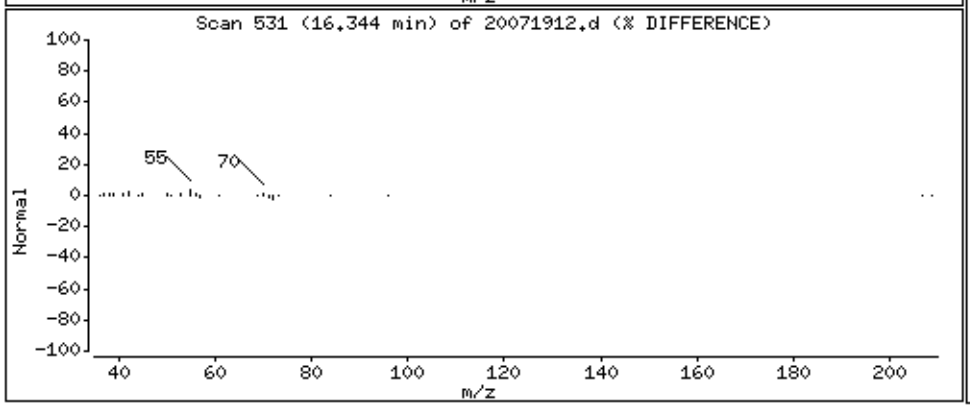
92 2-Butanone

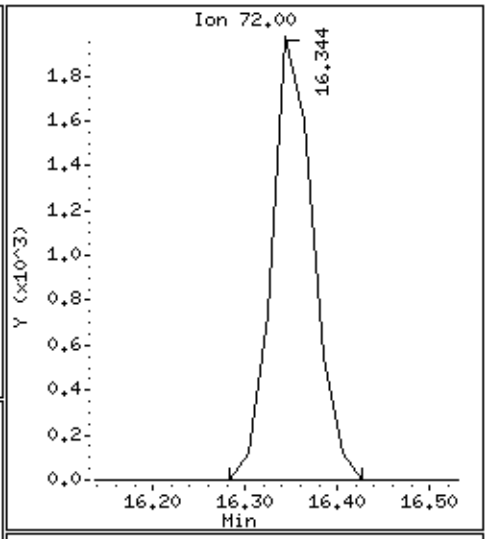
Concentration: 0.7388 PPBV

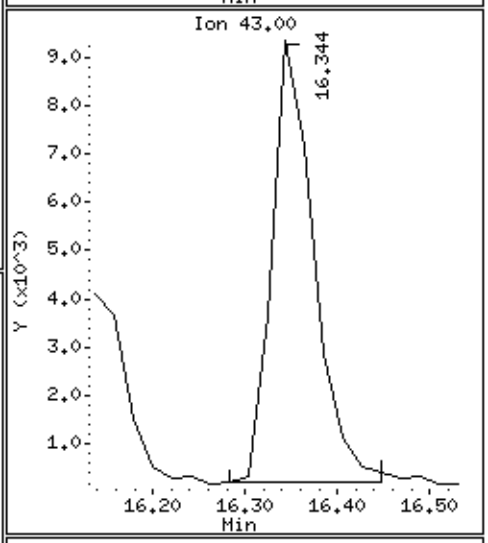


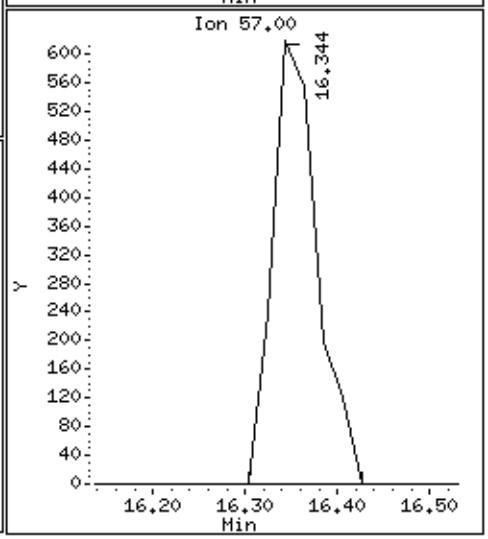












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

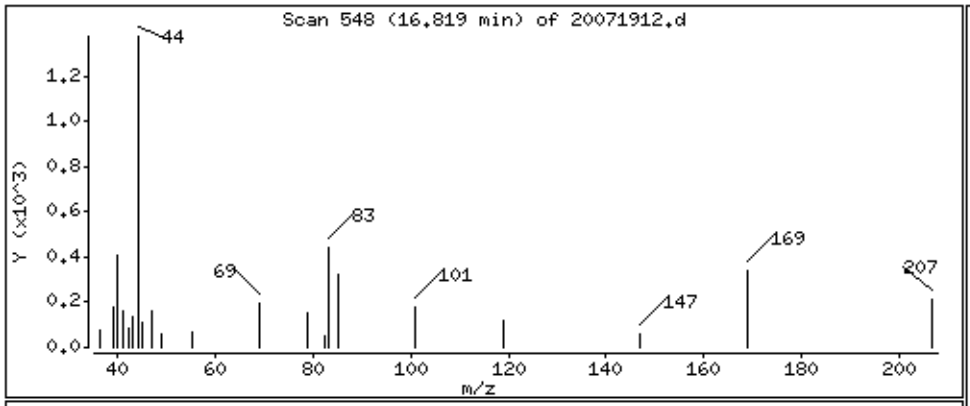
Operator: gh

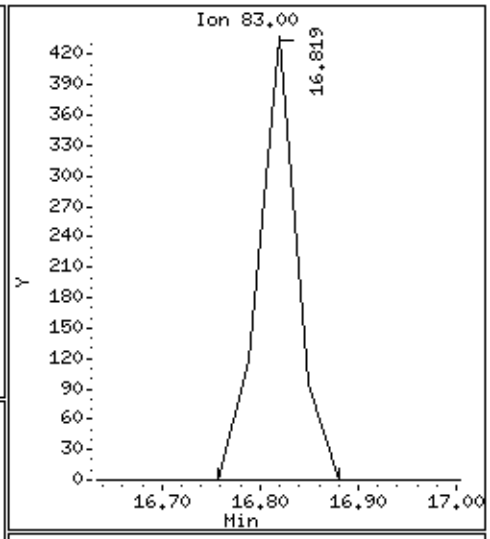
Column phase: RTX-624

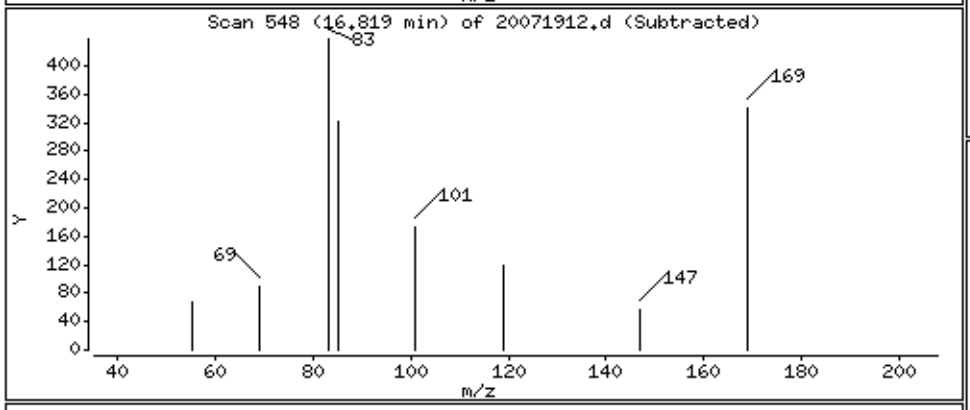
Column diameter: 0.32

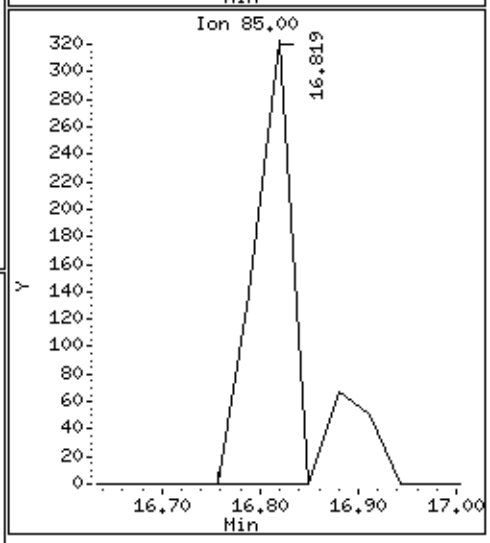
100 Chloroform

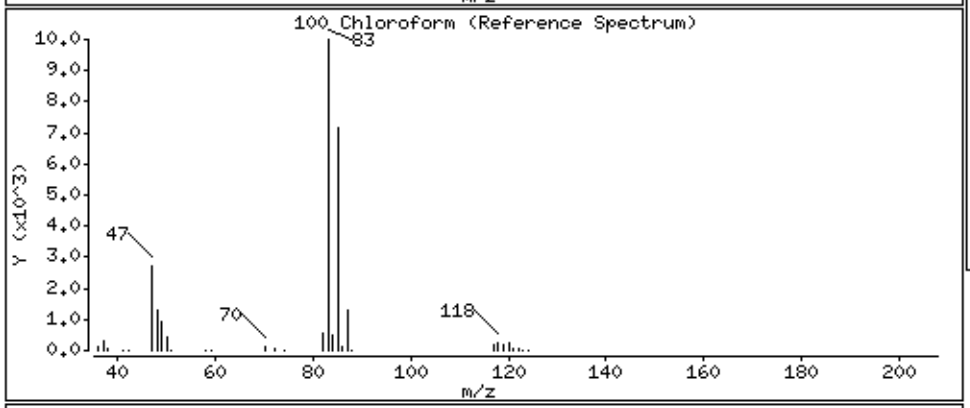
Concentration: 0.03213 PPBV

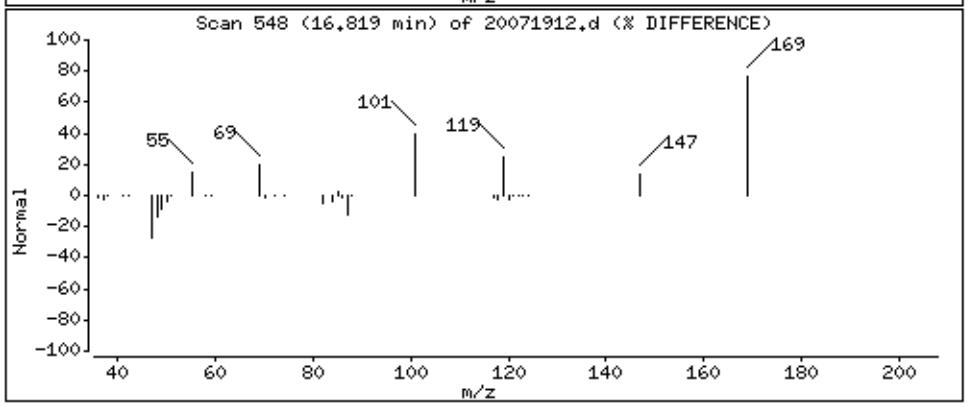












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

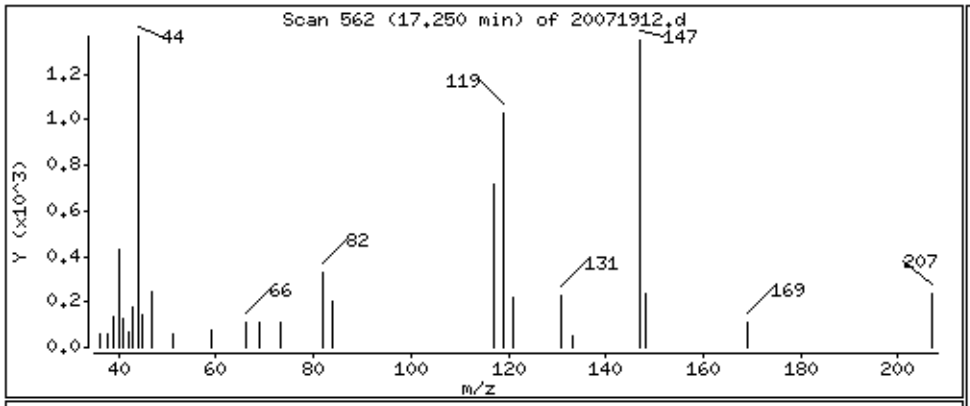
Operator: gh

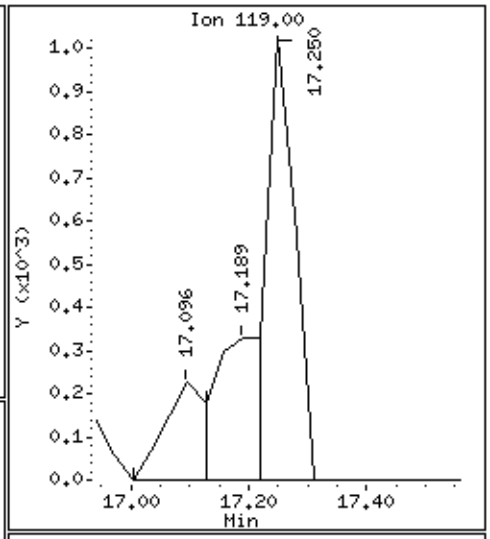
Column phase: RTX-624

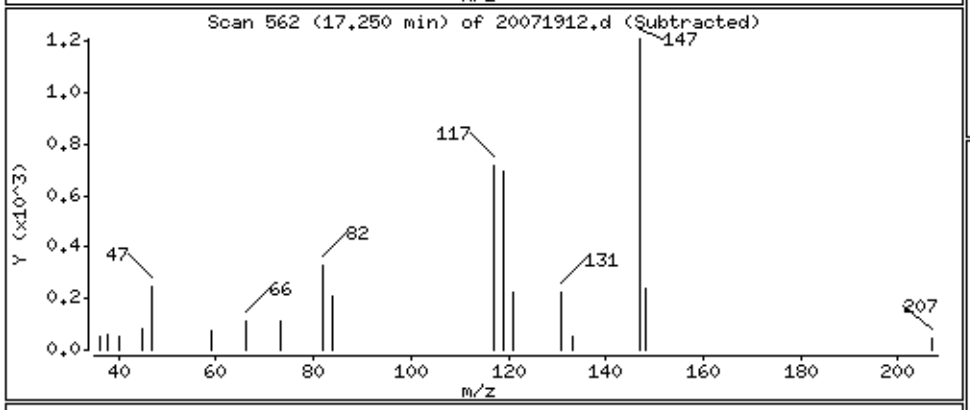
Column diameter: 0.32

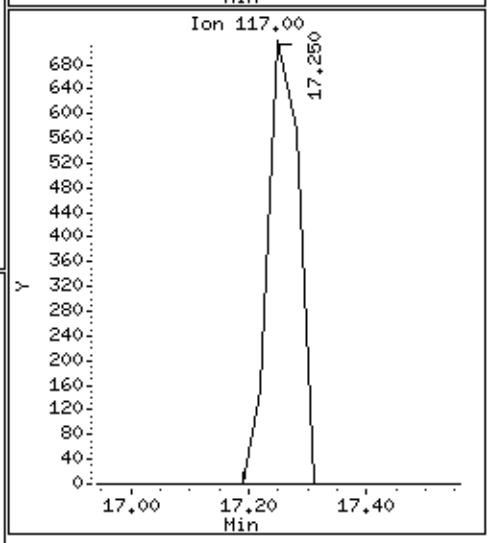
106 Carbon Tetrachloride

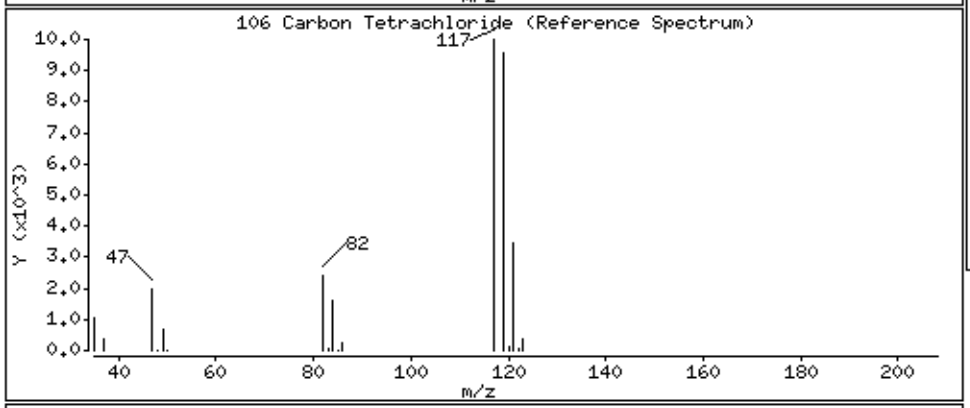
Concentration: 0.1099 PPBV

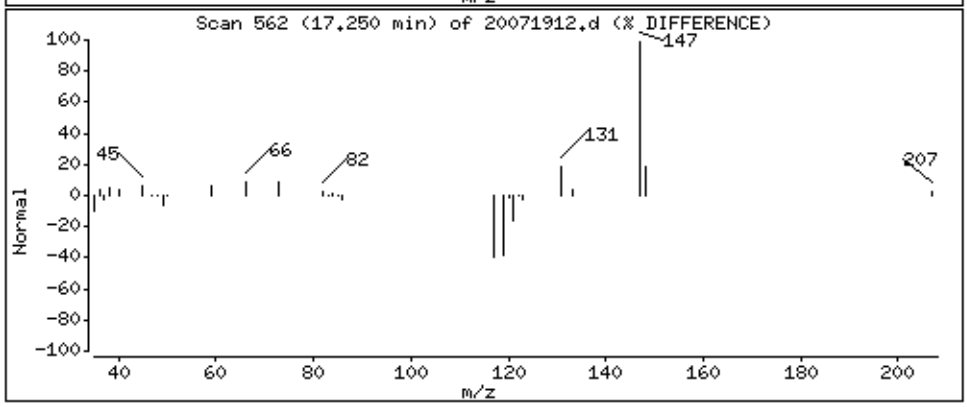












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

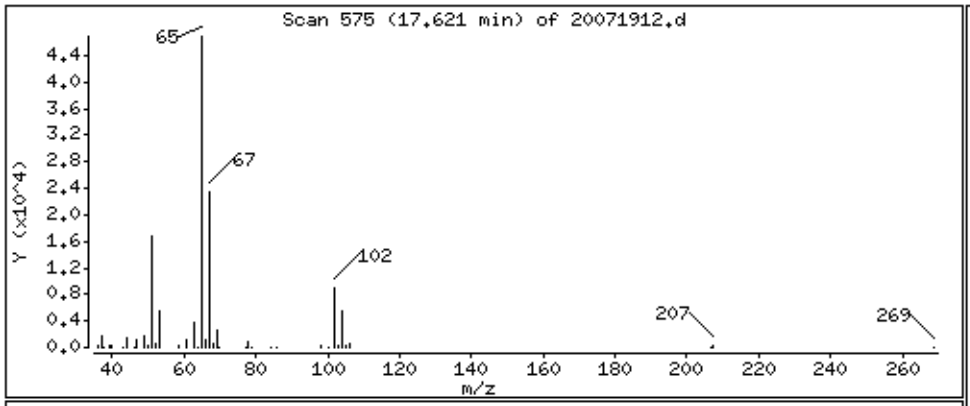
Operator: gh

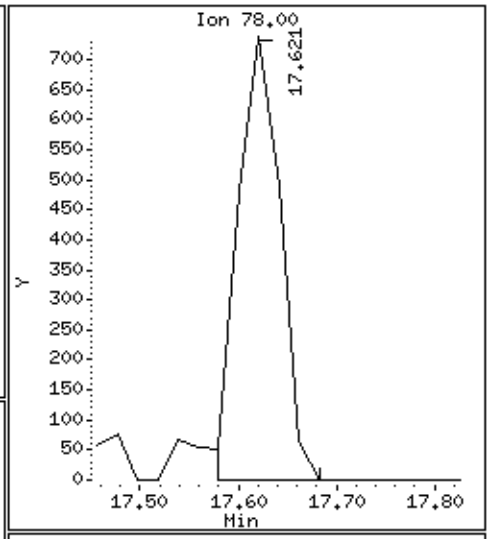
Column phase: RTX-624

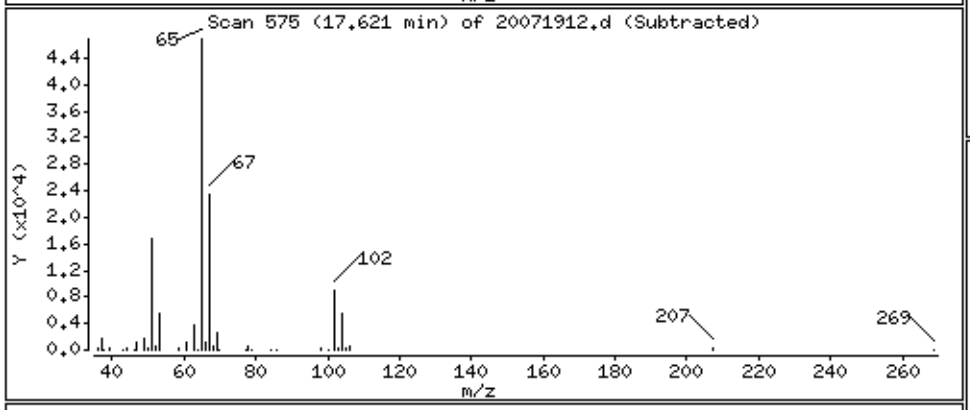
Column diameter: 0.32

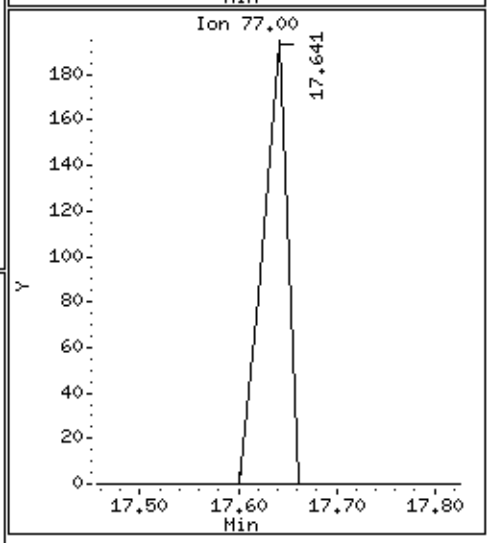
116 Benzene

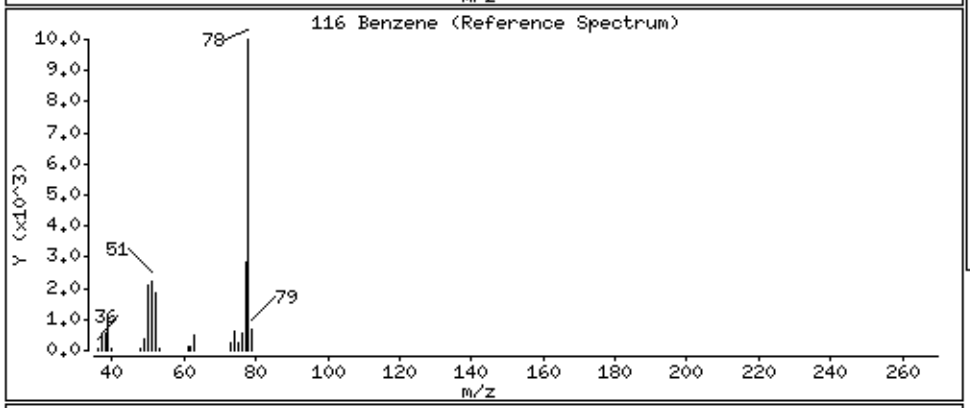
Concentration: 0.05444 PPBV

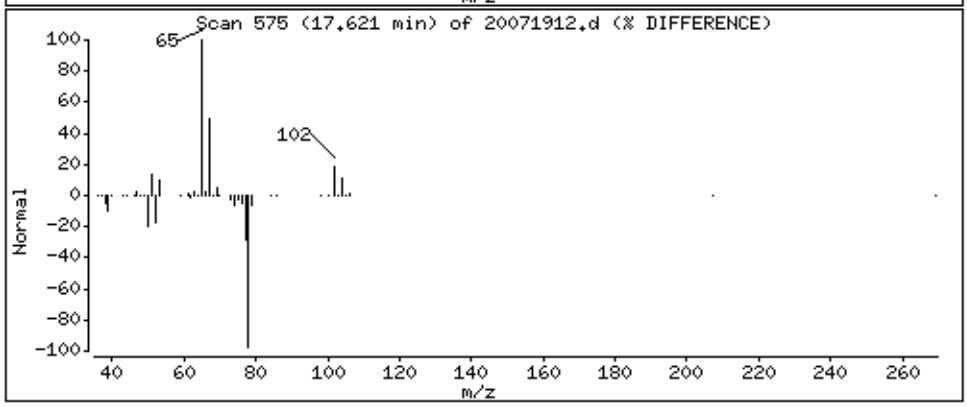












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

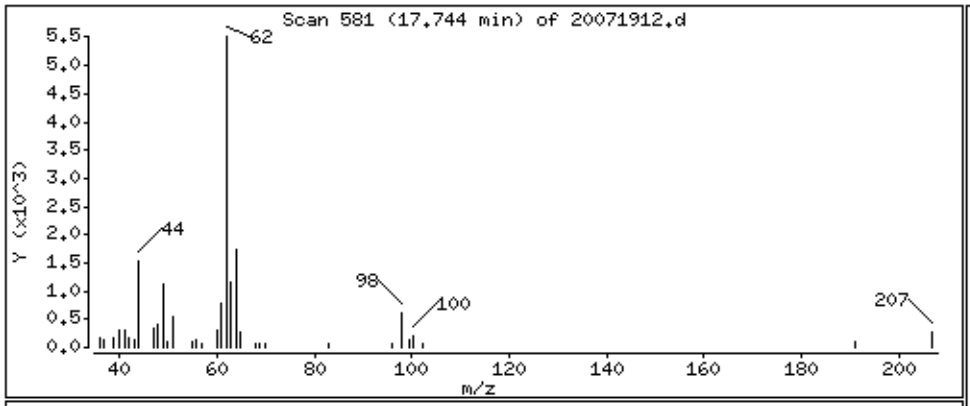
Operator: gh

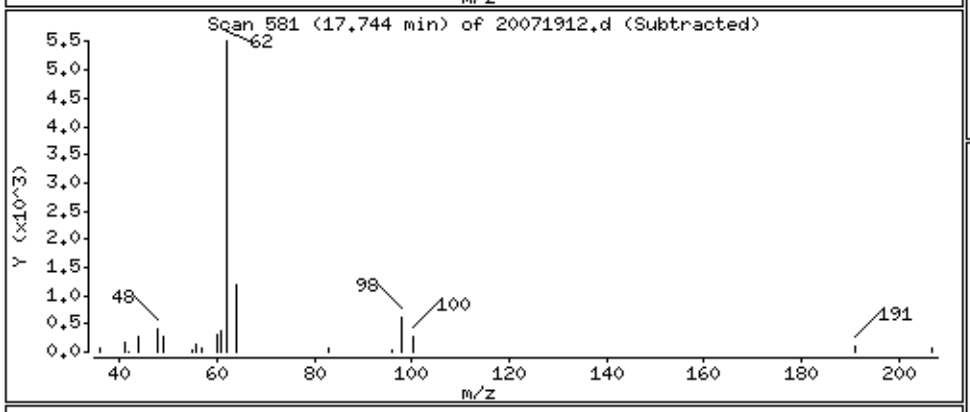
Column phase: RTX-624

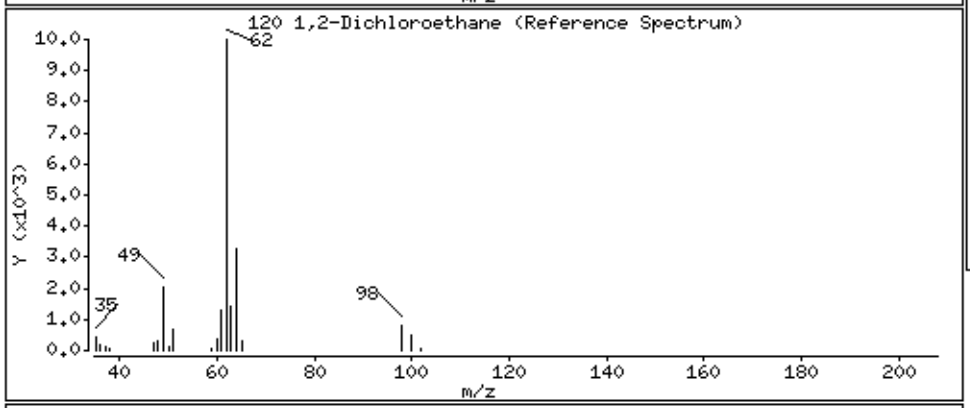
Column diameter: 0.32

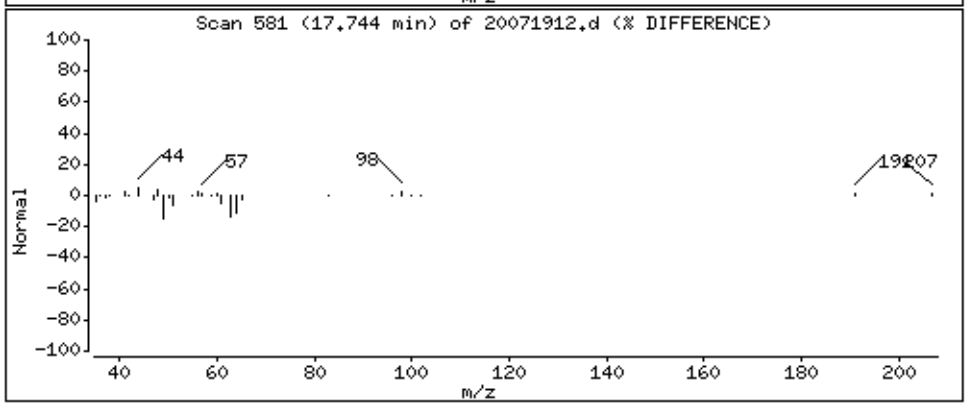
120 1,2-Dichloroethane

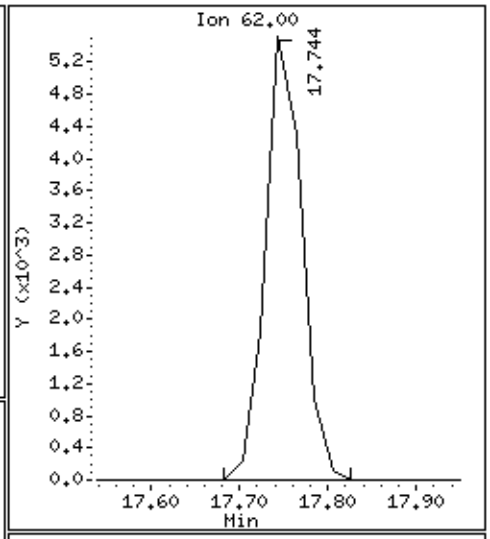
Concentration: 0.8828 PPBV

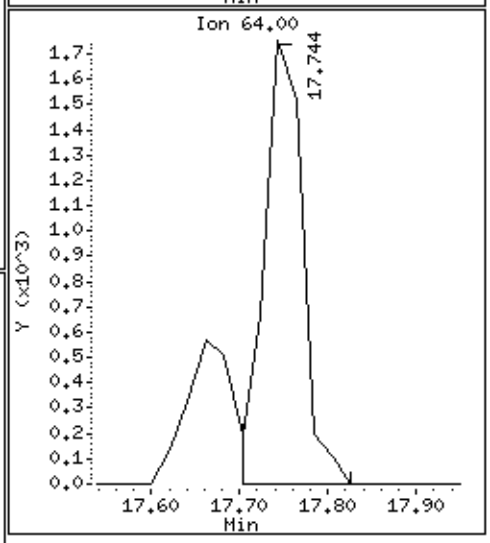












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

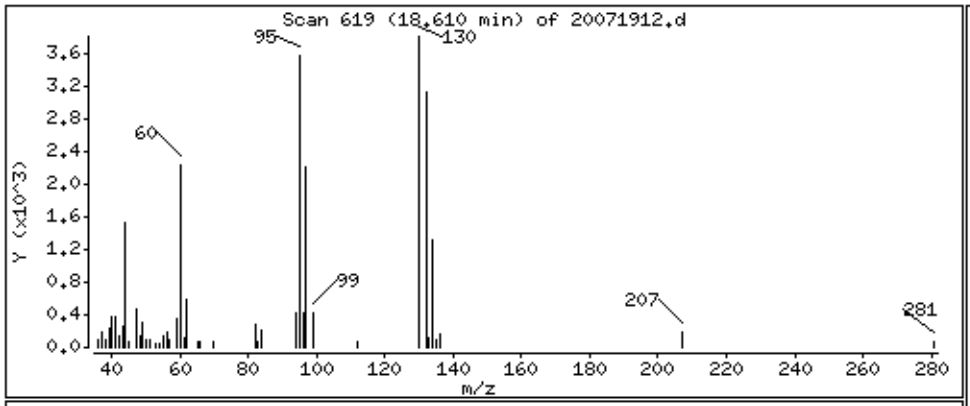
Operator: gh

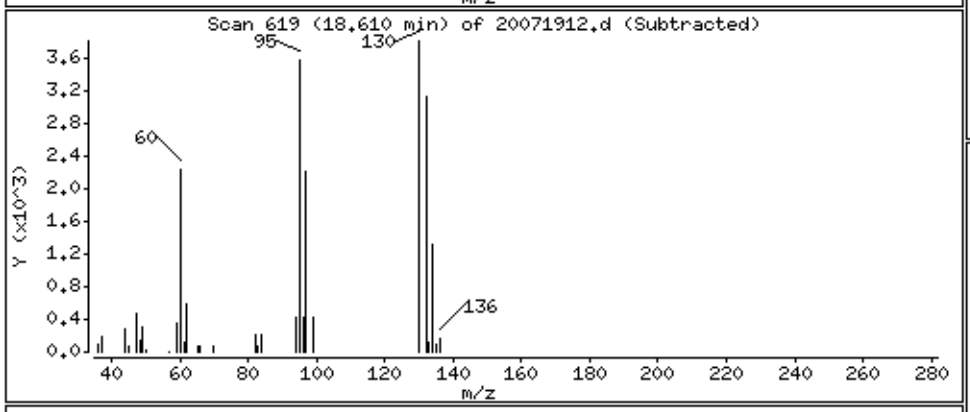
Column phase: RTX-624

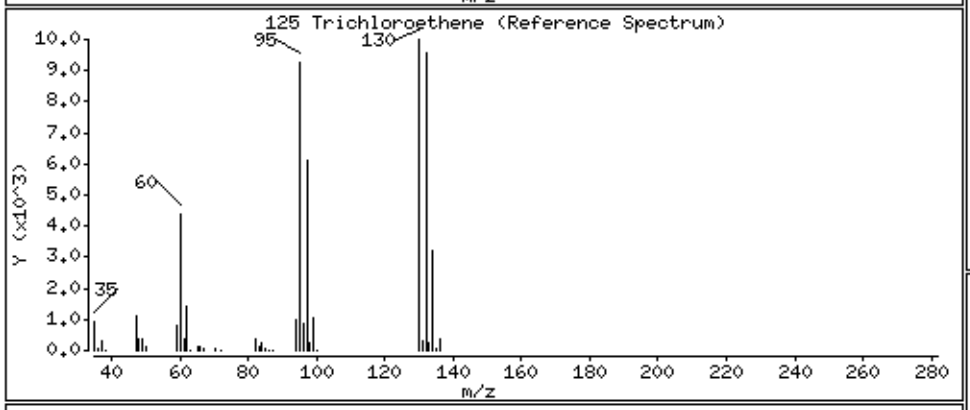
Column diameter: 0.32

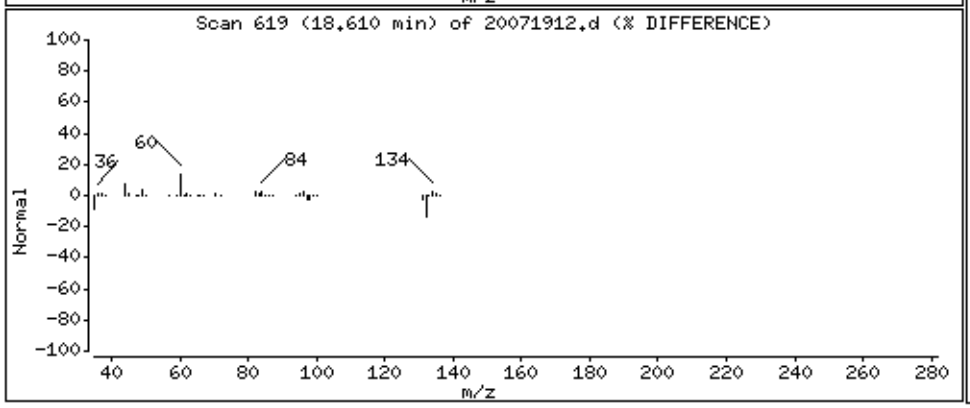
125 Trichloroethene

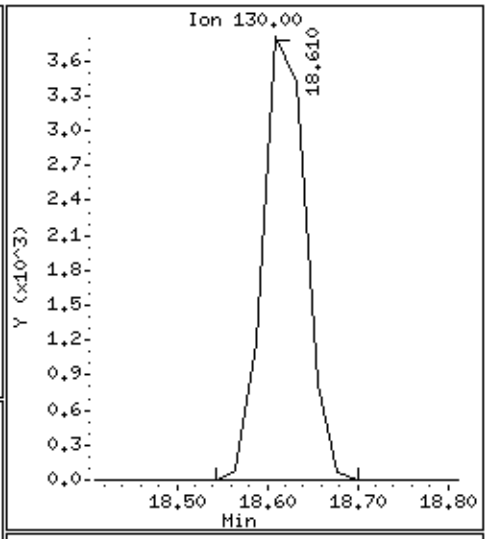
Concentration: 0.6658 PPBV

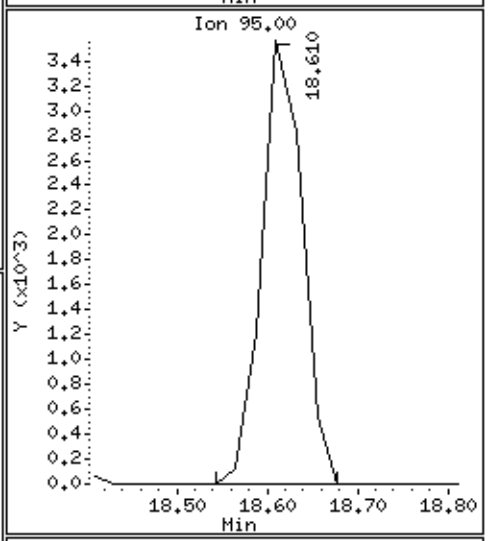


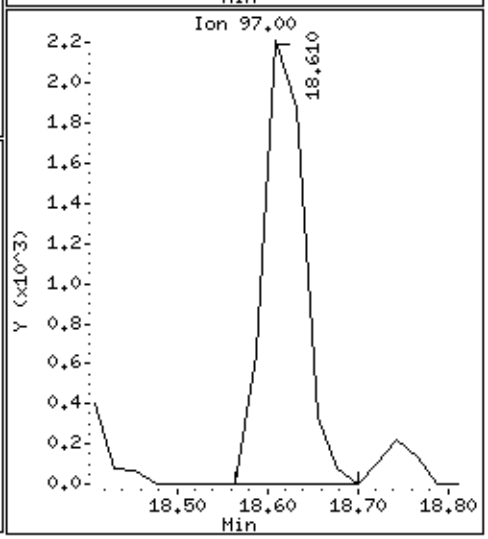












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

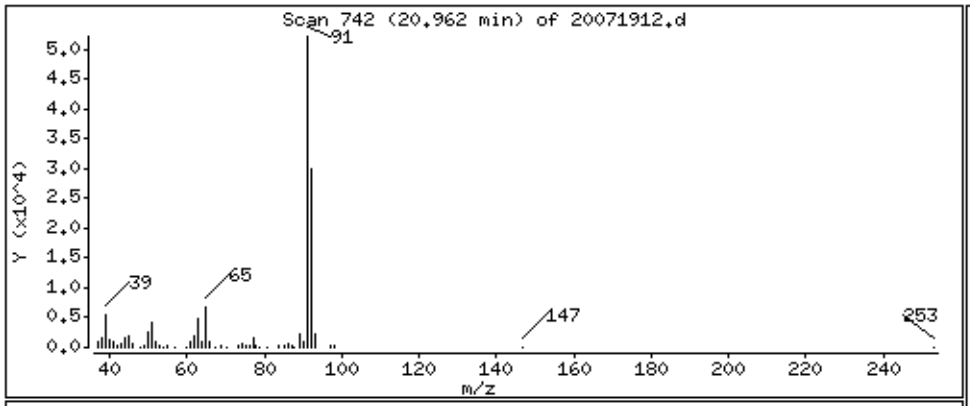
Operator: gh

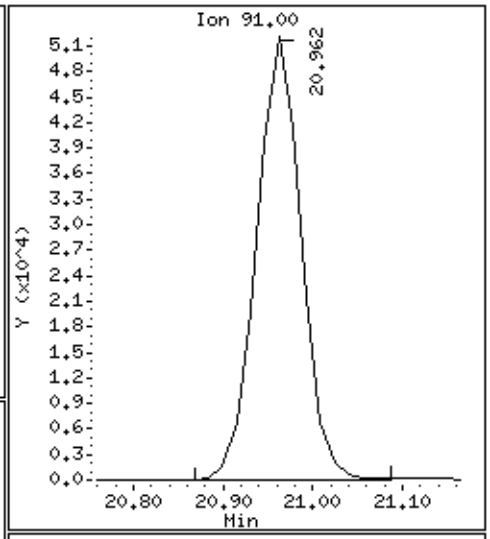
Column phase: RTX-624

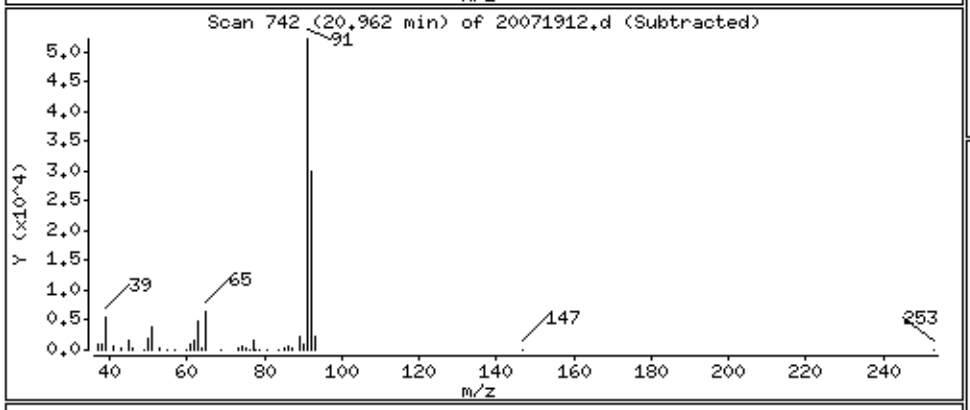
Column diameter: 0.32

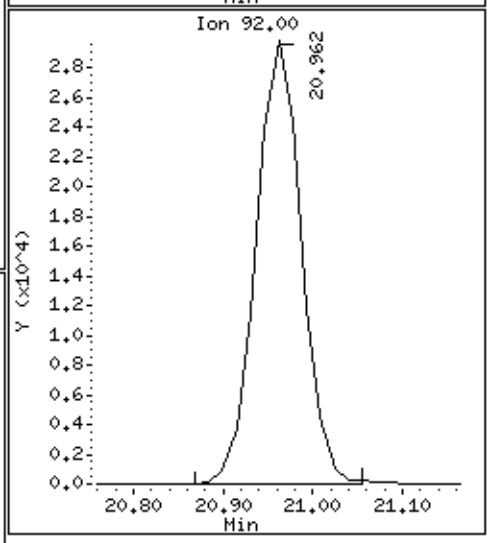
147 Toluene

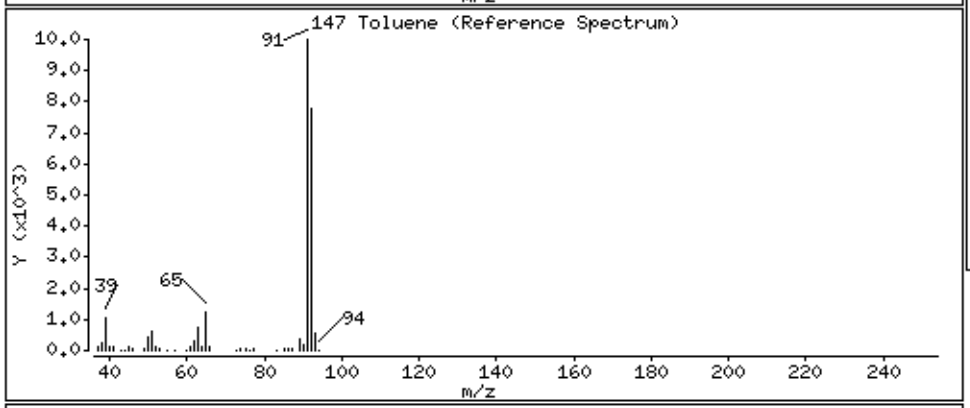
Concentration: 4.052 PPBV

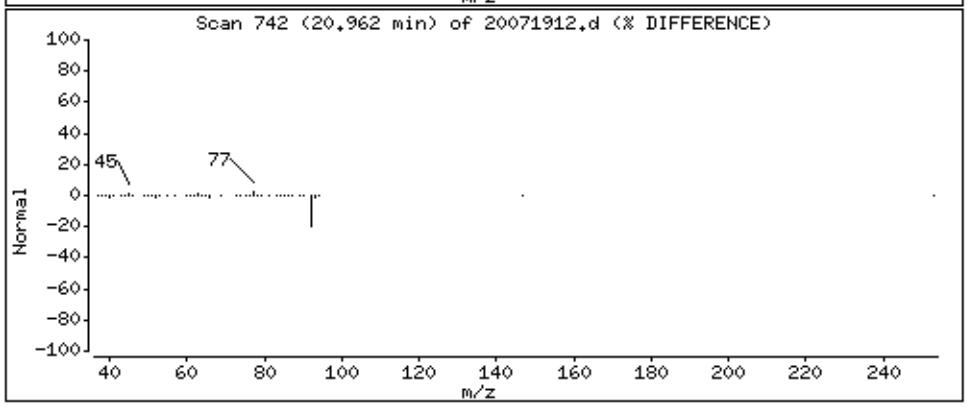












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

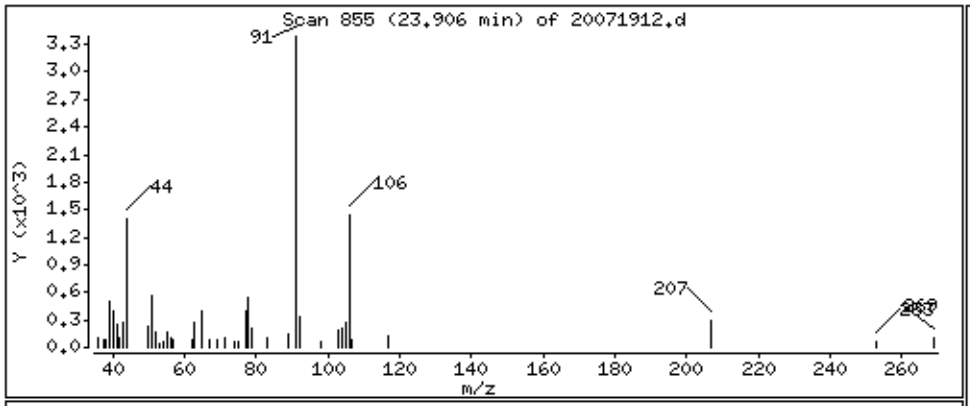
Operator: gh

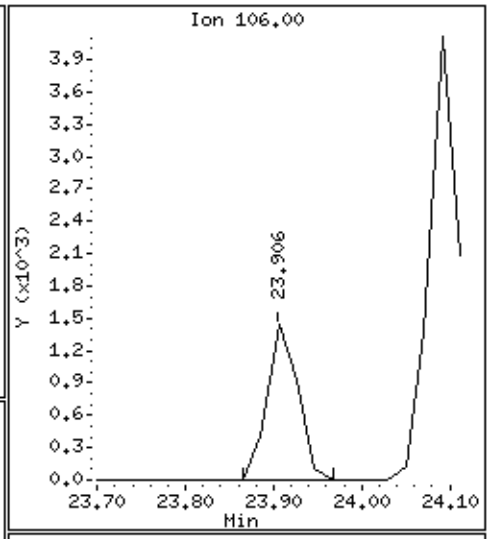
Column phase: RTX-624

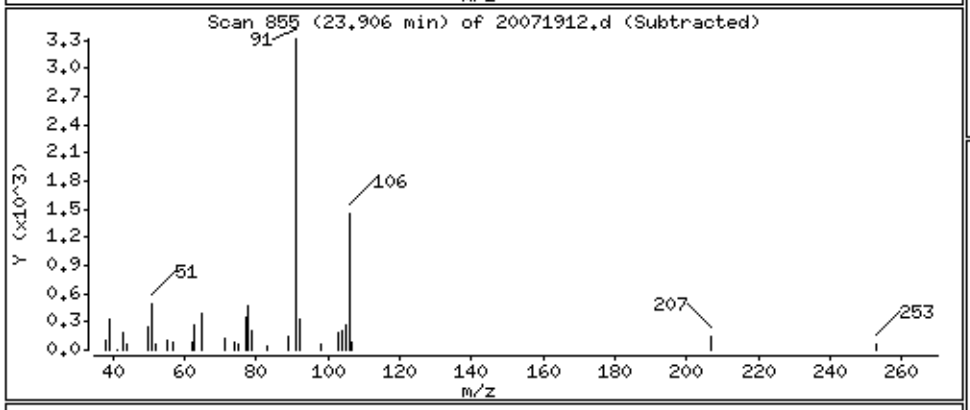
Column diameter: 0.32

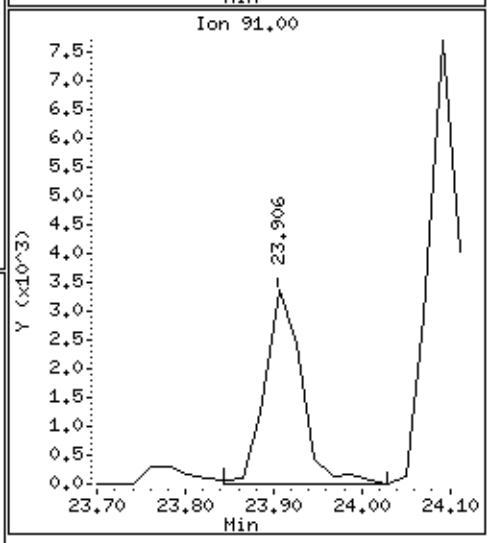
167 Ethyl Benzene

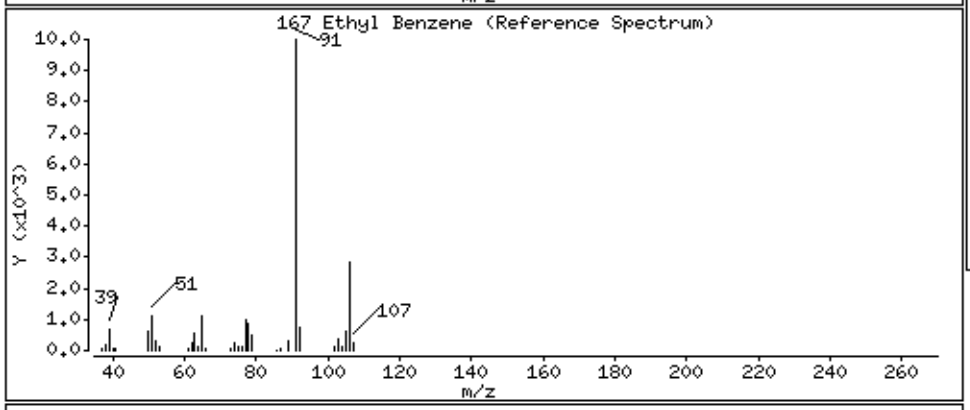
Concentration: 0.1827 PPBV

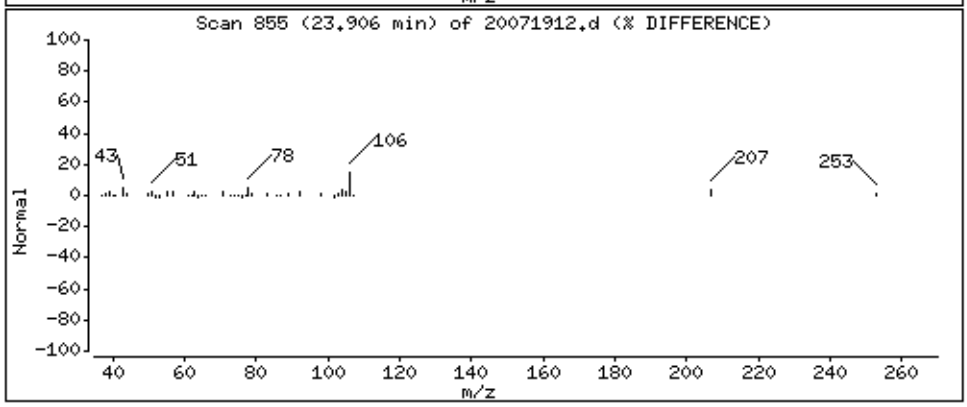












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

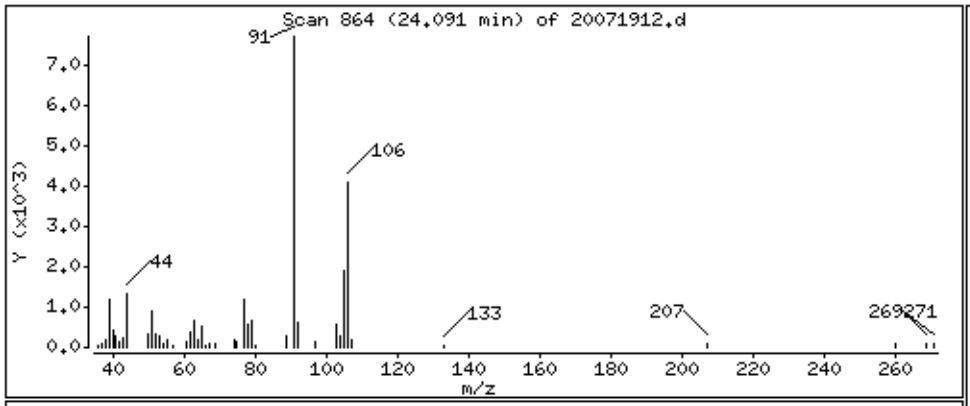
Operator: gh

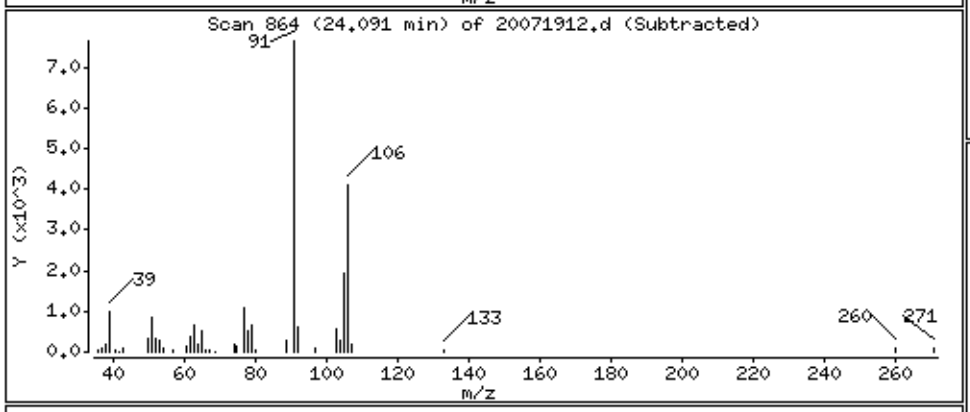
Column phase: RTX-624

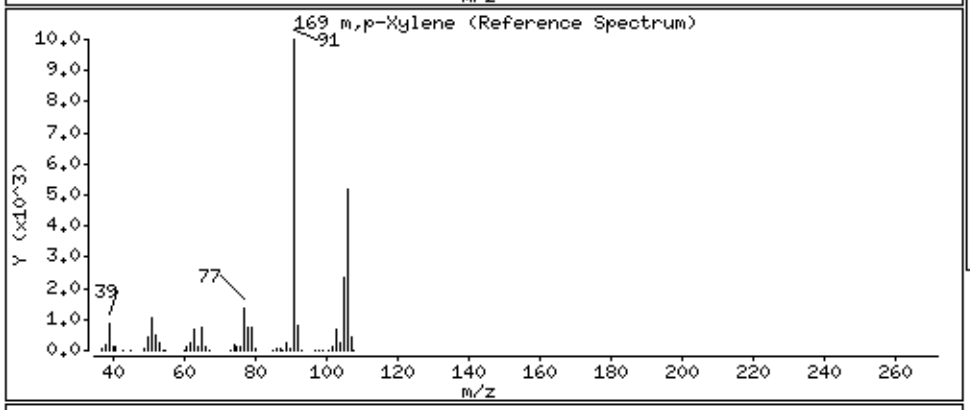
Column diameter: 0.32

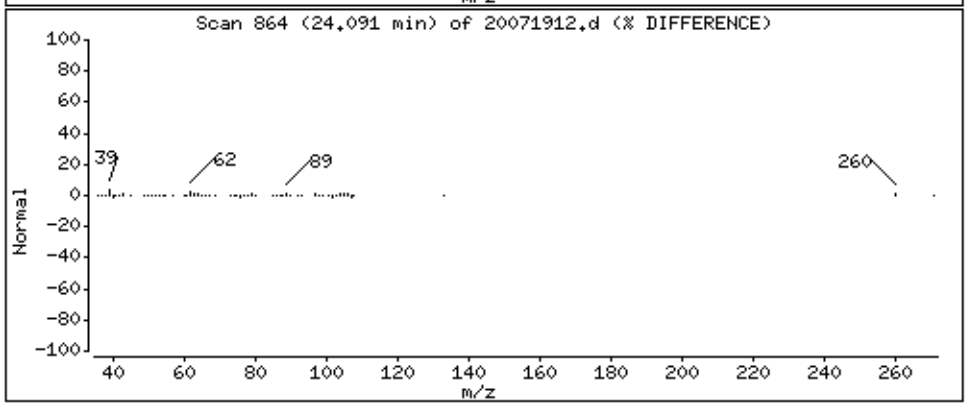
169 m,p-Xylene

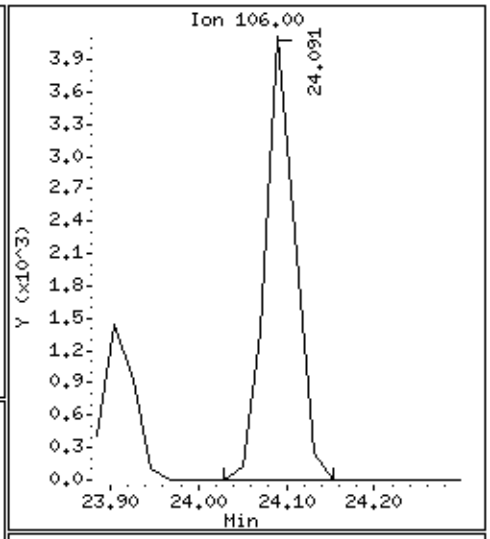
Concentration: 0.4690 PPBV

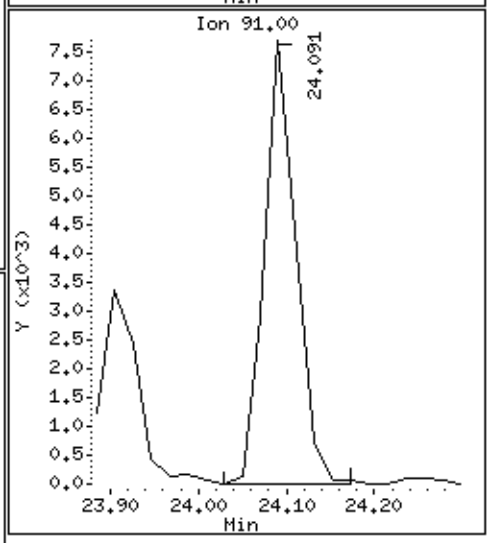












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

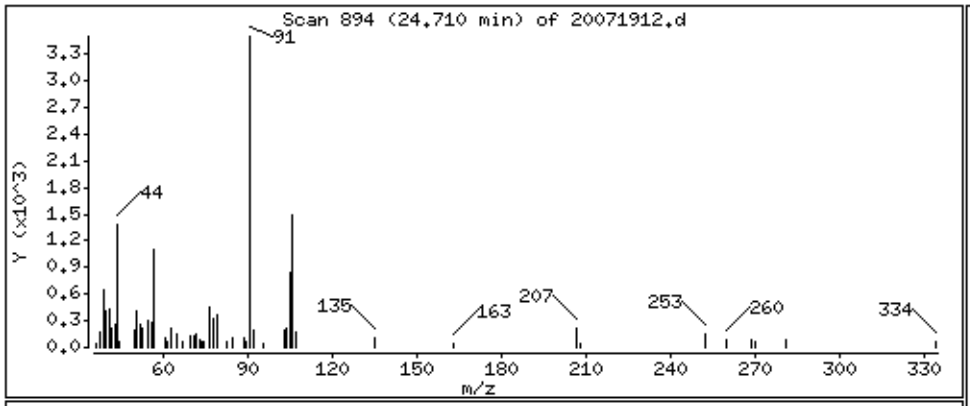
Operator: gh

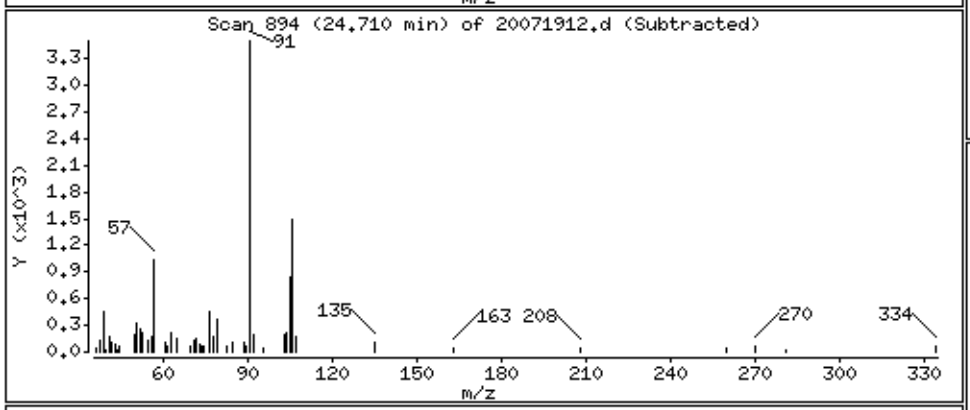
Column phase: RTX-624

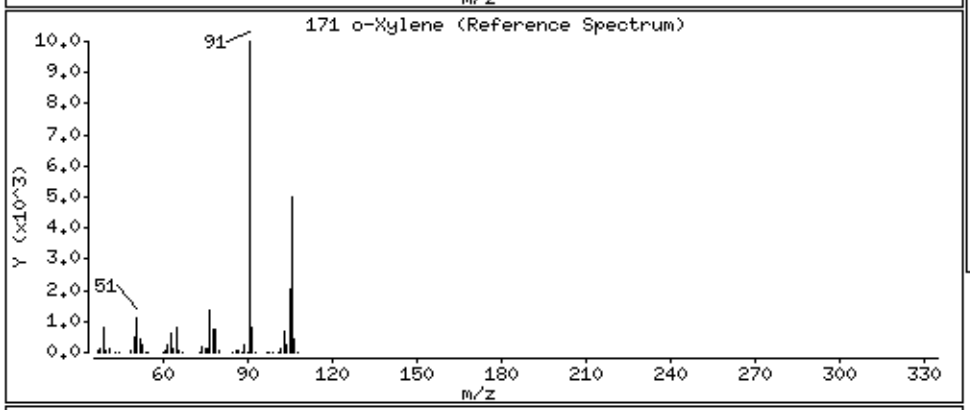
Column diameter: 0.32

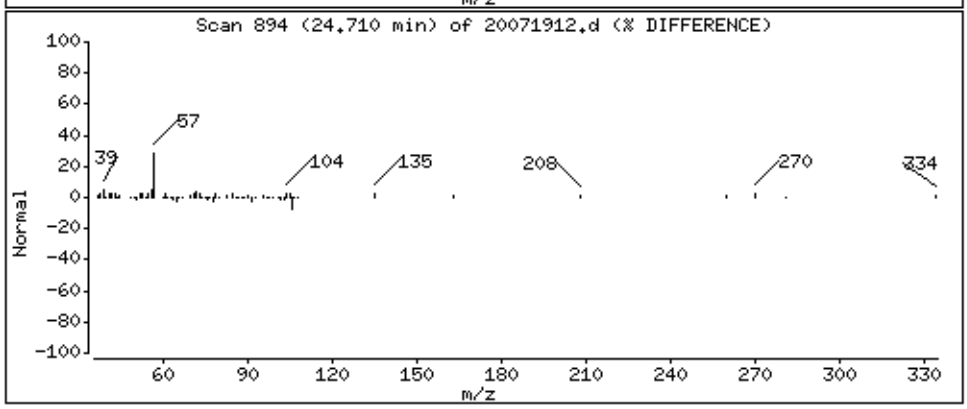
171 o-Xylene

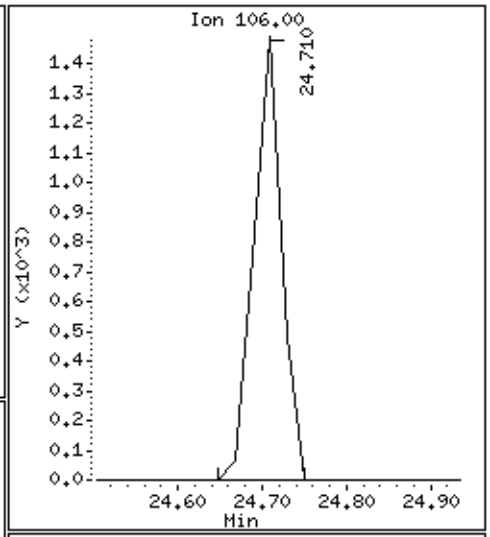
Concentration: 0.1741 PPBV

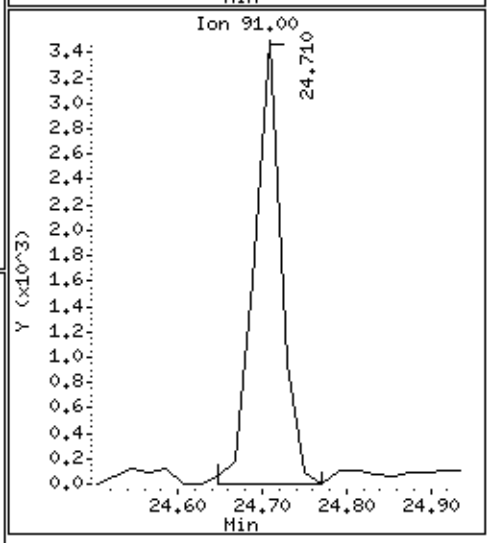












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

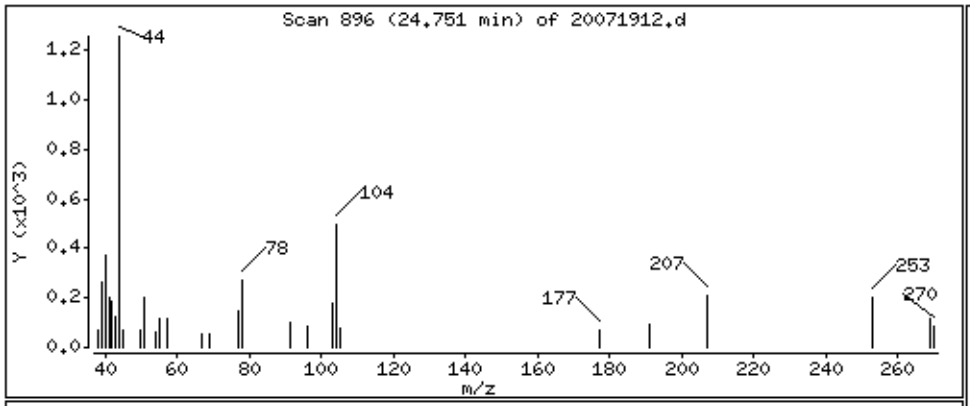
Operator: gh

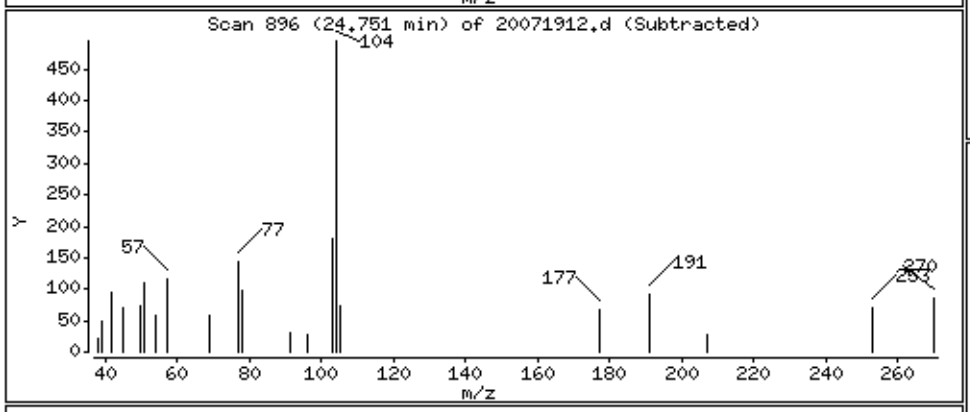
Column phase: RTX-624

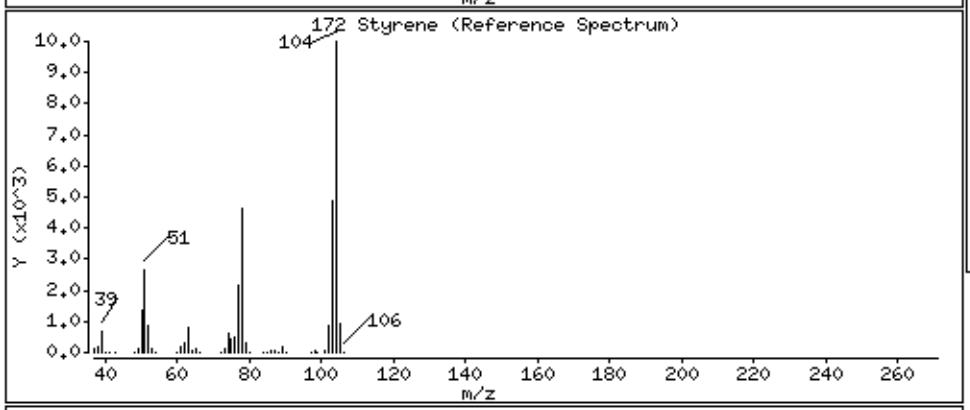
Column diameter: 0.32

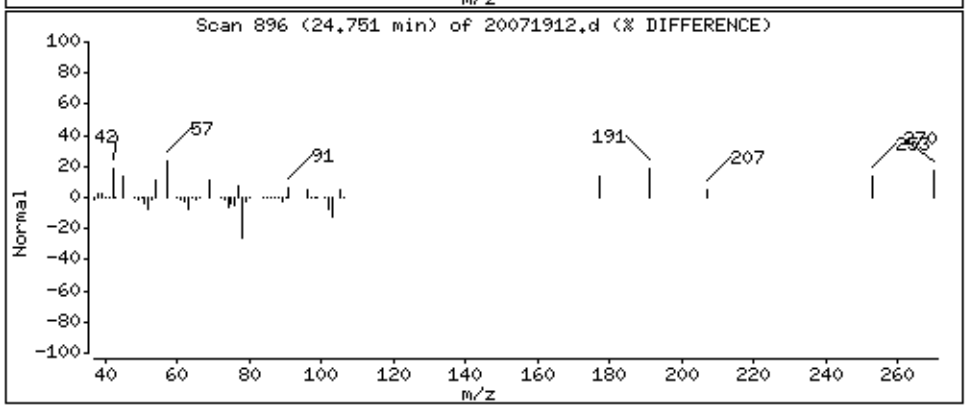
172 Styrene

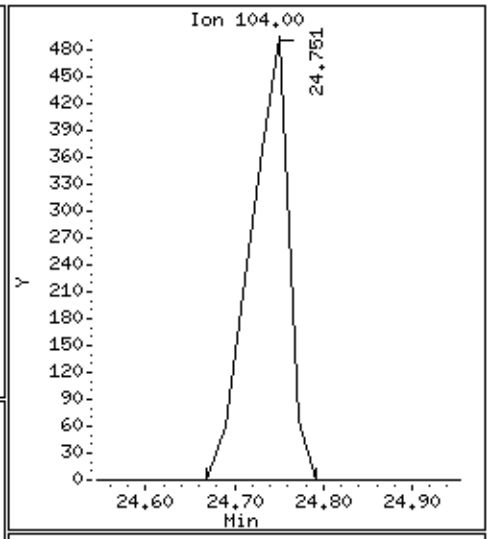
Concentration: 0.05243 PPBV

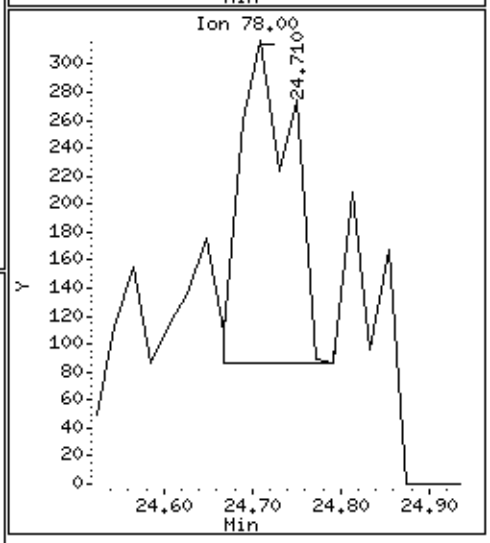












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

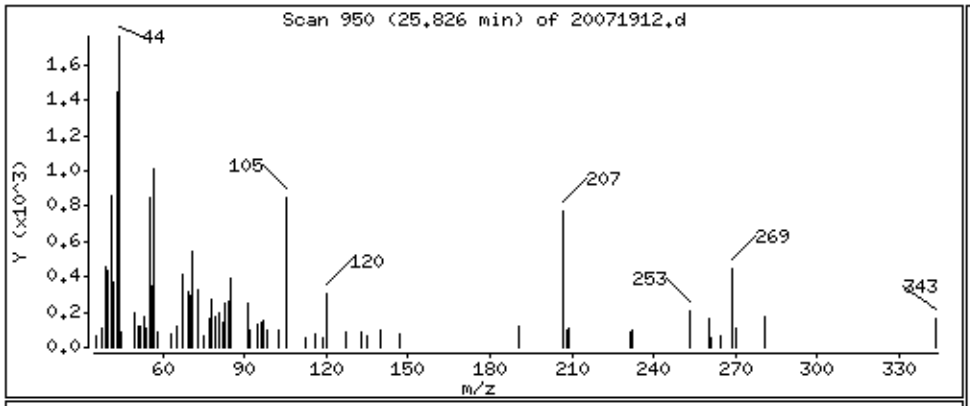
Operator: gh

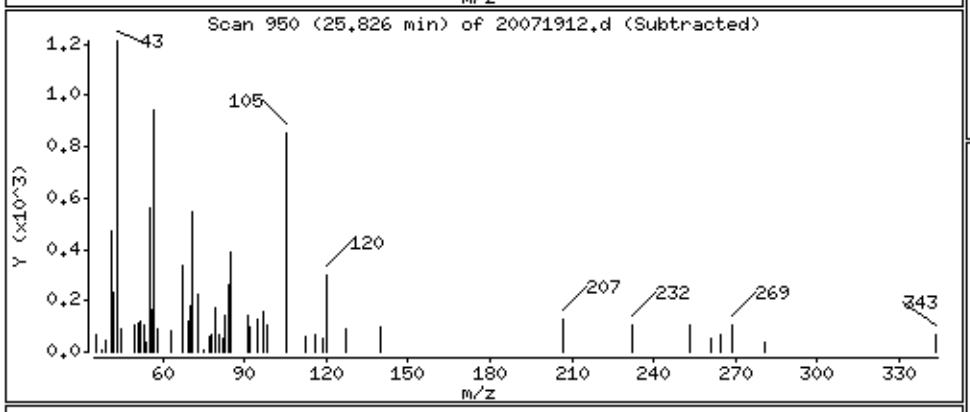
Column phase: RTX-624

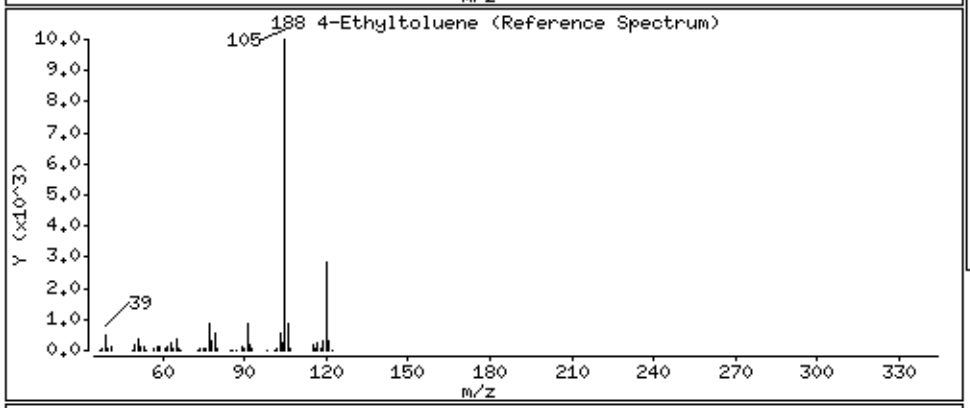
Column diameter: 0.32

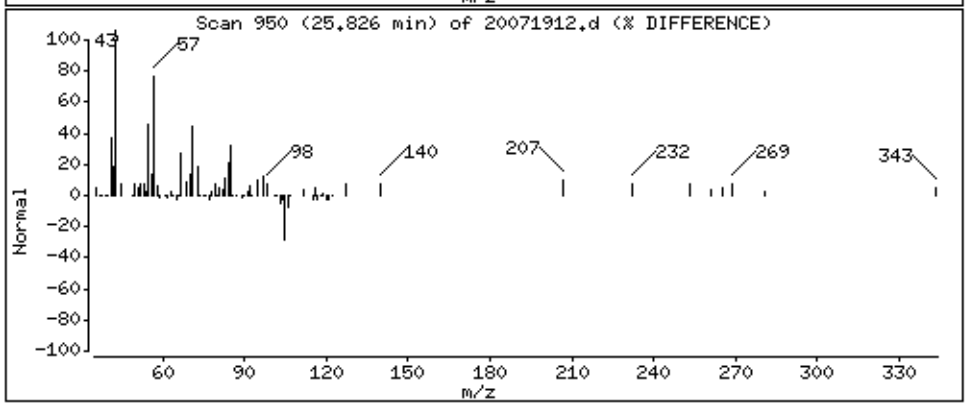
188 4-Ethyltoluene

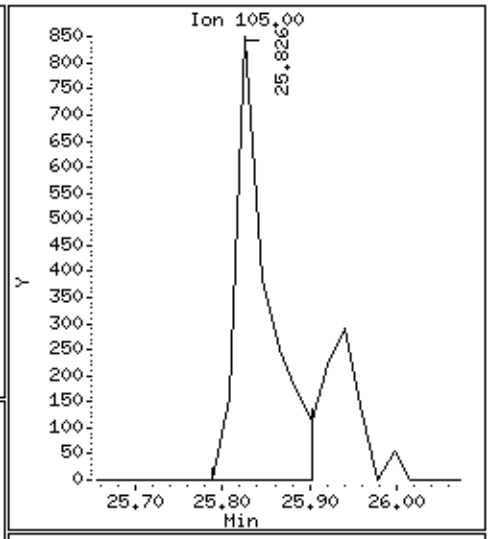
Concentration: 0.04111 PPBV

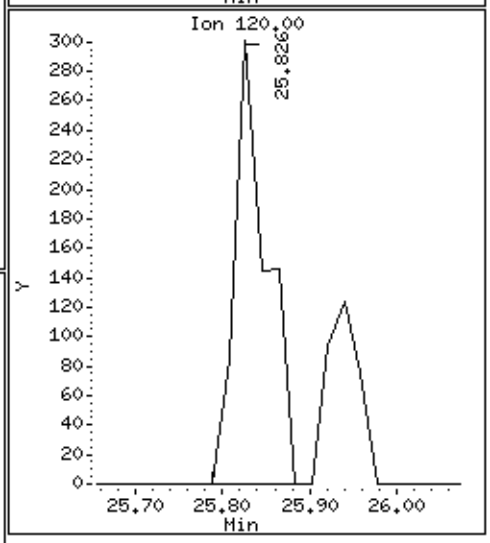












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

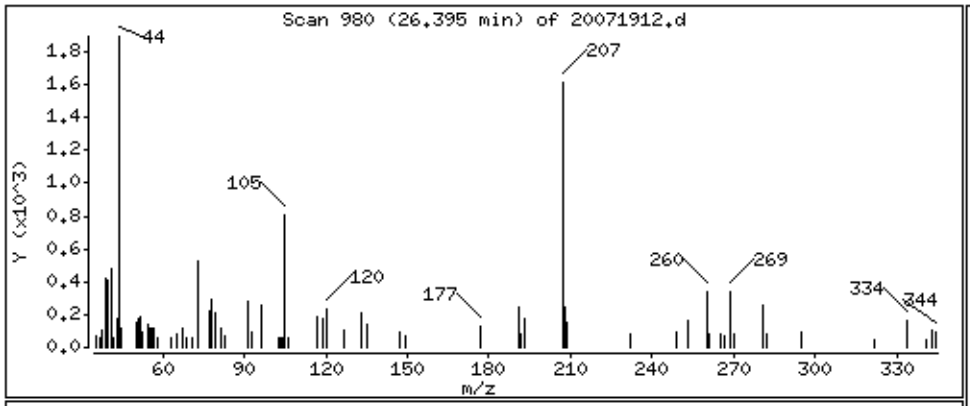
Operator: gh

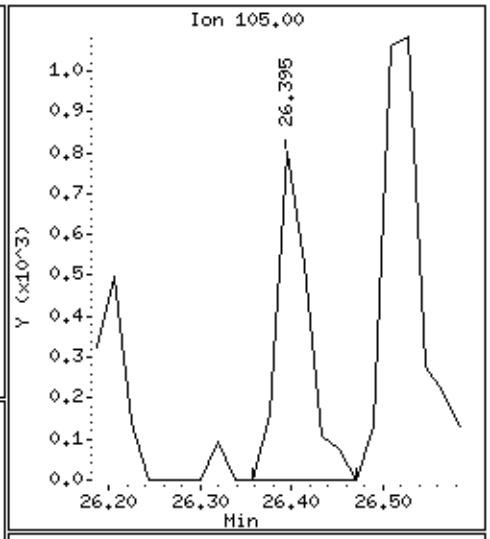
Column phase: RTX-624

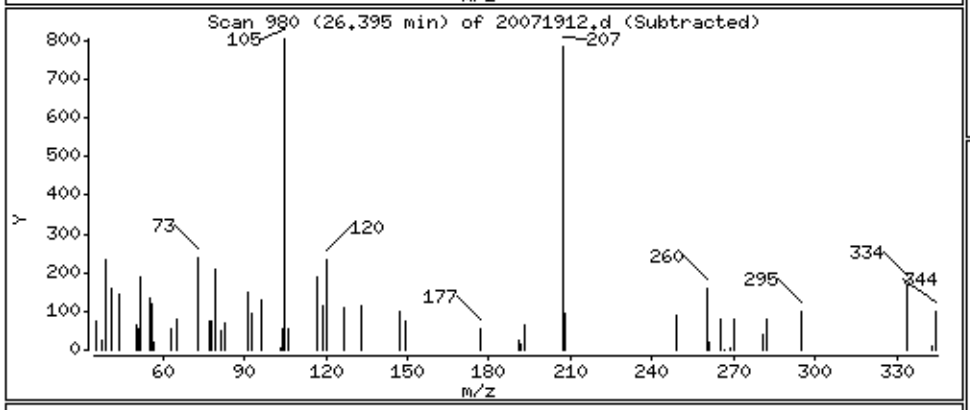
Column diameter: 0.32

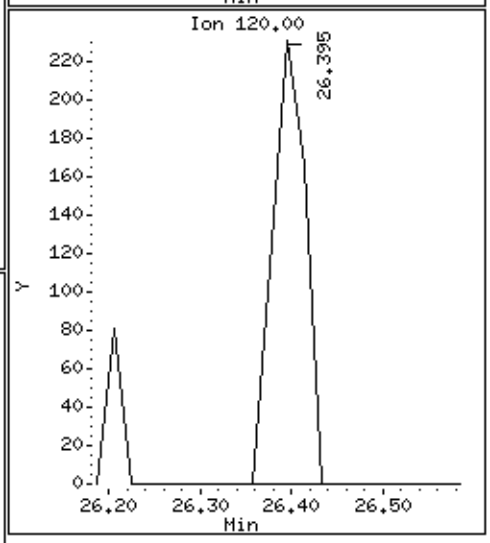
196 1,2,4-Trimethylbenzene

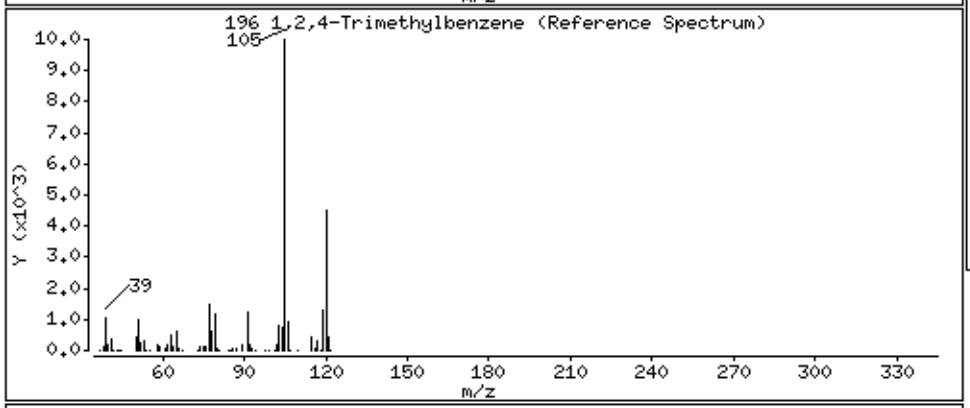
Concentration: 0.04179 PPBV

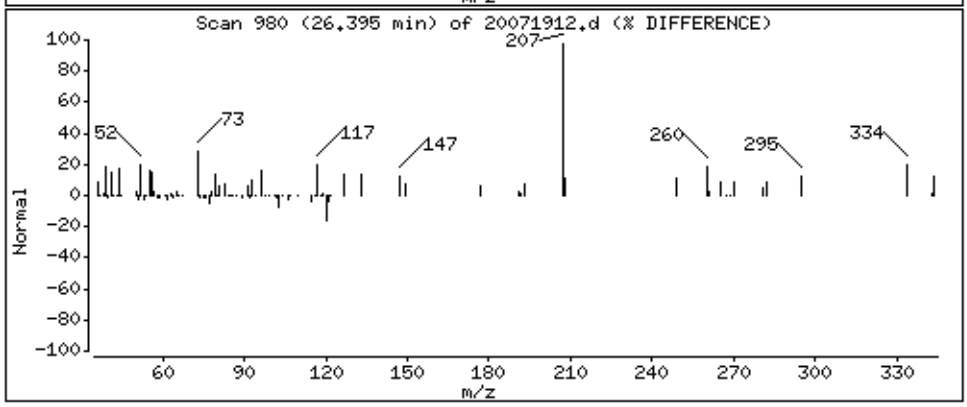












Data File: /chem/msd20.i/19Jul2016.b/20071912.d

Date : 19-JUL-2016 15:50

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12082

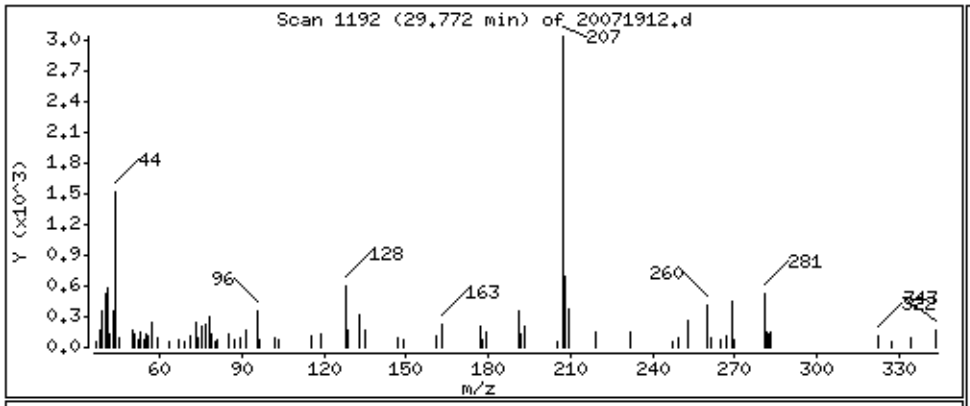
Operator: gh

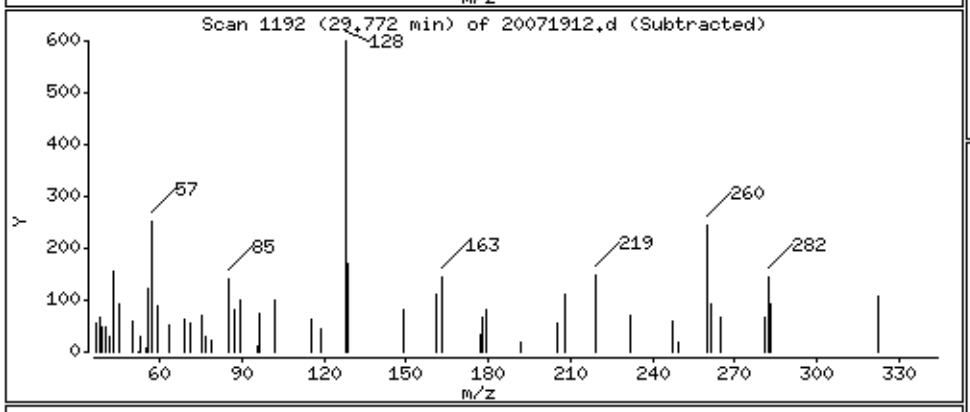
Column phase: RTX-624

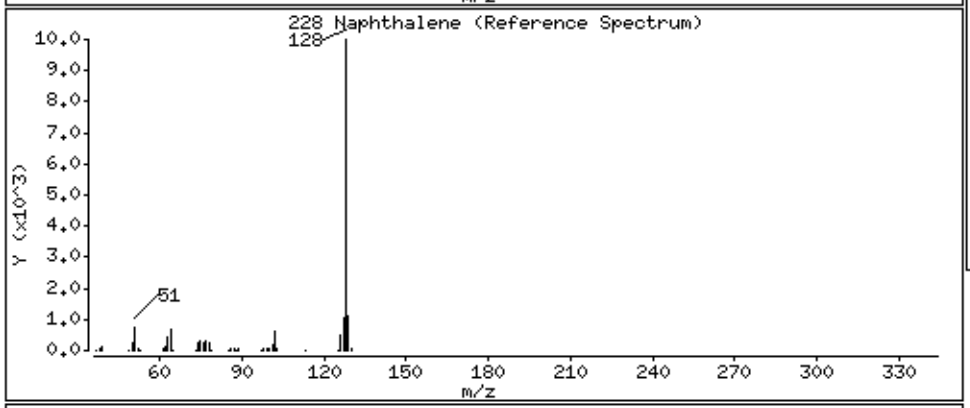
Column diameter: 0.32

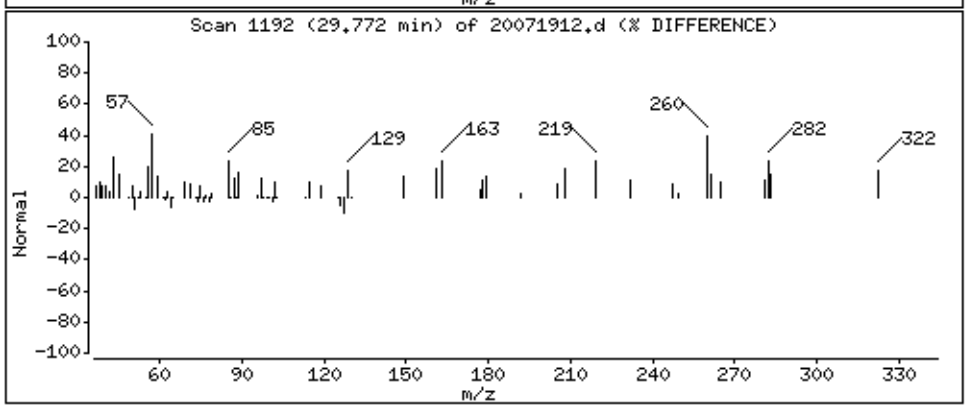
228 Naphthalene

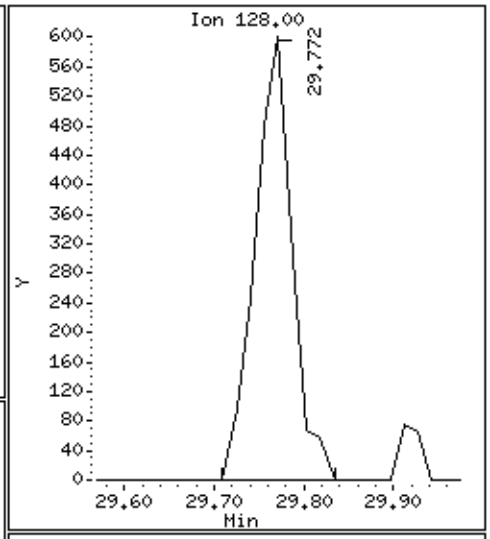
Concentration: 0.04547 PPBV

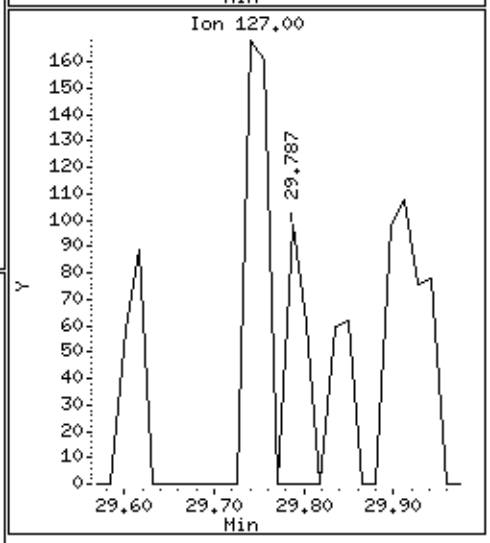












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-5

Lab ID#: 1607235D-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.67	0.82	3.3
Chloromethane	0.84	1.0	1.7	2.1
Freon 11	0.17	2.9	0.94	16
Ethanol	0.84	27	1.6	51
Freon 113	0.17	0.080 J	1.3	0.62 J
Acetone	0.84	11	2.0	26
2-Propanol	0.84	12	2.0	31
Methylene Chloride	0.33	0.30 J	1.2	1.0 J
Hexane	0.17	0.046 J	0.59	0.16 J
2-Butanone (Methyl Ethyl Ketone)	0.84	0.66 J	2.5	1.9 J
Chloroform	0.17	0.043 J	0.82	0.21 J
Cyclohexane	0.17	0.033 J	0.57	0.11 J
Carbon Tetrachloride	0.17	0.062 J	1.0	0.39 J
Benzene	0.17	0.079 J	0.53	0.25 J
1,2-Dichloroethane	0.17	0.80	0.68	3.2
Heptane	0.17	0.088 J	0.68	0.36 J
Trichloroethene	0.17	0.54	0.90	2.9
Toluene	0.17	3.6	0.63	13
Ethyl Benzene	0.17	0.10 J	0.72	0.45 J
m,p-Xylene	0.17	0.31	0.72	1.3
o-Xylene	0.17	0.12 J	0.72	0.53 J
Styrene	0.17	0.062 J	0.71	0.26 J
4-Ethyltoluene	0.17	0.039 J	0.82	0.19 J
1,2,4-Trimethylbenzene	0.17	0.041 J	0.82	0.20 J
Naphthalene	0.84	0.031 J	4.4	0.16 J

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Client Sample ID: B18IA-5

Lab ID#: 1607235D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071913**	**Date of Collection:**	**7/9/16 6:44:00 PM**
Dil. Factor:	**1.67**	**Date of Analysis:**	**7/19/16 04:29 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.67	0.82	3.3
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.84	1.0	1.7	2.1
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.84	Not Detected	3.2	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.17	2.9	0.94	16
Ethanol	0.84	27	1.6	51
Freon 113	0.17	0.080 J	1.3	0.62 J
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.84	11	2.0	26
2-Propanol	0.84	12	2.0	31
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.30 J	1.2	1.0 J
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Hexane	0.17	0.046 J	0.59	0.16 J
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	0.66 J	2.5	1.9 J
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	0.043 J	0.82	0.21 J
1,1,1-Trichloroethane	0.17	Not Detected	0.91	Not Detected
Cyclohexane	0.17	0.033 J	0.57	0.11 J
Carbon Tetrachloride	0.17	0.062 J	1.0	0.39 J
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.17	0.079 J	0.53	0.25 J
1,2-Dichloroethane	0.17	0.80	0.68	3.2
Heptane	0.17	0.088 J	0.68	0.36 J
Trichloroethene	0.17	0.54	0.90	2.9
1,2-Dichloropropane	0.17	Not Detected	0.77	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.68	Not Detected
Toluene	0.17	3.6	0.63	13
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.91	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.84	Not Detected	3.4	Not Detected

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Client Sample ID: B18IA-5

Lab ID#: 1607235D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071913**	**Date of Collection:**	**7/9/16 6:44:00 PM**
Dil. Factor:	**1.67**	**Date of Analysis:**	**7/19/16 04:29 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	0.77	Not Detected
Ethyl Benzene	0.17	0.10 J	0.72	0.45 J
m,p-Xylene	0.17	0.31	0.72	1.3
o-Xylene	0.17	0.12 J	0.72	0.53 J
Styrene	0.17	0.062 J	0.71	0.26 J
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.1	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	0.039 J	0.82	0.19 J
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	0.041 J	0.82	0.20 J
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	0.86	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.84	Not Detected	8.9	Not Detected
Naphthalene	0.84	0.031 J	4.4	0.16 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	127	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	90	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071913.d
Lab Smp Id: 1607235D-05A
Inj Date : 19-JUL-2016 16:29
Operator : gh Inst ID: msd20.i
Smp Info : 250mL#31146
Misc Info : 5.9"Hg ->5psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
Dil Factor: 1.67000
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	87104	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	69230			47.94- 107.94	79.48
16.726	16.726 (1.000)	49	128770			102.10- 162.10	147.83
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	273855	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	44615			0.00- 45.77	16.29
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	271352	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	156488			26.51- 86.51	57.67
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	160086	6.33625	6.336	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	80221			32.47- 92.47	50.11
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.821	20.822 (1.142)	98	272259	5.14728	5.147	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	36009			0.00- 41.37	13.23

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

$ 146 Toluene-d8 (continued)
 20.821  20.822 (1.142)   100    176250                    36.07-  96.07    64.74
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    131654 4.51887    4.519  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    165876                   89.67- 149.67   125.99
 25.485  25.485 (1.073)   176    125631                   67.40- 127.40    95.43
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.672   4.672 (0.279)    85     29683 0.40124   0.6701  80.00- 120.00   100.00(M)
  4.672   4.672 (0.279)    87      9384                    2.54-  62.54    31.62
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.673   6.577 (0.399)    50     14926 0.60255    1.006  80.00- 120.00   100.00(M)
  6.649   6.553 (0.398)    52      4630                    3.03-  63.03    31.02
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101    123819 1.73179    2.892  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103     80680                   34.91-  94.91    65.16
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.296  12.269 (0.735)    45    149051 16.1069   26.898  80.00- 120.00   100.00
 12.296  12.269 (0.735)    46     60854                   11.72-  71.72    40.83
 12.296  12.269 (0.735)    43     44654                    0.00-  52.99    29.96
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.763  12.763 (0.763)   151      2322 0.04810  0.08033  80.00- 120.00   100.00(a)
 12.763  12.763 (0.763)   153      1463                   34.49-  94.49    63.02
 12.763  12.763 (0.763)   101      3183                   96.39- 156.39   137.12
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58     88014 6.62847   11.070  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43    291870                  278.33- 338.33   331.62
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 13.560  13.533 (0.811)    45    307812 7.49553   12.518  80.00- 120.00   100.00
 13.532  13.533 (0.809)    43    117147                    0.00-  52.04    38.06
 13.560  13.533 (0.811)    59     12568                    0.00-  34.17     4.08
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 14.027  14.027 (0.839)    84      4803 0.17740   0.2963  80.00- 120.00   100.00(a)
 14.027  14.027 (0.839)    49      7048                   97.79- 157.79   146.74
 14.027  14.027 (0.839)    51      2386                    9.84-  69.84    49.69
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 14.878  14.878 (0.889)    57      1161 0.02753  0.04598  80.00- 120.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane (continued)							
14.933	14.878 (0.893)	43	2424			33.20- 93.20	208.79
0.000	14.878 (0.000)	86	0			0.00- 48.21	0.00
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	5328	0.39556	0.6606	80.00- 120.00	100.00(a)
16.344	16.344 (0.977)	43	28237			345.54- 405.54	529.90
16.365	16.344 (0.978)	57	1714			0.00- 59.64	32.17
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	1527	0.02602	0.04345	80.00- 120.00	100.00(a)
16.819	16.819 (1.006)	85	1133			35.08- 95.08	74.21
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	800	0.01981	0.03309	80.00- 120.00	100.00(a)
17.035	17.035 (1.018)	56	1498			82.51- 142.51	187.05
17.035	17.035 (1.018)	41	1427			30.91- 90.91	178.27
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	1888	0.03720	0.06212	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	2585			75.13- 135.13	136.92
116 Benzene					CAS #: 71-43-2		
17.620	17.621 (0.966)	78	3160	0.04758	0.07945	80.00- 120.00	100.00(a)
17.620	17.621 (0.966)	77	588			0.00- 54.04	18.63
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	14026	0.48023	0.8020	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	4587			2.26- 62.26	32.70
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	957	0.05284	0.08824	80.00- 120.00	100.00(a)
17.847	17.847 (0.979)	100	335			9.17- 69.17	35.05
17.847	17.847 (0.979)	43	2377			158.08- 218.08	248.20
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	9896	0.32642	0.5451	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	10326			67.33- 127.33	104.34
18.610	18.610 (1.021)	97	7141			32.56- 92.56	72.16
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	151770	2.13137	3.559	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	89434			30.04- 90.04	58.93
167 Ethyl Benzene					CAS #: 100-41-4		
23.905	23.906 (1.006)	106	1964	0.06180	0.1032	80.00- 120.00	100.00(a)

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
167 Ethyl Benzene (continued)							
23.905	23.906 (1.006)	91	6850			282.65- 342.65	348.81
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	6266	0.18402	0.3073	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	13786			170.44- 230.44	220.00
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	2357	0.07318	0.1222	80.00- 120.00	100.00(a)
24.710	24.710 (1.040)	91	6084			177.28- 237.28	258.07
172 Styrene					CAS #: 100-42-5		
24.730	24.751 (1.041)	104	1694	0.03690	0.06162	80.00- 120.00	100.00(a)
24.730	24.731 (1.041)	78	1764			22.29- 82.29	104.17
188 4-Ethyltoluene					CAS #: 622-96-8		
25.826	25.864 (1.087)	105	2019	0.02324	0.03880	80.00- 120.00	100.00(a)
25.864	25.864 (1.089)	120	472			0.21- 60.21	23.38
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	1826	0.02478	0.04139	80.00- 120.00	100.00(a)
26.395	26.395 (1.111)	120	680			17.68- 77.68	37.26
228 Naphthalene					CAS #: 91-20-3		
29.756	29.772 (1.252)	128	1141	0.01851	0.03091	80.00- 120.00	100.00(a)
29.772	29.772 (1.253)	127	238			0.00- 42.99	20.90

QC Flag Legend

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

Report Date: 27-Jul-2016 15:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071913.d
Lab Smp Id: 1607235D-05A
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.9"Hg ->5psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	87104	-24.84
123 1,4-Difluorobenze	406395	243837	568953	273855	-32.61
163 Chlorobenzene-d5	363239	217943	508535	271352	-25.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-05A
Level: LOW Operator: gh
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.9"Hg ->5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	6.336	126.73	70-130
$ 146 Toluene-d8	5.000	5.147	102.95	70-130
$ 177 4-Bromofluorobenze	5.000	4.519	90.38	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

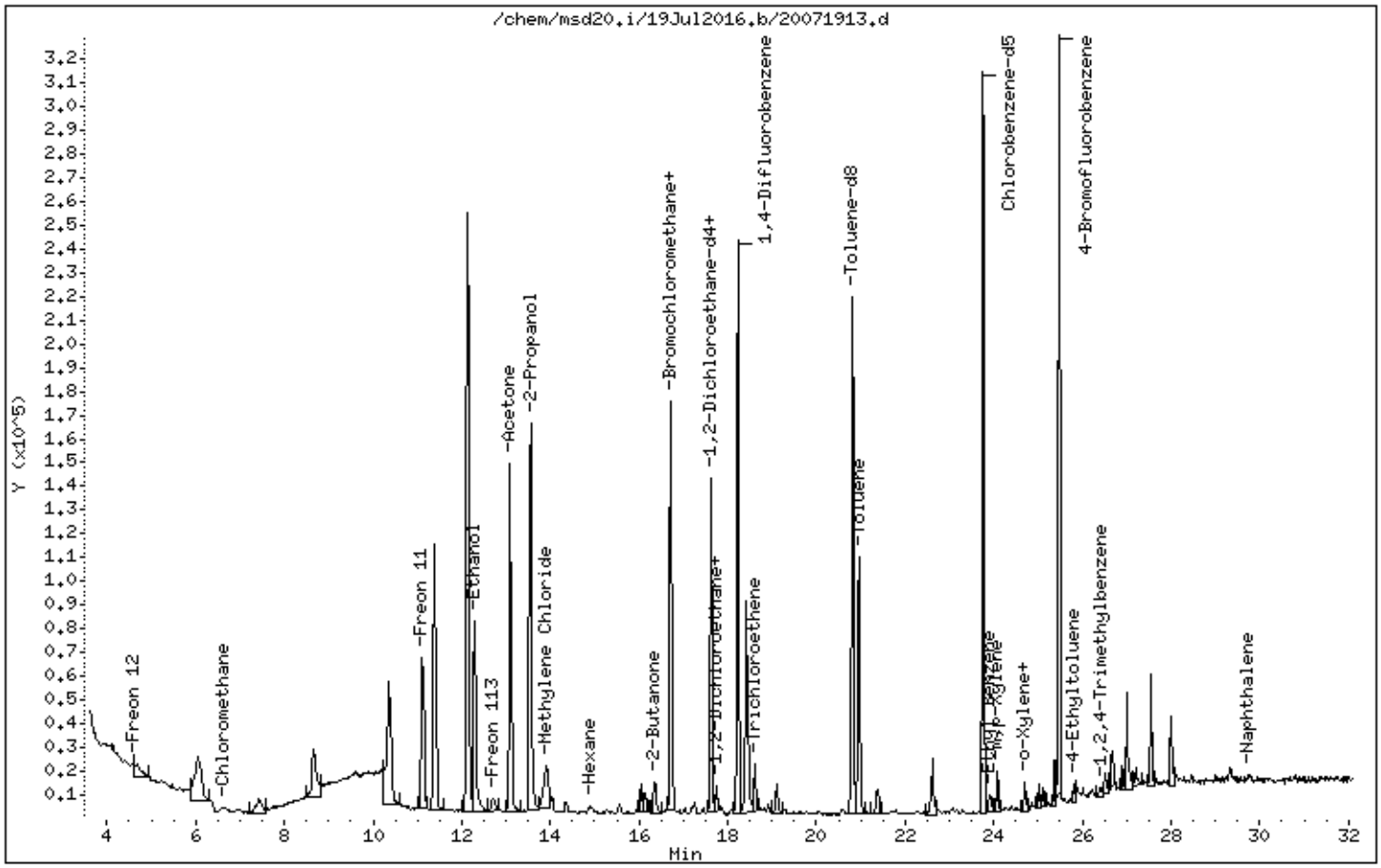
Instrument: msd20.i

Sample Info: 250mL#31146

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

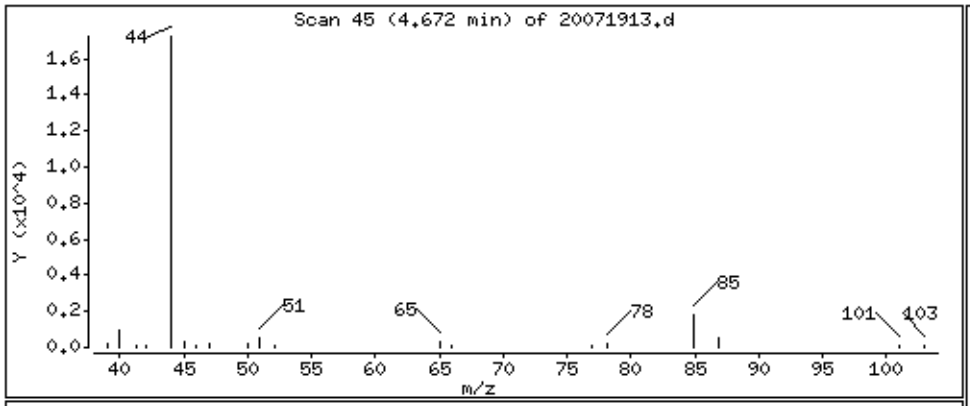
Operator: gh

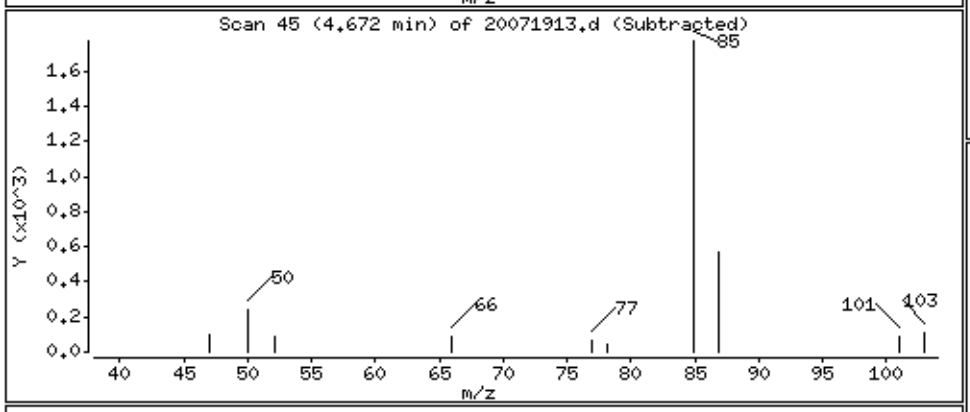
Column phase: RTX-624

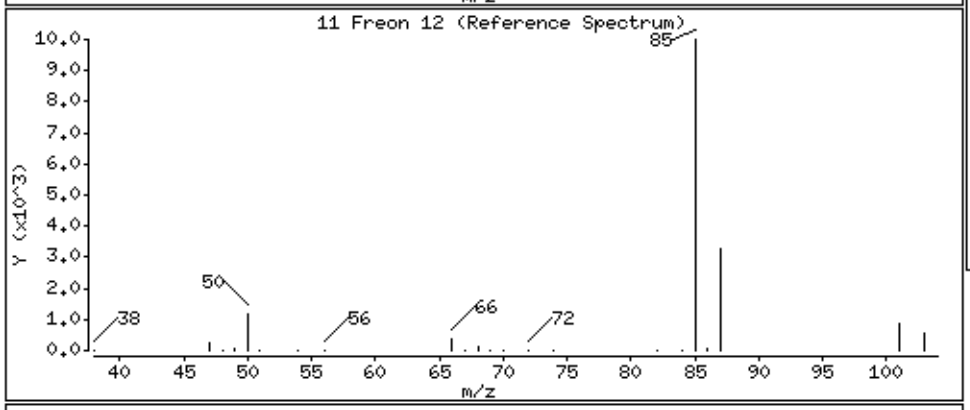
Column diameter: 0.32

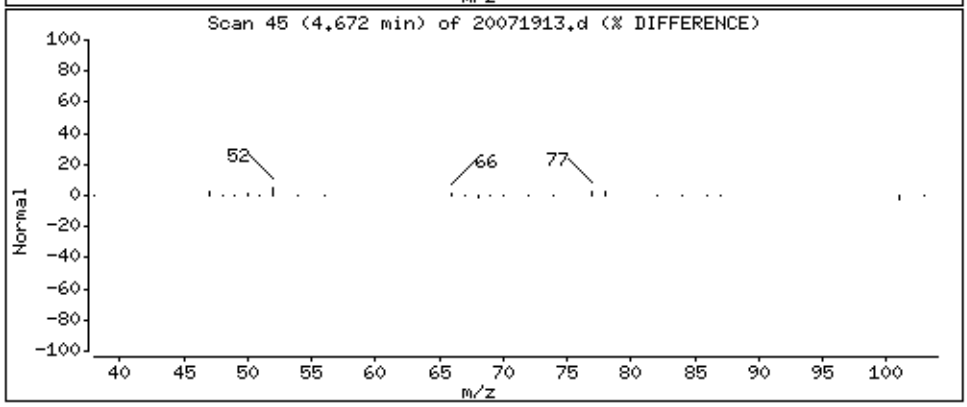
11 Freon 12

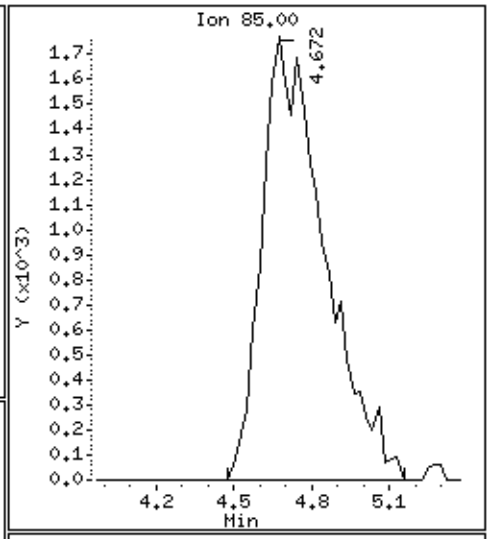
Concentration: 0.6701 PPBV

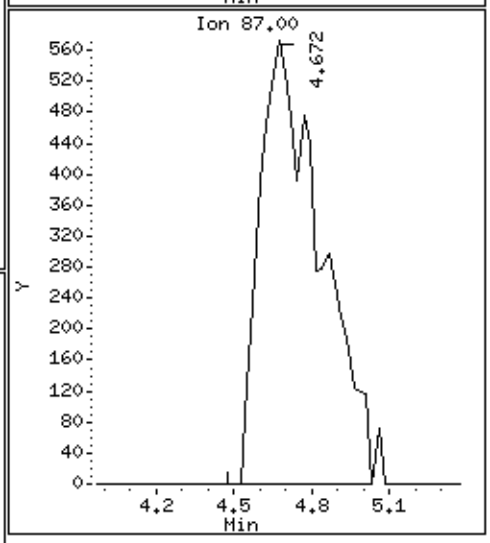












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

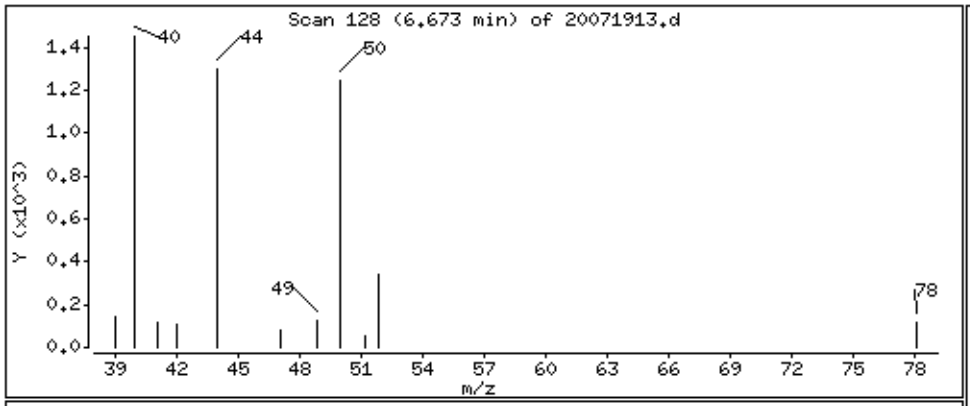
Operator: gh

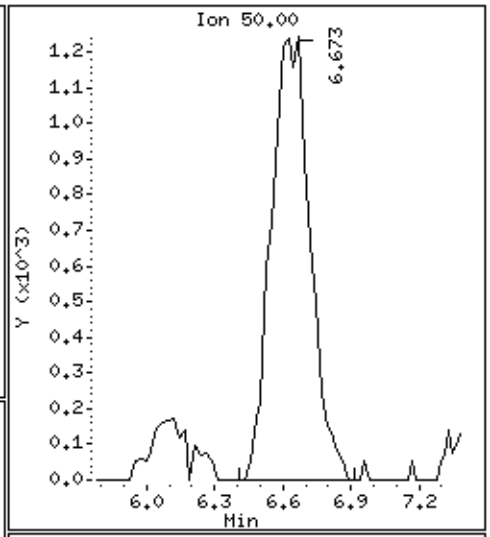
Column phase: RTX-624

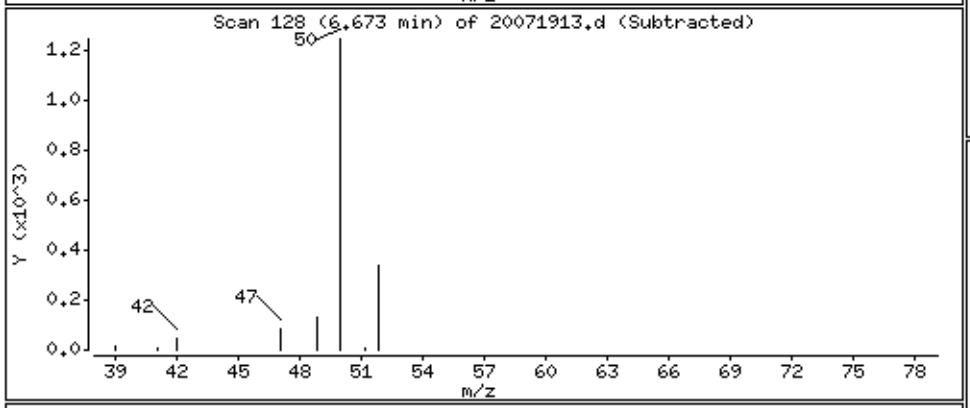
Column diameter: 0.32

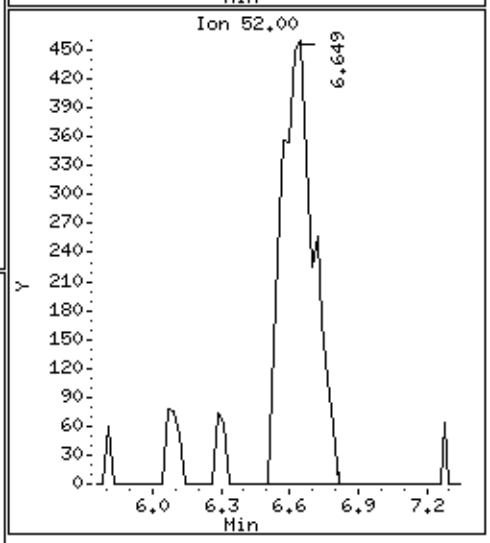
17 Chloromethane

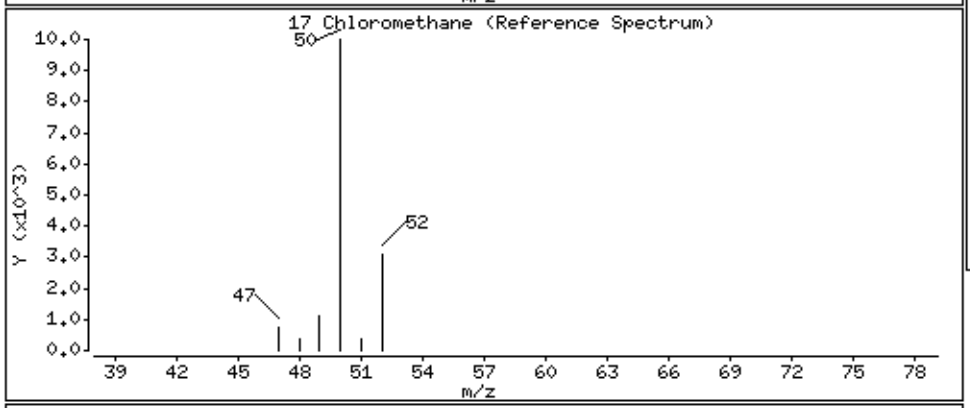
Concentration: 1.006 PPBV

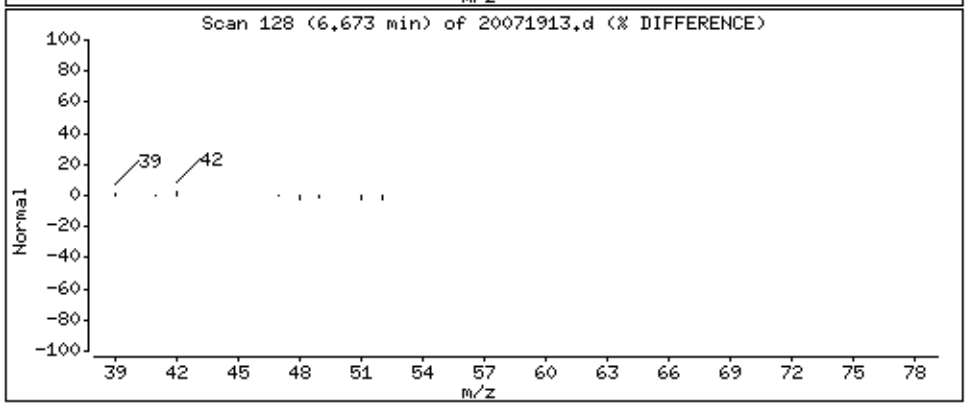












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

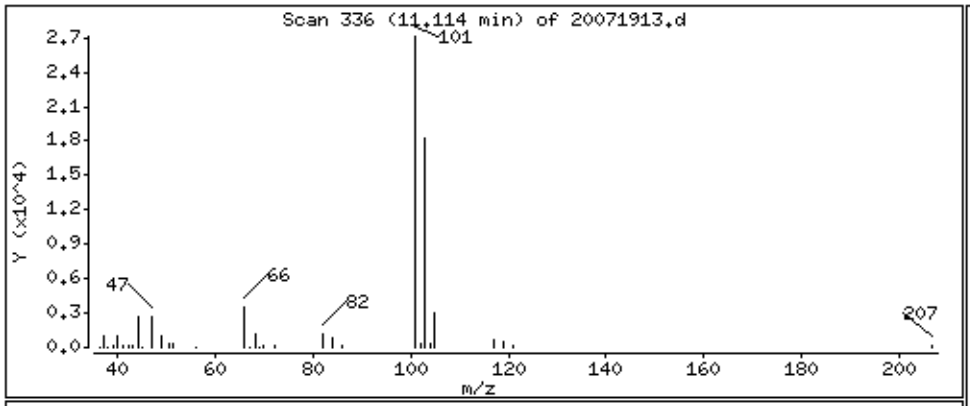
Operator: gh

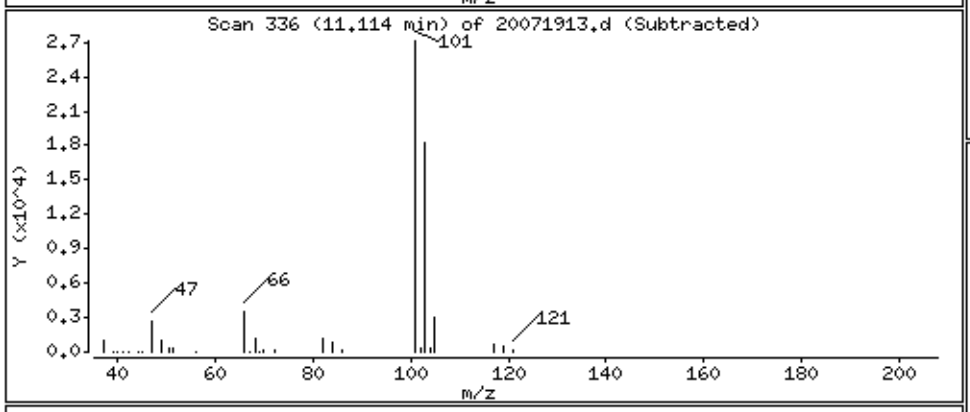
Column phase: RTX-624

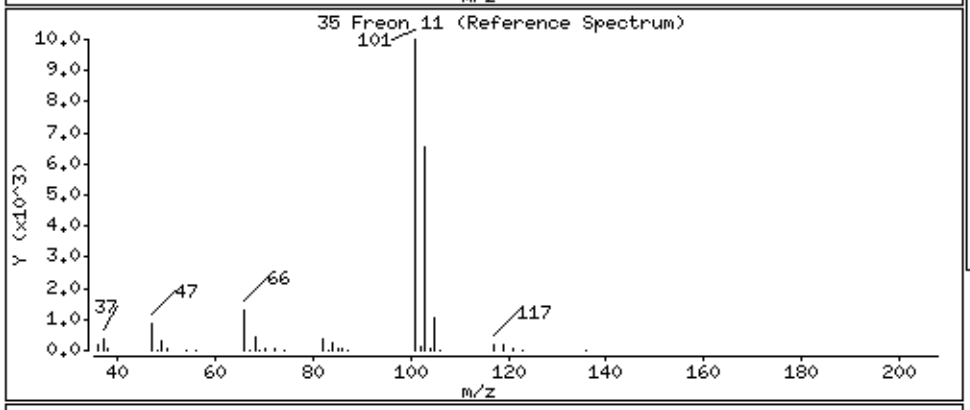
Column diameter: 0.32

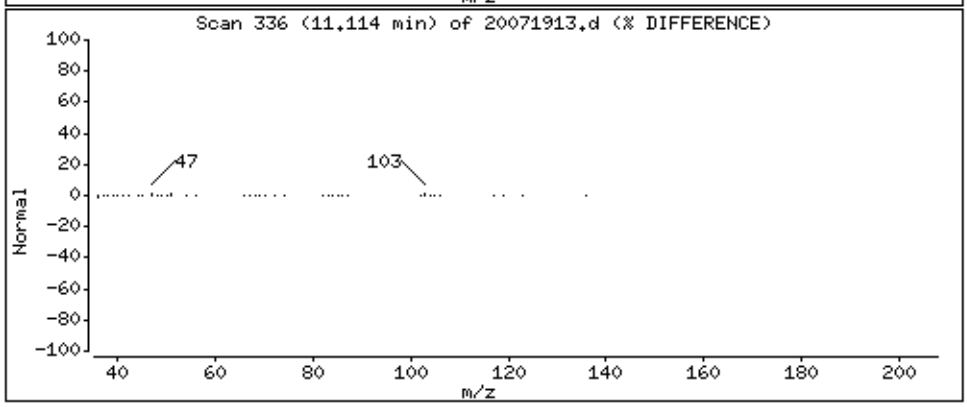
35 Freon 11

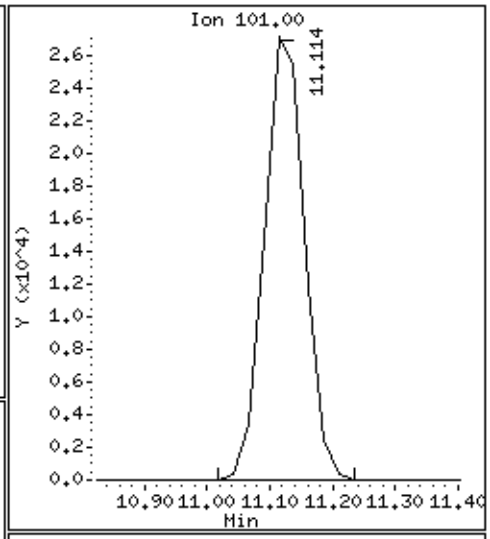
Concentration: 2.892 PPBV

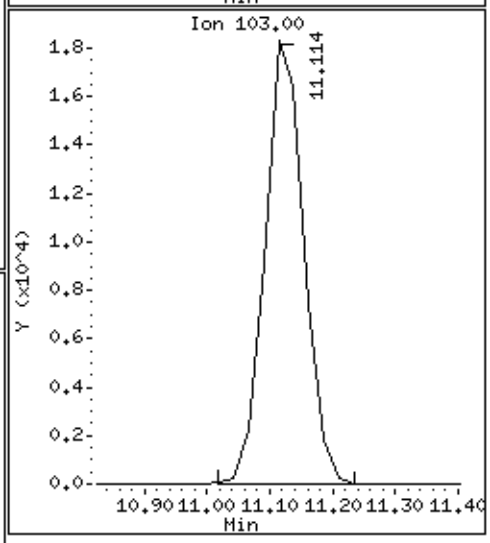












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

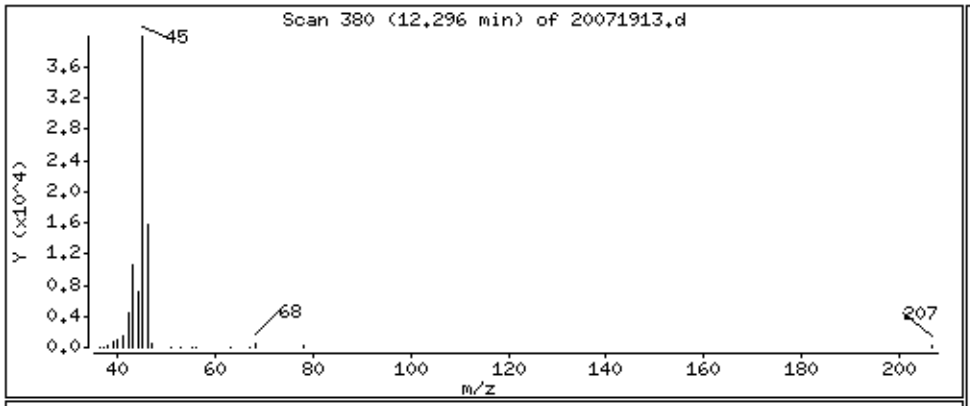
Operator: gh

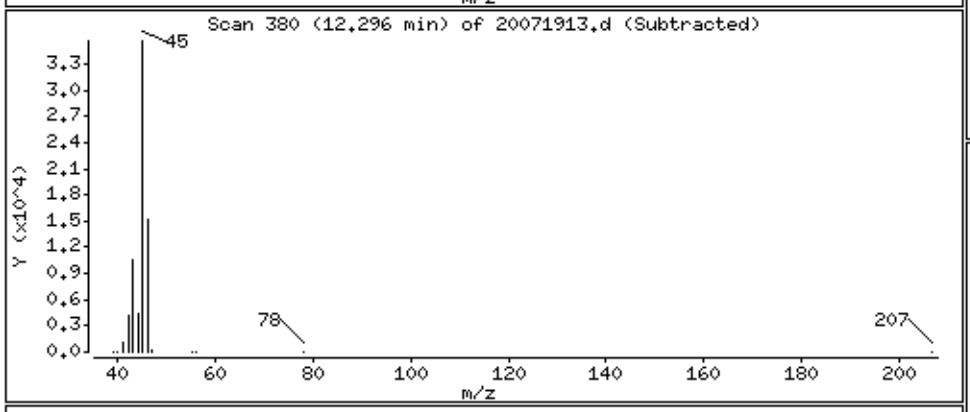
Column phase: RTX-624

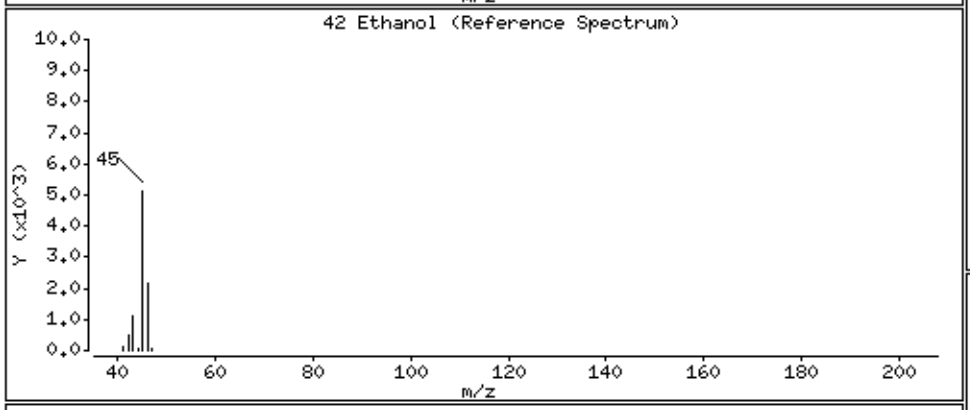
Column diameter: 0.32

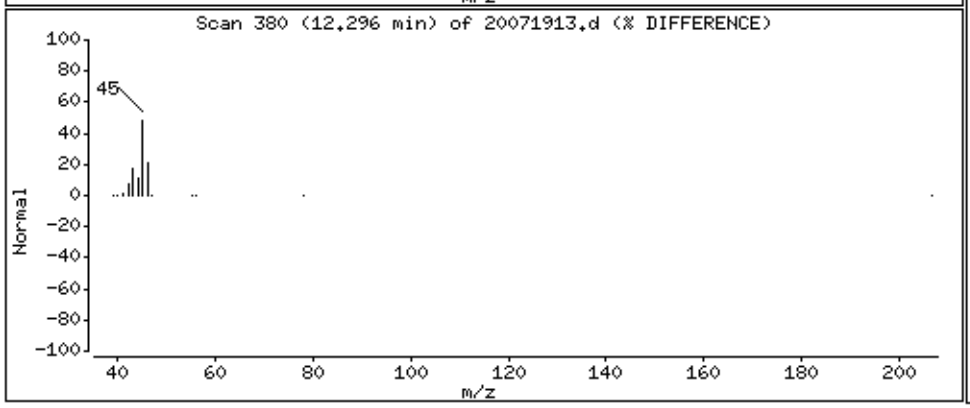
42 Ethanol

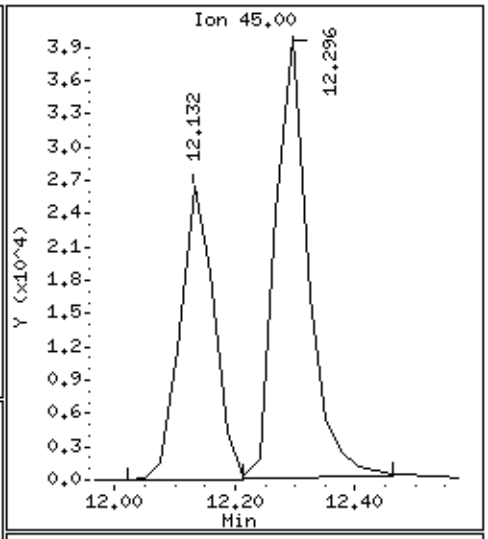
Concentration: 26.898 PPBV

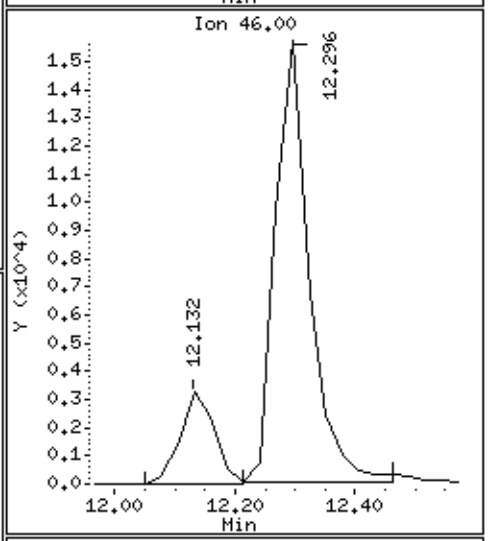


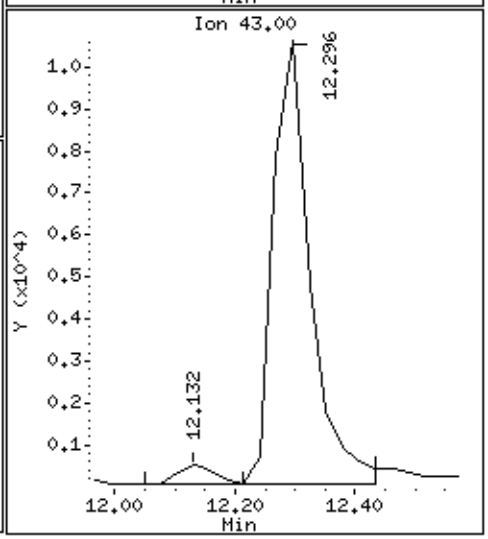












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

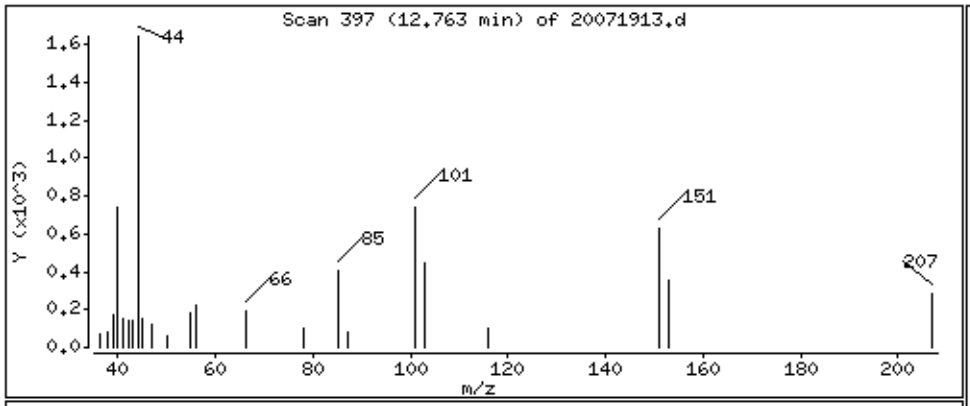
Operator: gh

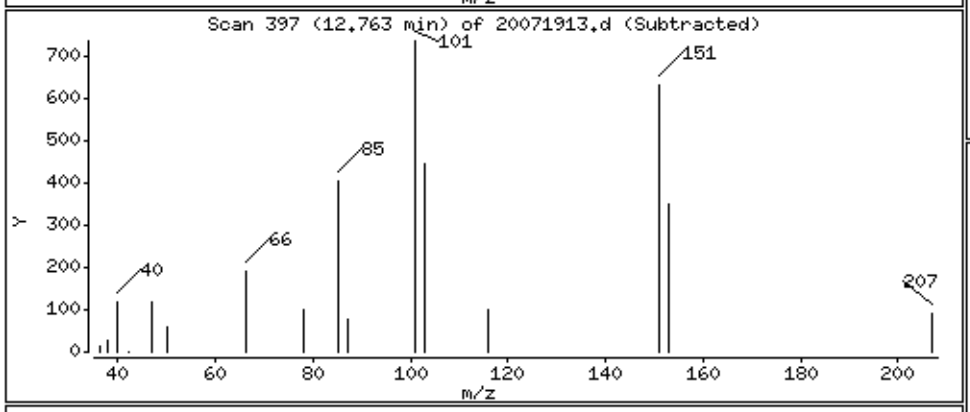
Column phase: RTX-624

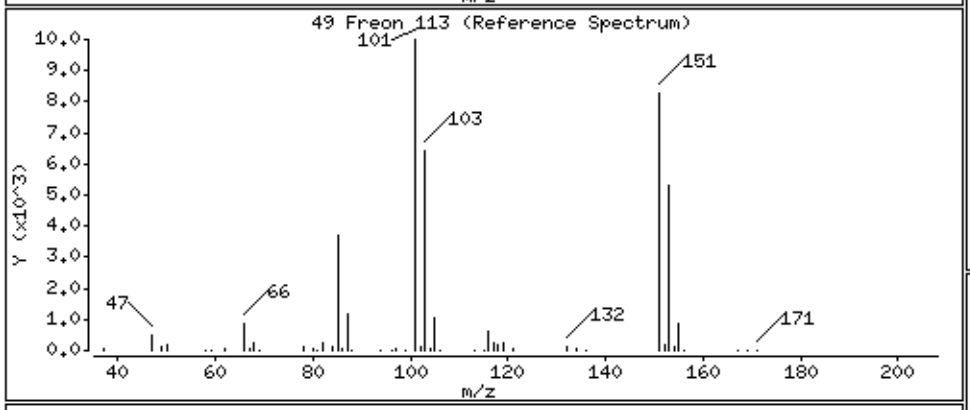
Column diameter: 0.32

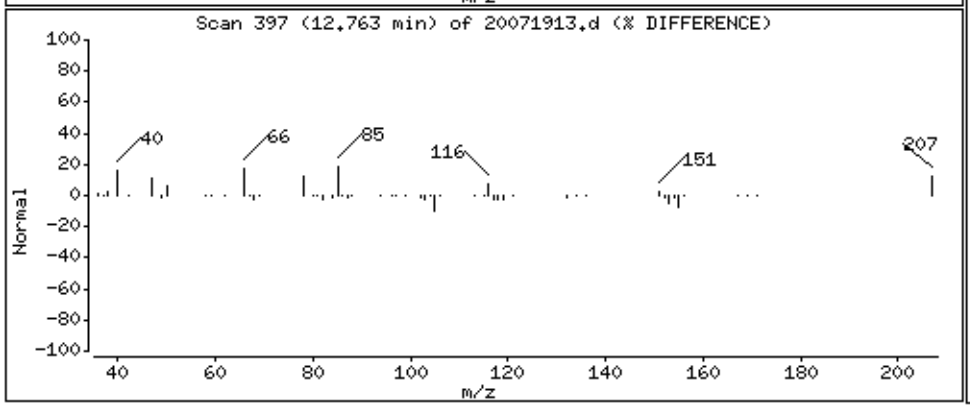
49 Freon 113

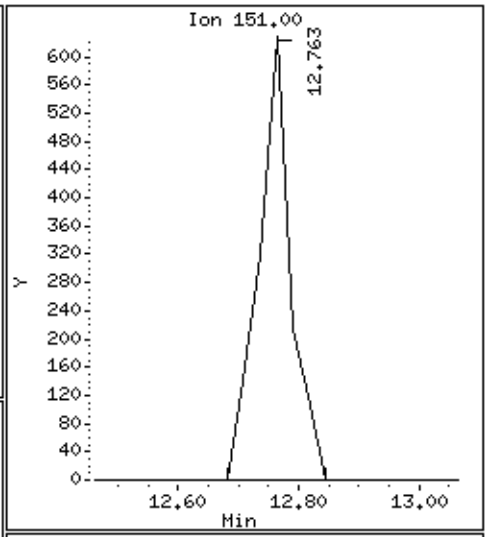
Concentration: 0.08033 PPBV

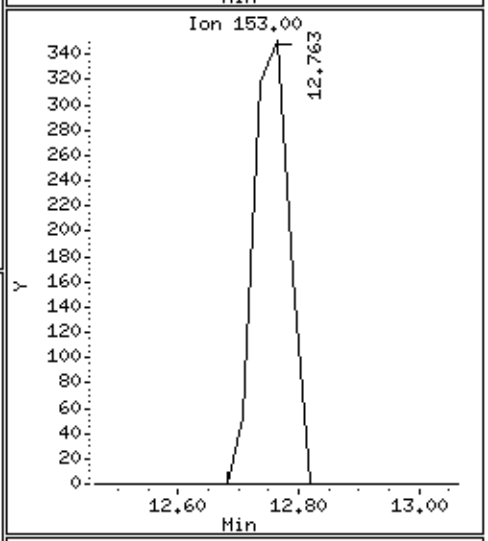


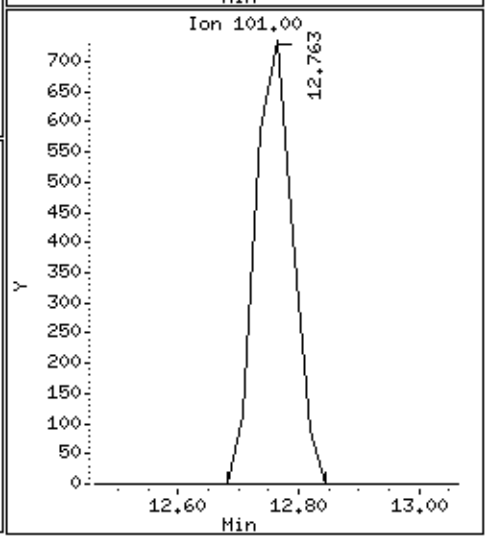












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

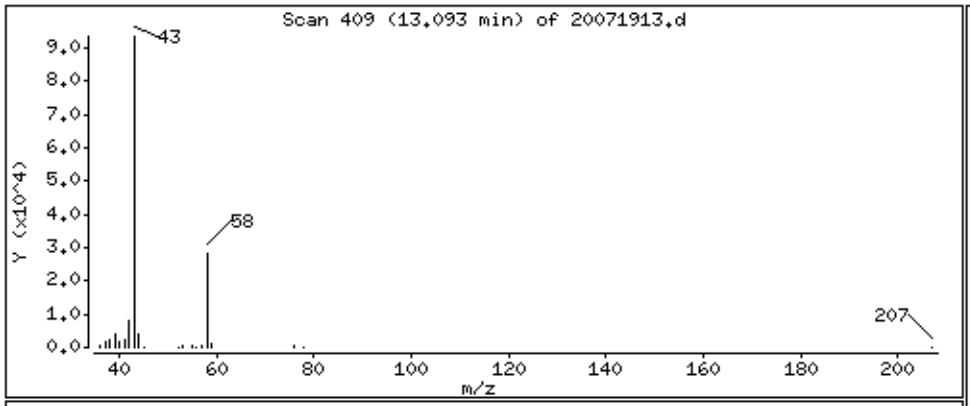
Operator: gh

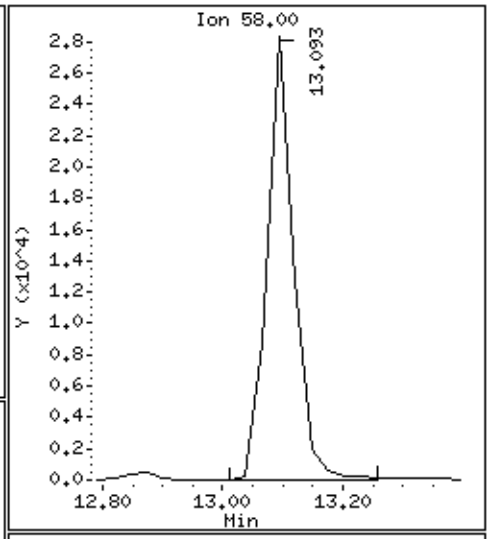
Column phase: RTX-624

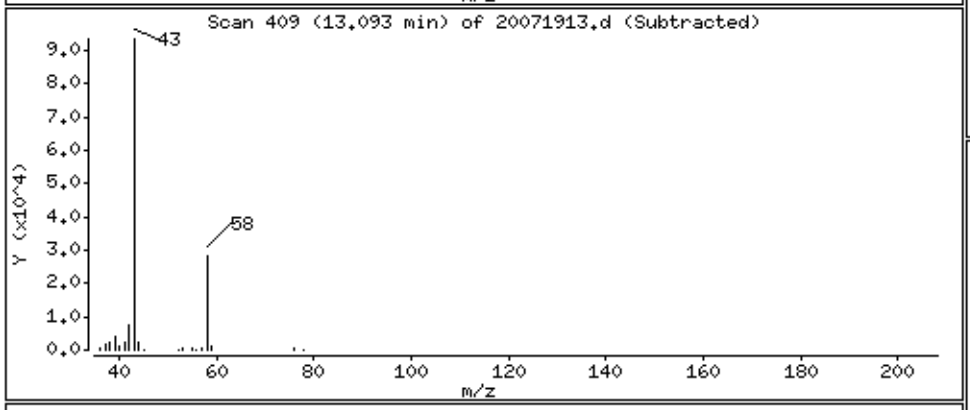
Column diameter: 0.32

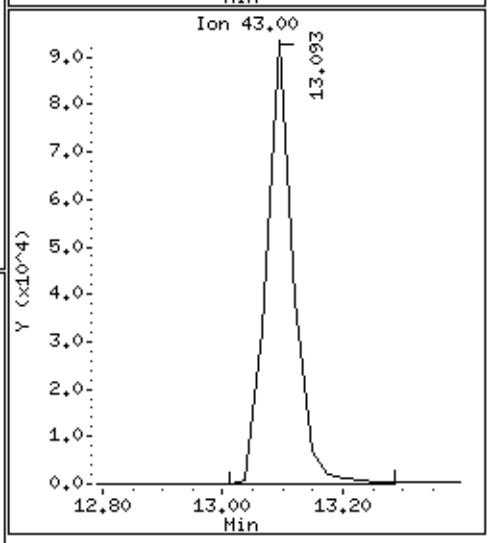
52 Acetone

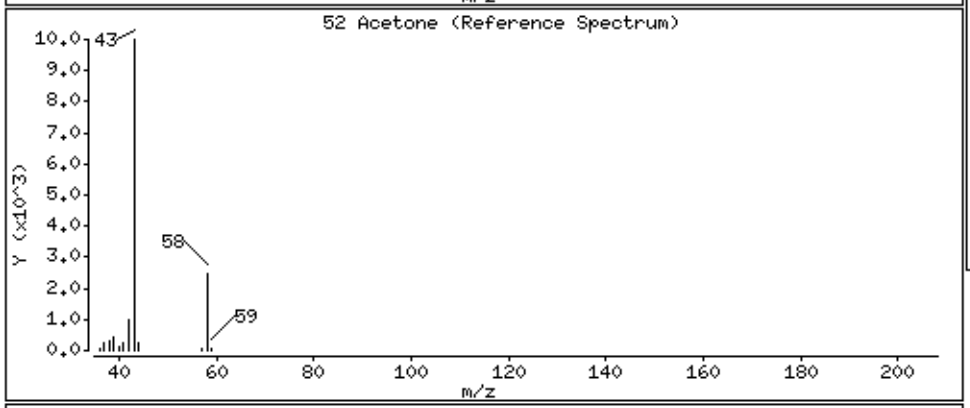
Concentration: 11.070 PPBV

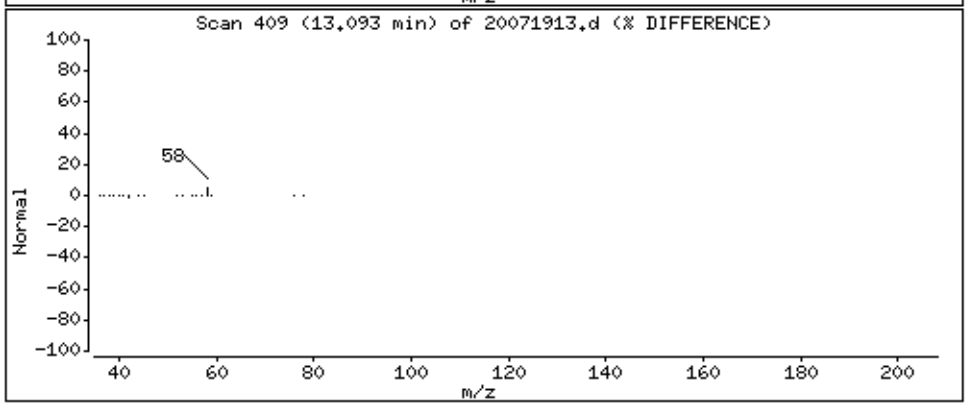












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

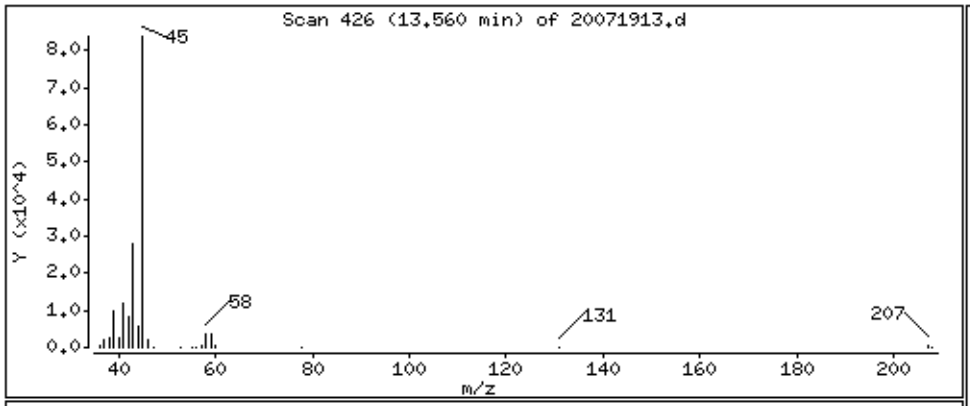
Operator: gh

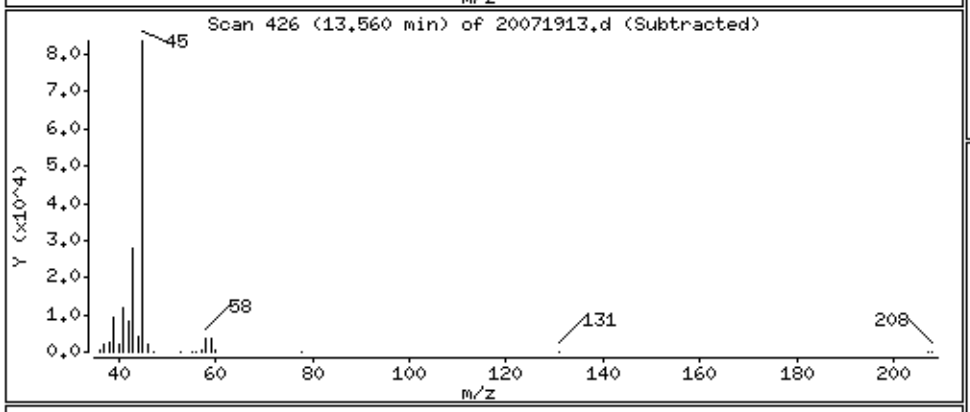
Column phase: RTX-624

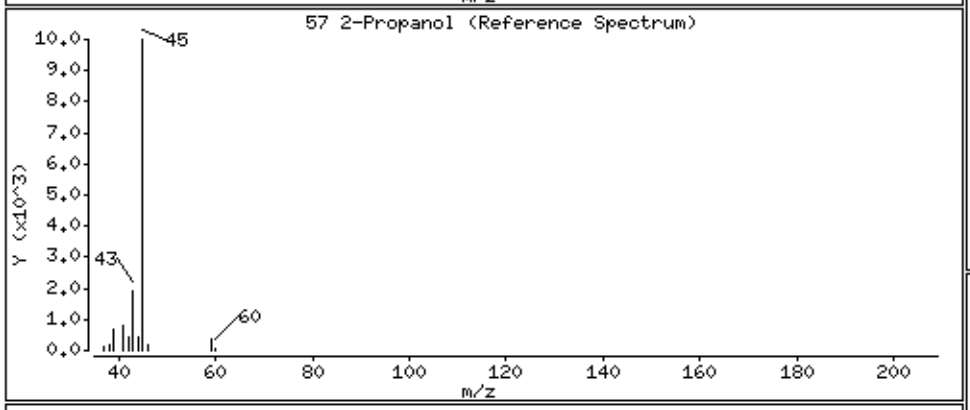
Column diameter: 0.32

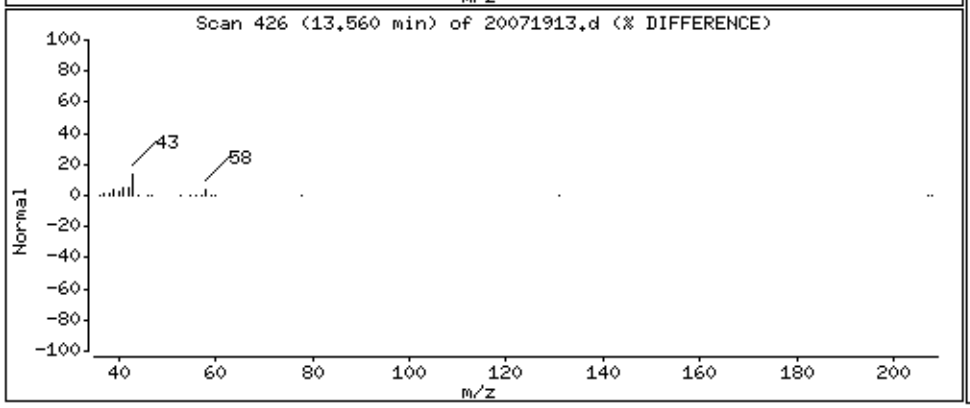
57 2-Propanol

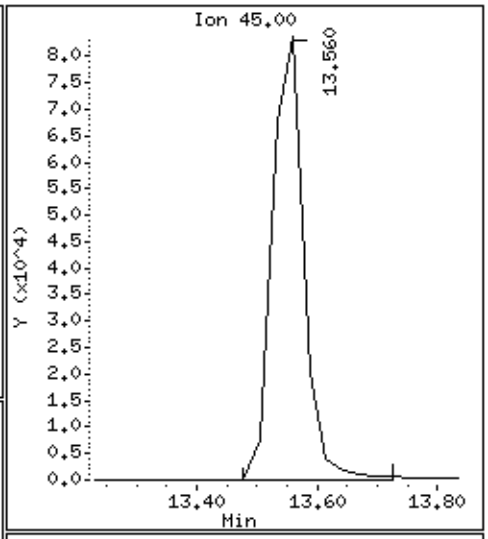
Concentration: 12.518 PPBV

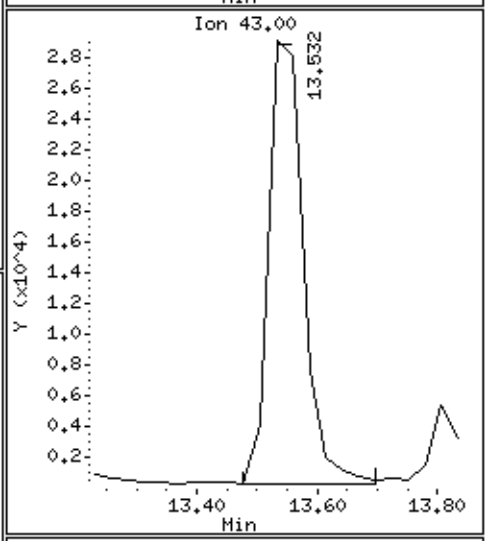


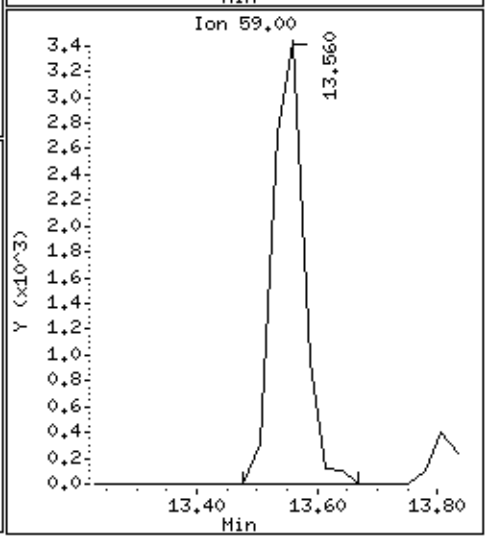












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

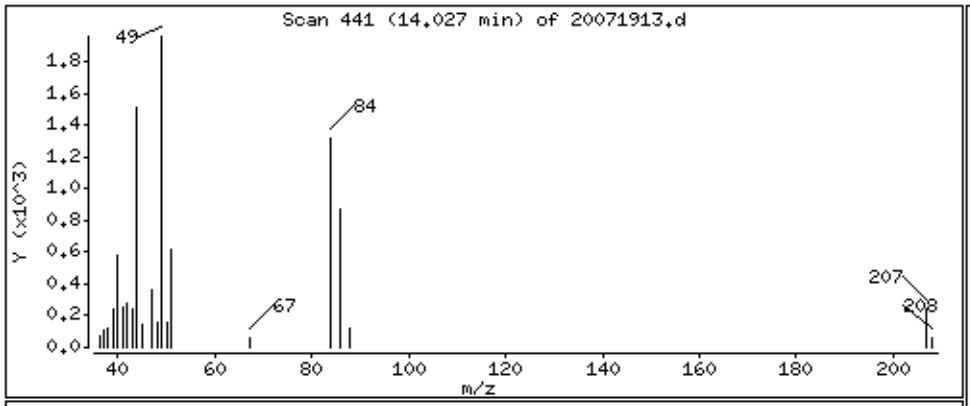
Operator: gh

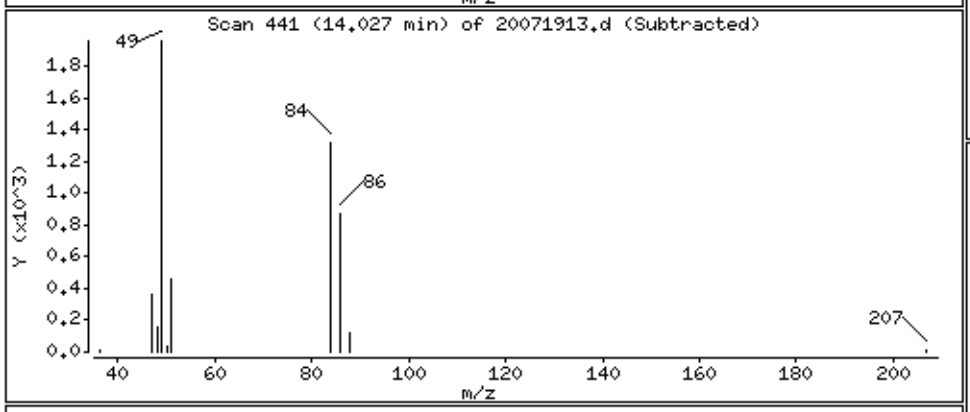
Column phase: RTX-624

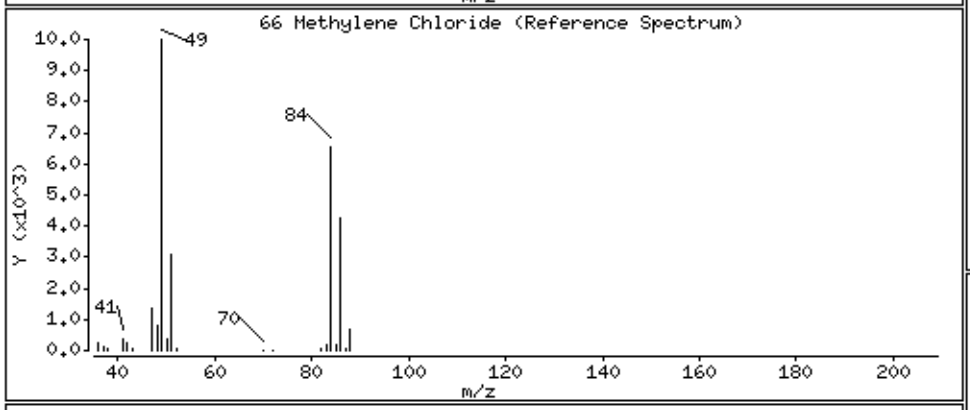
Column diameter: 0.32

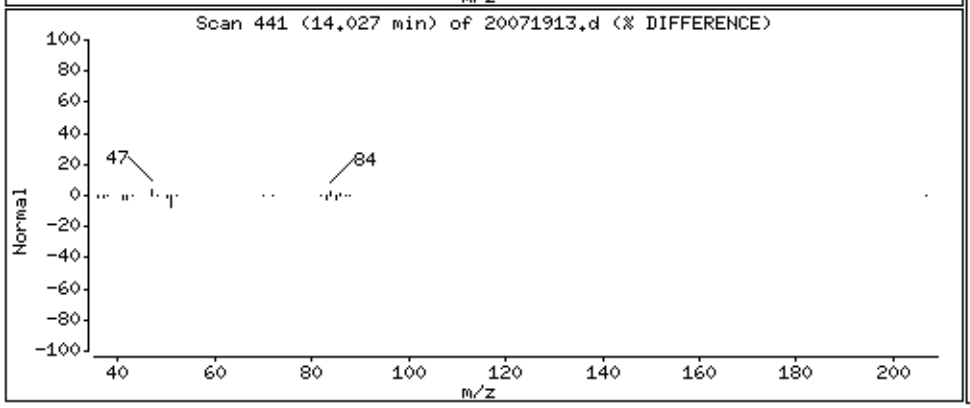
66 Methylene Chloride

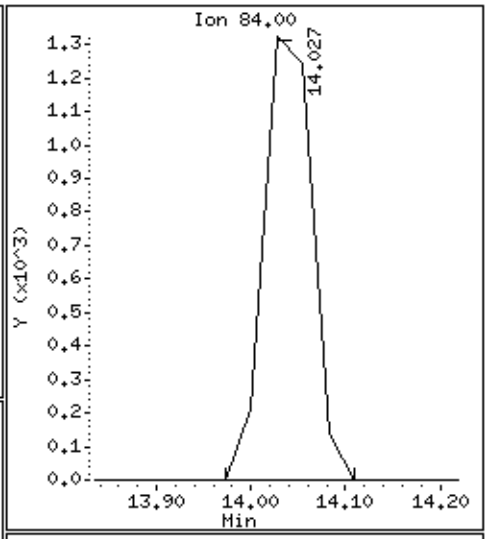
Concentration: 0.2963 PPBV

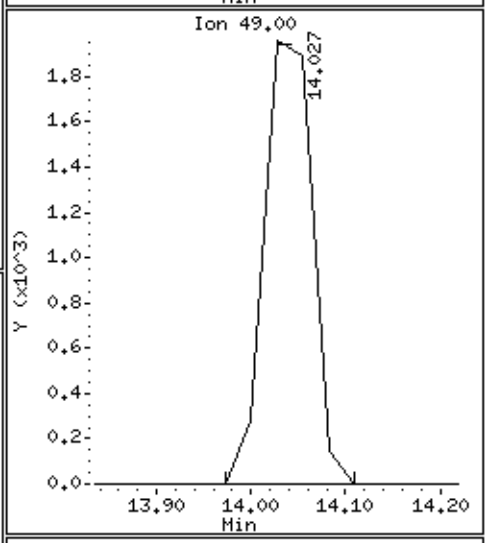


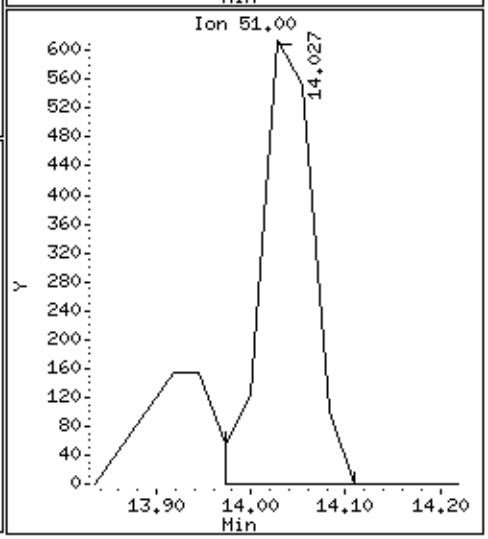












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

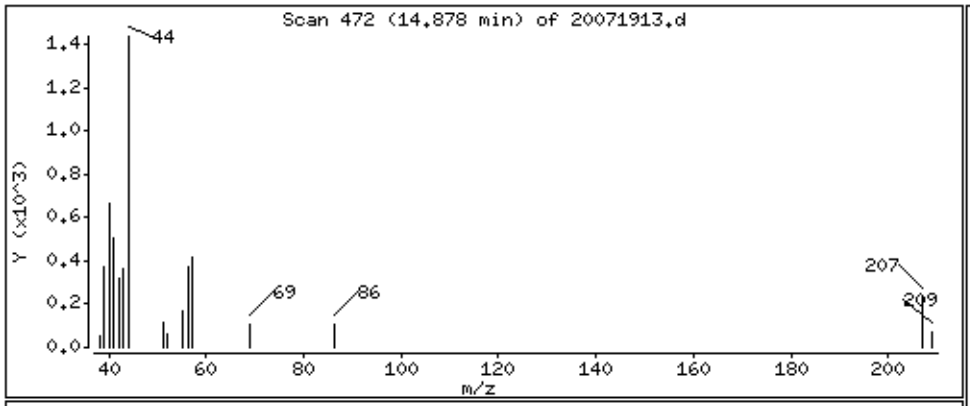
Operator: gh

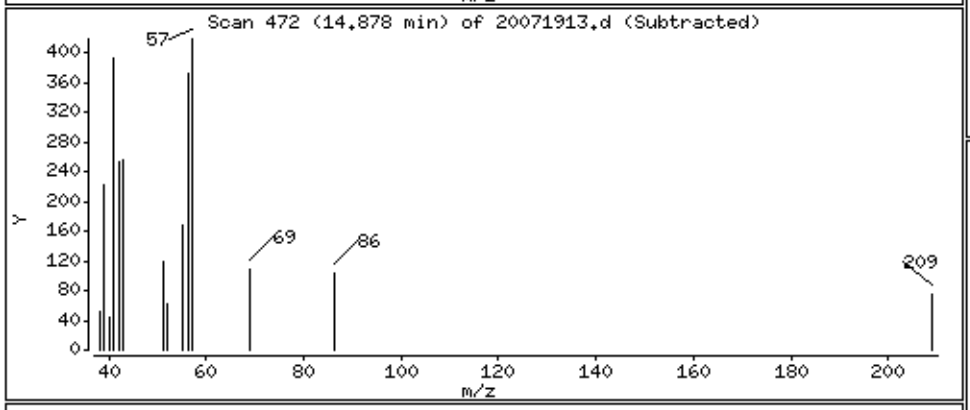
Column phase: RTX-624

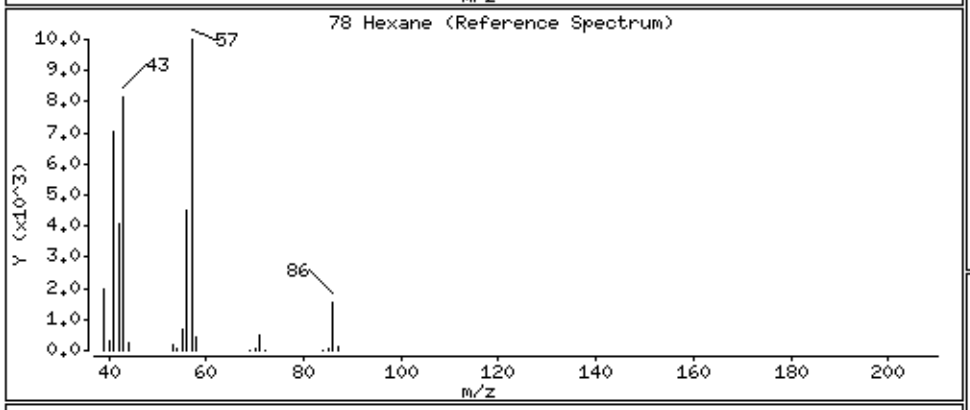
Column diameter: 0.32

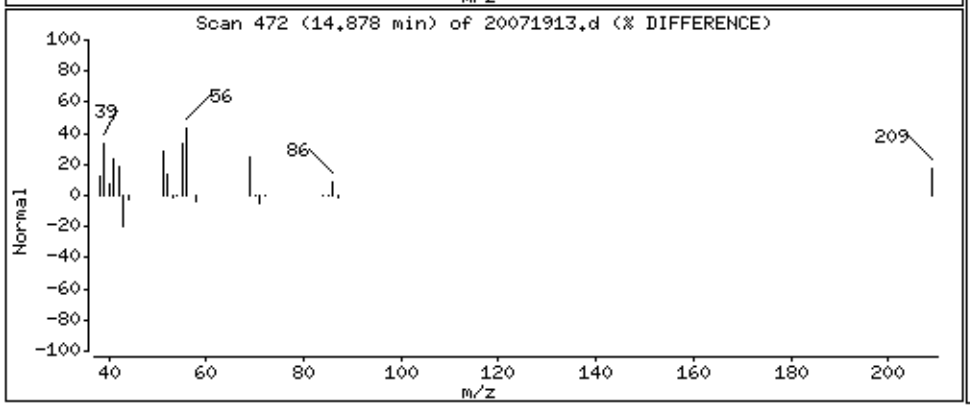
78 Hexane

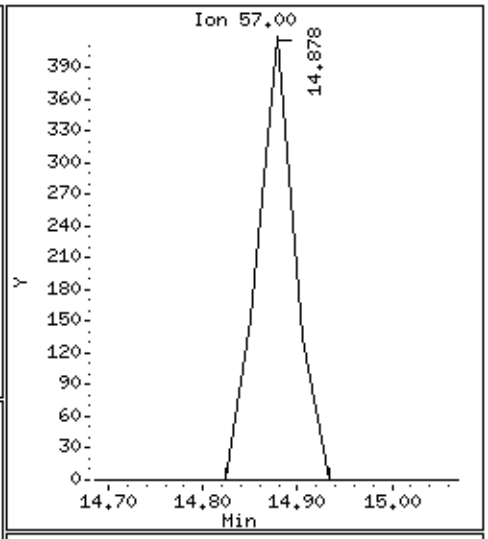
Concentration: 0.04598 PPBV

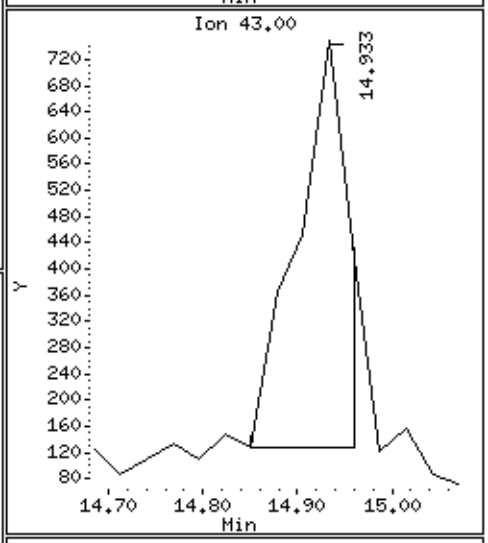


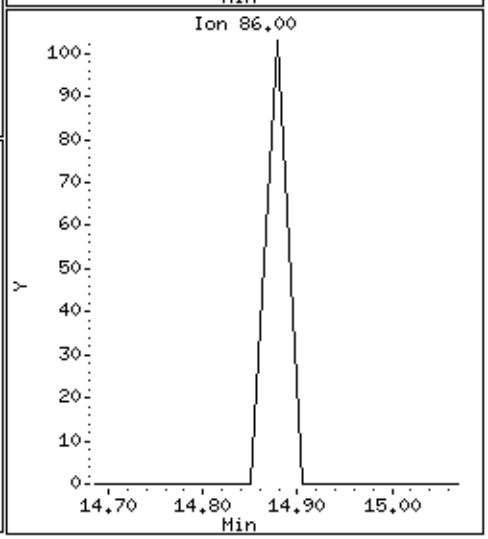












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

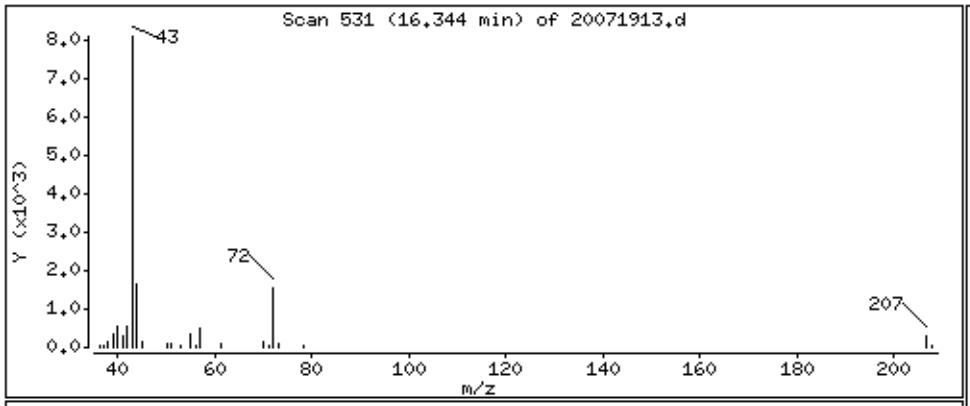
Operator: gh

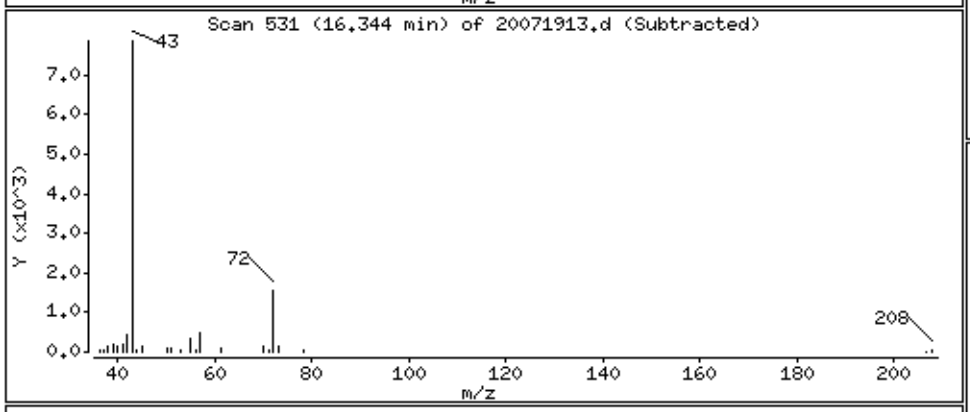
Column phase: RTX-624

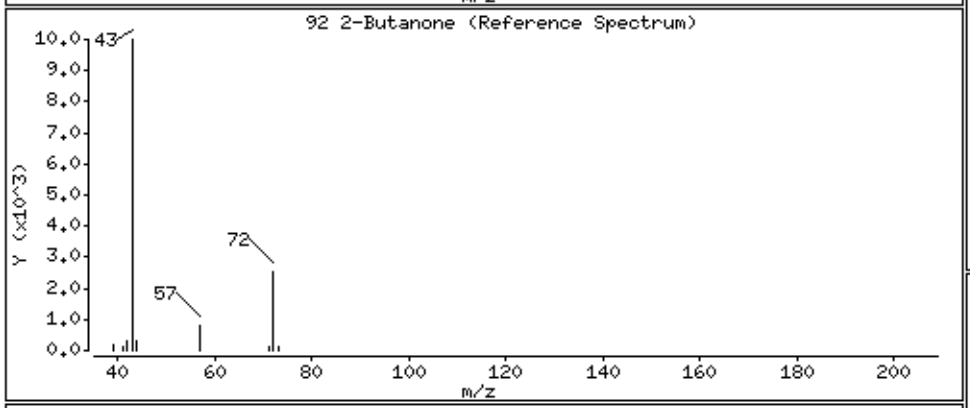
Column diameter: 0.32

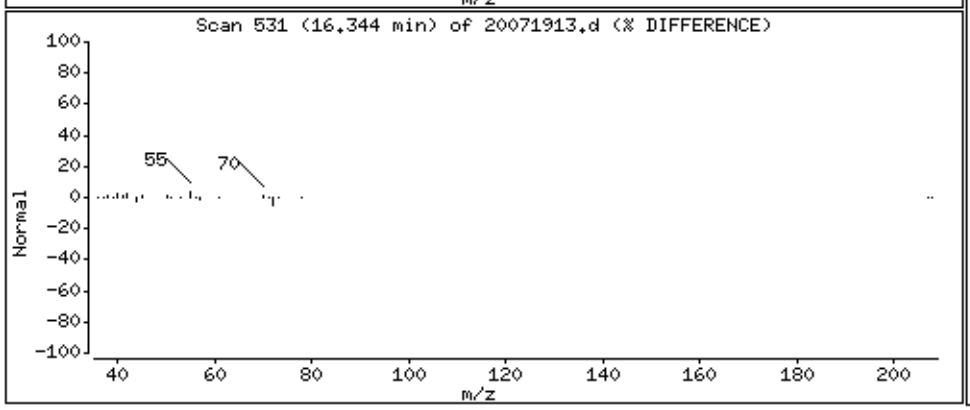
92 2-Butanone

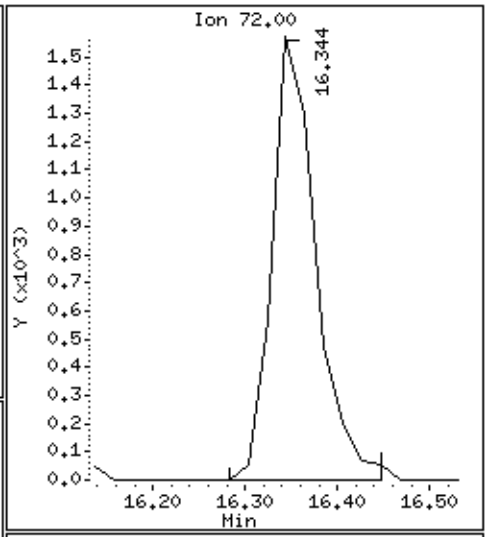
Concentration: 0.6606 PPBV

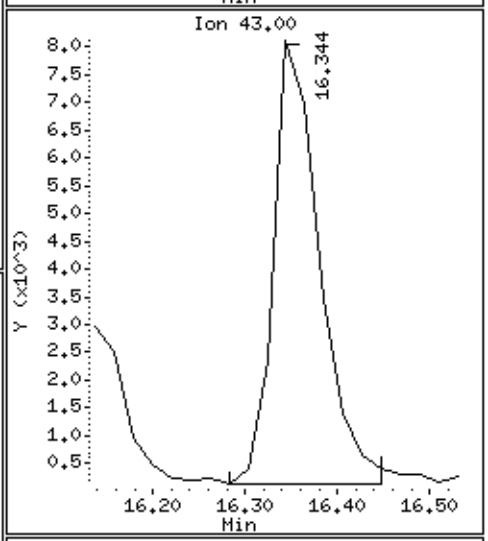


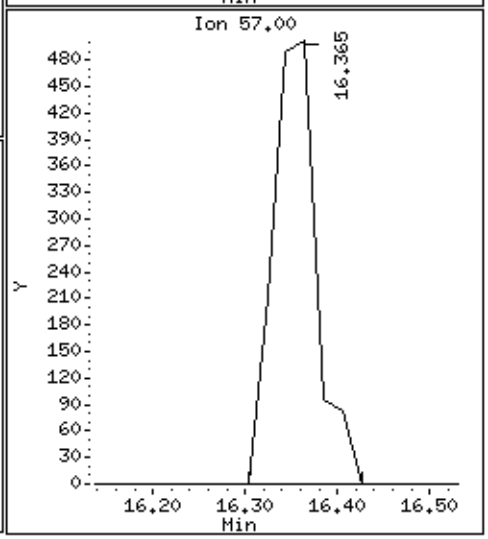












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

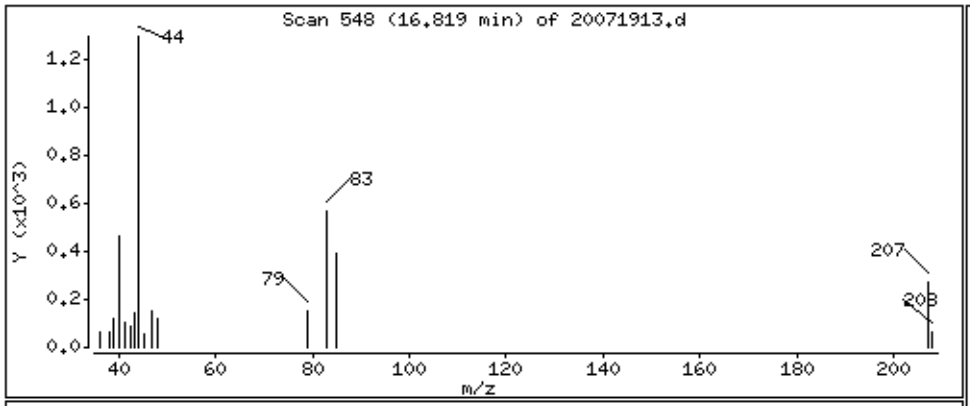
Operator: gh

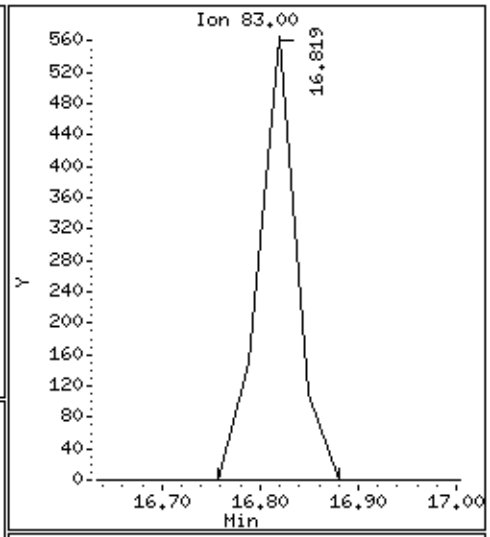
Column phase: RTX-624

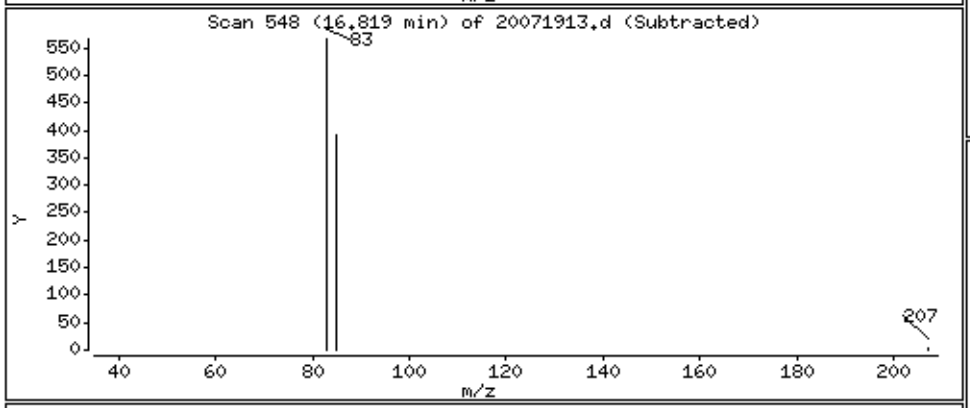
Column diameter: 0.32

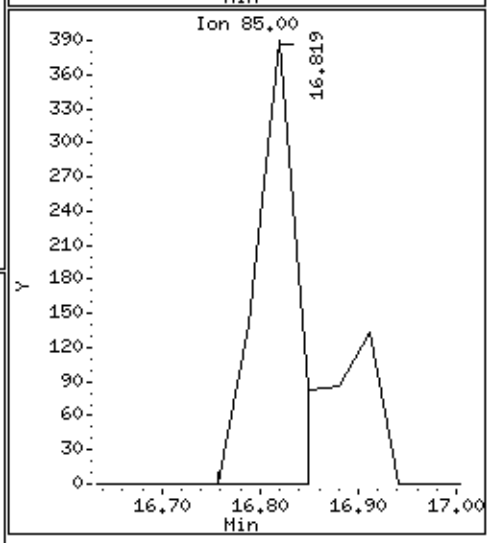
100 Chloroform

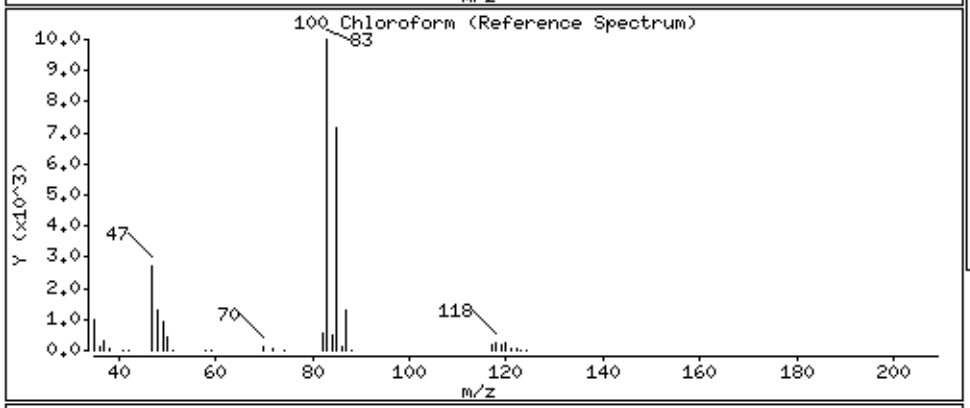
Concentration: 0.04345 PPBV

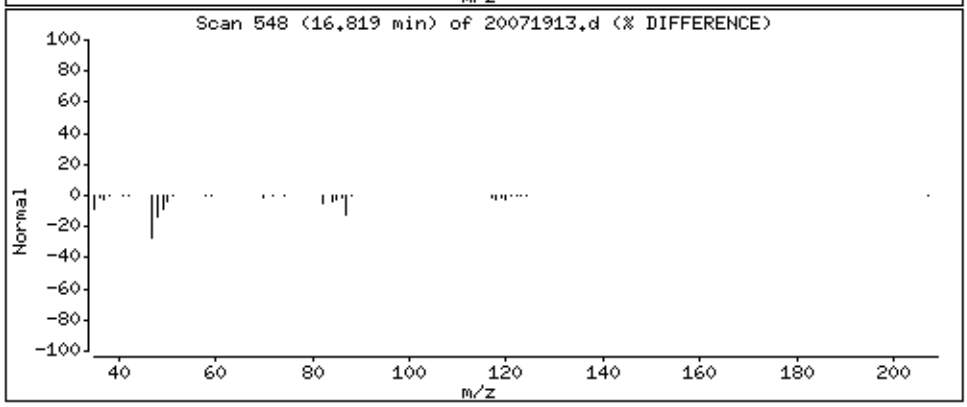












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

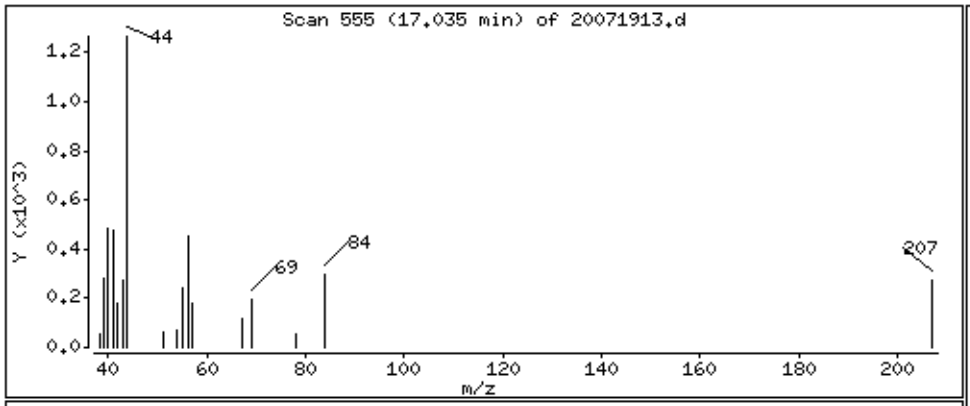
Operator: gh

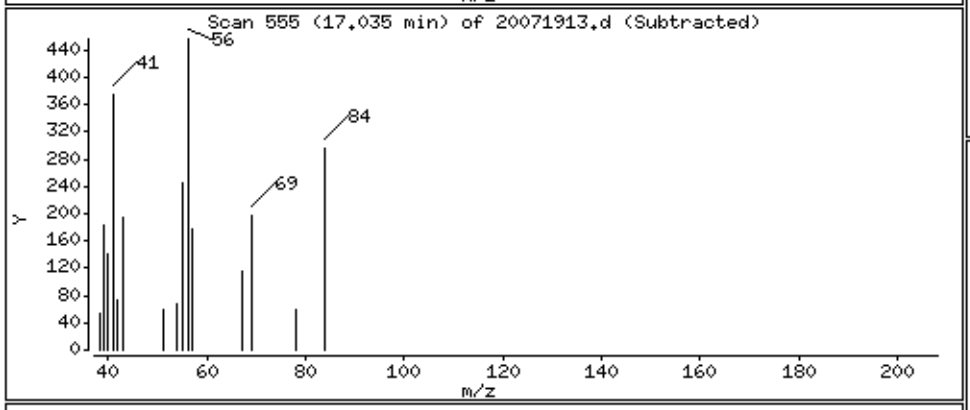
Column phase: RTX-624

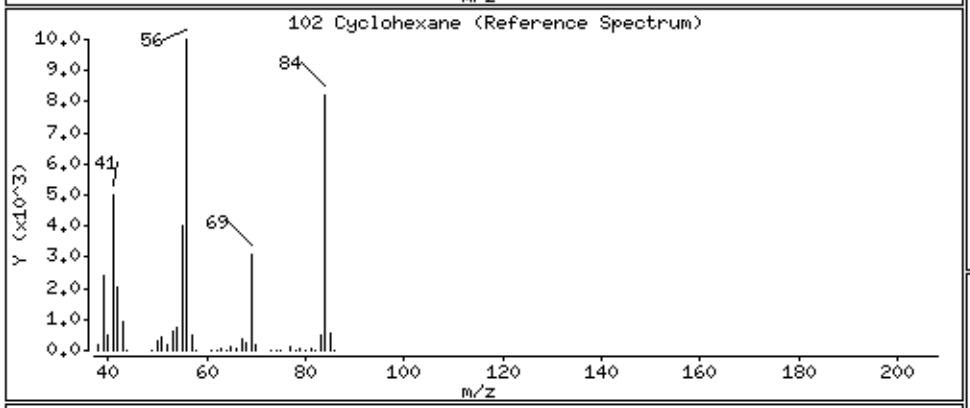
Column diameter: 0.32

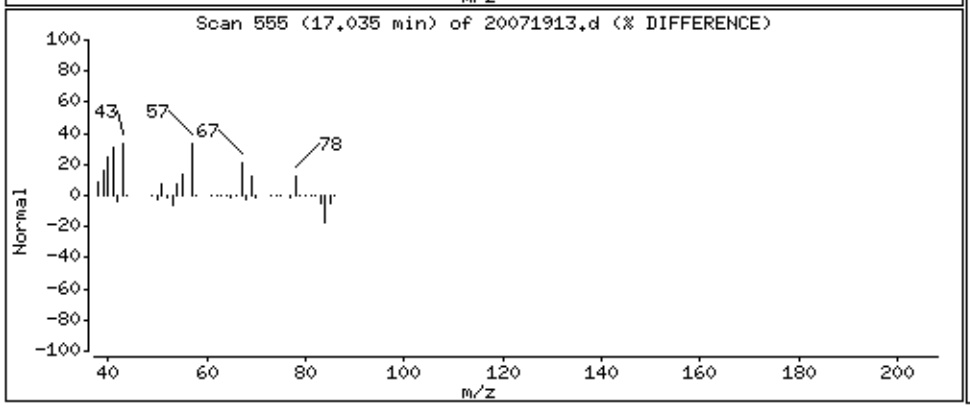
102 Cyclohexane

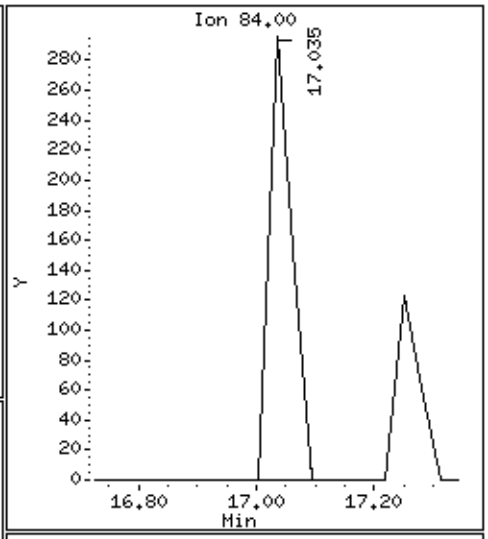
Concentration: 0.03309 PPBV

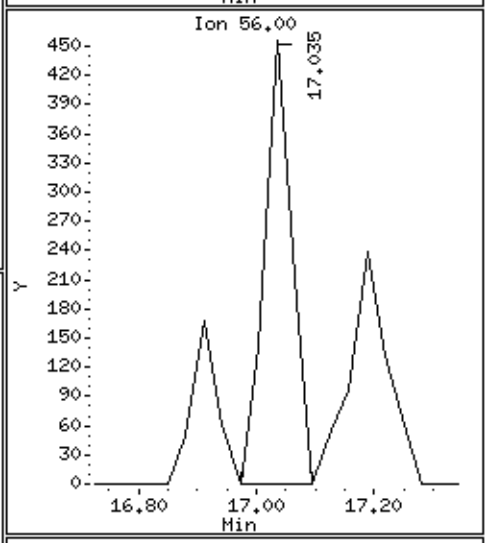


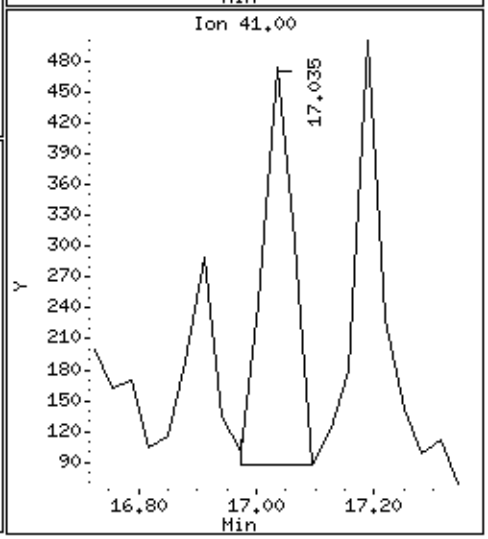












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

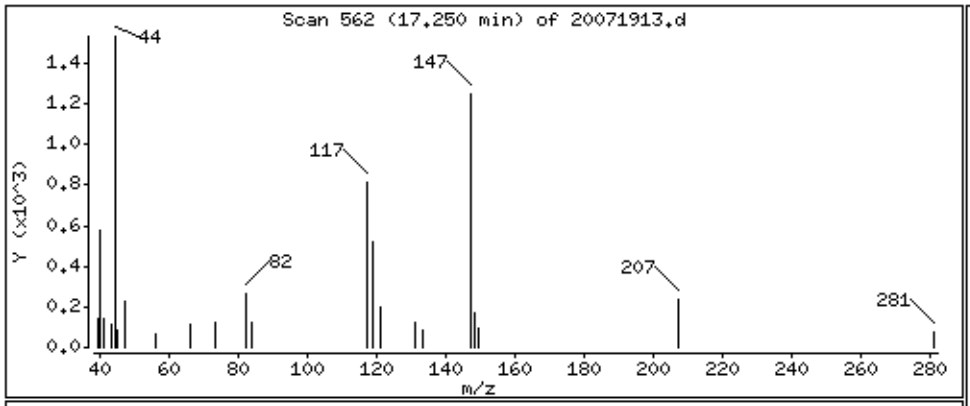
Operator: gh

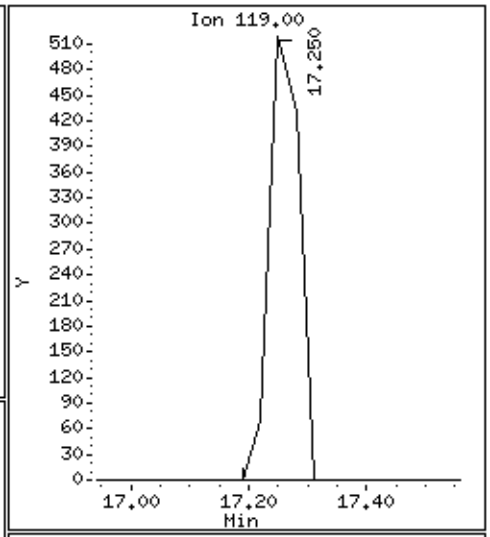
Column phase: RTX-624

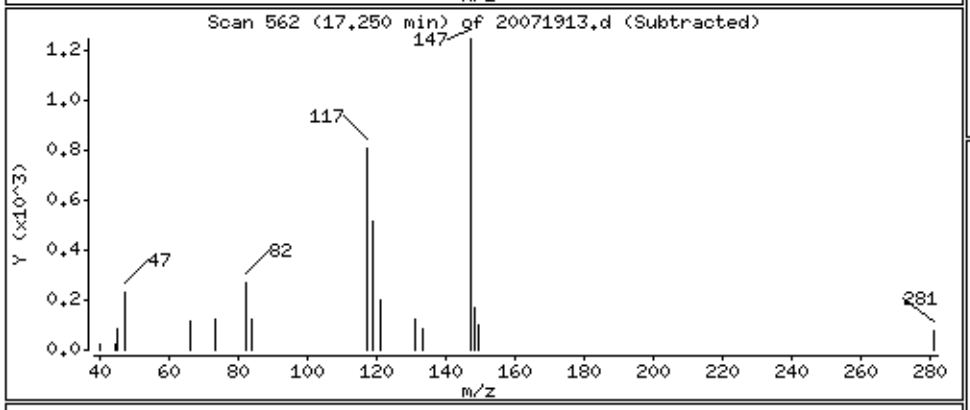
Column diameter: 0.32

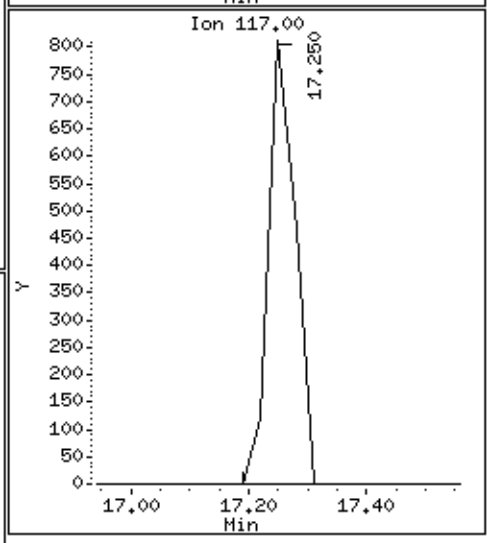
106 Carbon Tetrachloride

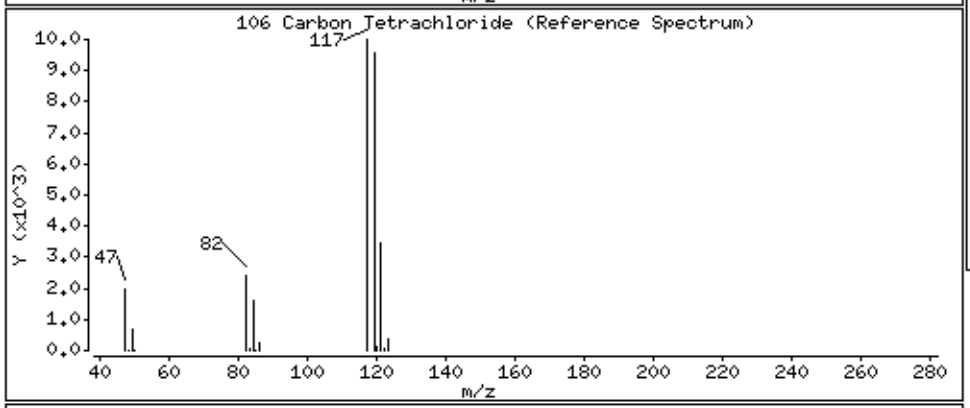
Concentration: 0.06212 PPBV

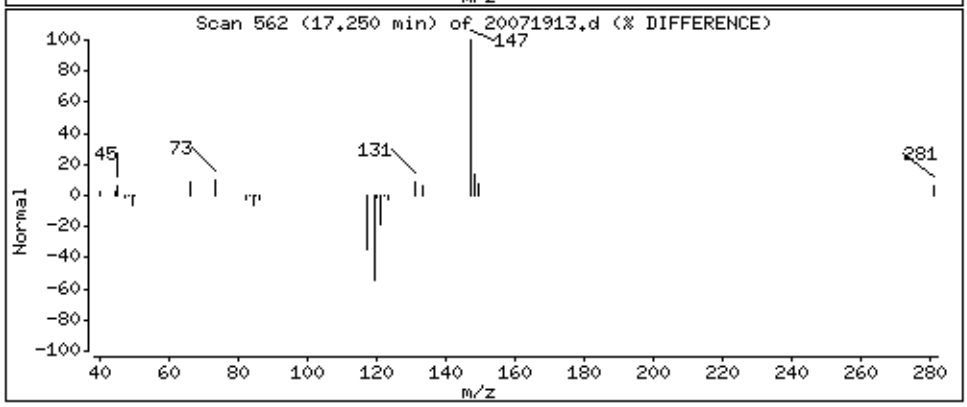












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

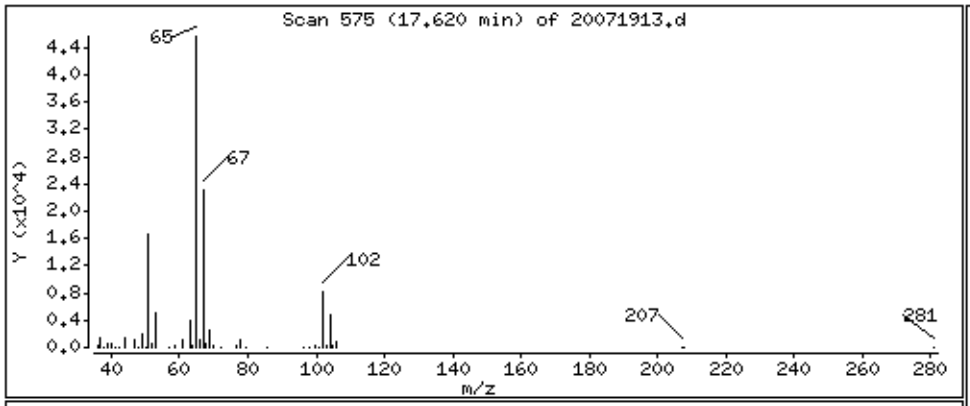
Operator: gh

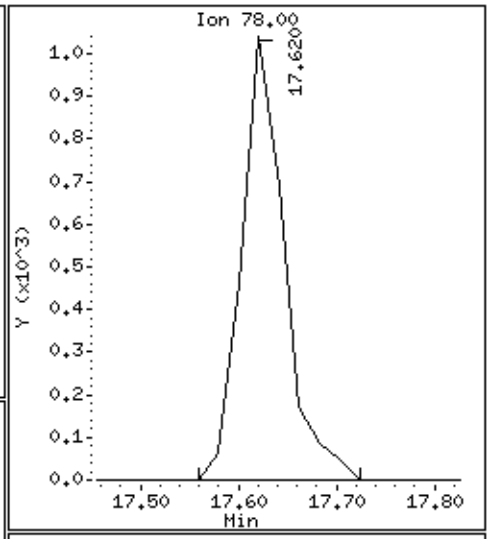
Column phase: RTX-624

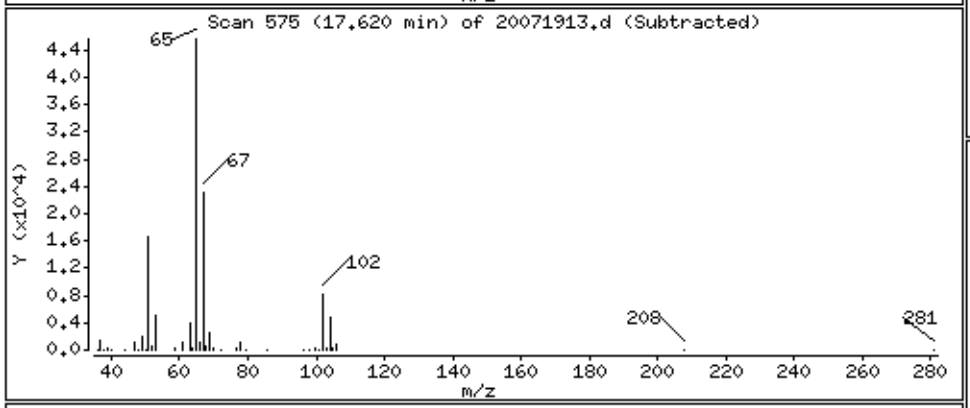
Column diameter: 0.32

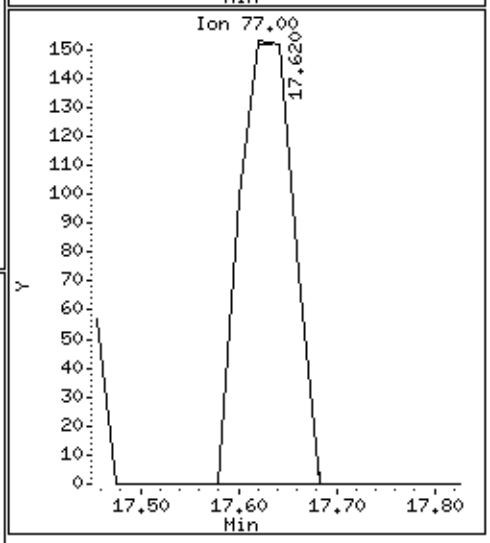
116 Benzene

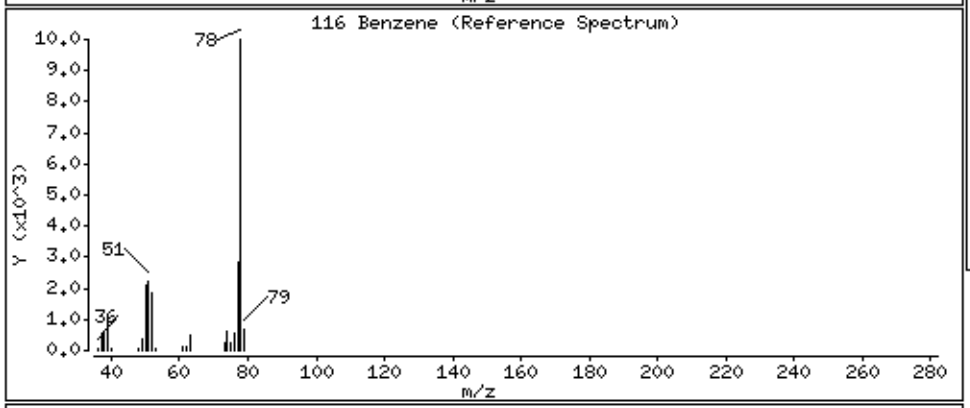
Concentration: 0.07945 PPBV

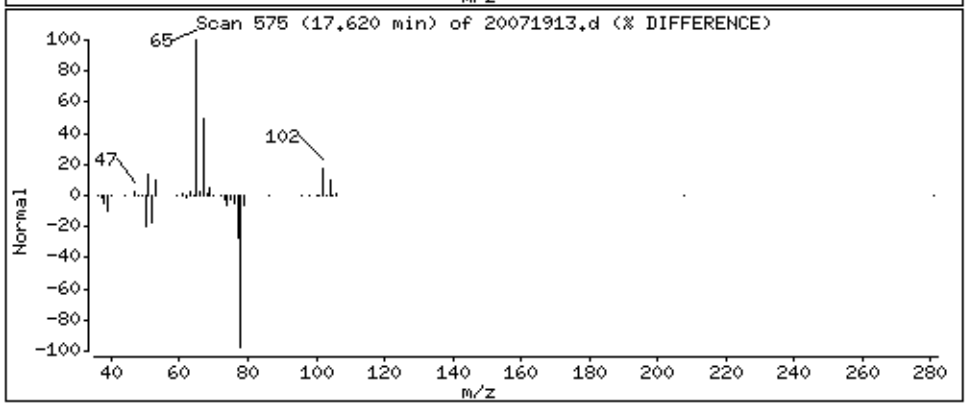












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

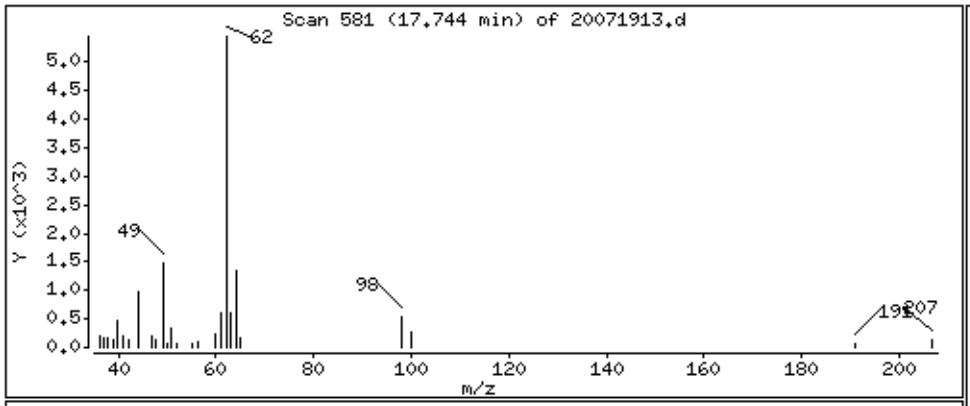
Operator: gh

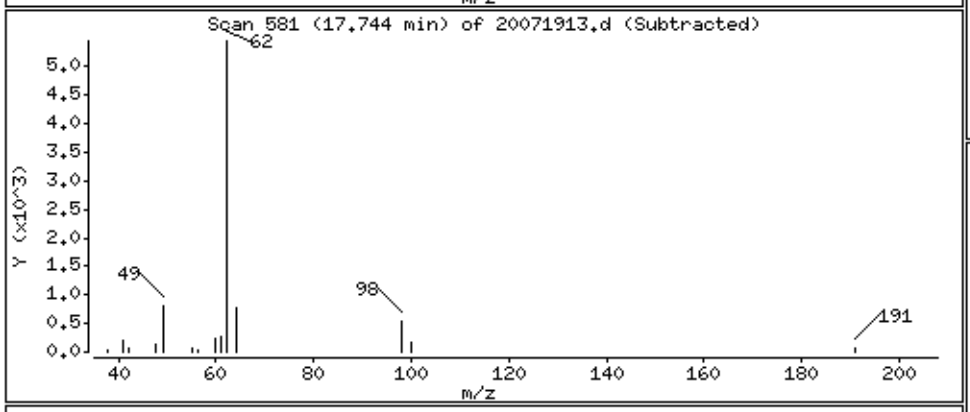
Column phase: RTX-624

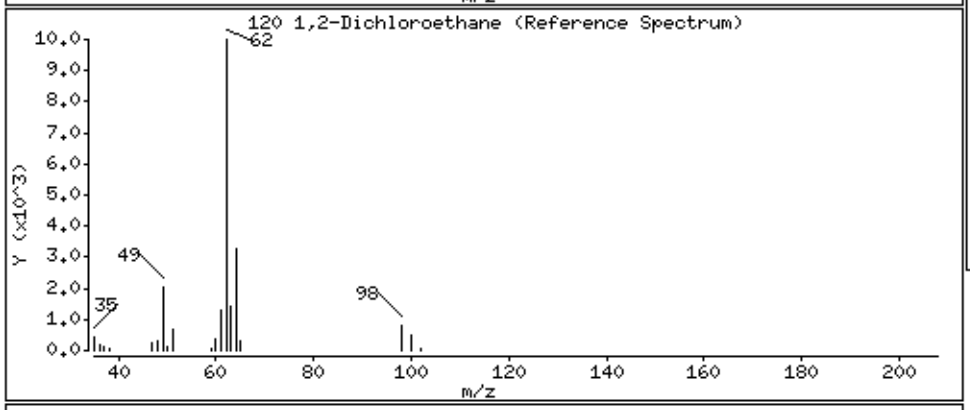
Column diameter: 0.32

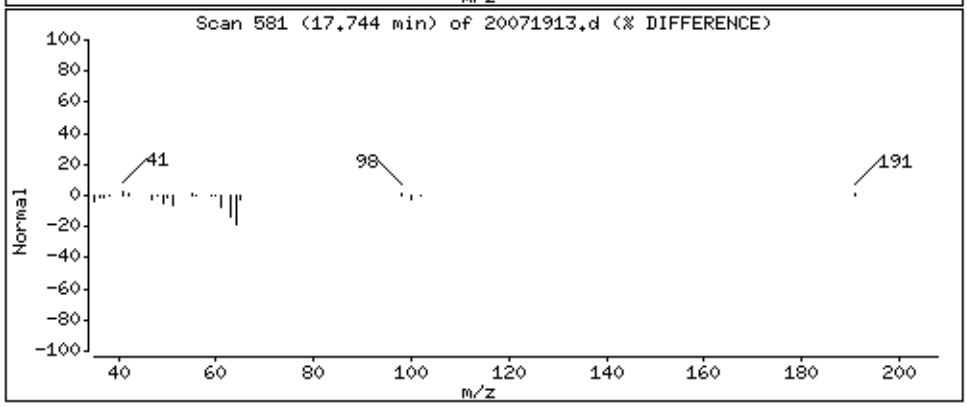
120 1,2-Dichloroethane

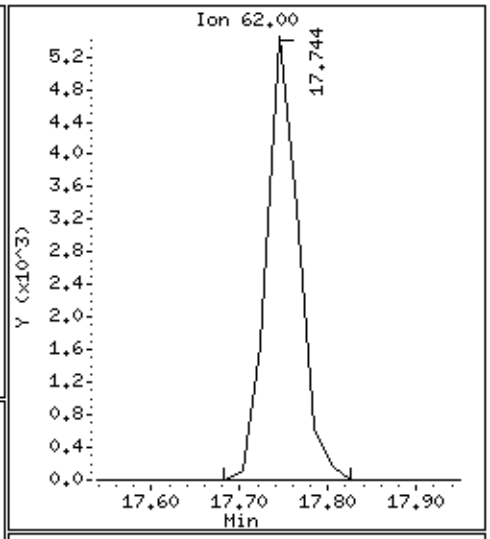
Concentration: 0.8020 PPBV

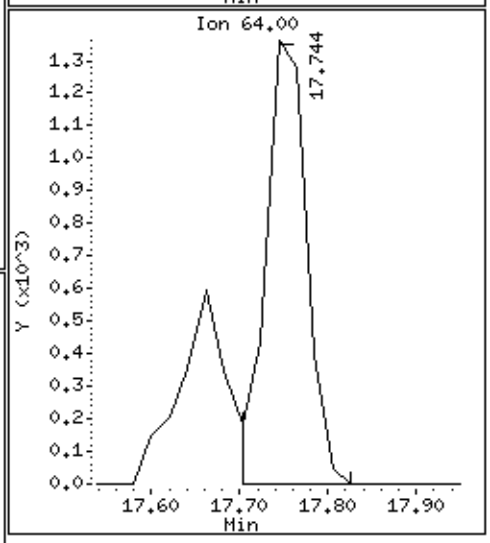












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

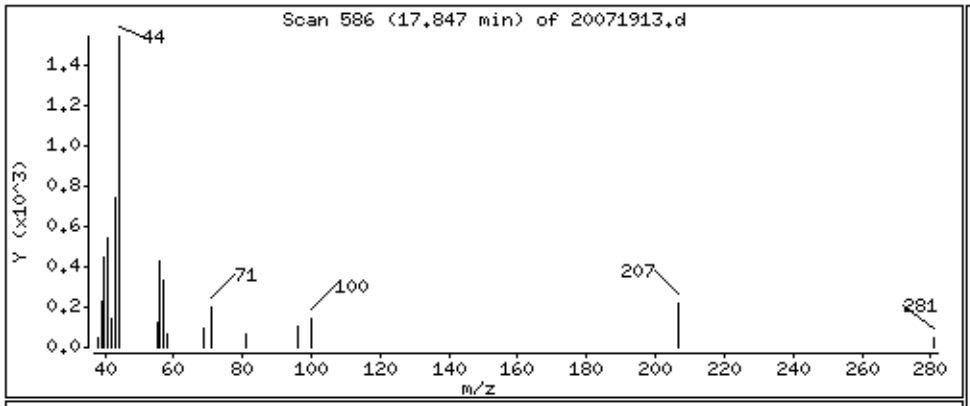
Operator: gh

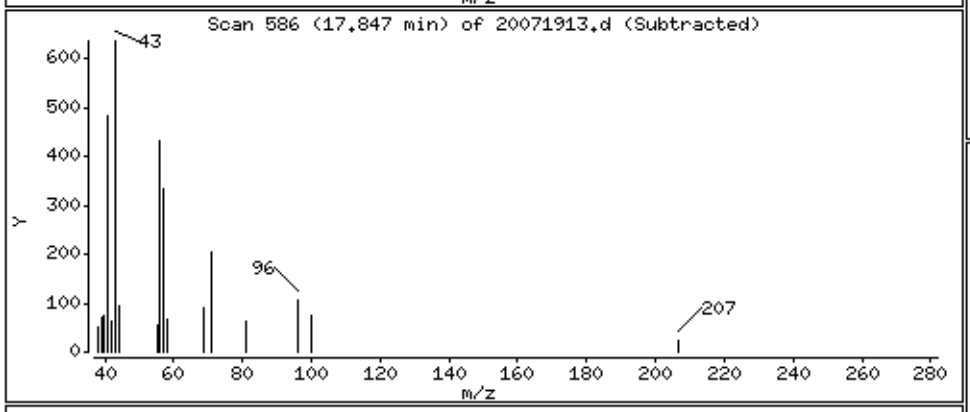
Column phase: RTX-624

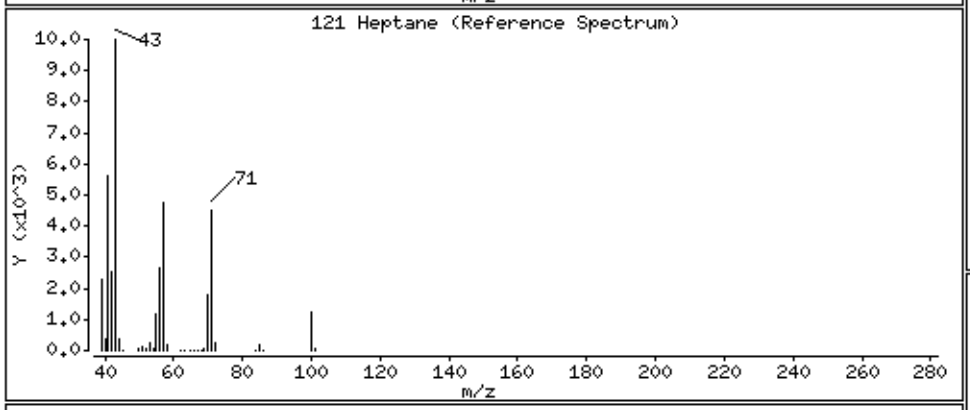
Column diameter: 0.32

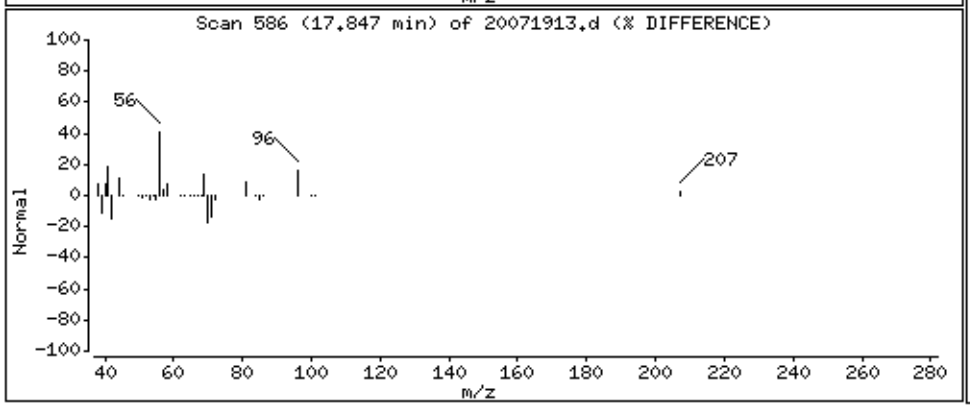
121 Heptane

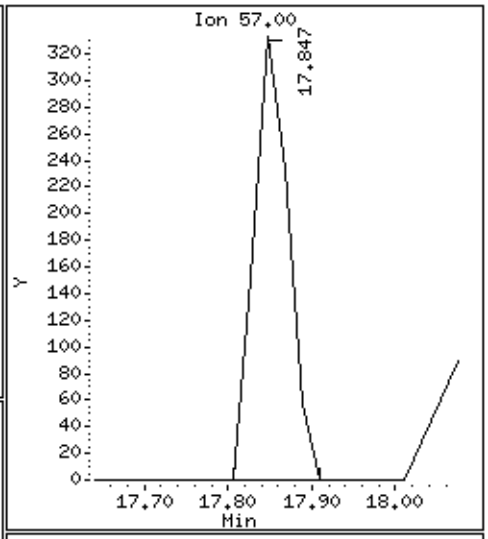
Concentration: 0.08824 PPBV

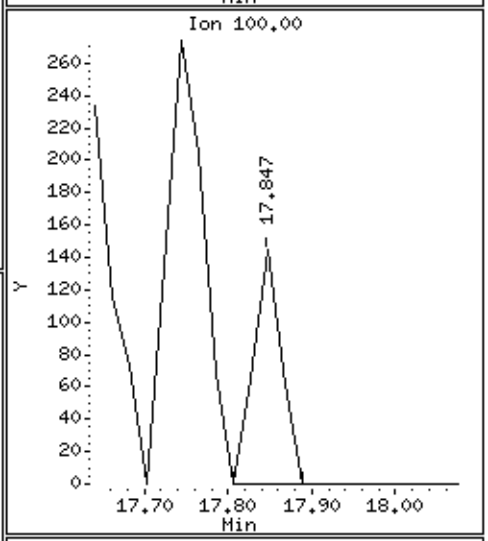


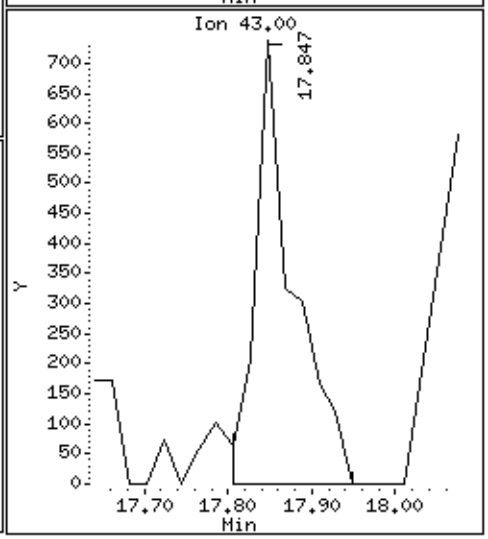












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

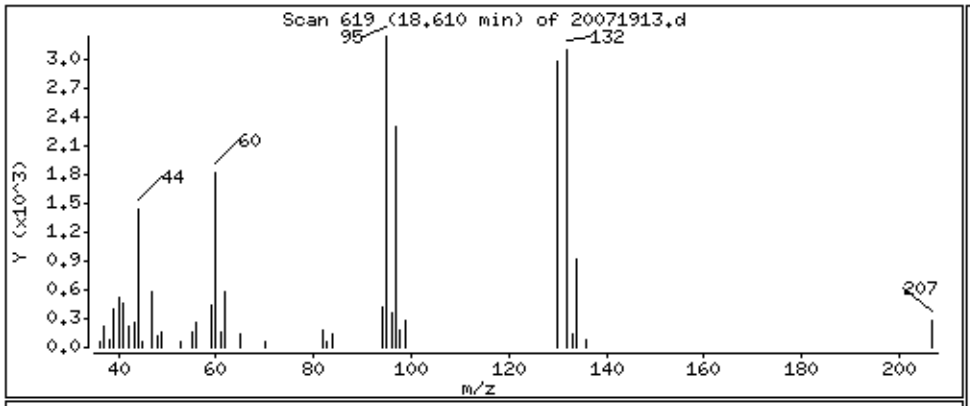
Operator: gh

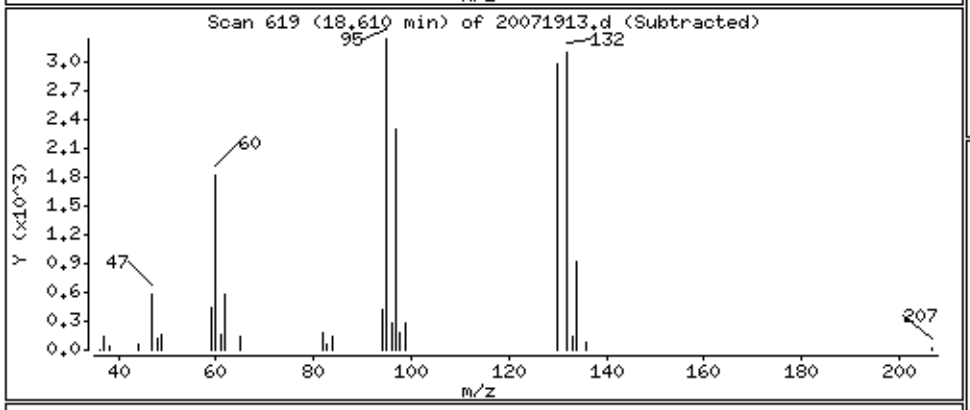
Column phase: RTX-624

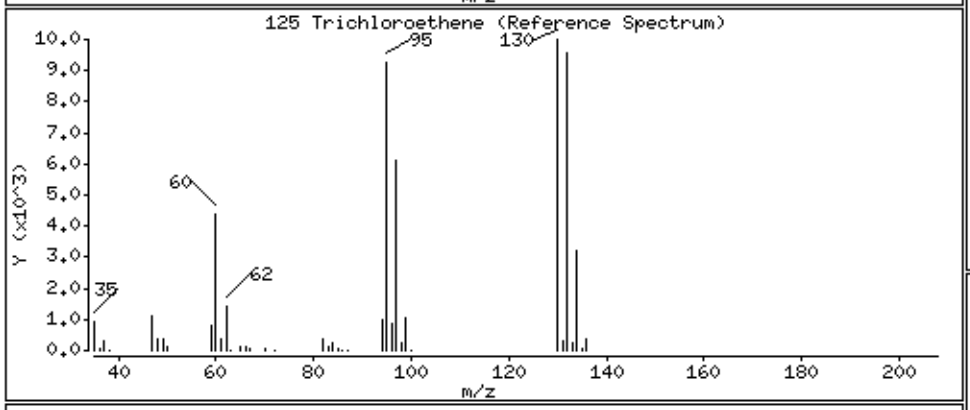
Column diameter: 0.32

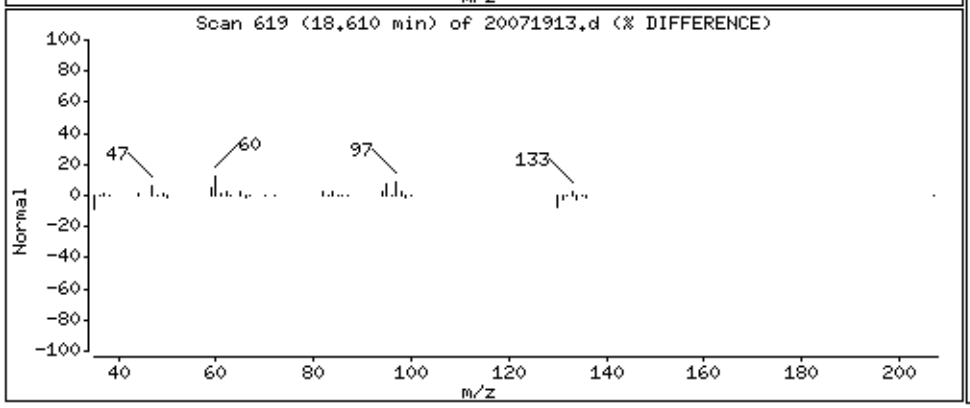
125 Trichloroethene

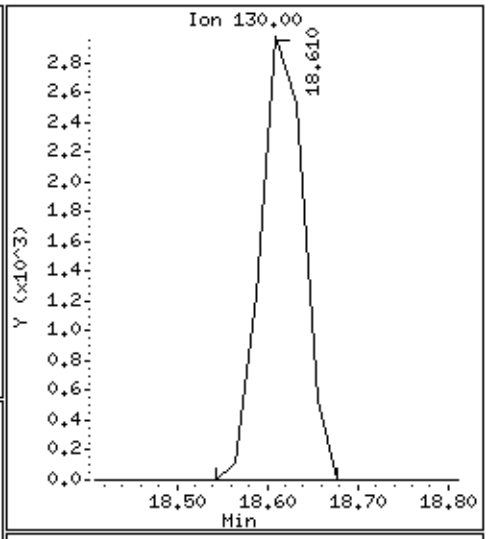
Concentration: 0.5451 PPBV

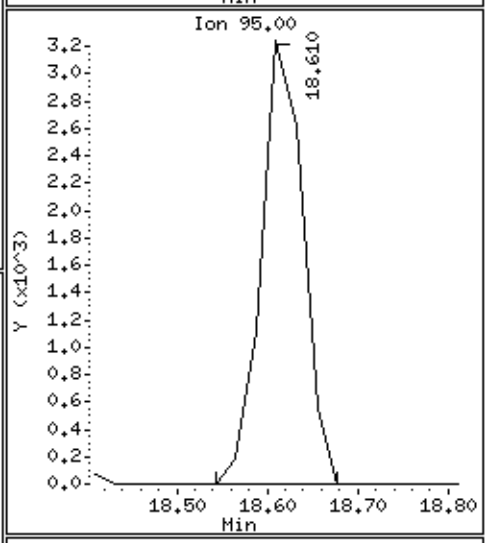


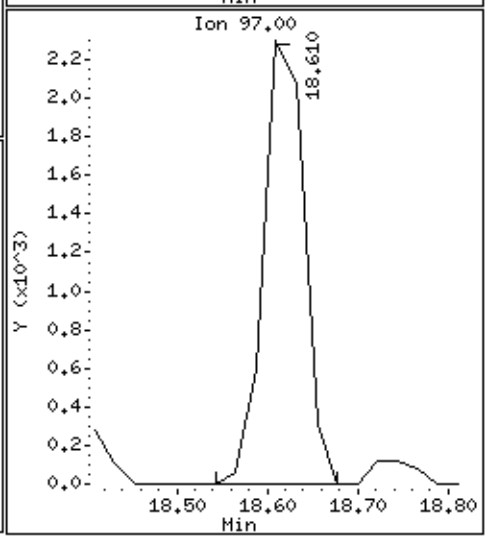












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

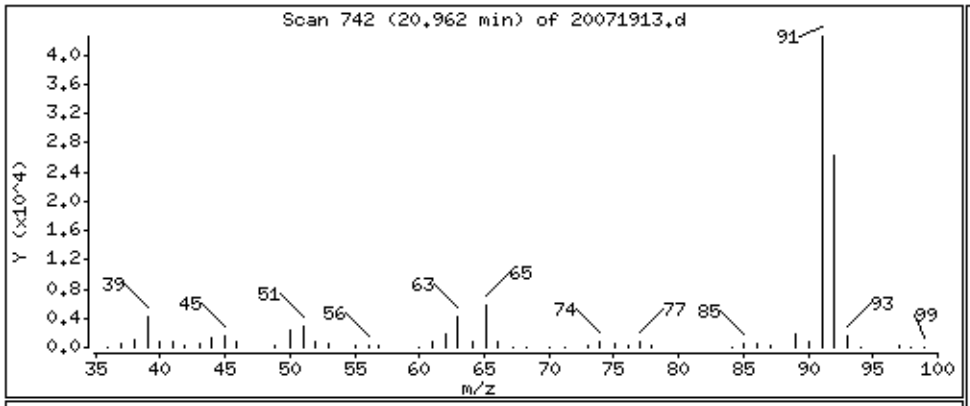
Operator: gh

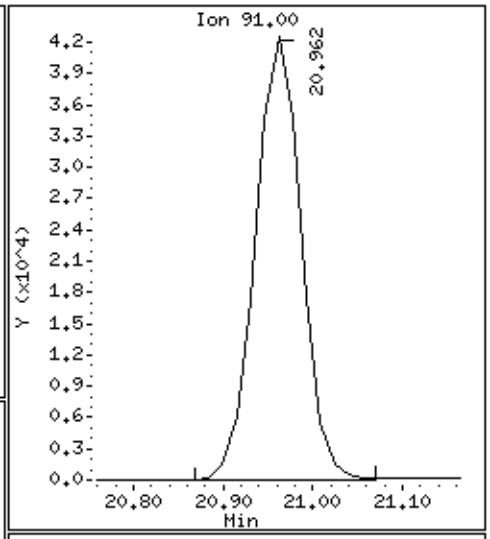
Column phase: RTX-624

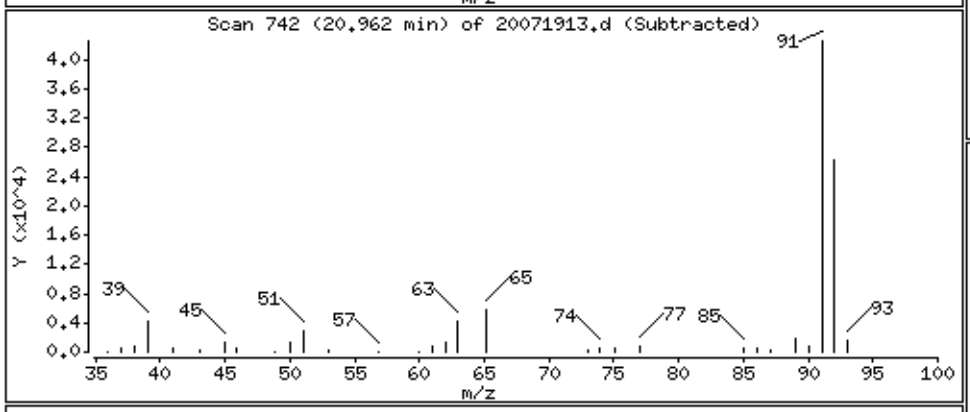
Column diameter: 0.32

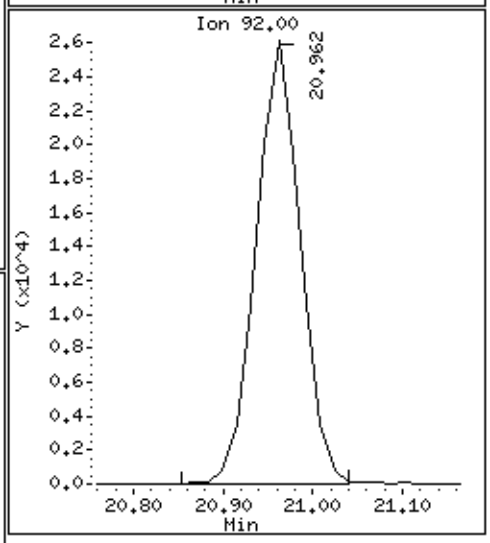
147 Toluene

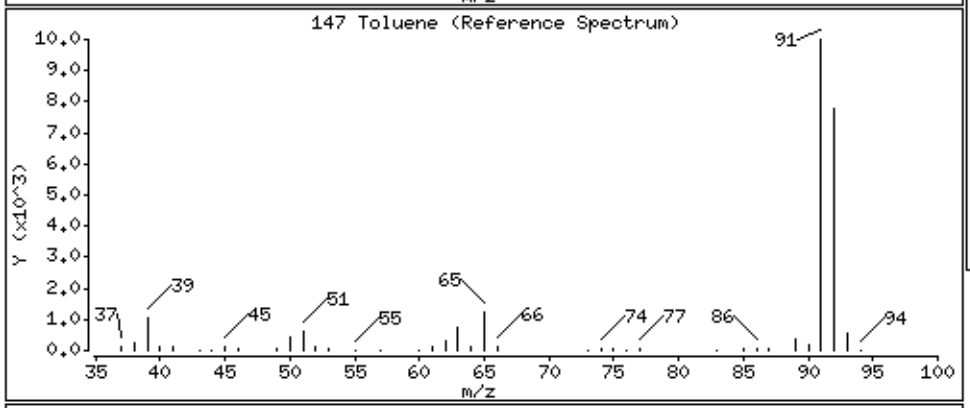
Concentration: 3.559 PPBV

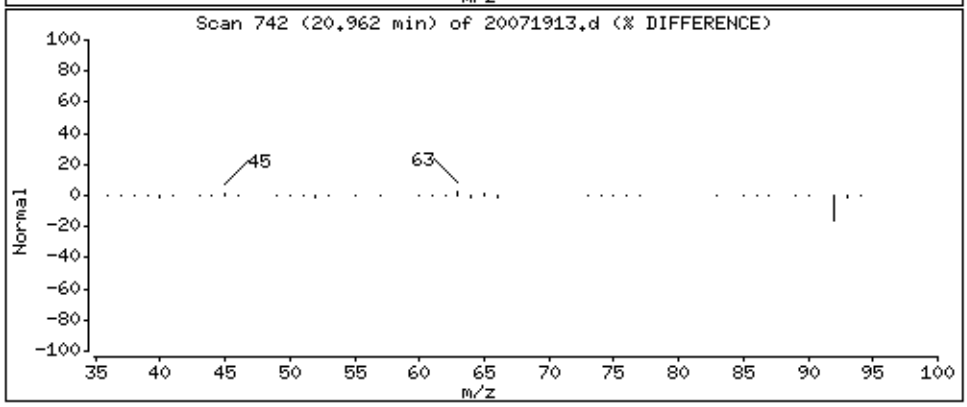












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

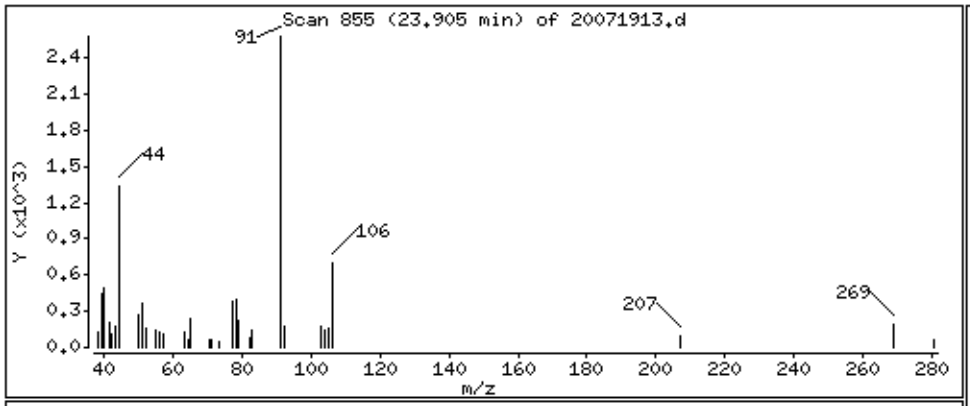
Operator: gh

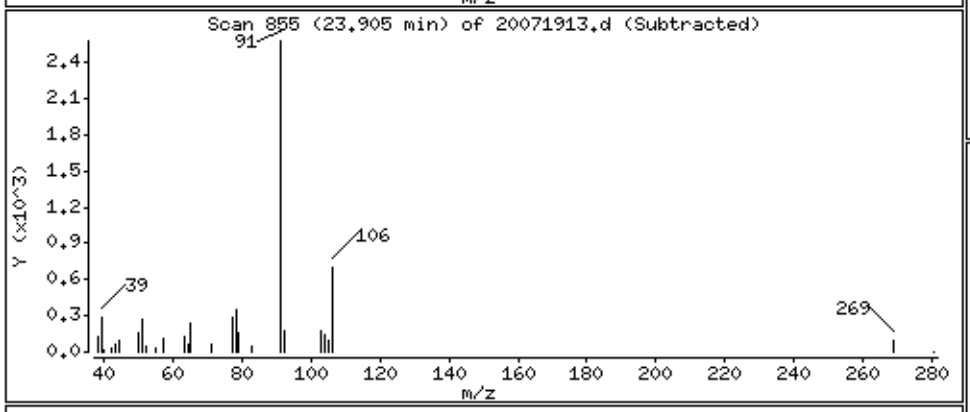
Column phase: RTX-624

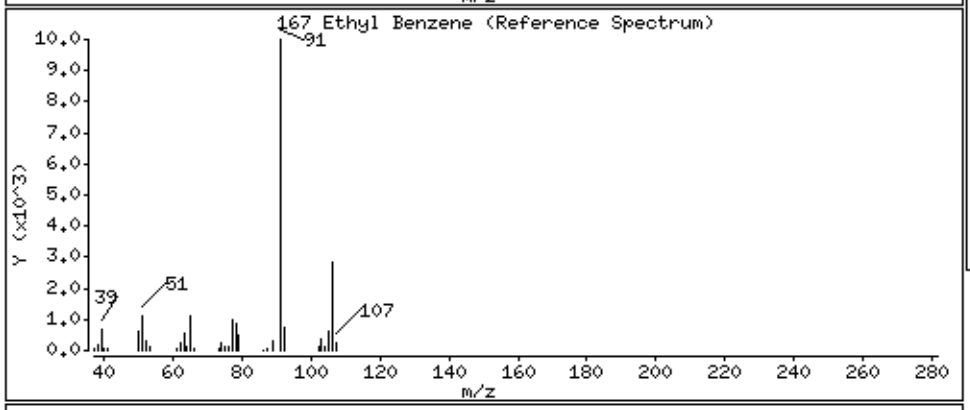
Column diameter: 0.32

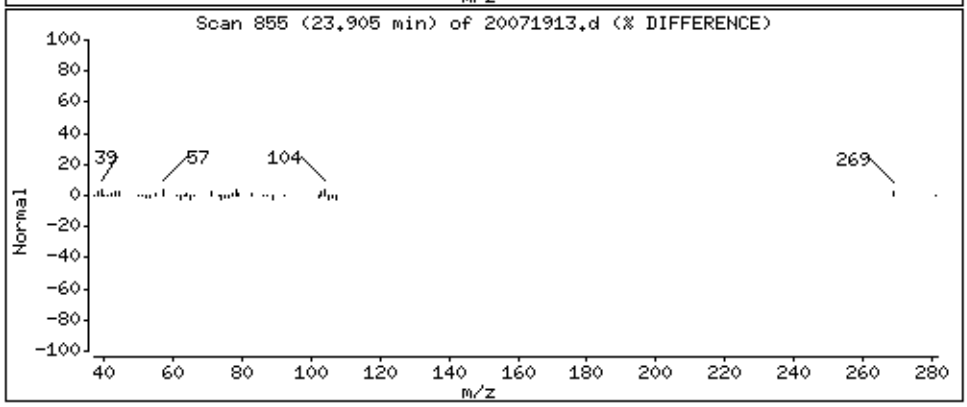
167 Ethyl Benzene

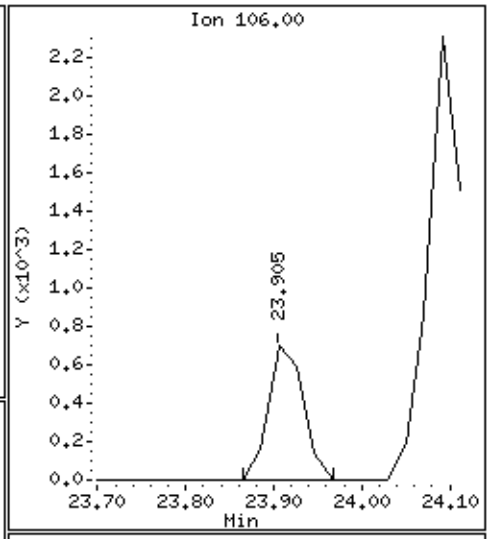
Concentration: 0.1032 PPBV

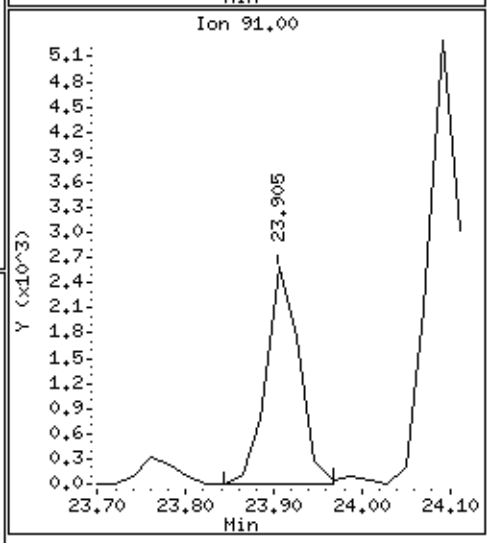












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

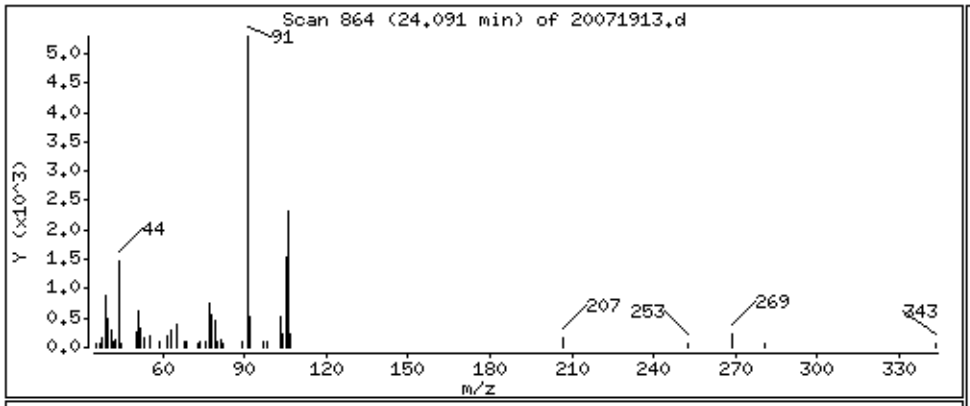
Operator: gh

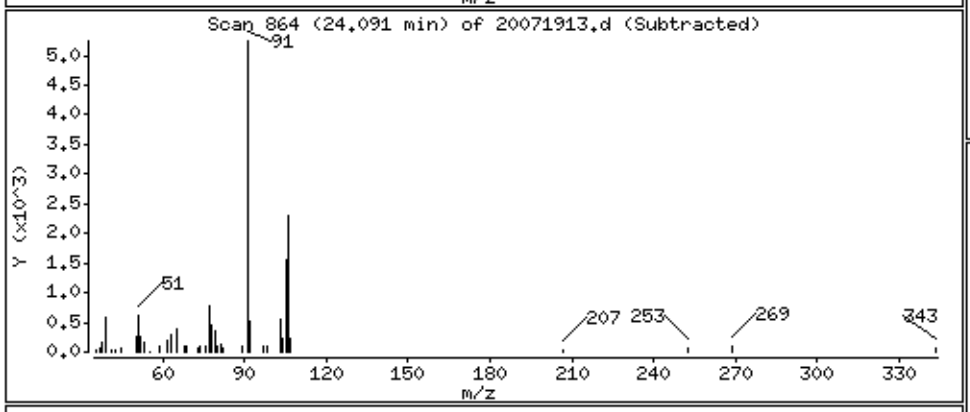
Column phase: RTX-624

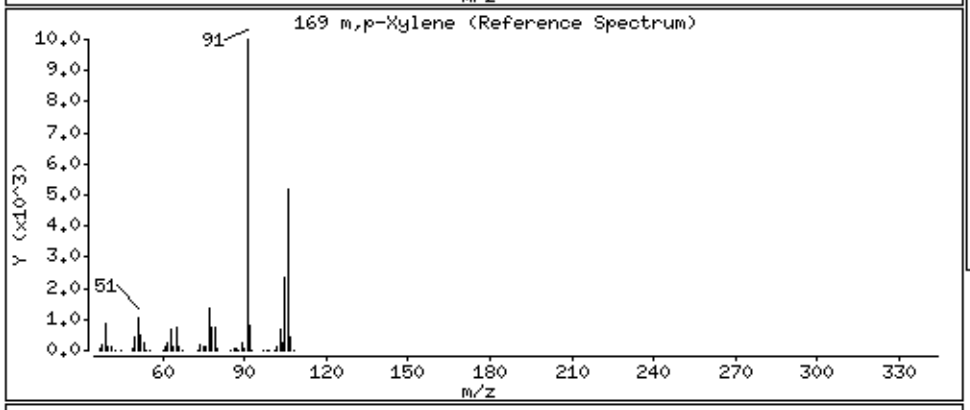
Column diameter: 0.32

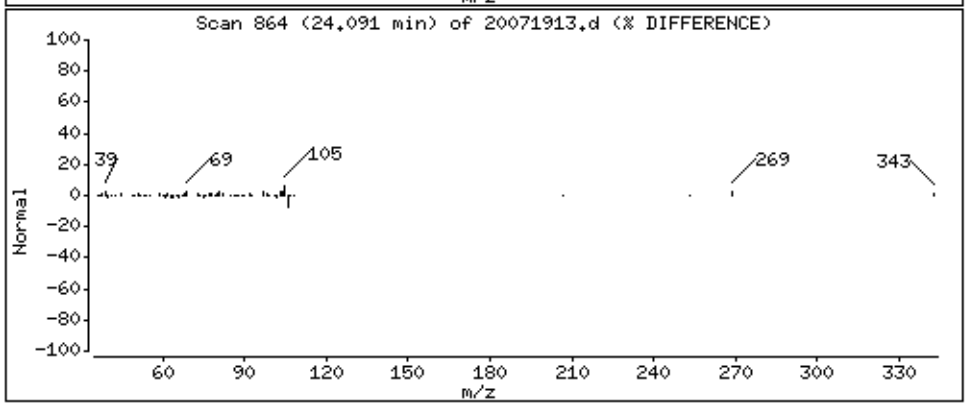
169 m,p-Xylene

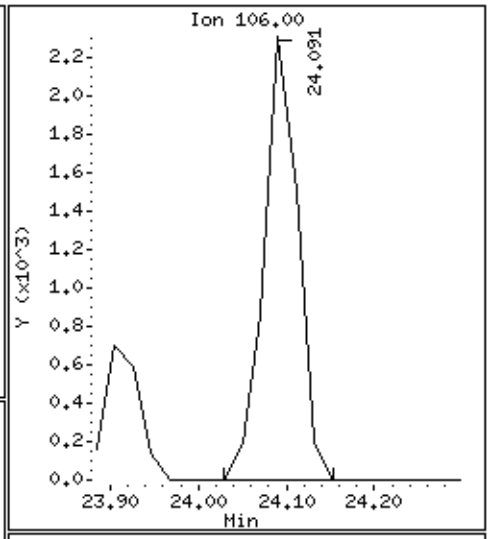
Concentration: 0.3073 PPBV

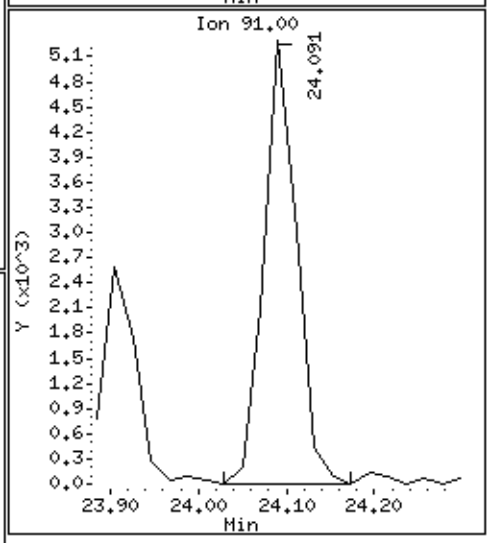












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

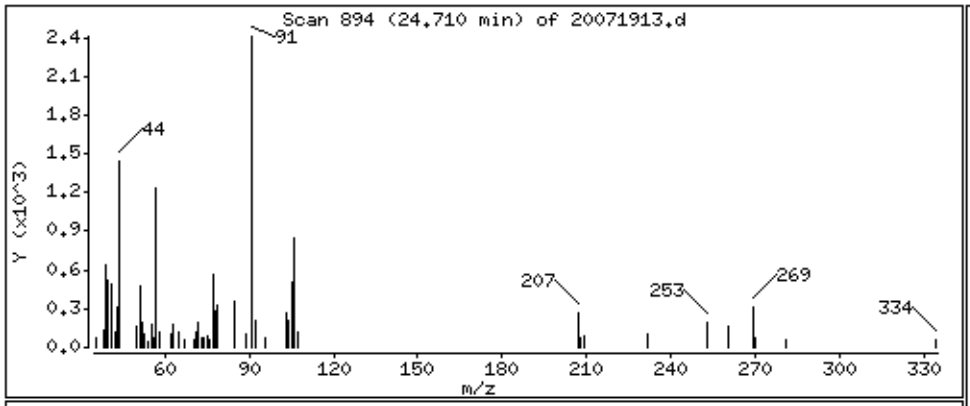
Operator: gh

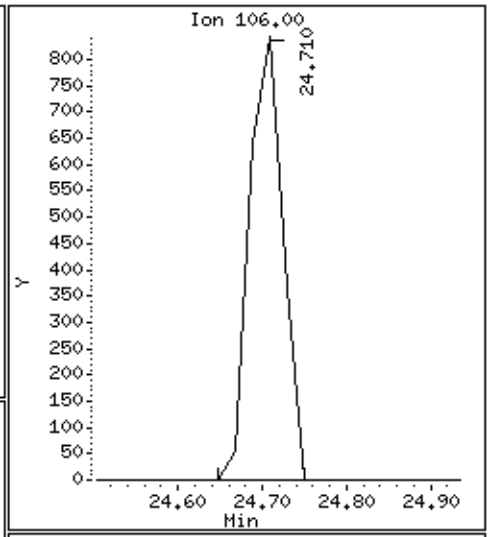
Column phase: RTX-624

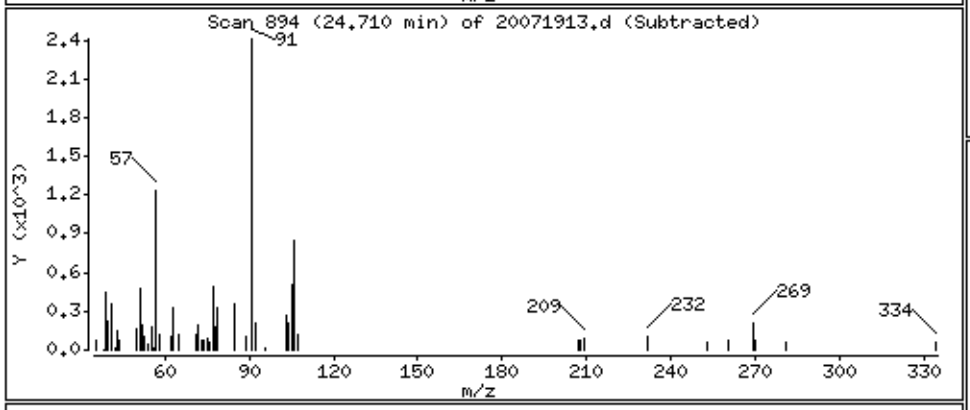
Column diameter: 0.32

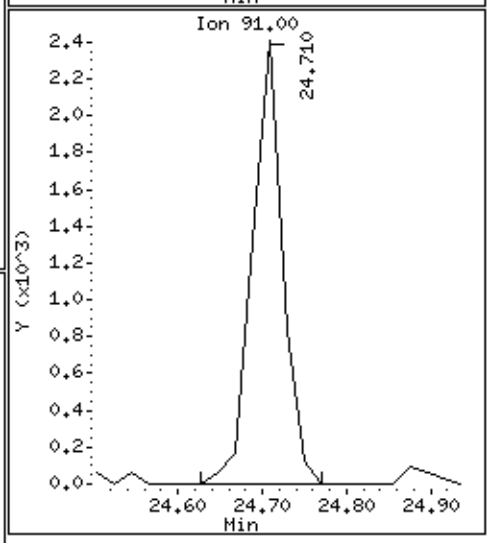
171 o-Xylene

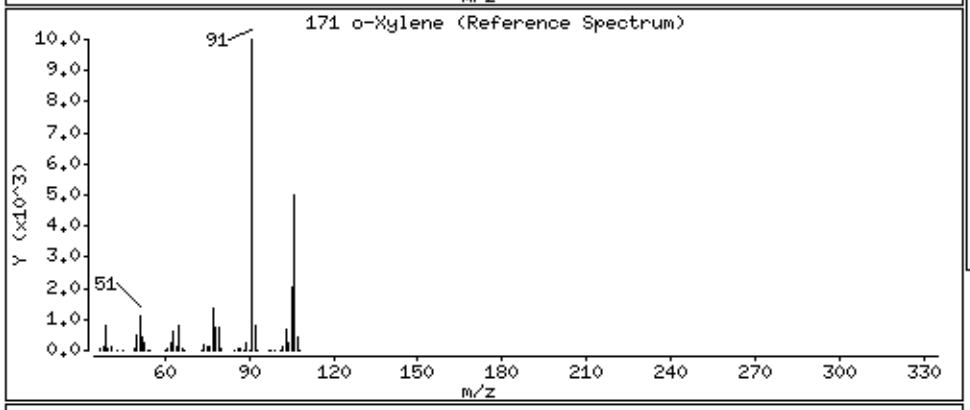
Concentration: 0.1222 PPBV

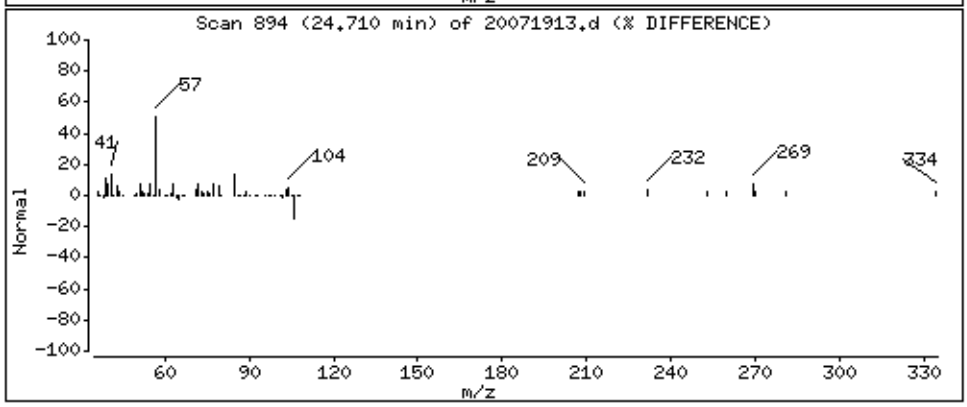












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

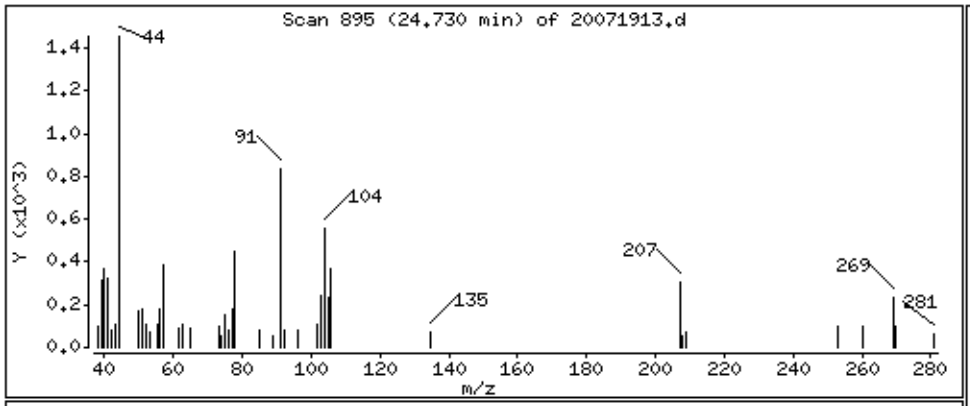
Operator: gh

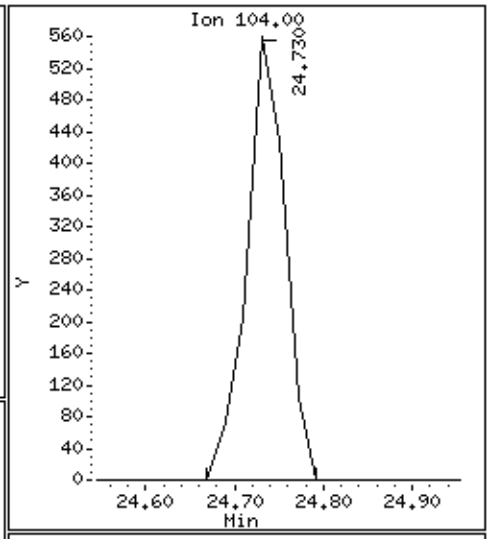
Column phase: RTX-624

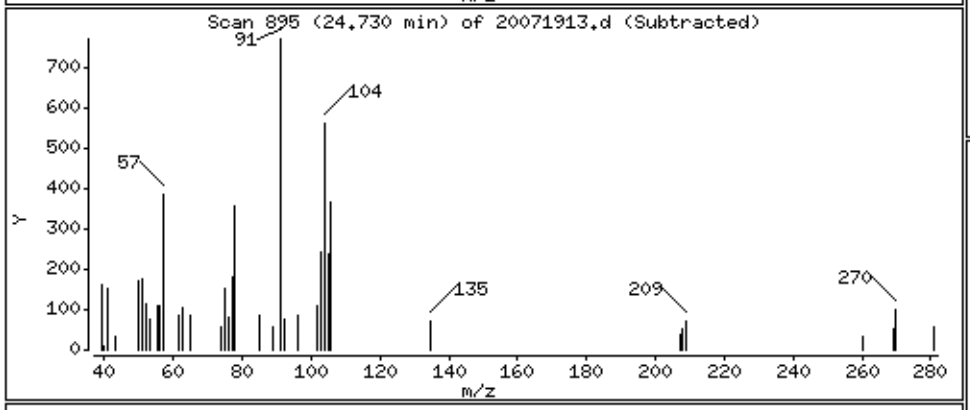
Column diameter: 0.32

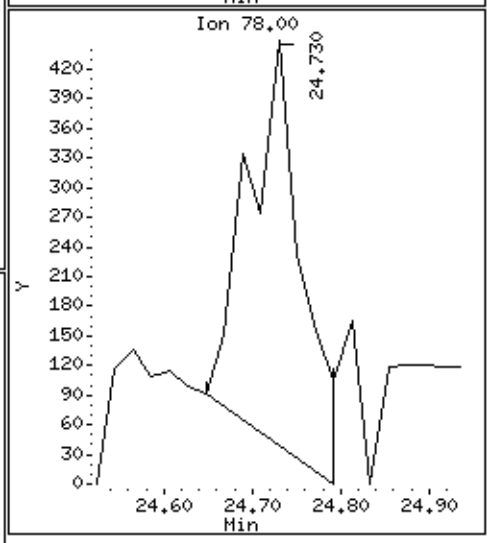
172 Styrene

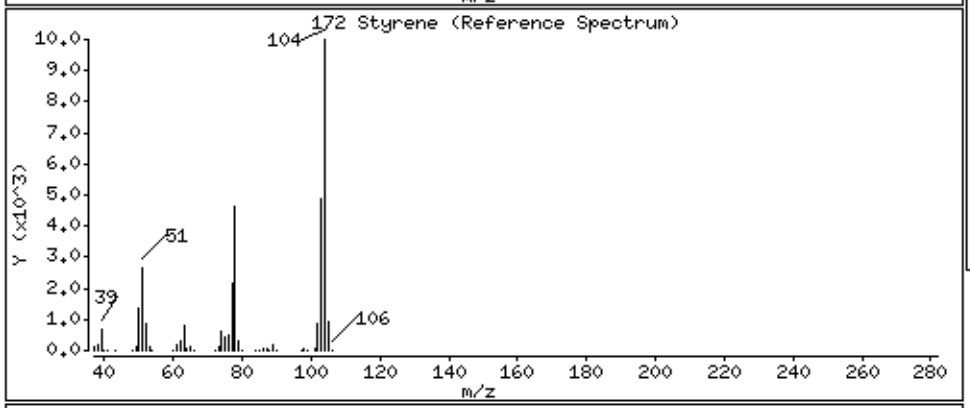
Concentration: 0.06162 PPBV

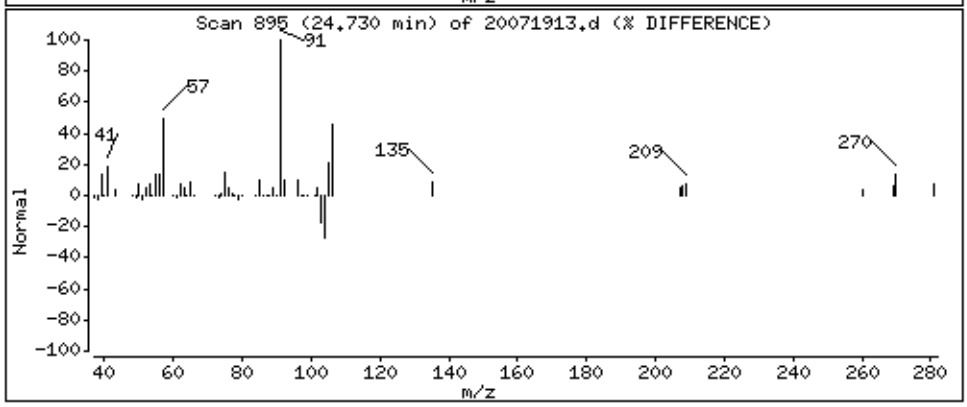












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

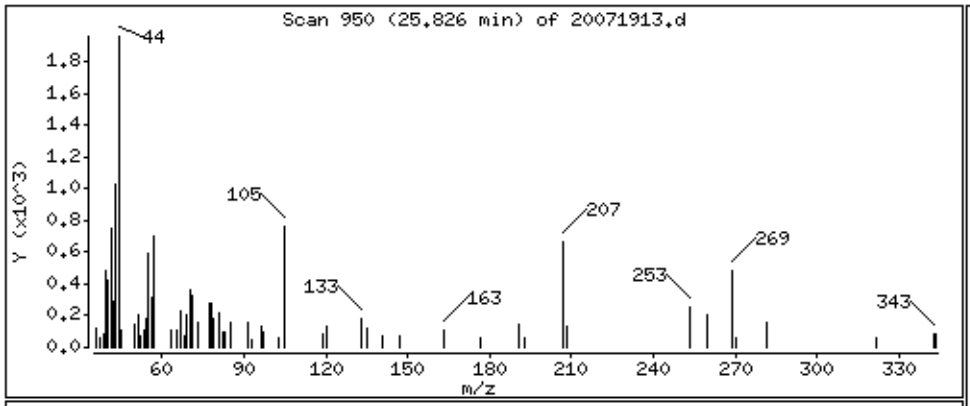
Operator: gh

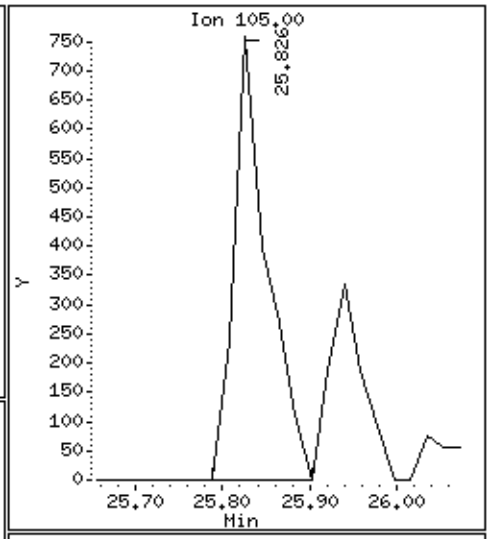
Column phase: RTX-624

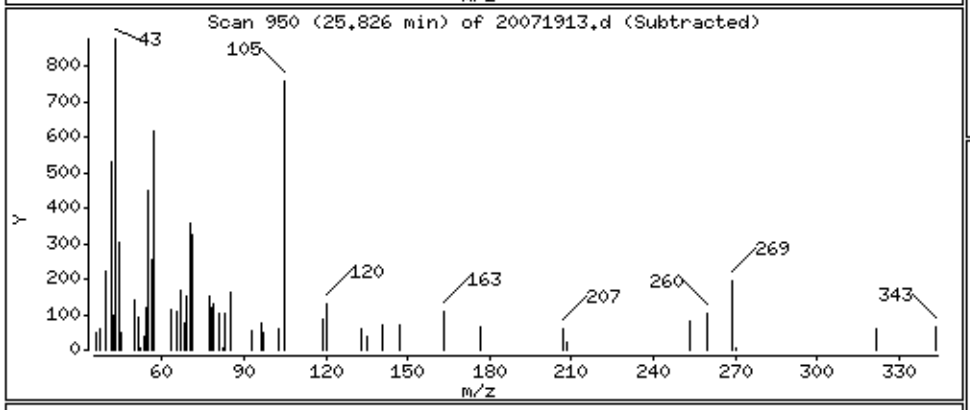
Column diameter: 0.32

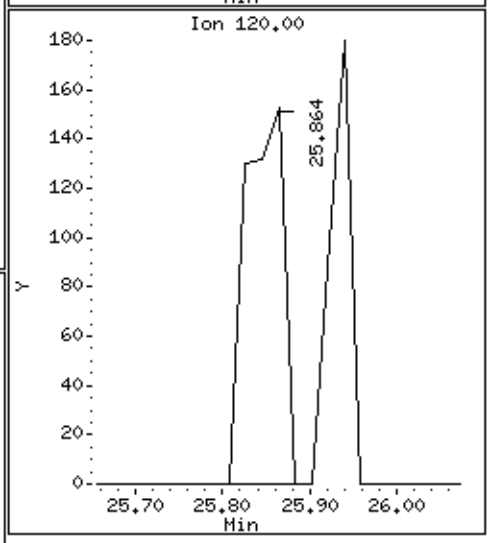
188 4-Ethyltoluene

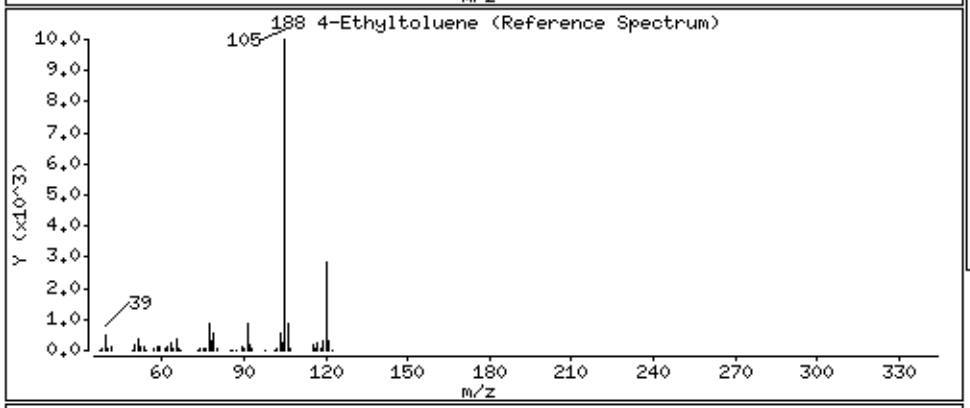
Concentration: 0.03880 PPBV

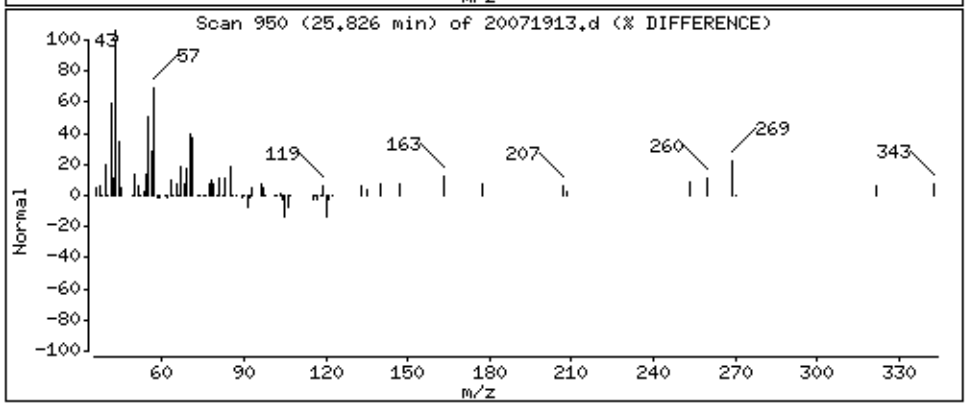












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

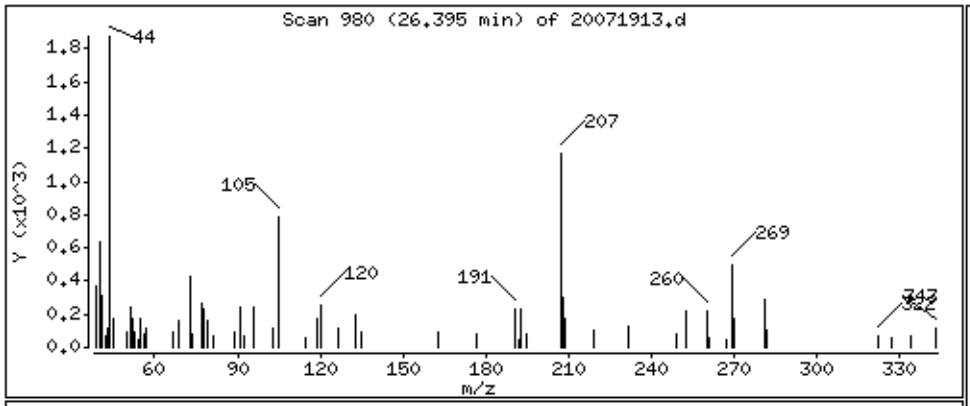
Operator: gh

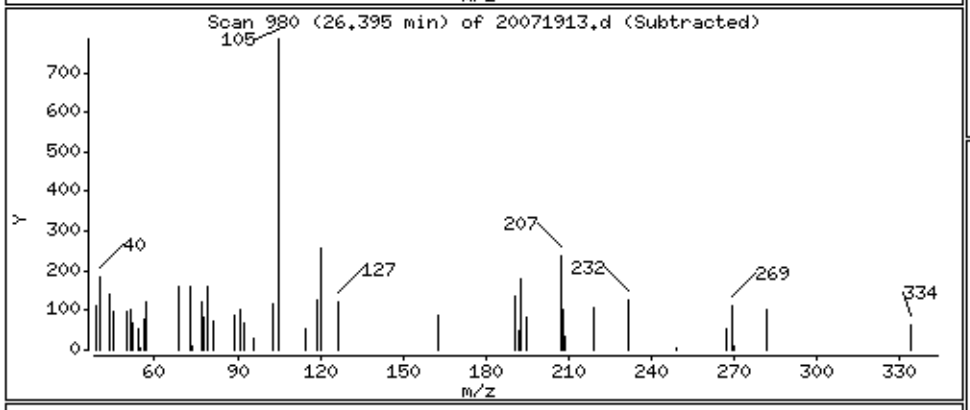
Column phase: RTX-624

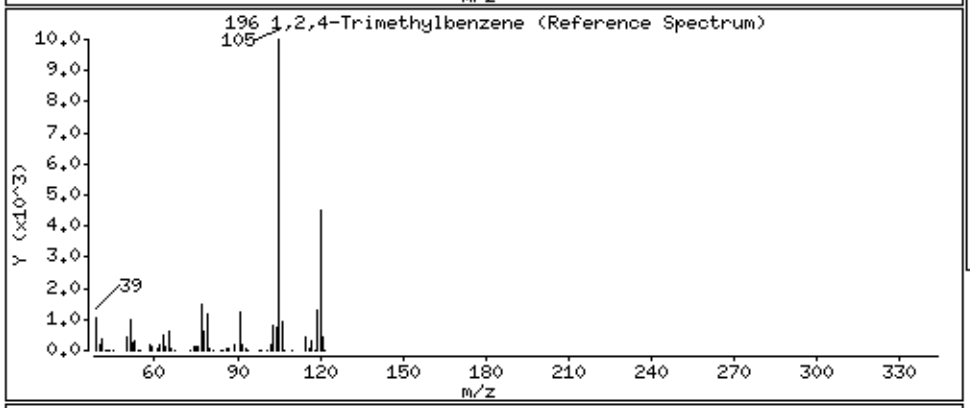
Column diameter: 0.32

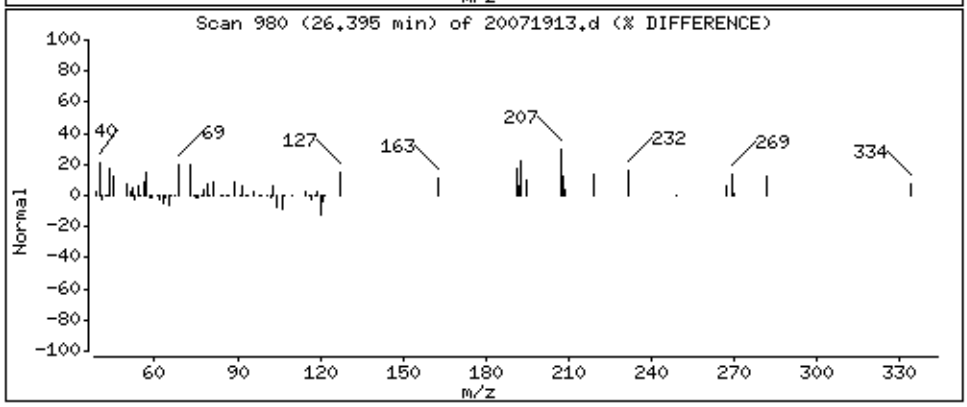
196 1,2,4-Trimethylbenzene

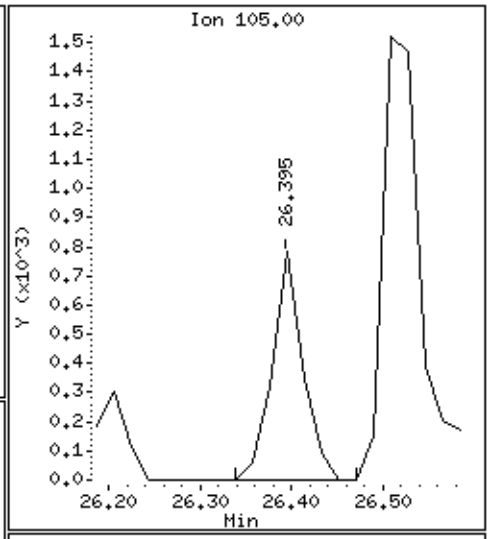
Concentration: 0.04139 PPBV

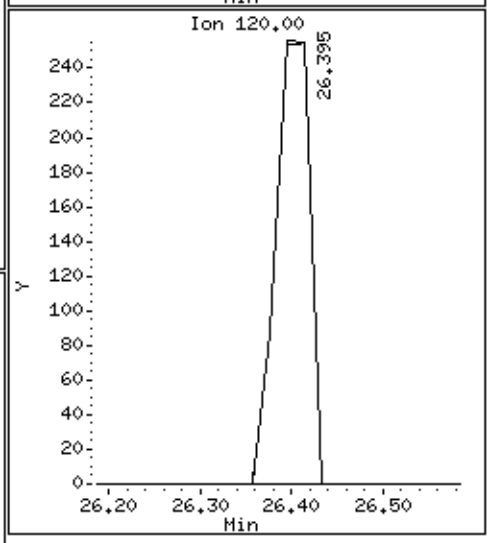












Data File: /chem/msd20.i/19Jul2016.b/20071913.d

Date : 19-JUL-2016 16:29

Client ID:

Instrument: msd20.i

Sample Info: 250mL#31146

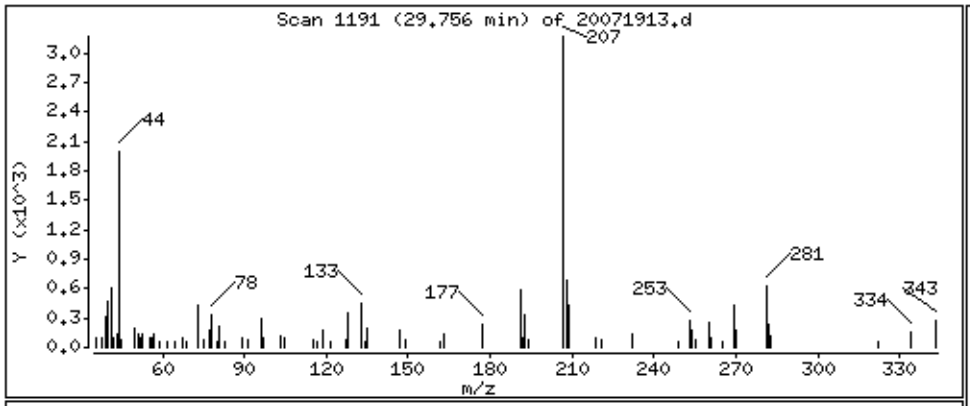
Operator: gh

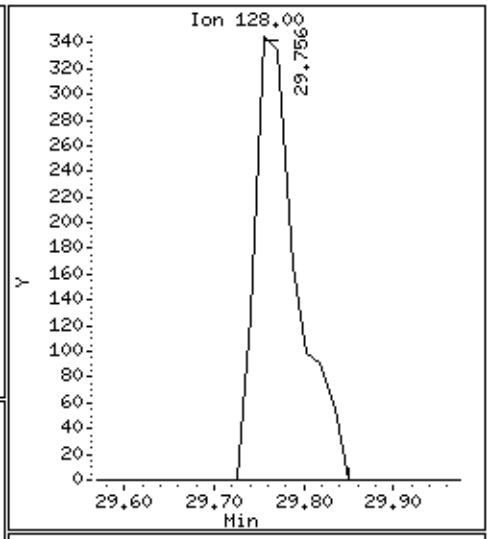
Column phase: RTX-624

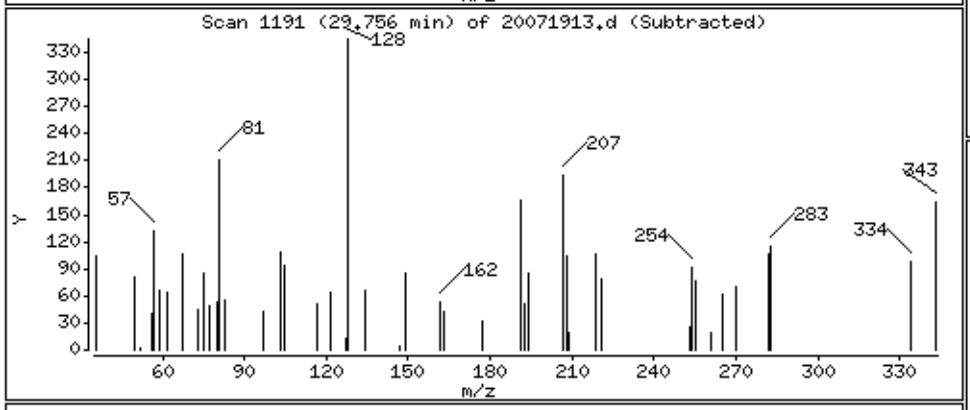
Column diameter: 0.32

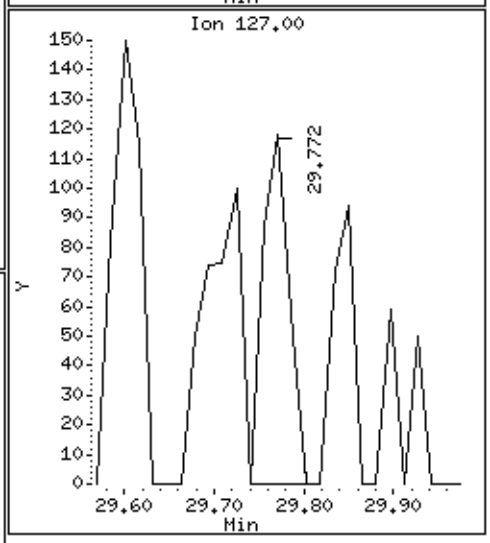
228 Naphthalene

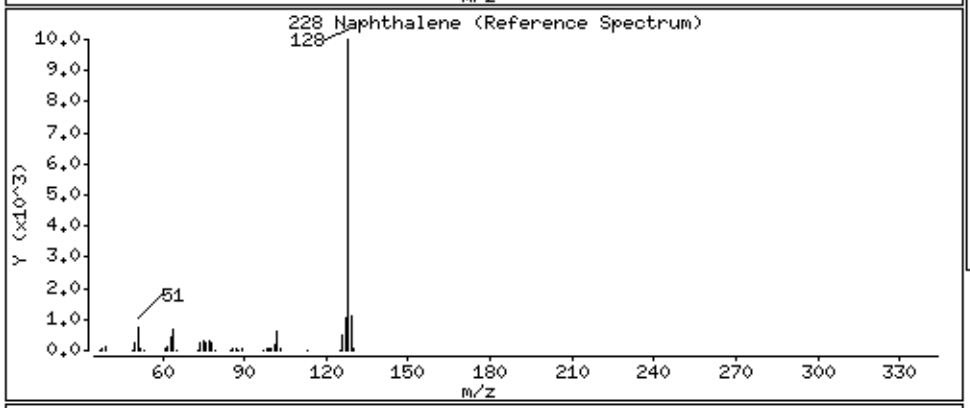
Concentration: 0.03091 PPBV

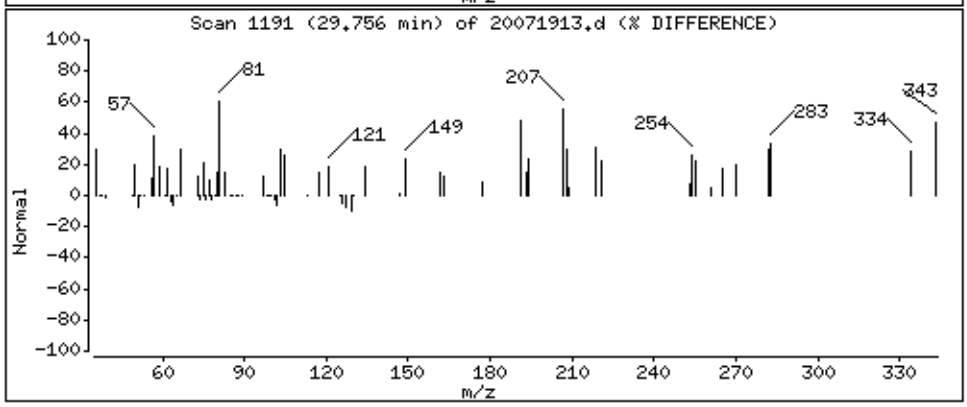












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-1D

Lab ID#: 1607235D-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.59	0.82	2.9
Chloromethane	0.83	0.96	1.7	2.0
Freon 11	0.17	4.9	0.93	27
Ethanol	0.83	12	1.6	23
Freon 113	0.17	0.071 J	1.3	0.54 J
Acetone	0.83	14	2.0	33
2-Propanol	0.83	5.4	2.0	13
Carbon Disulfide	0.83	0.086 J	2.6	0.27 J
Methylene Chloride	0.33	0.35	1.2	1.2
Hexane	0.17	0.14 J	0.58	0.48 J
2-Butanone (Methyl Ethyl Ketone)	0.83	2.6	2.4	7.6
Chloroform	0.17	0.044 J	0.81	0.21 J
Cyclohexane	0.17	0.034 J	0.57	0.12 J
Carbon Tetrachloride	0.17	0.062 J	1.0	0.39 J
Benzene	0.17	0.091 J	0.53	0.29 J
1,2-Dichloroethane	0.17	1.2	0.67	4.8
Heptane	0.17	0.27	0.68	1.1
Trichloroethene	0.17	0.54	0.89	2.9
4-Methyl-2-pentanone	0.17	0.087 J	0.68	0.36 J
Toluene	0.17	2.1	0.62	7.9
2-Hexanone	0.83	0.099 J	3.4	0.40 J
Ethyl Benzene	0.17	0.058 J	0.72	0.25 J
m,p-Xylene	0.17	0.17	0.72	0.75
o-Xylene	0.17	0.060 J	0.72	0.26 J
Styrene	0.17	0.041 J	0.71	0.18 J
Naphthalene	0.83	0.035 J	4.4	0.18 J

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Client Sample ID: B18IA-1D

Lab ID#: 1607235D-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071914**	**Date of Collection:**	**7/9/16 7:02:00 PM**
Dil. Factor:	**1.66**	**Date of Analysis:**	**7/19/16 05:09 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.59	0.82	2.9
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.83	0.96	1.7	2.0
Vinyl Chloride	0.17	Not Detected	0.42	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.83	Not Detected	3.2	Not Detected
Chloroethane	0.83	Not Detected	2.2	Not Detected
Freon 11	0.17	4.9	0.93	27
Ethanol	0.83	12	1.6	23
Freon 113	0.17	0.071 J	1.3	0.54 J
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	14	2.0	33
2-Propanol	0.83	5.4	2.0	13
Carbon Disulfide	0.83	0.086 J	2.6	0.27 J
3-Chloropropene	0.83	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.35	1.2	1.2
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Hexane	0.17	0.14 J	0.58	0.48 J
1,1-Dichloroethane	0.17	Not Detected	0.67	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.83	2.6	2.4	7.6
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Tetrahydrofuran	0.83	Not Detected	2.4	Not Detected
Chloroform	0.17	0.044 J	0.81	0.21 J
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Cyclohexane	0.17	0.034 J	0.57	0.12 J
Carbon Tetrachloride	0.17	0.062 J	1.0	0.39 J
2,2,4-Trimethylpentane	0.83	Not Detected	3.9	Not Detected
Benzene	0.17	0.091 J	0.53	0.29 J
1,2-Dichloroethane	0.17	1.2	0.67	4.8
Heptane	0.17	0.27	0.68	1.1
Trichloroethene	0.17	0.54	0.89	2.9
1,2-Dichloropropane	0.17	Not Detected	0.77	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.75	Not Detected
4-Methyl-2-pentanone	0.17	0.087 J	0.68	0.36 J
Toluene	0.17	2.1	0.62	7.9
trans-1,3-Dichloropropene	0.17	Not Detected	0.75	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
2-Hexanone	0.83	0.099 J	3.4	0.40 J

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Client Sample ID: B18IA-1D

Lab ID#: 1607235D-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071914**	**Date of Collection:**	**7/9/16 7:02:00 PM**
Dil. Factor:	**1.66**	**Date of Analysis:**	**7/19/16 05:09 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	0.76	Not Detected
Ethyl Benzene	0.17	0.058 J	0.72	0.25 J
m,p-Xylene	0.17	0.17	0.72	0.75
o-Xylene	0.17	0.060 J	0.72	0.26 J
Styrene	0.17	0.041 J	0.71	0.18 J
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.82	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.1	Not Detected
Propylbenzene	0.17	Not Detected	0.82	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.82	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	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	0.86	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected	6.2	Not Detected
Hexachlorobutadiene	0.83	Not Detected	8.8	Not Detected
Naphthalene	0.83	0.035 J	4.4	0.18 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	93	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071914.d
Lab Smp Id: 1607235D-06A
Inj Date : 19-JUL-2016 17:09
Operator : gh Inst ID: msd20.i
Smp Info : 250mL#21011
Misc Info : 5.5"Hg ->5.2psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
Dil Factor: 1.66000
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	90293	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	68184			47.94- 107.94	75.51
16.726	16.726 (1.000)	49	132100			102.10- 162.10	146.30
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	292429	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	47298			0.00- 45.77	16.17
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	284604	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	167523			26.51- 86.51	58.86
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	158585	6.05516	6.055	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	78578			32.47- 92.47	49.55
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.821	20.822 (1.142)	98	298887	5.29180	5.292	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	39693			0.00- 41.37	13.28

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

$ 146 Toluene-d8 (continued)
 20.821  20.822 (1.142)   100    191818                    36.07-  96.07    64.18
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    141689 4.63686    4.637  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    181418                   89.67- 149.67   128.04
 25.485  25.485 (1.073)   176    140066                   67.40- 127.40    98.85
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.696   4.672 (0.281)    85     27476 0.35829   0.5948  80.00- 120.00   100.00
  4.672   4.672 (0.279)    87      3945                     2.54-  62.54    14.36
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.625   6.577 (0.396)    50     14812 0.57683   0.9575  80.00- 120.00   100.00
  6.625   6.553 (0.396)    52      5388                     3.03-  63.03    36.38
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101    217247 2.93120    4.866  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103    140544                   34.91-  94.91    64.69
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.296  12.269 (0.735)    45     69779 7.27421   12.075  80.00- 120.00   100.00
 12.296  12.269 (0.735)    46     29100                   11.72-  71.72    41.70
 12.296  12.269 (0.735)    43     22875                    0.00-  52.99    32.78
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.763  12.763 (0.763)   151      2147 0.04291  0.07122  80.00- 120.00   100.00(a)
 12.763  12.763 (0.763)   153      1466                   34.49-  94.49    68.28
 12.763  12.763 (0.763)   101      2900                   96.39- 156.39   135.07
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58    116276 8.44764   14.023  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43    376983                  278.33- 338.33   324.21
-------------------------------------------------------------------------------
   56 Carbon Disulfide                              CAS #: 75-15-0
 13.121  13.121 (0.784)    76      4034 0.05185  0.08607  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 13.560  13.533 (0.811)    45    138850 3.26172    5.414  80.00- 120.00   100.00
 13.560  13.533 (0.811)    43     60297                    0.00-  52.04    43.43
 13.560  13.533 (0.811)    59      6202                    0.00-  34.17     4.47
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 14.027  14.027 (0.839)    84      5902 0.21030   0.3491  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49      8754                   97.79- 157.79   148.32
 14.027  14.027 (0.839)    51      2952                    9.84-  69.84    50.02
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	3578	0.08186	0.1359	80.00- 120.00	100.00(a)
14.933	14.878 (0.893)	43	12330			33.20- 93.20	344.61
14.878	14.878 (0.889)	86	673			0.00- 48.21	18.81
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	21616	1.54813	2.570	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	96368			345.54- 405.54	445.82
16.344	16.344 (0.977)	57	7440			0.00- 59.64	34.42
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	1594	0.02620	0.04350	80.00- 120.00	100.00(a)
16.819	16.819 (1.006)	85	961			35.08- 95.08	60.29
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	863	0.02062	0.03423	80.00- 120.00	100.00(a)
17.035	17.035 (1.018)	56	2149			82.51- 142.51	249.02
17.035	17.035 (1.018)	41	1533			30.91- 90.91	177.64
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	1980	0.03763	0.06247	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	1599			75.13- 135.13	80.76
116 Benzene					CAS #: 71-43-2		
17.621	17.621 (0.966)	78	3888	0.05482	0.09100	80.00- 120.00	100.00(a)
17.621	17.621 (0.966)	77	683			0.00- 54.04	17.57
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	22308	0.71528	1.187	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	7693			2.26- 62.26	34.49
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	3157	0.16324	0.2710	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	470			9.17- 69.17	14.89
17.847	17.847 (0.979)	43	8604			158.08- 218.08	272.54
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	10599	0.32741	0.5435	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	11948			67.33- 127.33	112.73
18.610	18.610 (1.021)	97	7670			32.56- 92.56	72.37
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.572	20.572 (1.128)	43	2536	0.05230	0.08681	80.00- 120.00	100.00(a)
20.572	20.572 (1.128)	58	616			9.48- 69.48	24.29
0.000	20.572 (0.000)	85	0			0.00- 47.76	0.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	96116	1.26406	2.098	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	55788			30.04- 90.04	58.04
158 2-Hexanone					CAS #: 591-78-6		
22.406	22.406 (0.943)	58	1695	0.05953	0.09881	80.00- 120.00	100.00(a)
22.406	22.406 (0.943)	43	3633			153.17- 213.17	214.34
22.377	22.406 (0.942)	100	345			0.00- 52.35	20.35
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	1158	0.03474	0.05767	80.00- 120.00	100.00(a)
23.906	23.906 (1.006)	91	4459			282.65- 342.65	385.06
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	3712	0.10394	0.1725	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	8651			170.44- 230.44	233.05
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	1227	0.03632	0.06029	80.00- 120.00	100.00(a)
24.710	24.710 (1.040)	91	3240			177.28- 237.28	264.06
172 Styrene					CAS #: 100-42-5		
24.731	24.751 (1.041)	104	1194	0.02480	0.04116	80.00- 120.00	100.00(a)
24.751	24.731 (1.042)	78	1278			22.29- 82.29	107.04
228 Naphthalene					CAS #: 91-20-3		
29.756	29.772 (1.252)	128	1359	0.02102	0.03489	80.00- 120.00	100.00(a)
29.741	29.772 (1.252)	127	198			0.00- 42.99	14.57

QC Flag Legend

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

Report Date: 27-Jul-2016 15:41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071914.d
Lab Smp Id: 1607235D-06A
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.5"Hg ->5.2psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	90293	-22.08
123 1,4-Difluorobenze	406395	243837	568953	292429	-28.04
163 Chlorobenzene-d5	363239	217943	508535	284604	-21.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:41

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-06A
Level: LOW Operator: gh
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 5.5"Hg ->5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	6.055	121.10	70-130
$ 146 Toluene-d8	5.000	5.292	105.84	70-130
$ 177 4-Bromofluorobenze	5.000	4.637	92.74	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

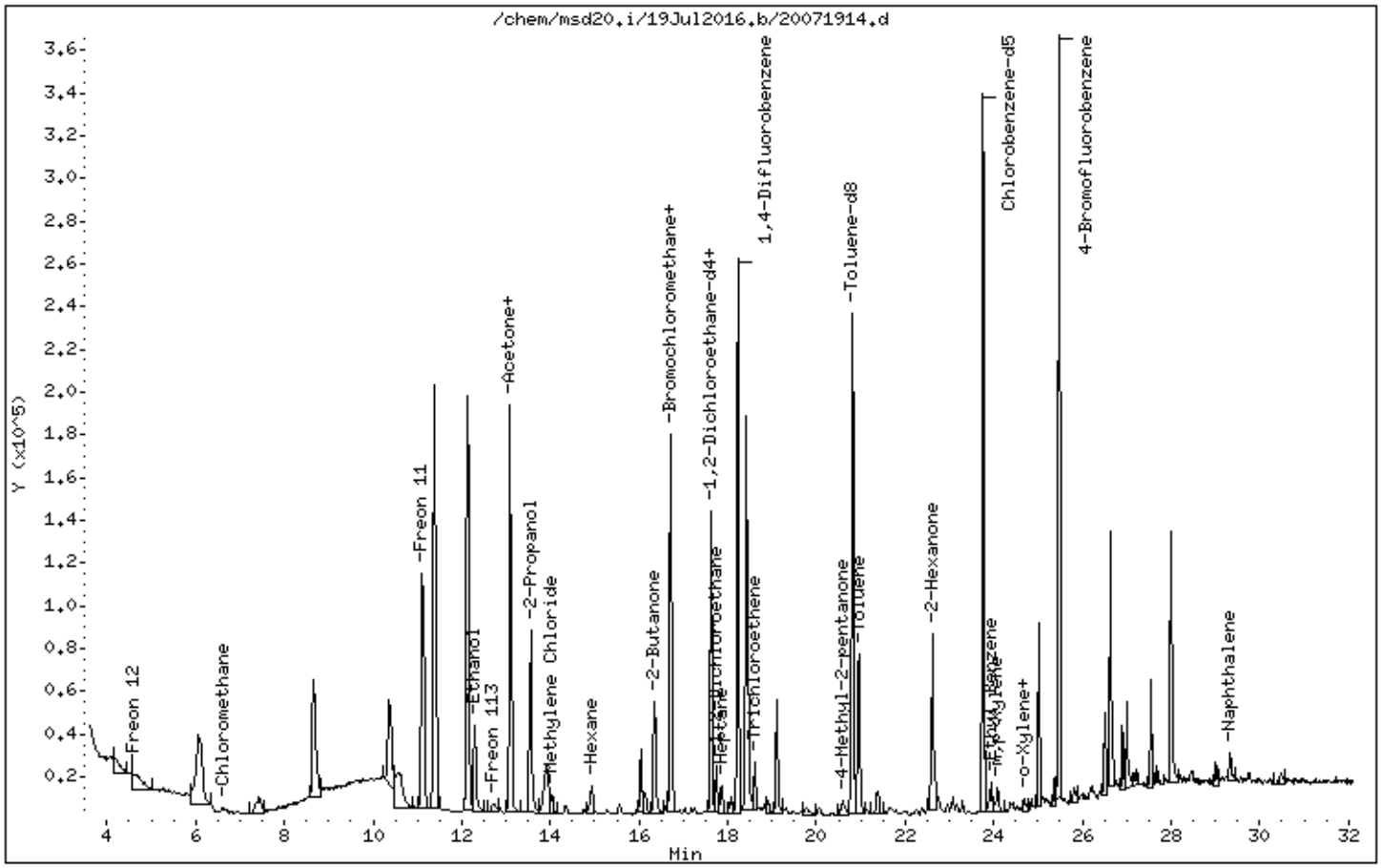
Instrument: msd20.i

Sample Info: 250mL#21011

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

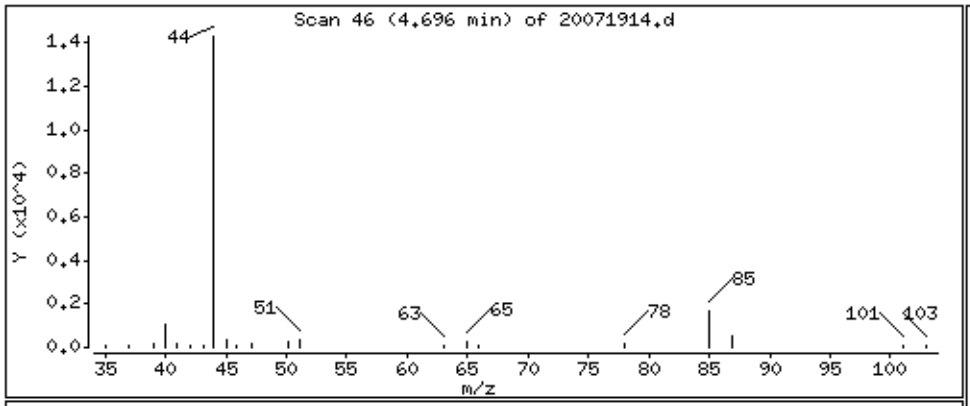
Operator: gh

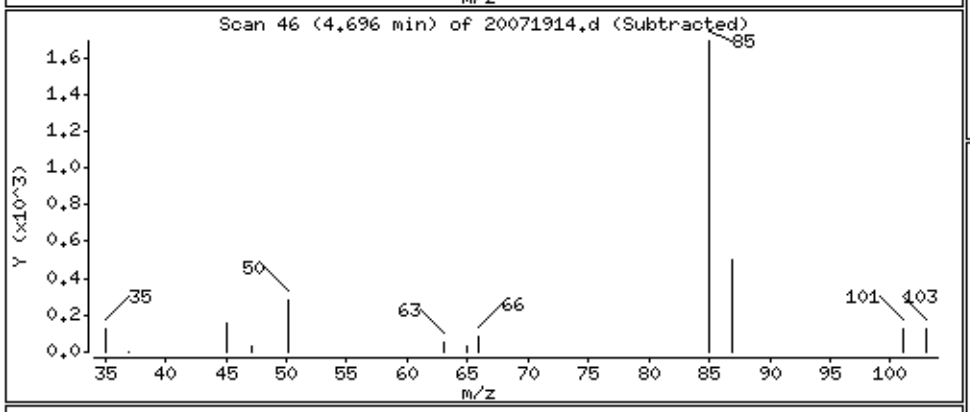
Column phase: RTX-624

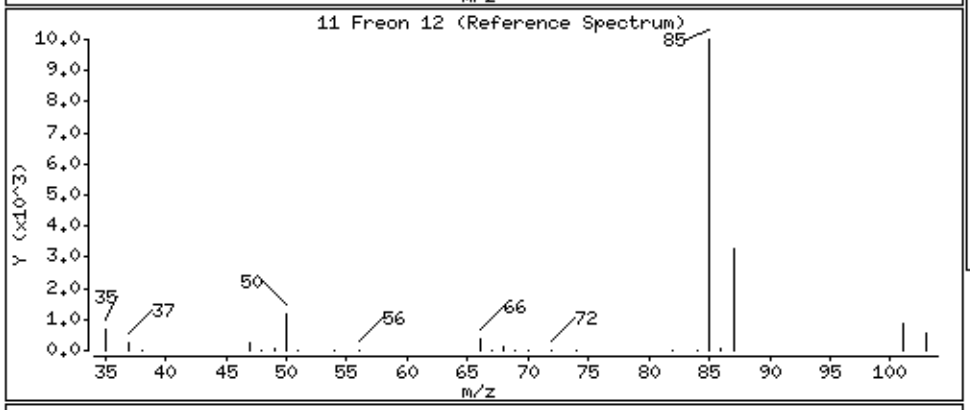
Column diameter: 0.32

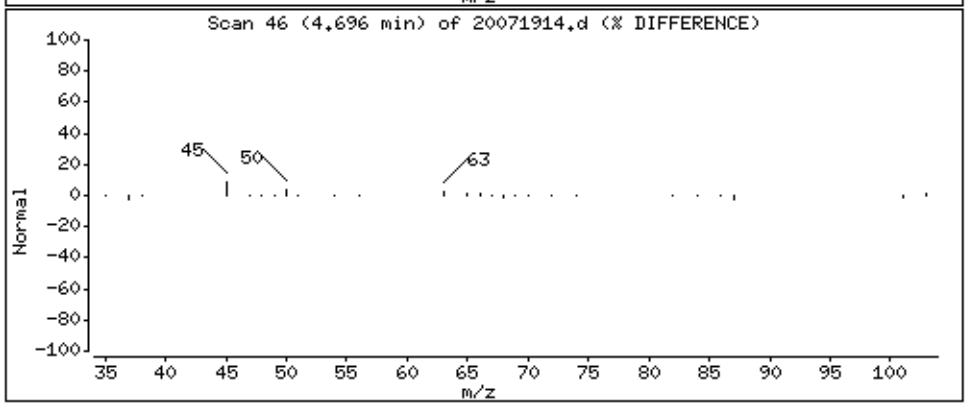
11 Freon 12

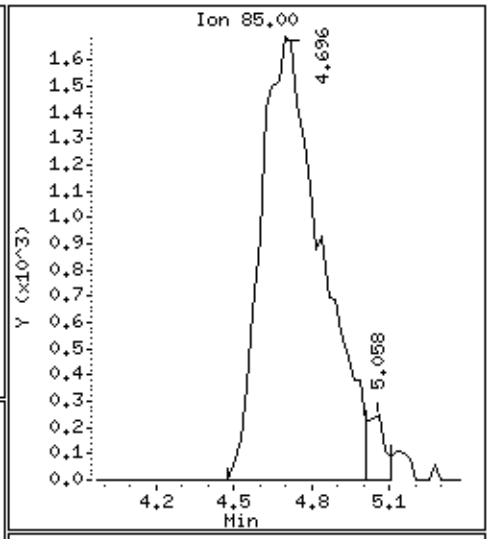
Concentration: 0.5948 PPBV

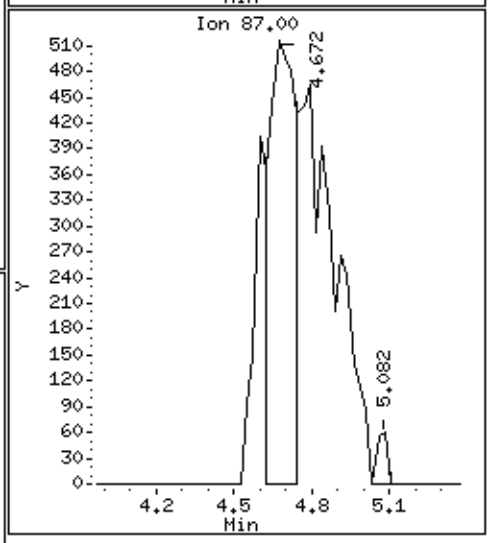












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

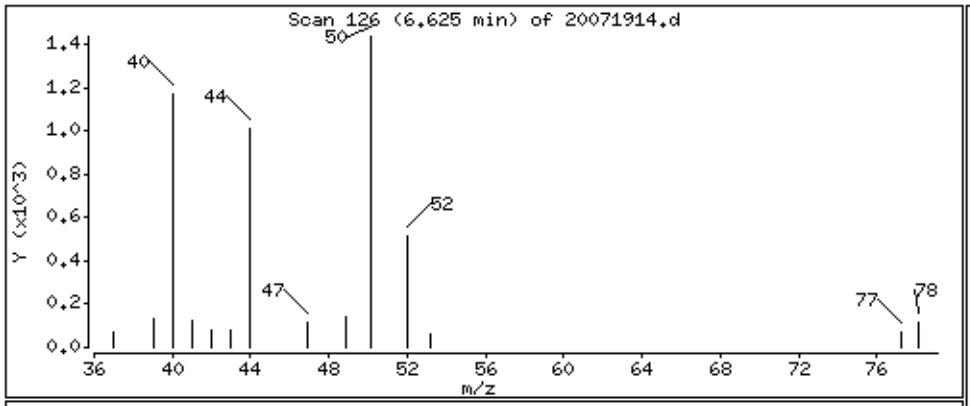
Operator: gh

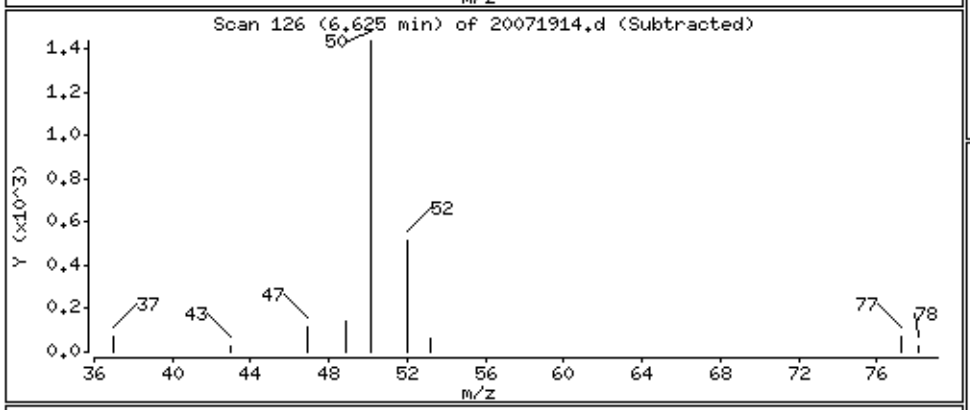
Column phase: RTX-624

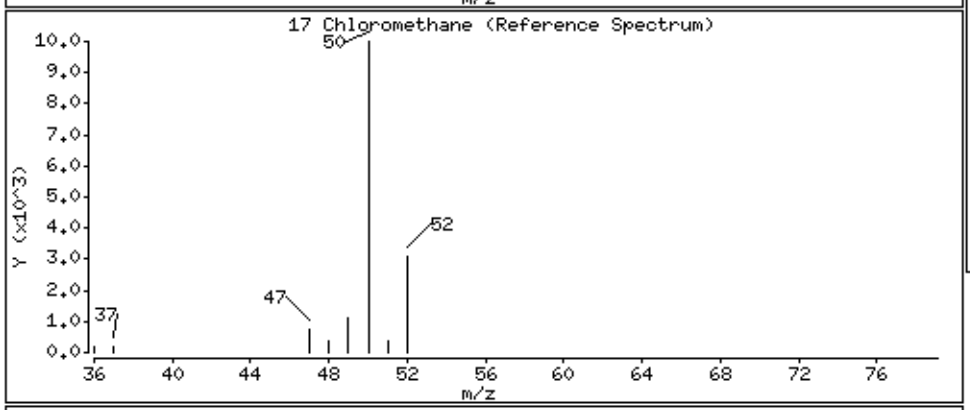
Column diameter: 0.32

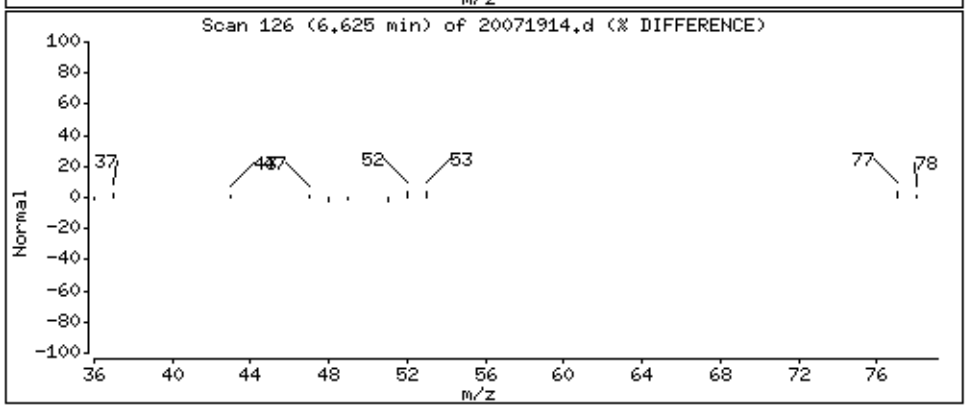
17 Chloromethane

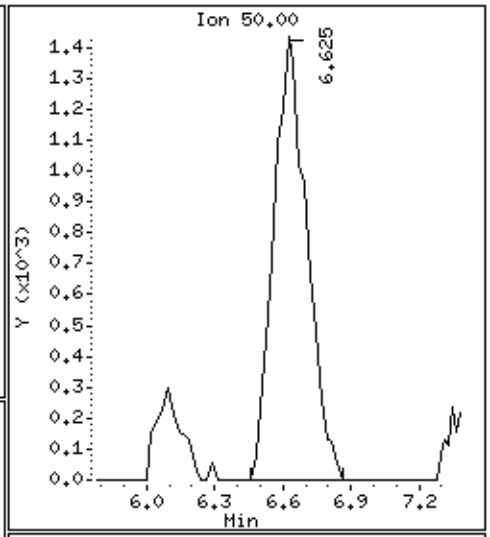
Concentration: 0.9575 PPBV

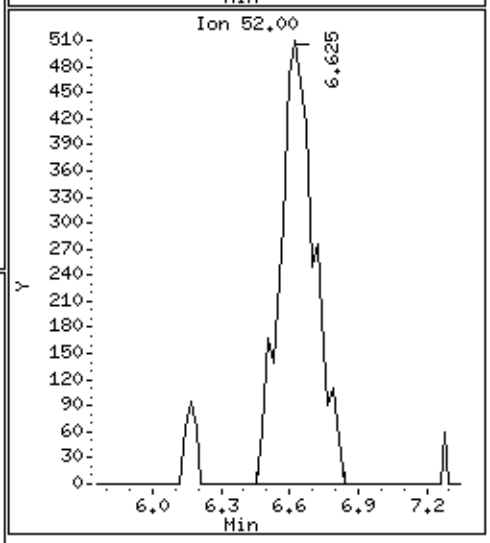












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

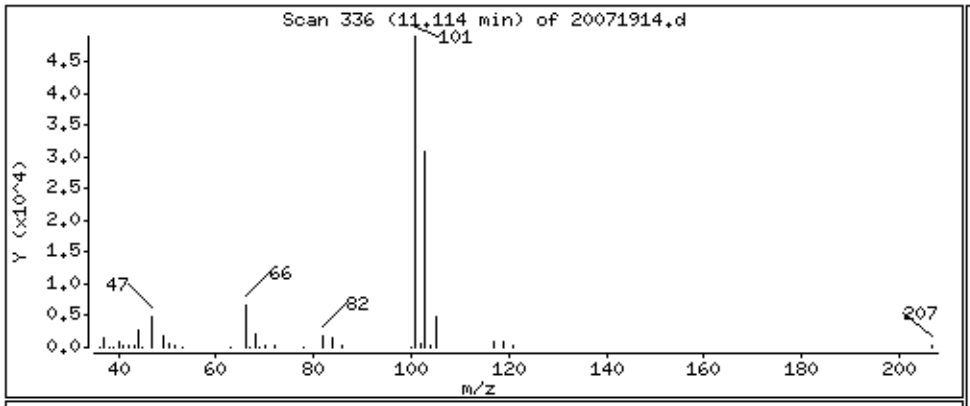
Operator: gh

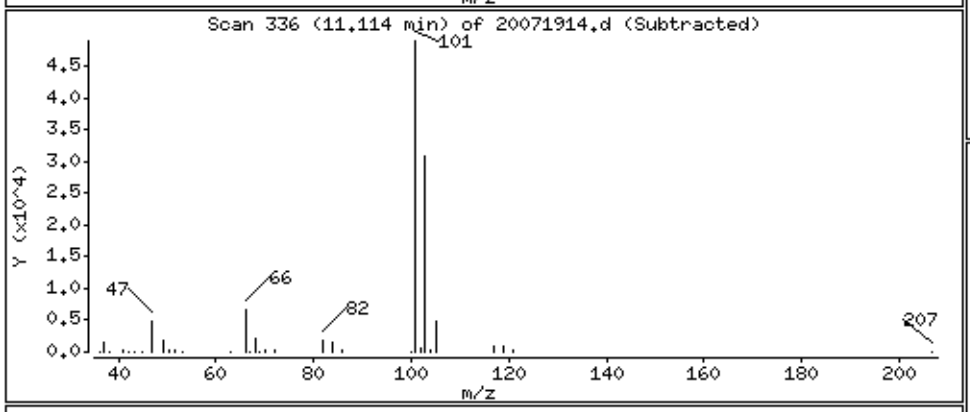
Column phase: RTX-624

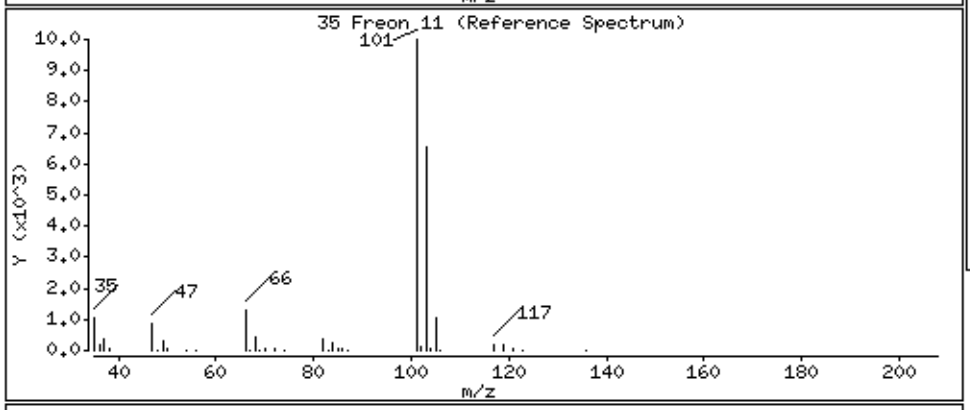
Column diameter: 0.32

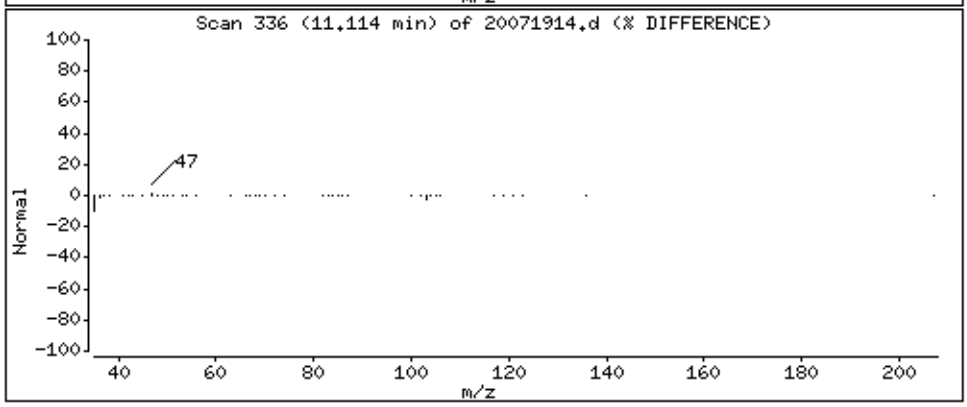
35 Freon 11

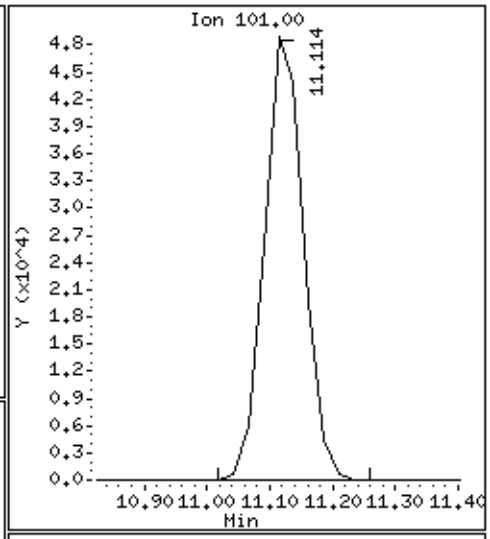
Concentration: 4.866 PPBV

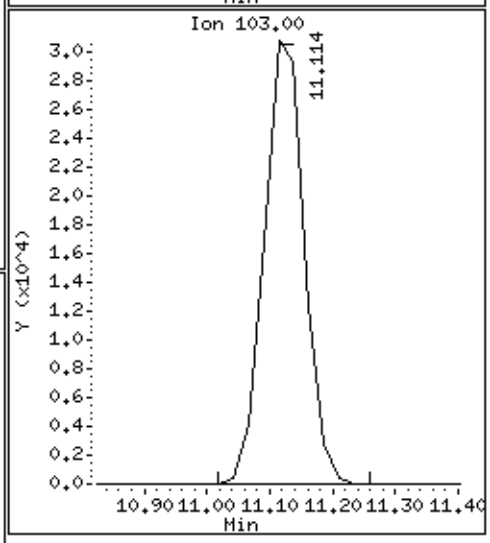












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

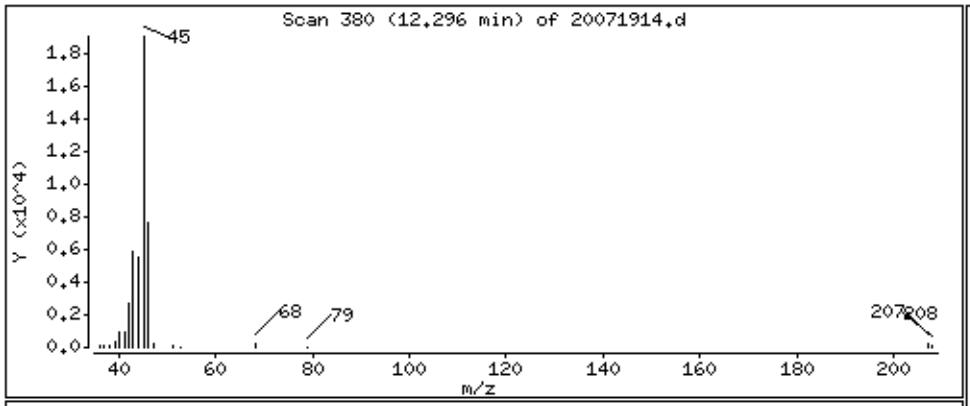
Operator: gh

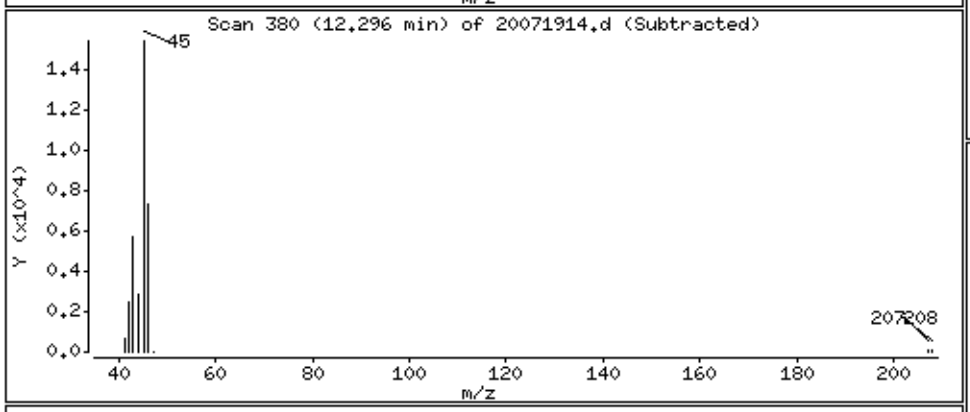
Column phase: RTX-624

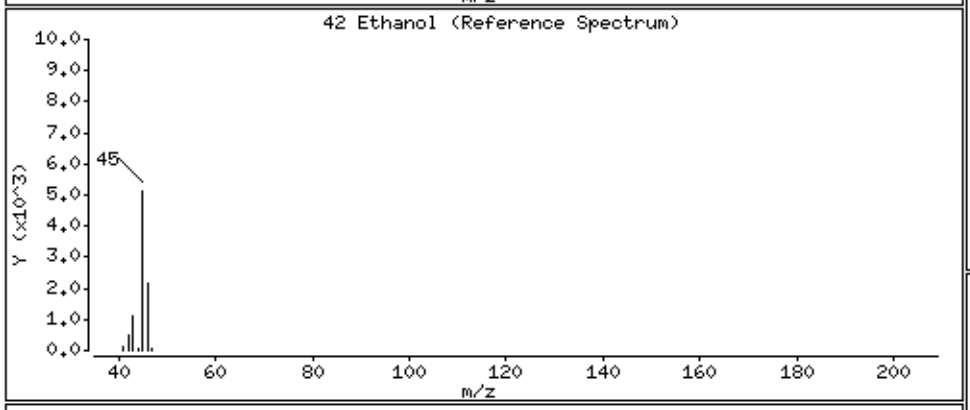
Column diameter: 0.32

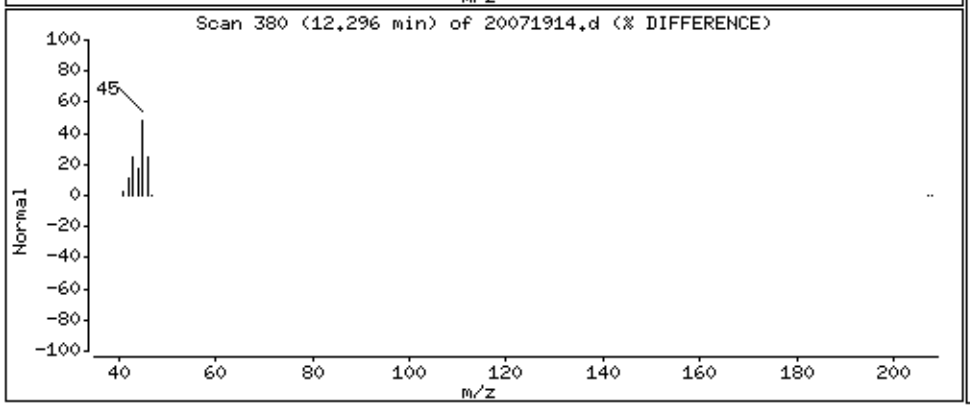
42 Ethanol

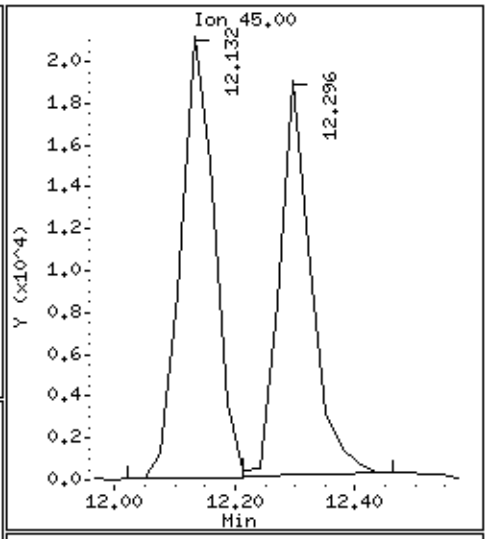
Concentration: 12.075 PPBV

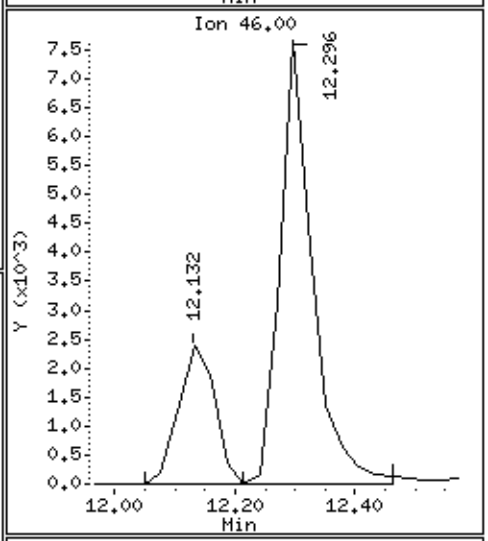


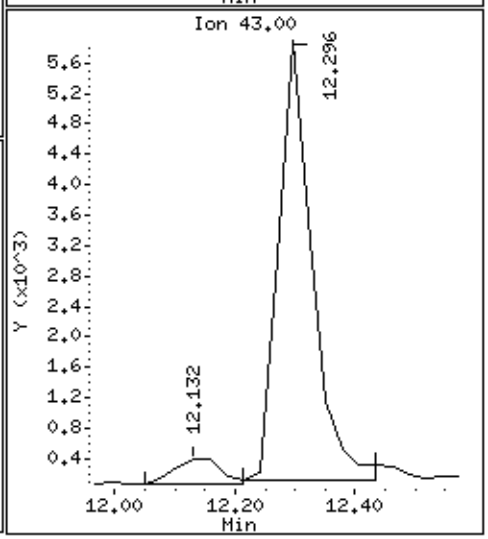












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

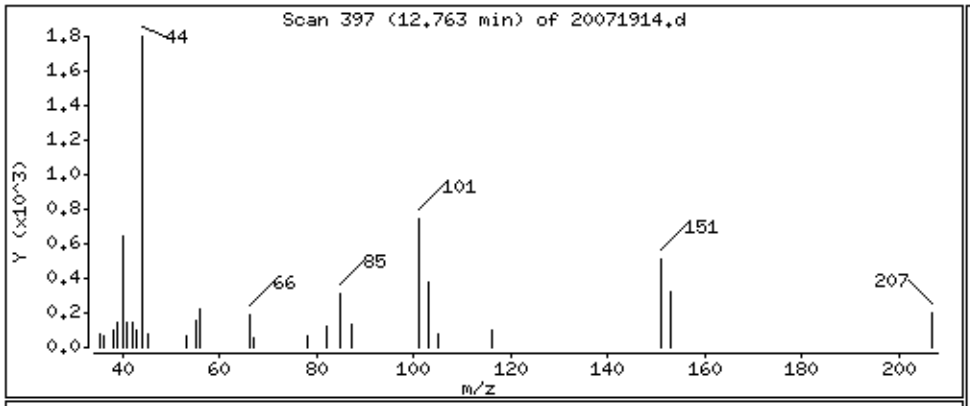
Operator: gh

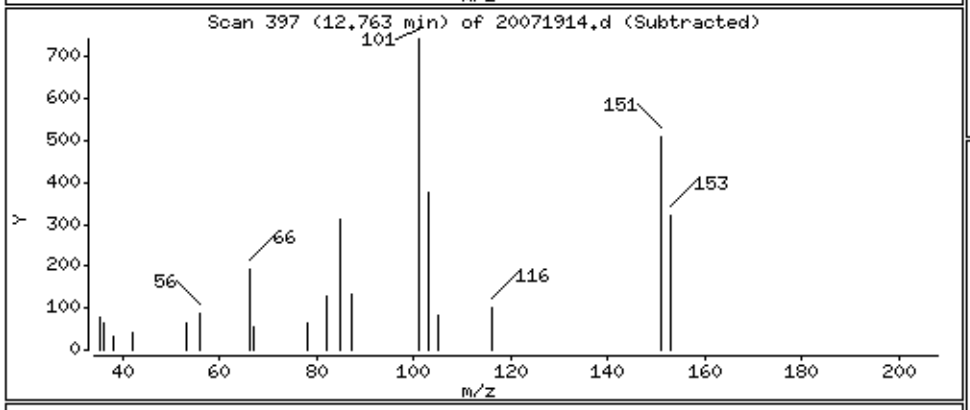
Column phase: RTX-624

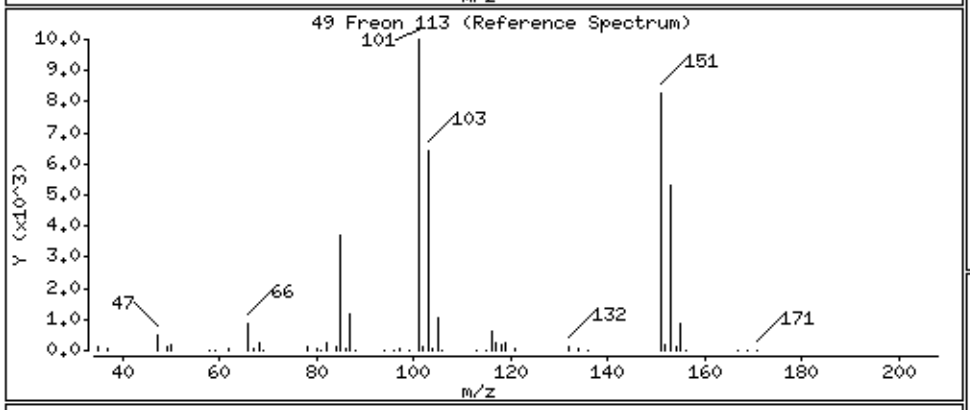
Column diameter: 0.32

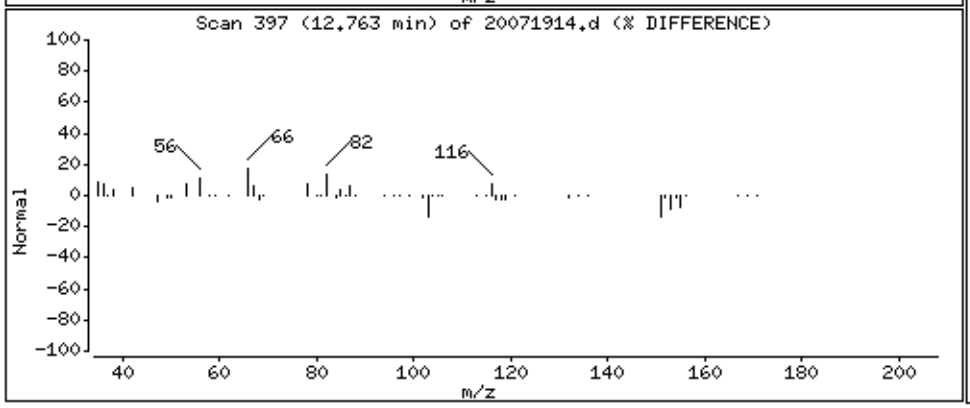
49 Freon 113

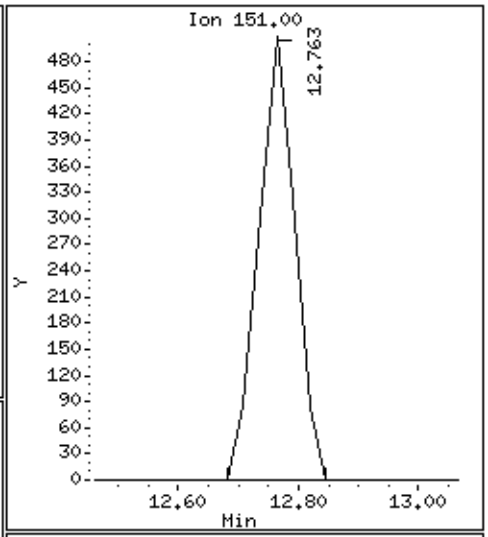
Concentration: 0.07122 PPBV

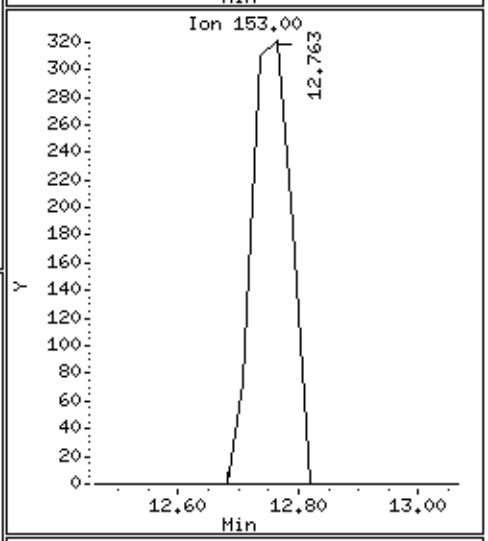


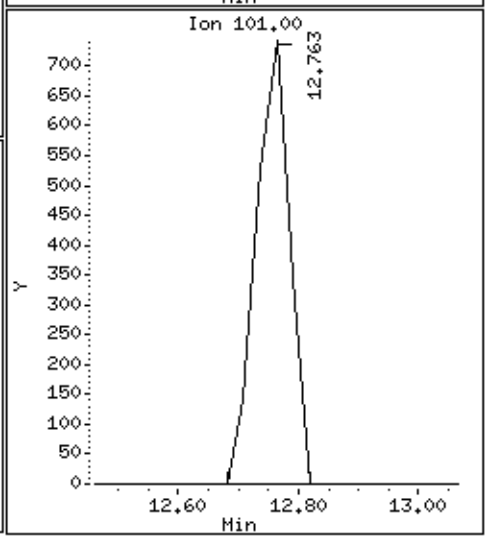












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

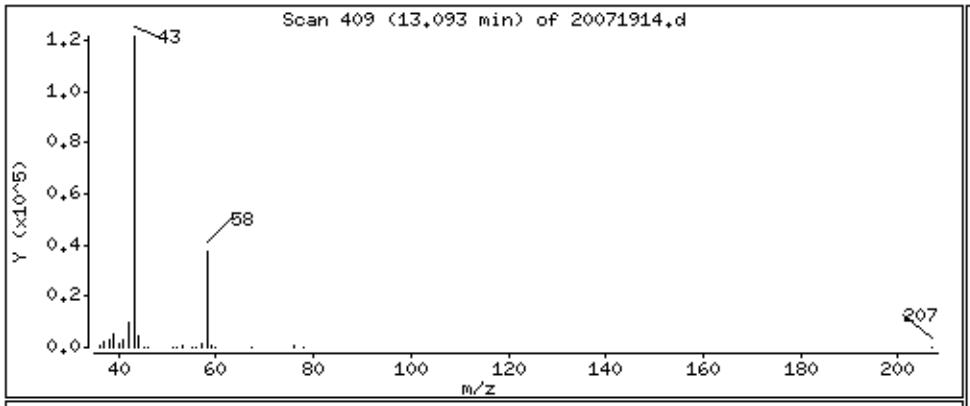
Operator: gh

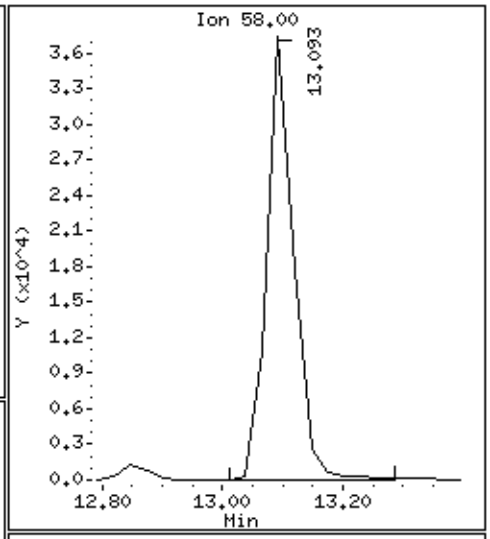
Column phase: RTX-624

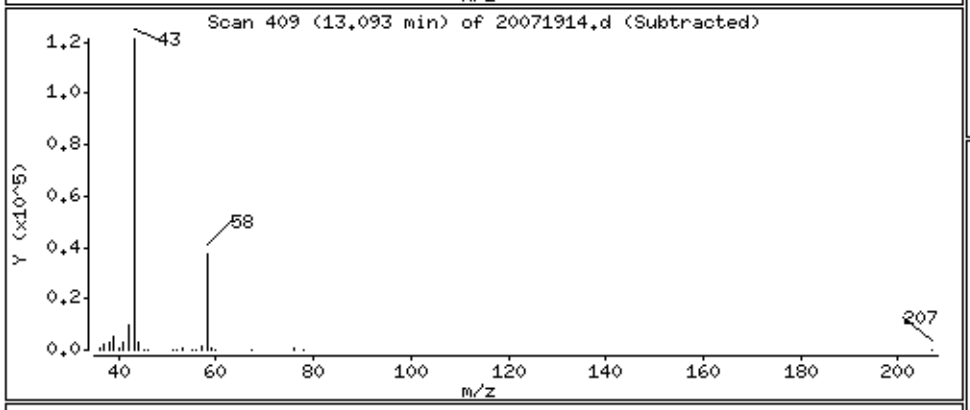
Column diameter: 0.32

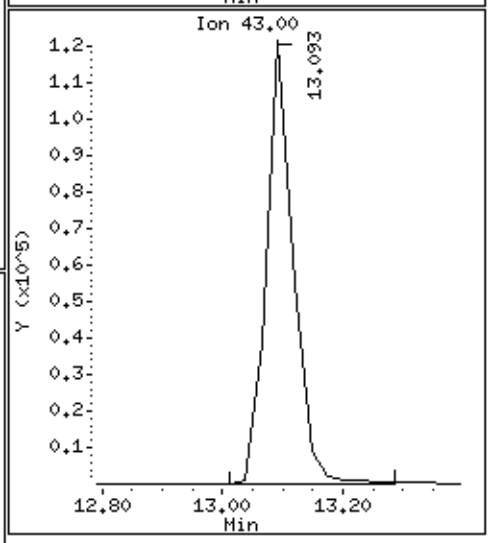
52 Acetone

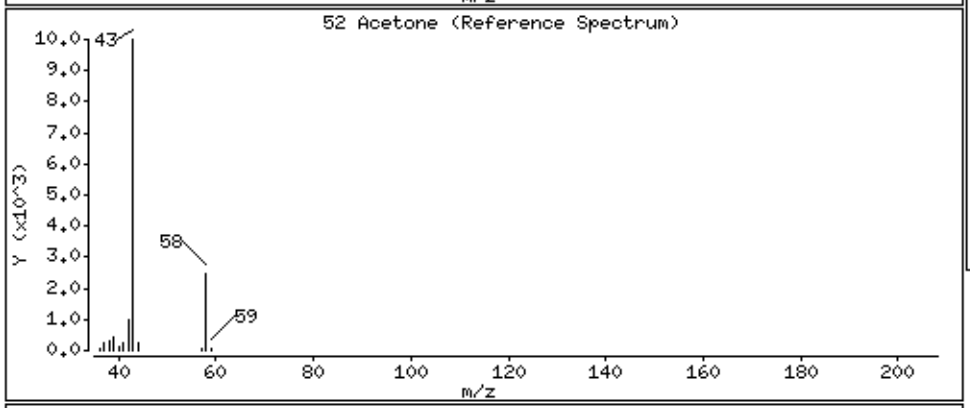
Concentration: 14.023 PPBV

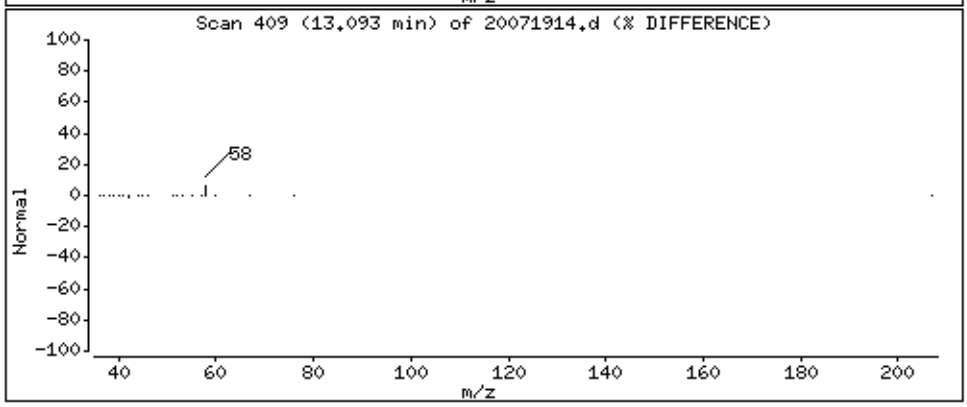












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

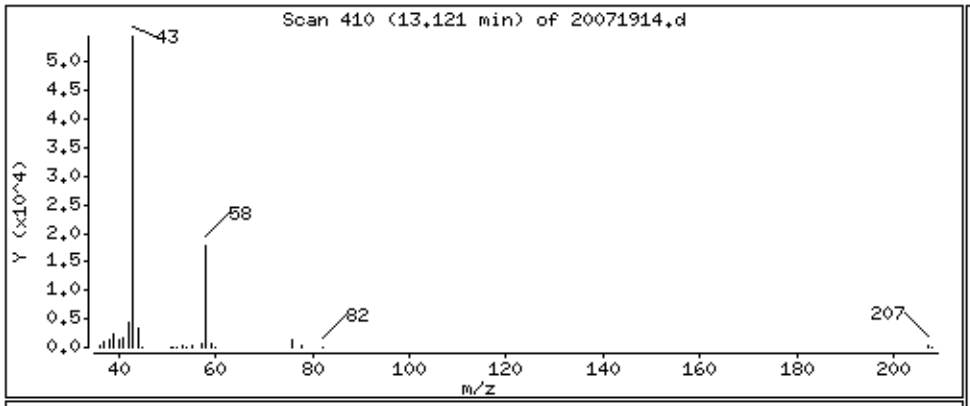
Operator: gh

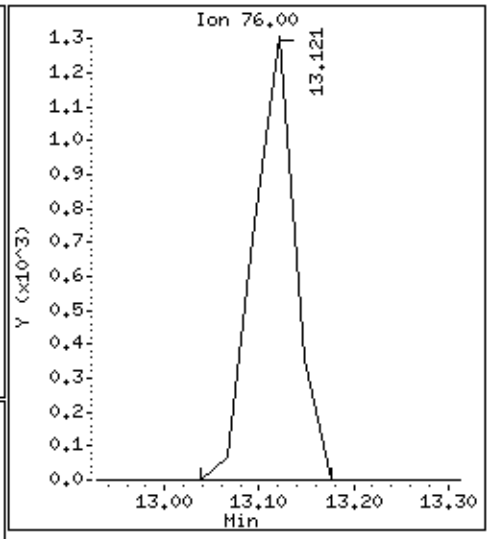
Column phase: RTX-624

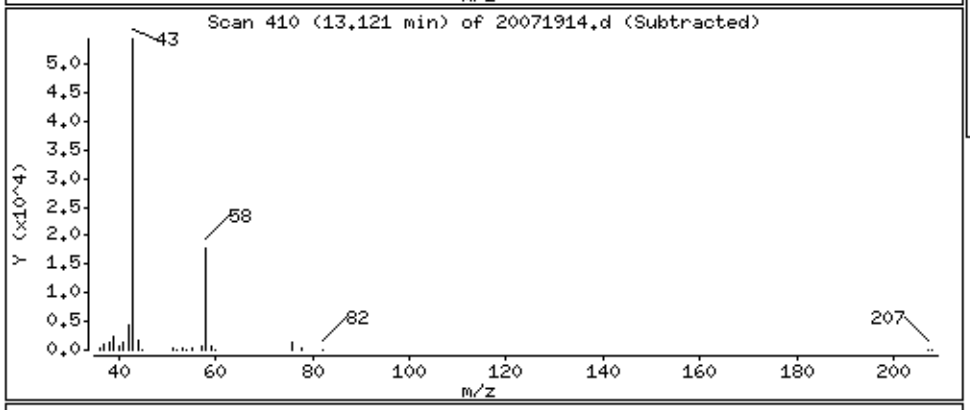
Column diameter: 0.32

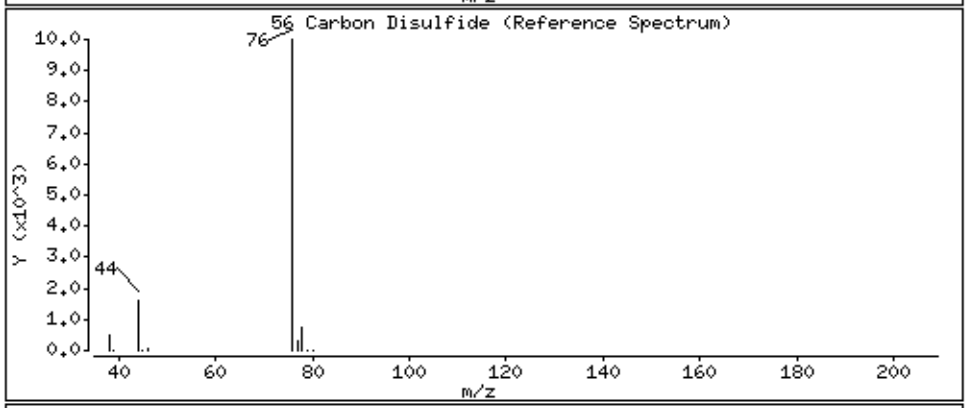
56 Carbon Disulfide

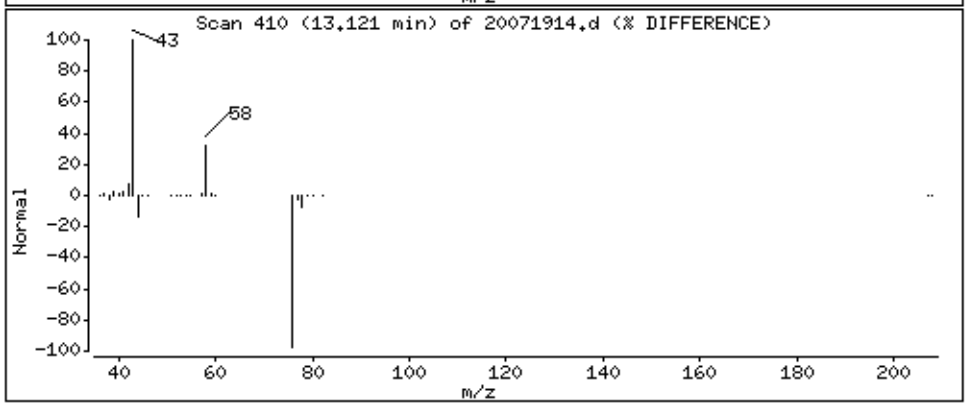
Concentration: 0.08607 PPBV











Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

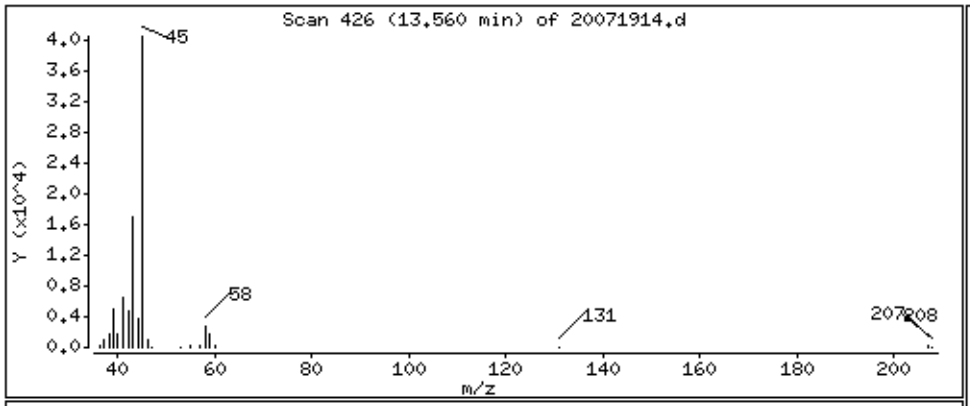
Operator: gh

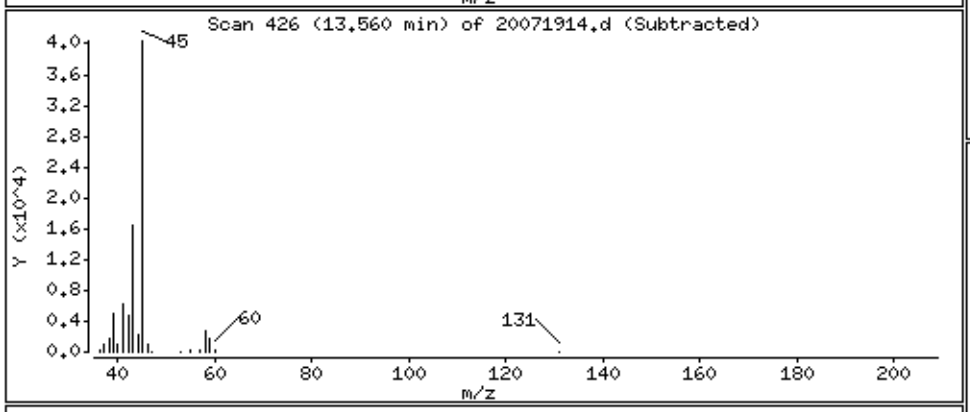
Column phase: RTX-624

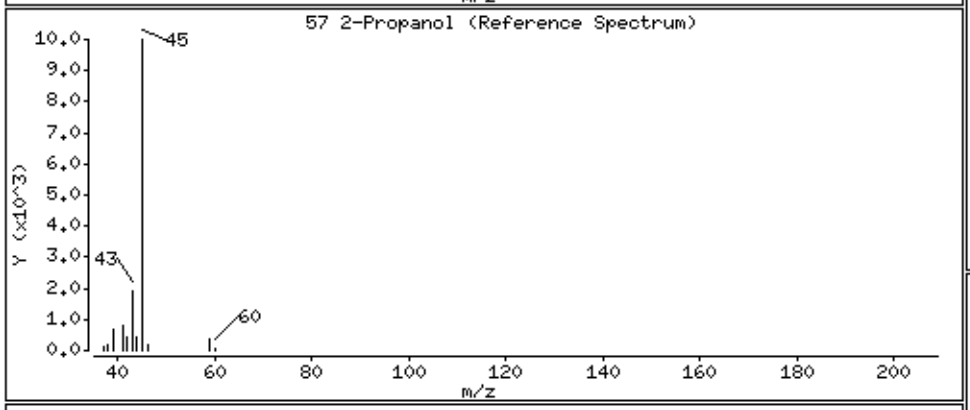
Column diameter: 0.32

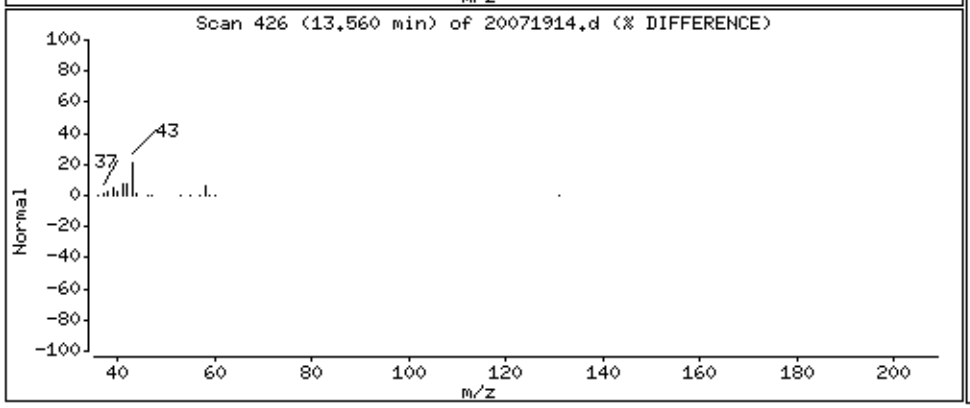
57 2-Propanol

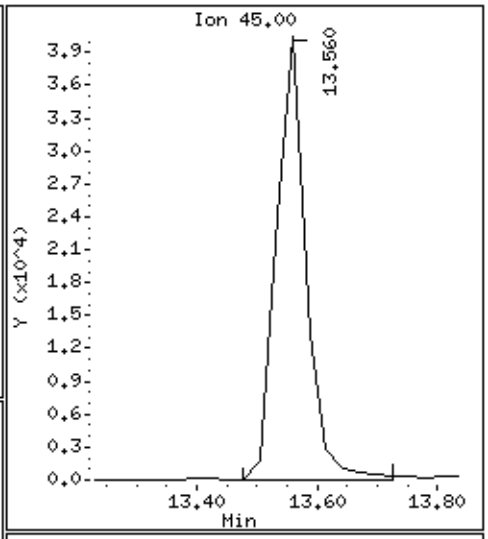
Concentration: 5.414 PPBV

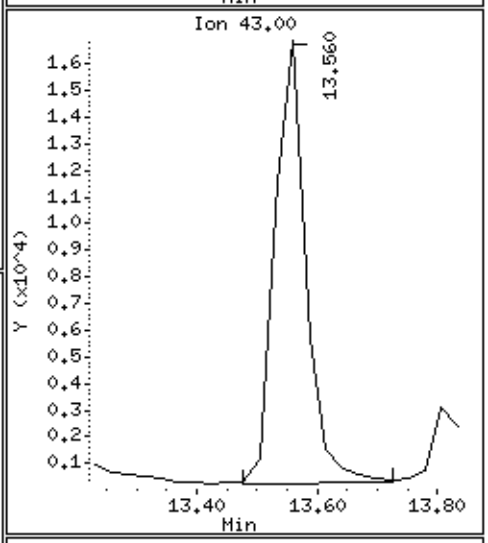


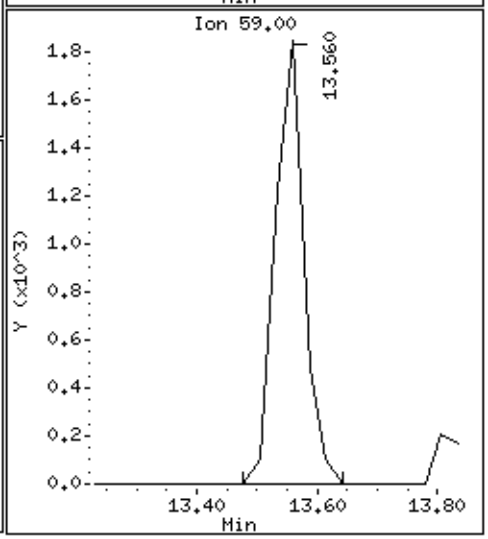












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

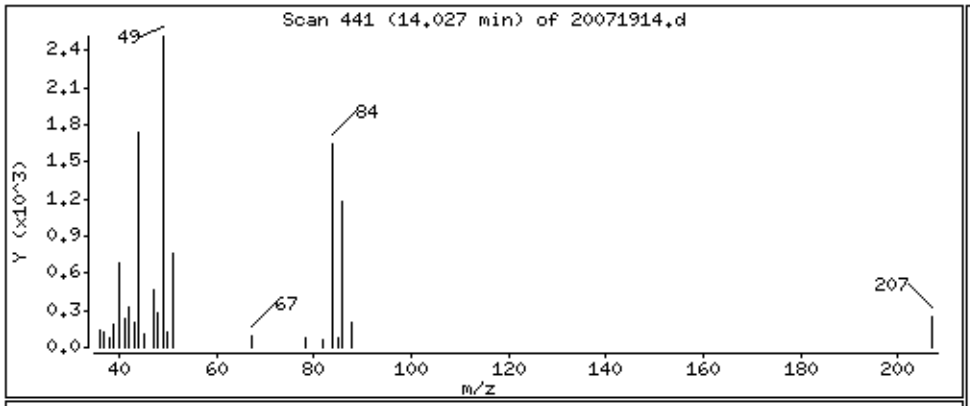
Operator: gh

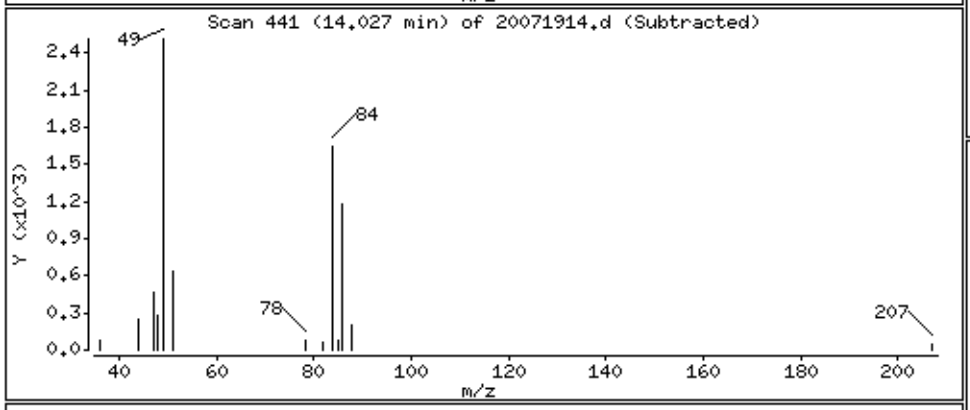
Column phase: RTX-624

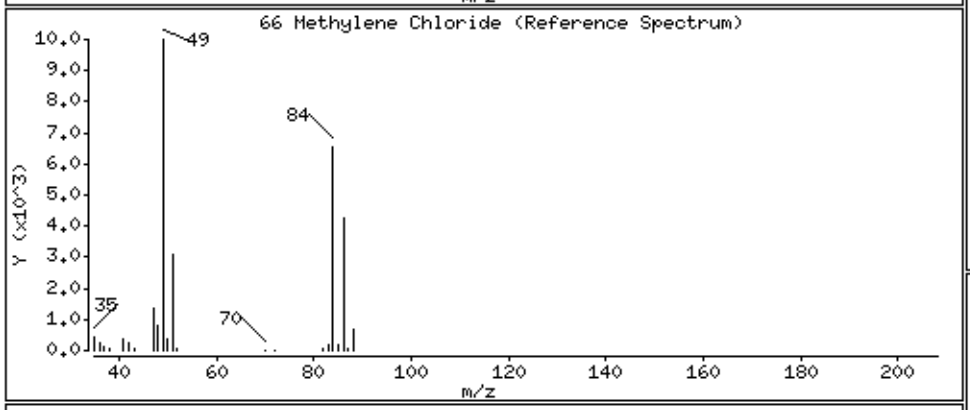
Column diameter: 0.32

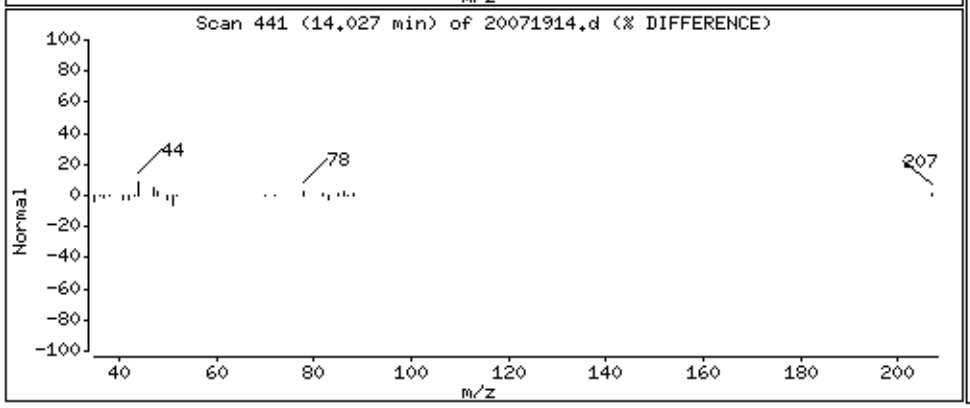
66 Methylene Chloride

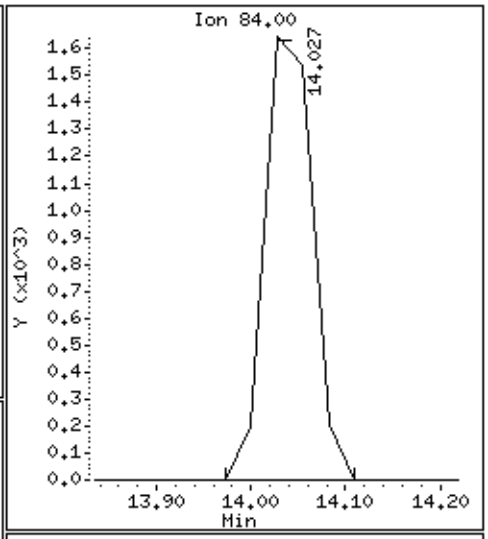
Concentration: 0.3491 PPBV

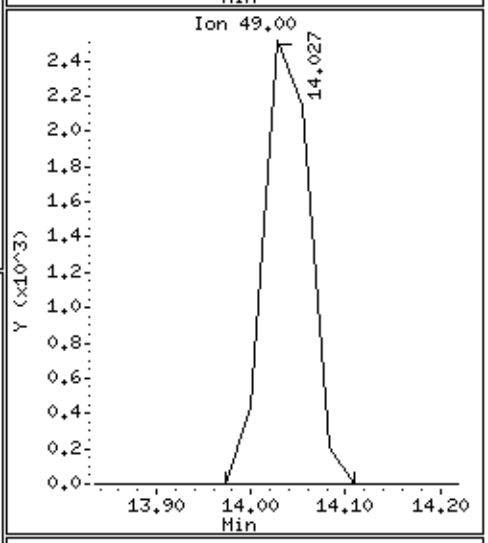


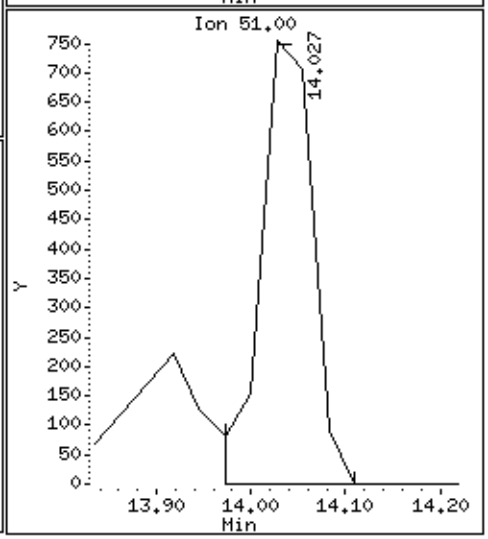












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

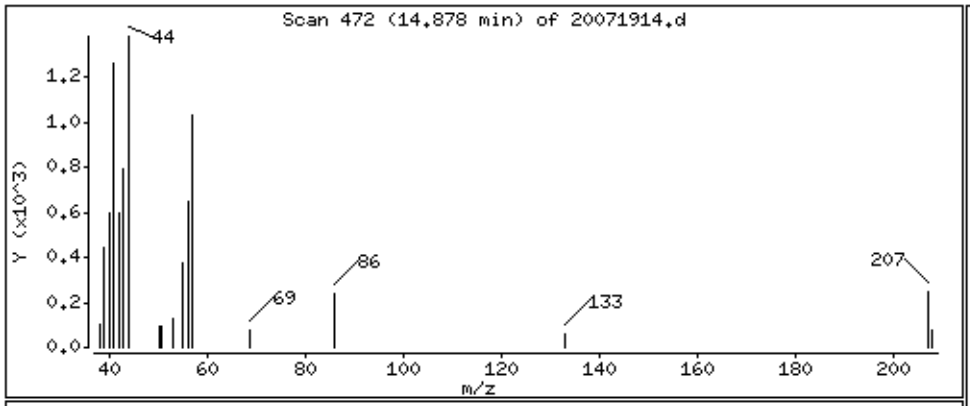
Operator: gh

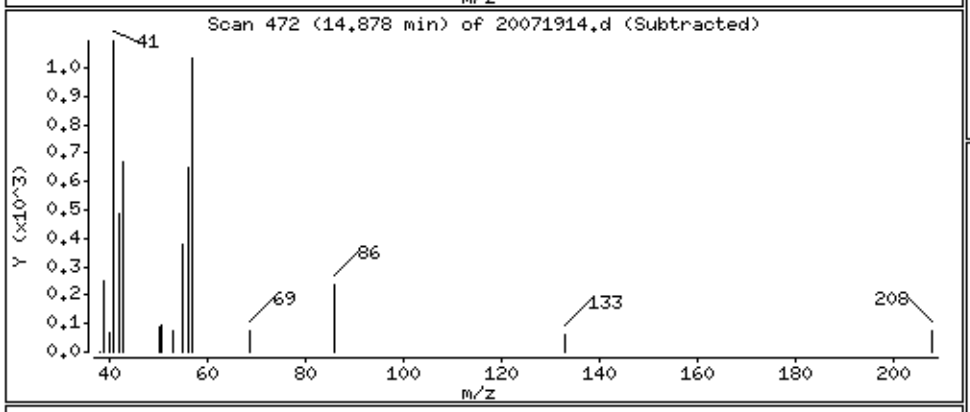
Column phase: RTX-624

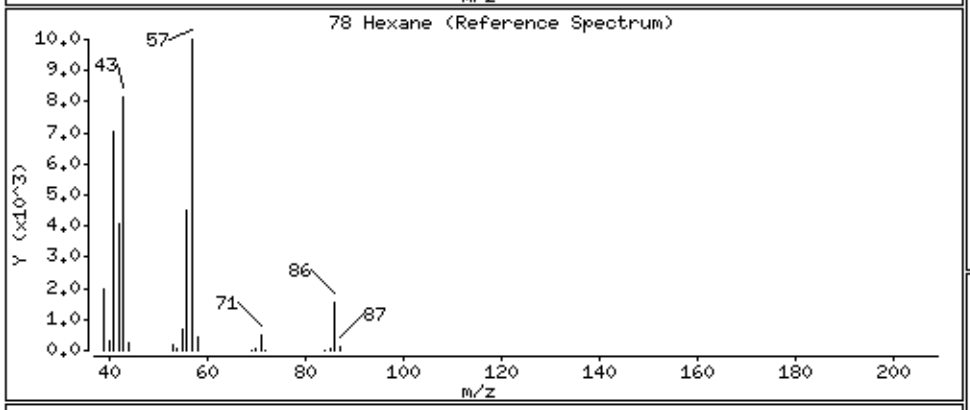
Column diameter: 0.32

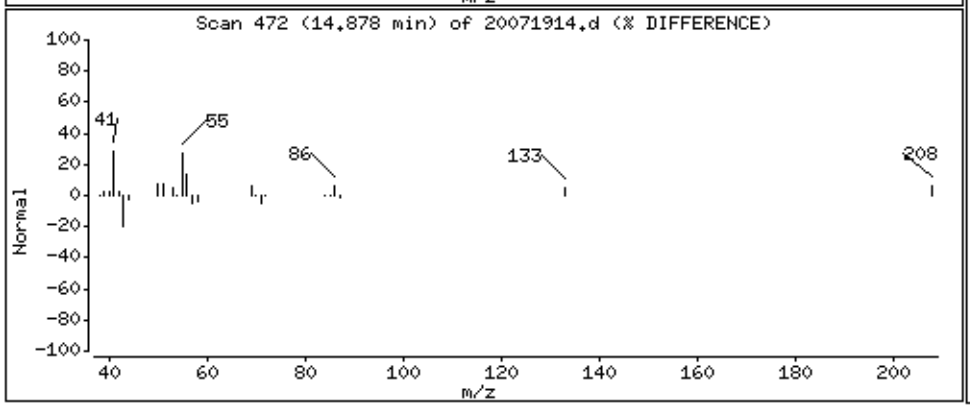
78 Hexane

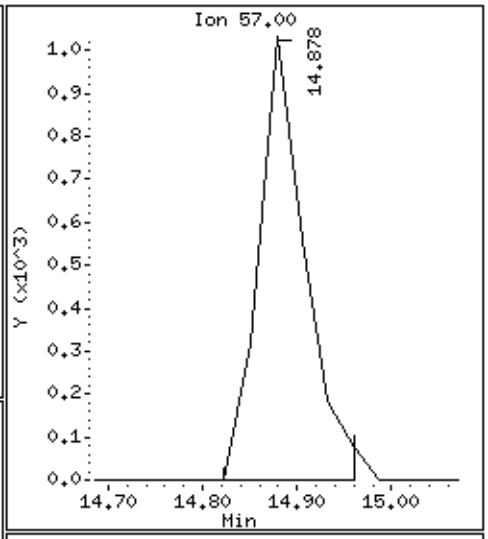
Concentration: 0.1359 PPBV

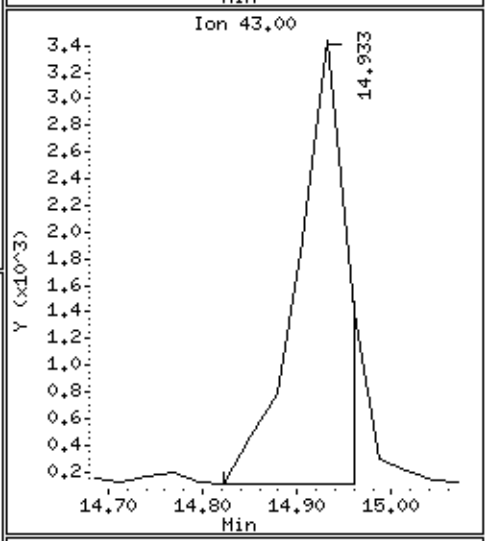


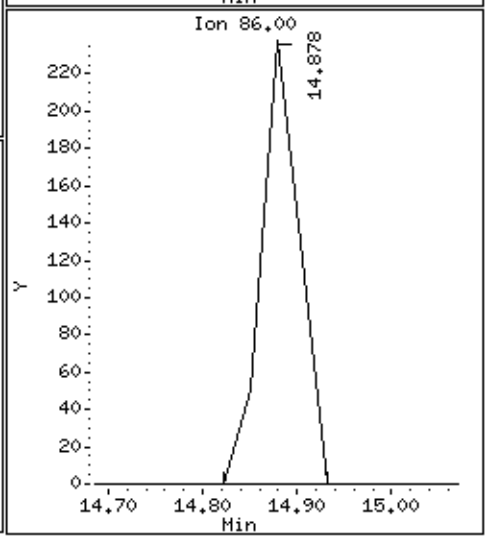












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

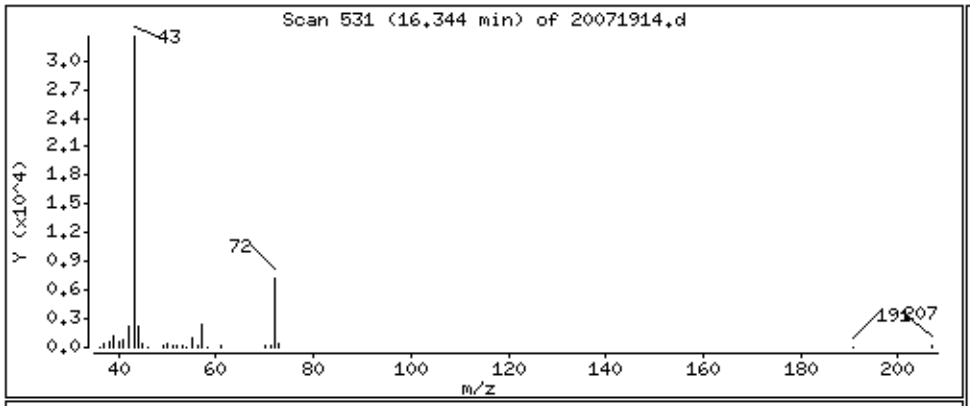
Operator: gh

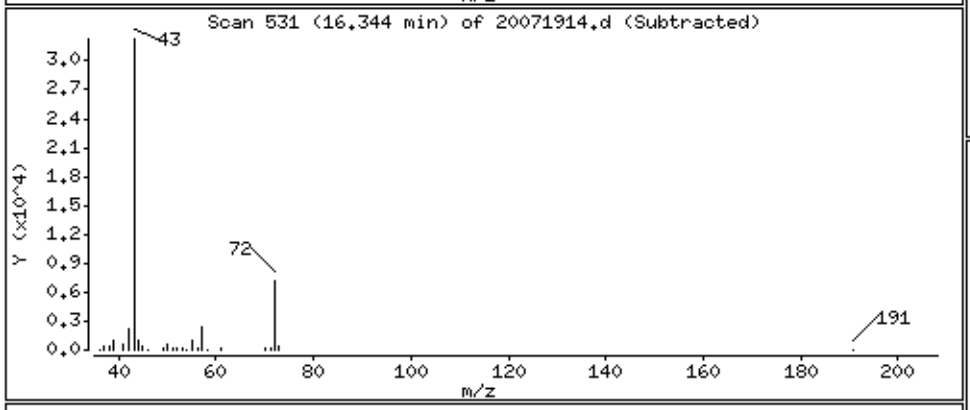
Column phase: RTX-624

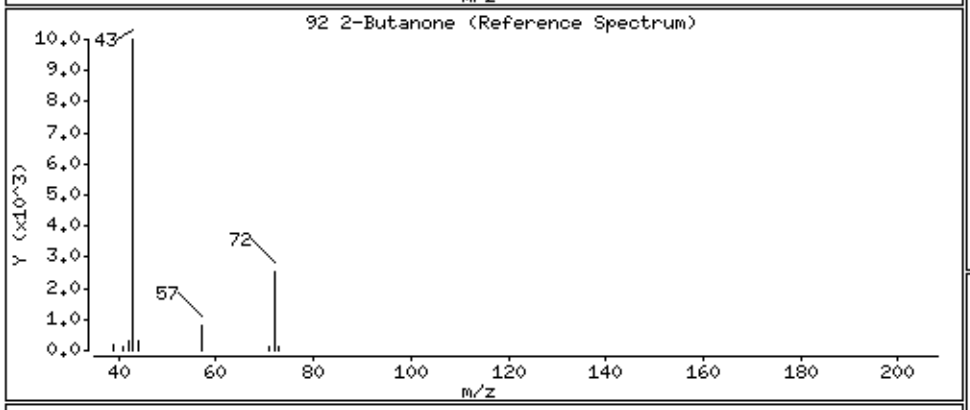
Column diameter: 0.32

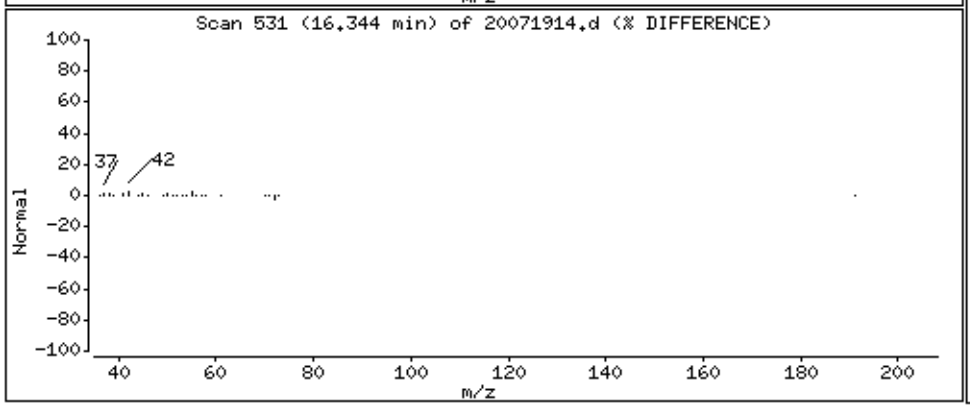
92 2-Butanone

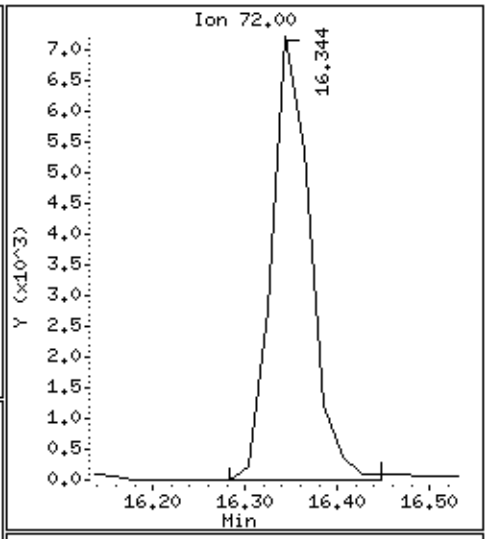
Concentration: 2.570 PPBV

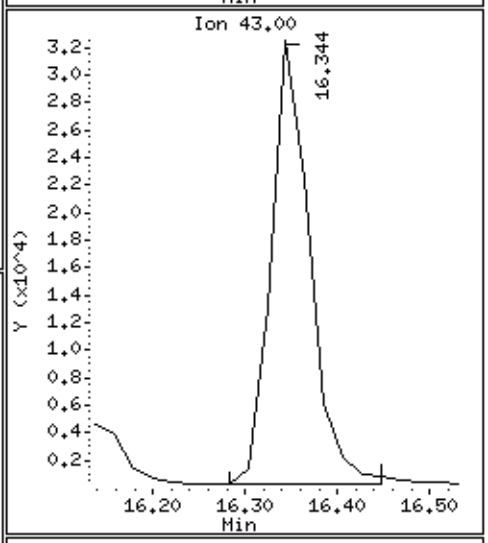


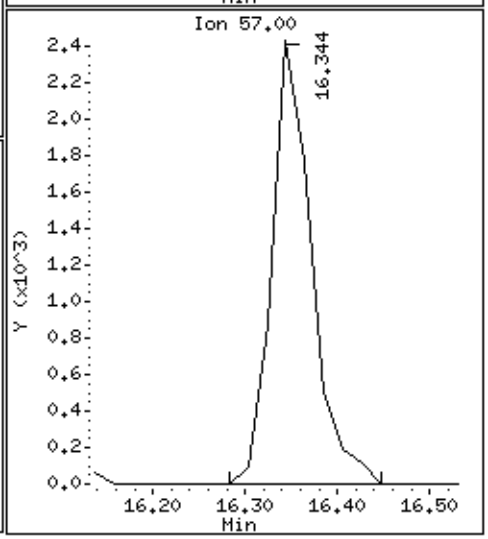












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

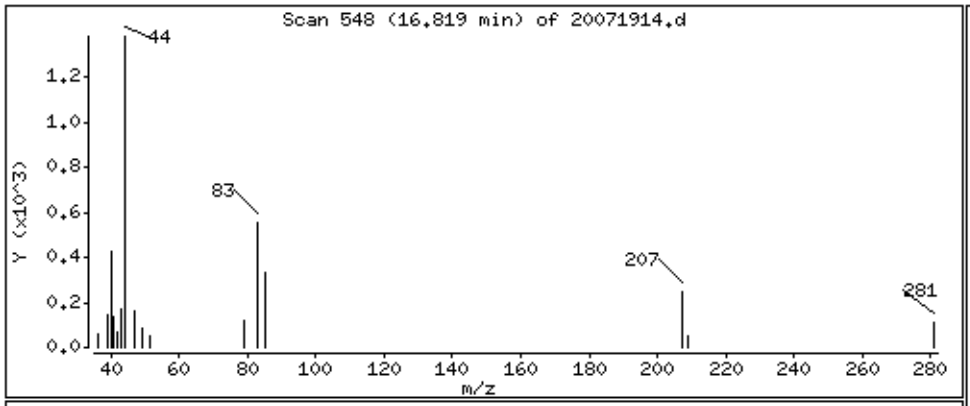
Operator: gh

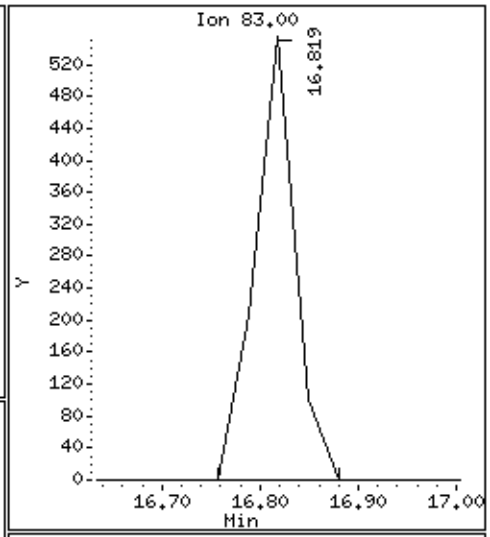
Column phase: RTX-624

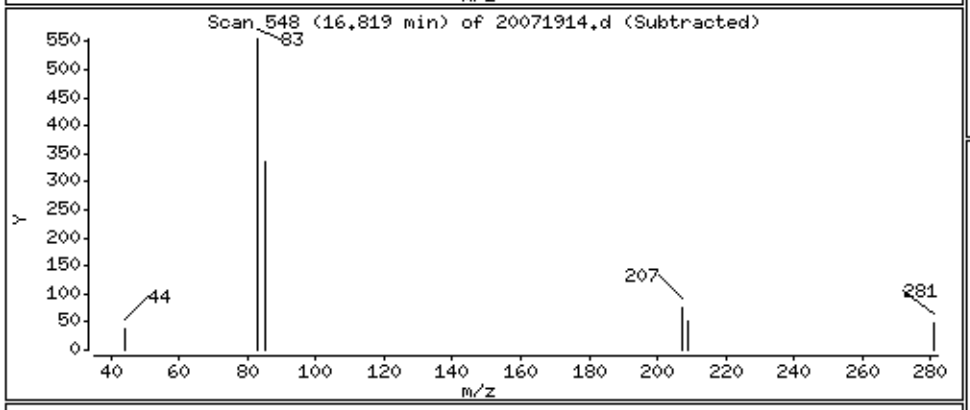
Column diameter: 0.32

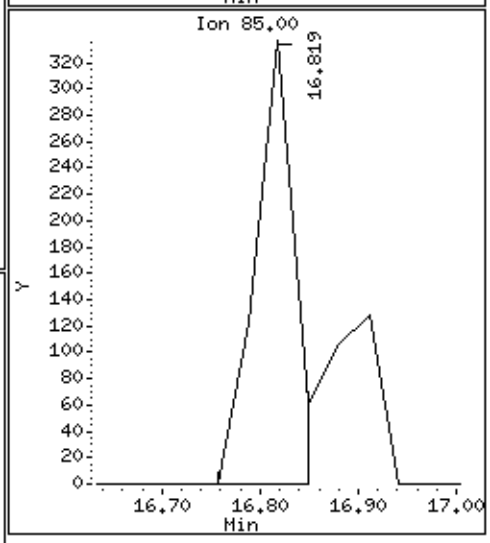
100 Chloroform

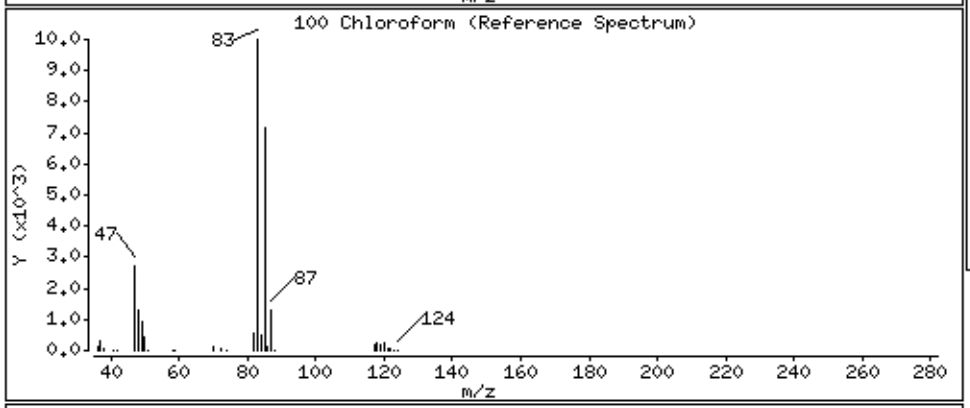
Concentration: 0.04350 PPBV

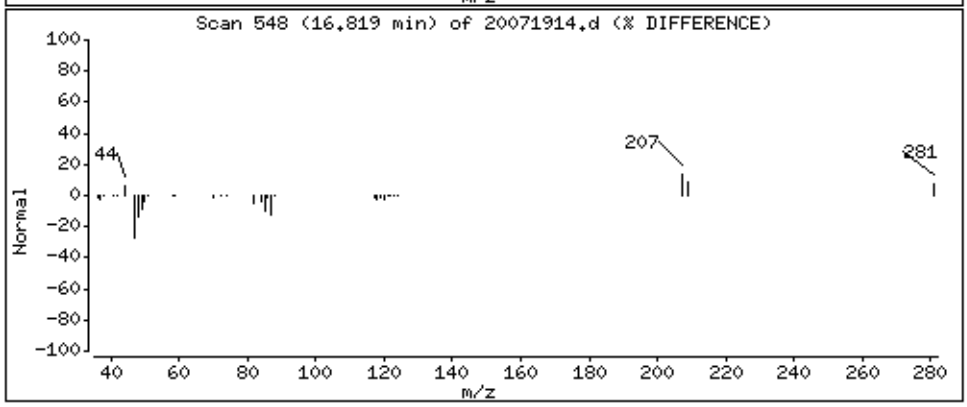












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

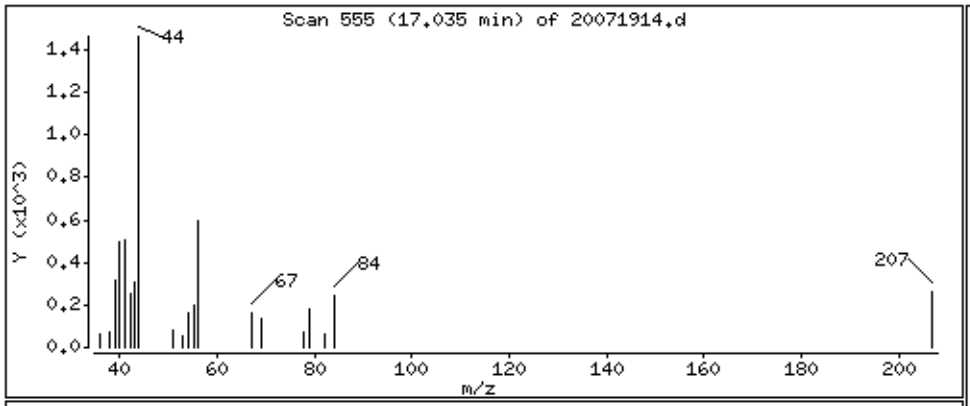
Operator: gh

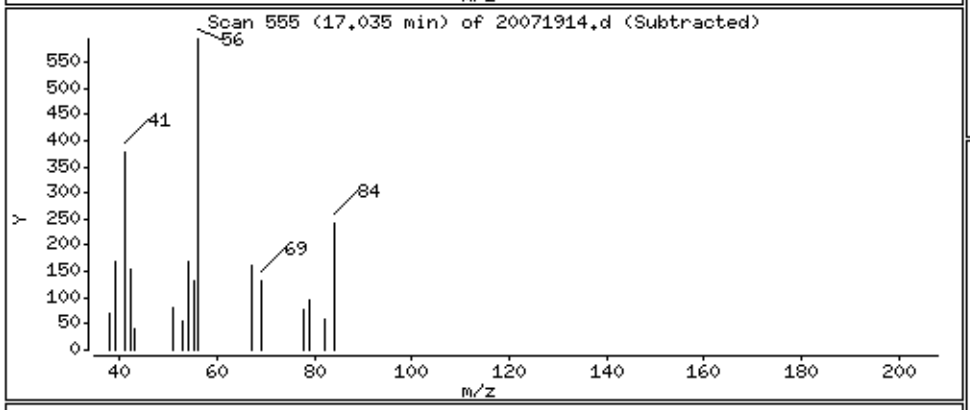
Column phase: RTX-624

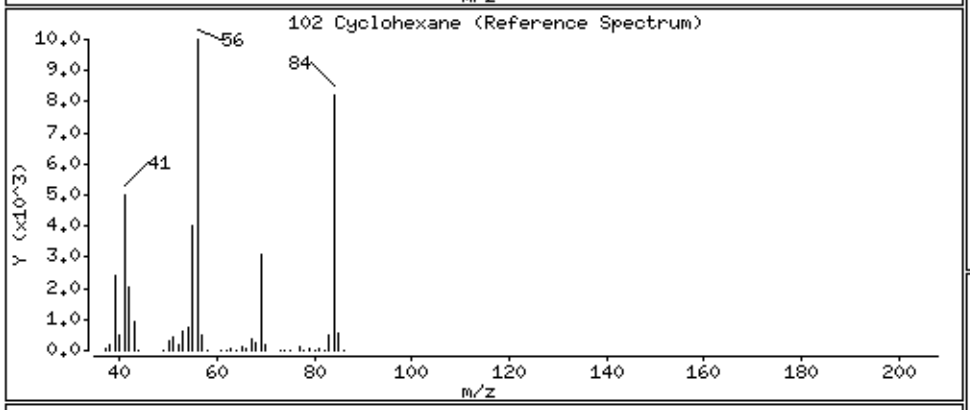
Column diameter: 0.32

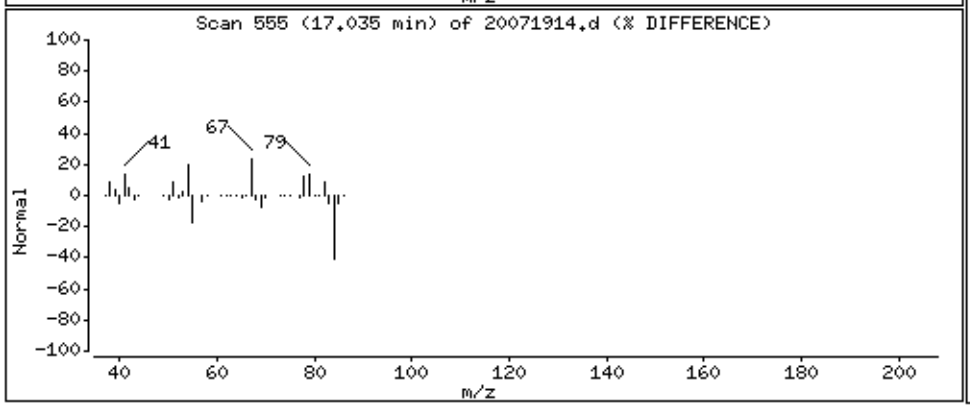
102 Cyclohexane

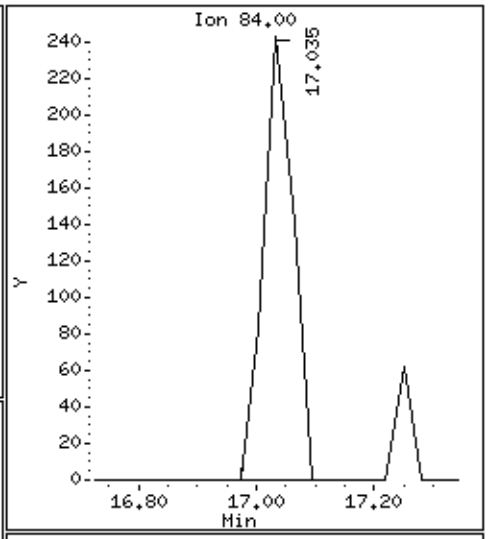
Concentration: 0.03423 PPBV

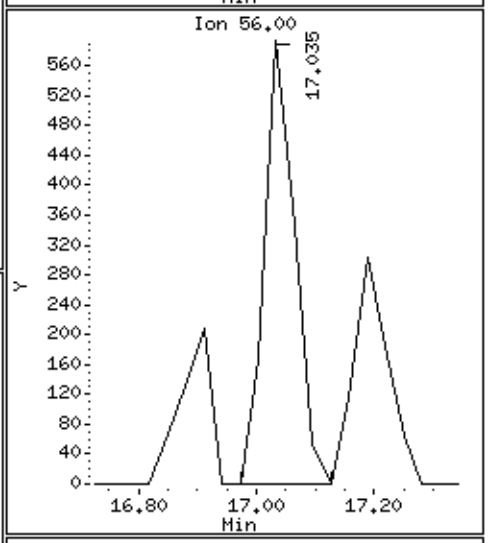


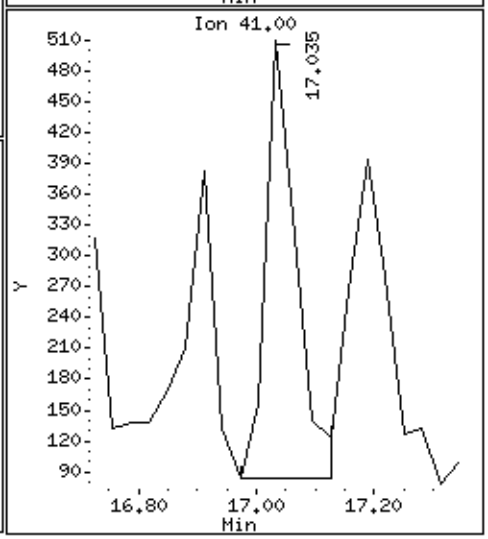












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

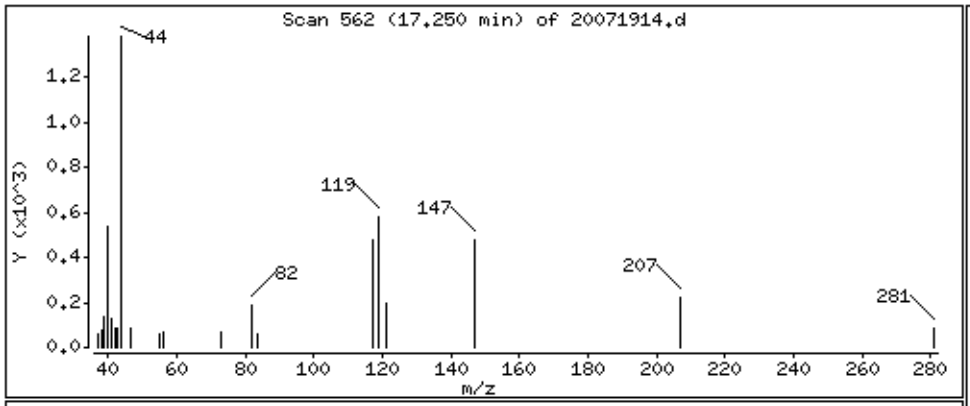
Operator: gh

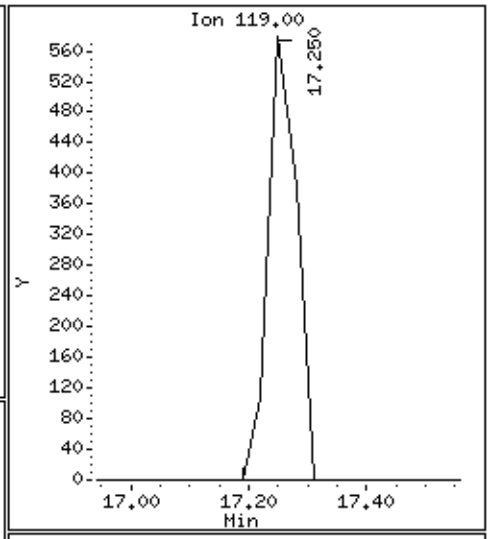
Column phase: RTX-624

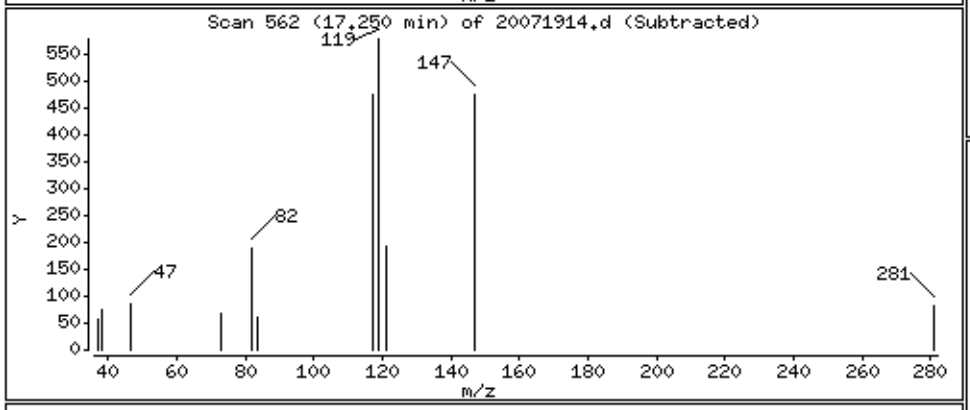
Column diameter: 0.32

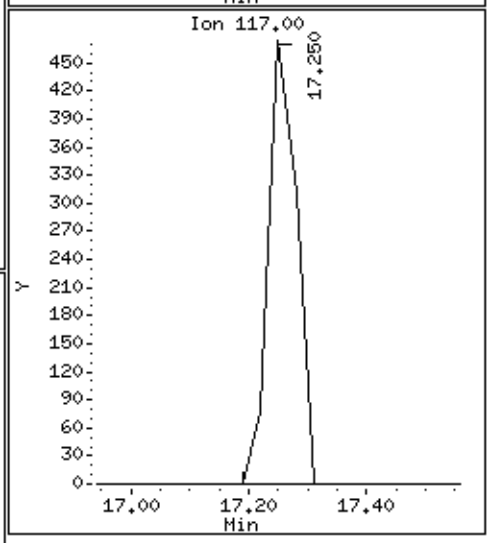
106 Carbon Tetrachloride

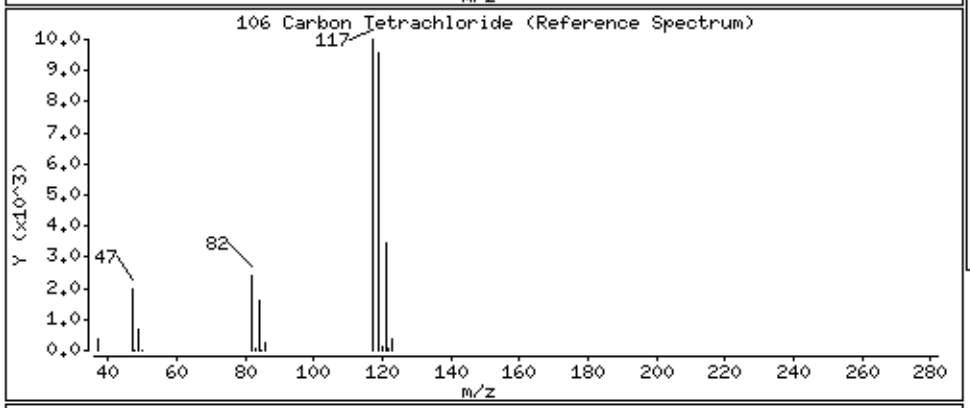
Concentration: 0.06247 PPBV

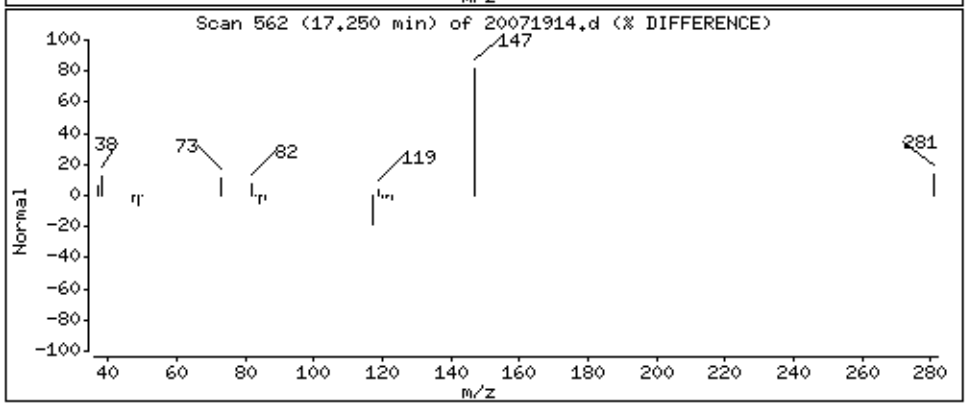












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

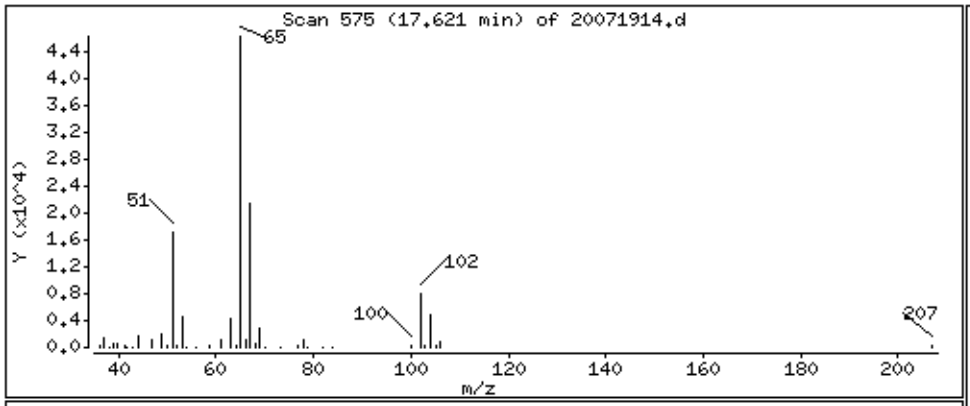
Operator: gh

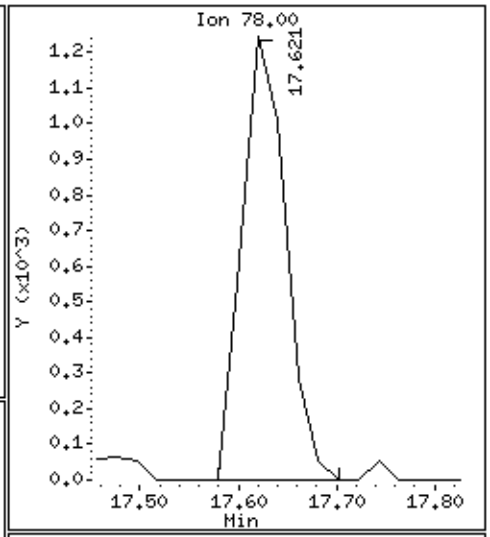
Column phase: RTX-624

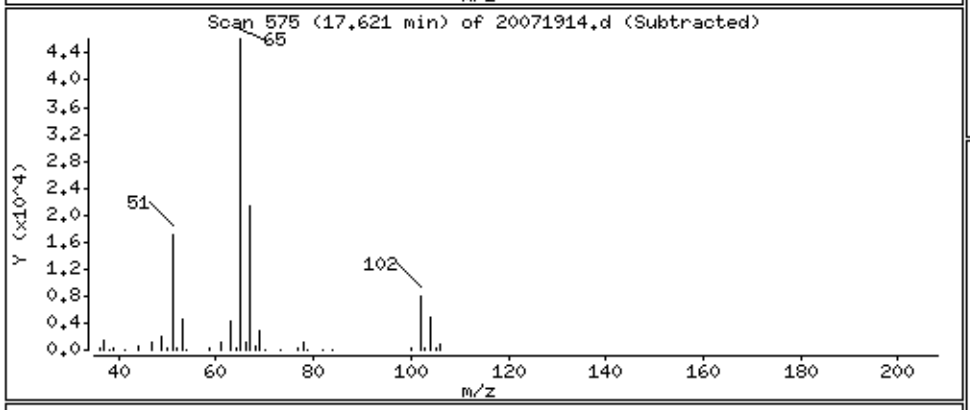
Column diameter: 0.32

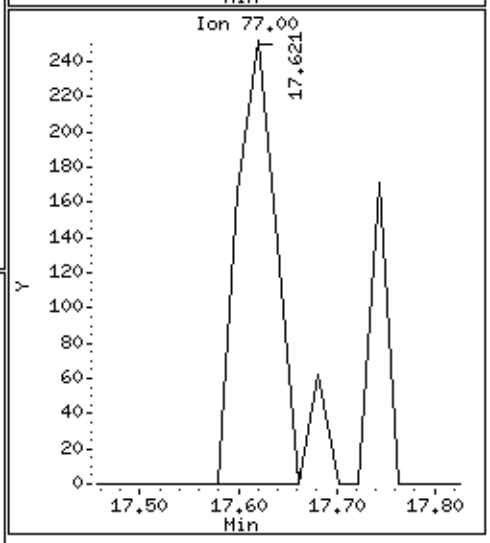
116 Benzene

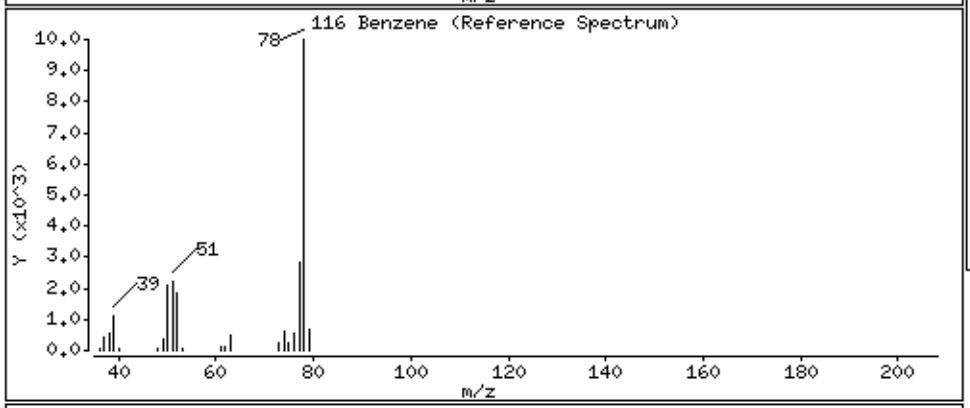
Concentration: 0.09100 PPBV

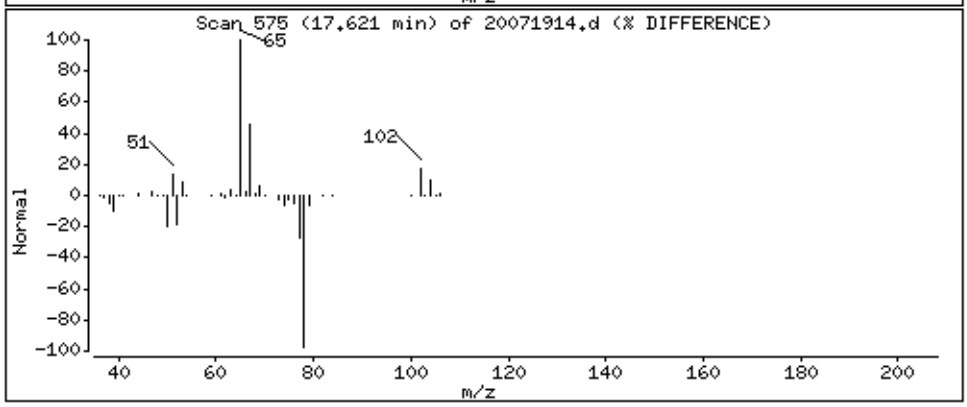












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

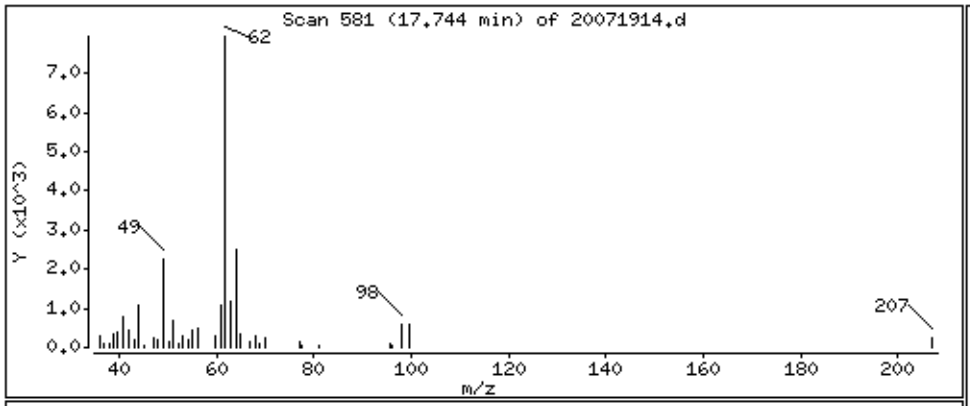
Operator: gh

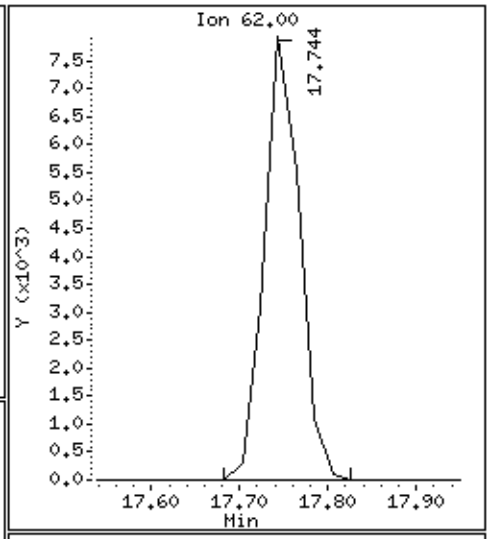
Column phase: RTX-624

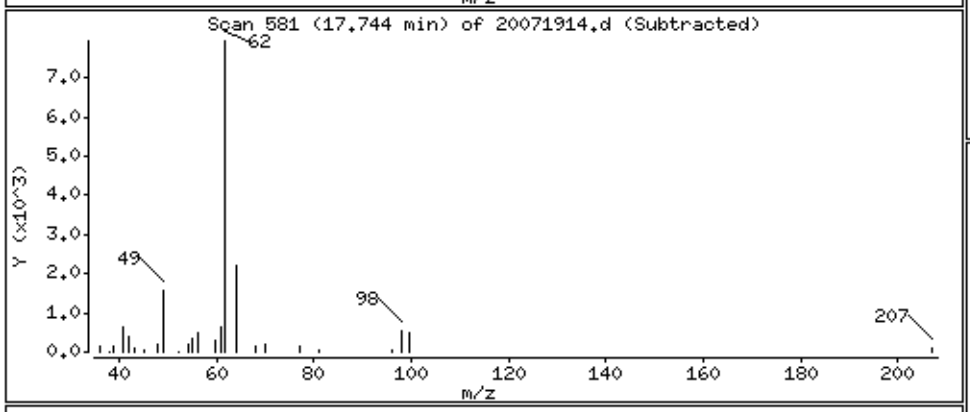
Column diameter: 0.32

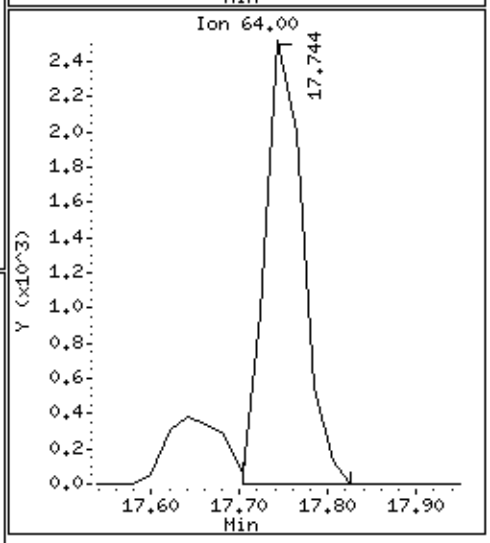
120 1,2-Dichloroethane

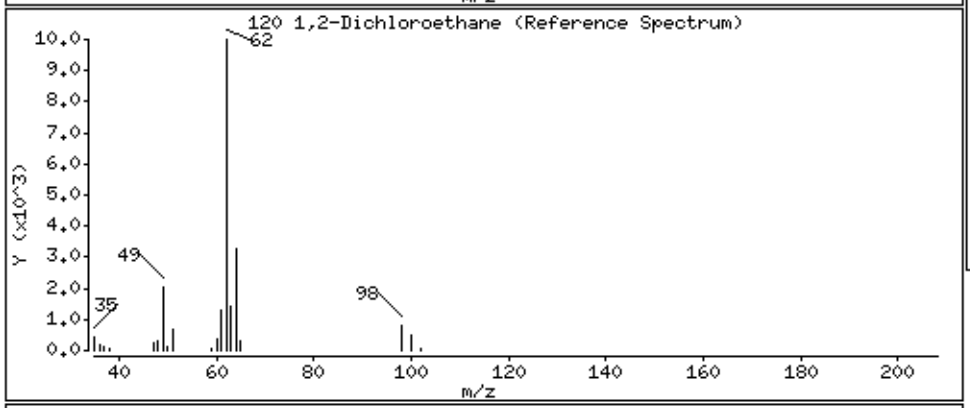
Concentration: 1.187 PPBV

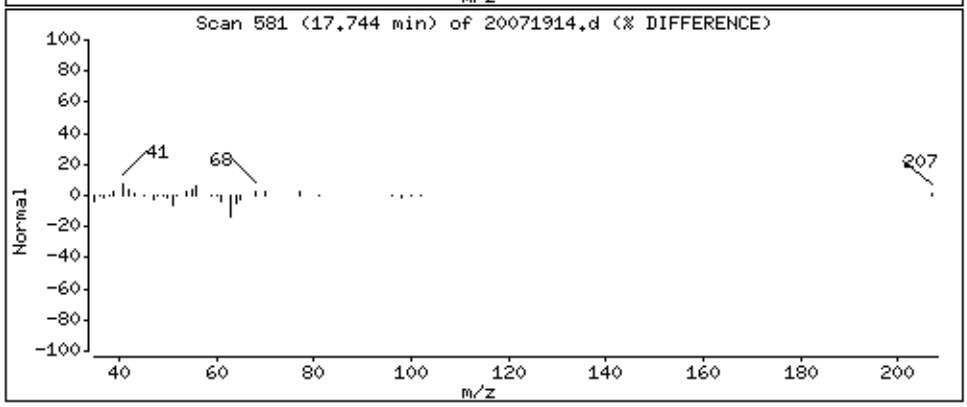












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

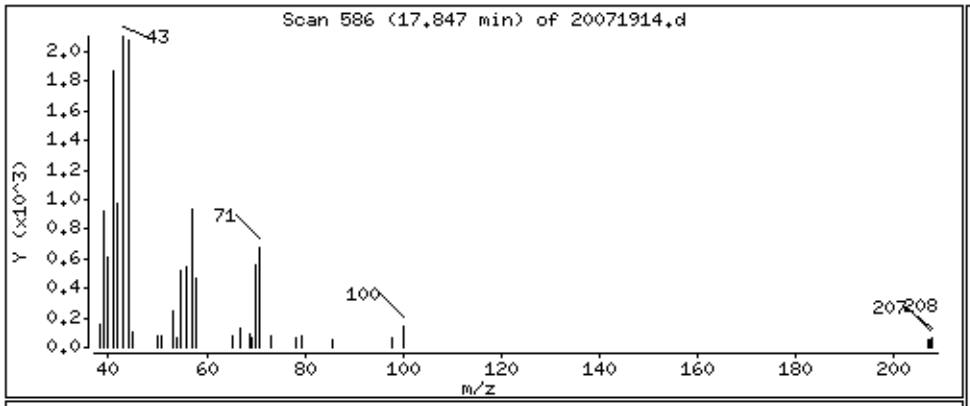
Operator: gh

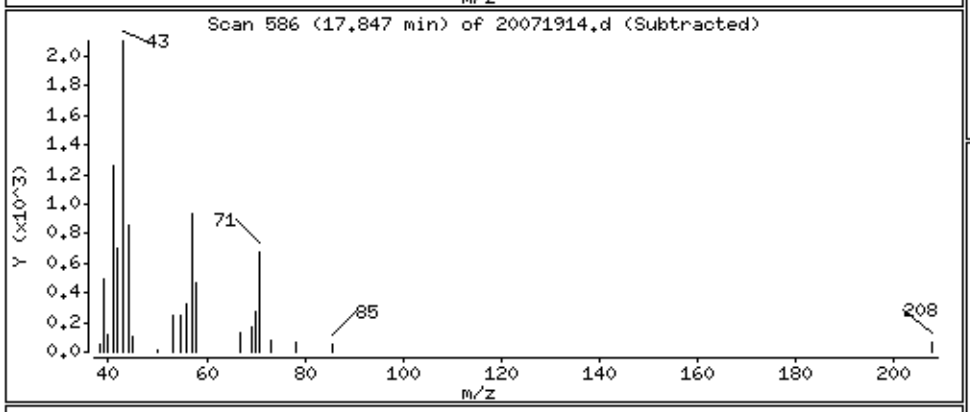
Column phase: RTX-624

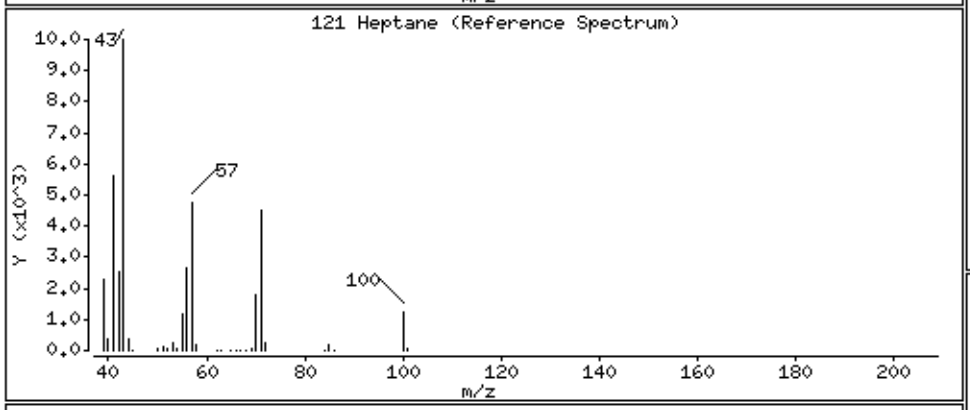
Column diameter: 0.32

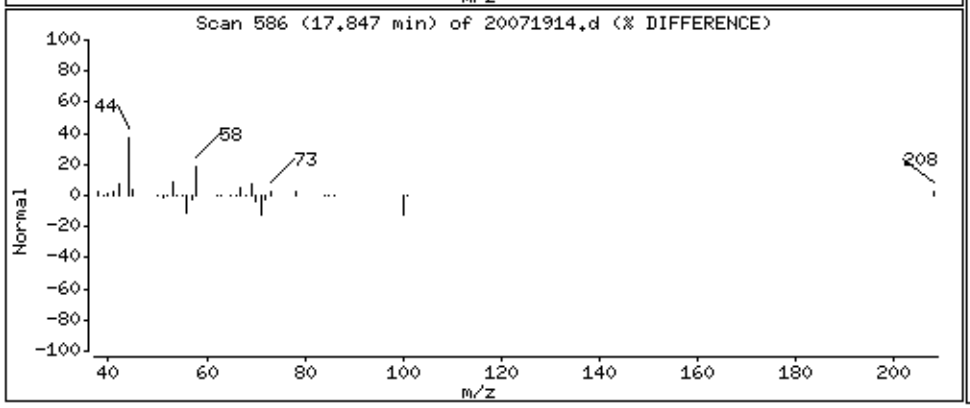
121 Heptane

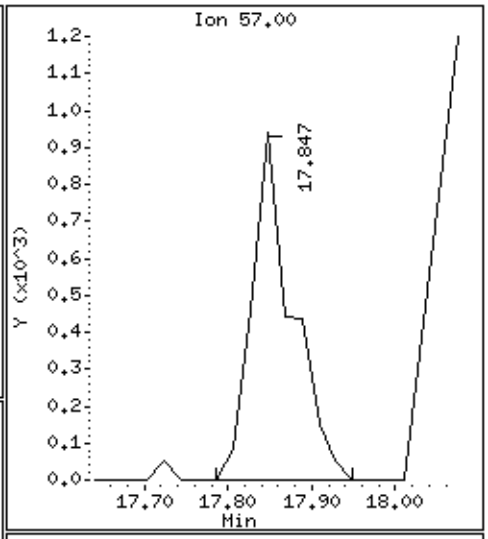
Concentration: 0.2710 PPBV

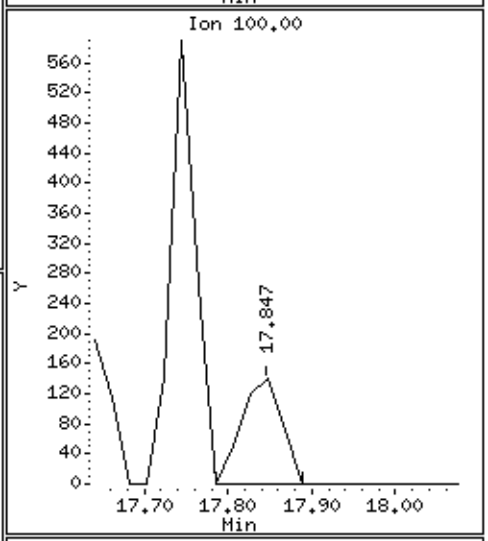


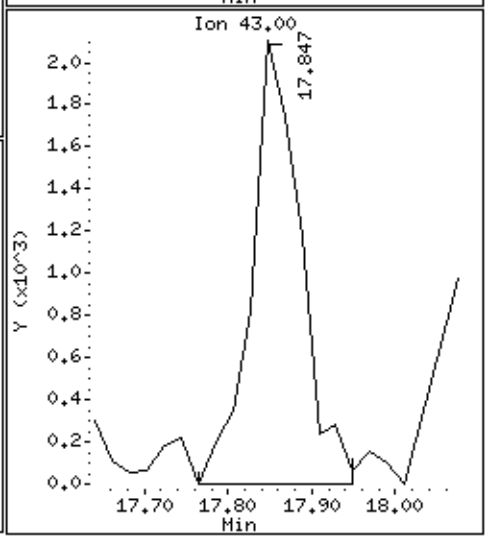












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

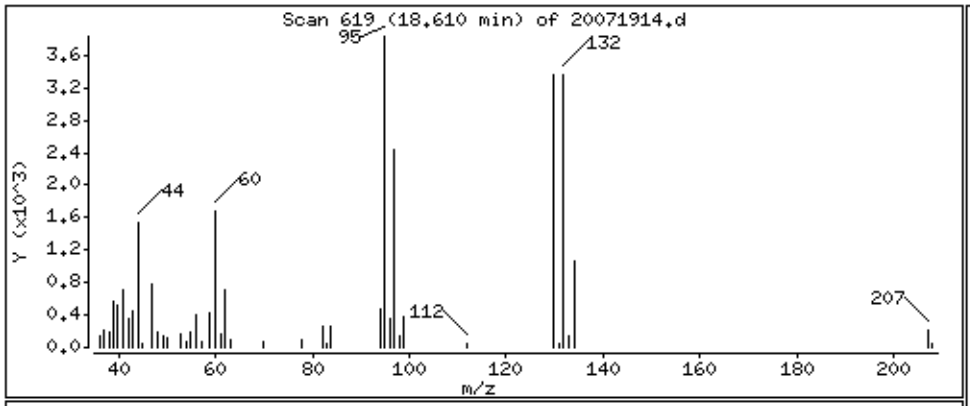
Operator: gh

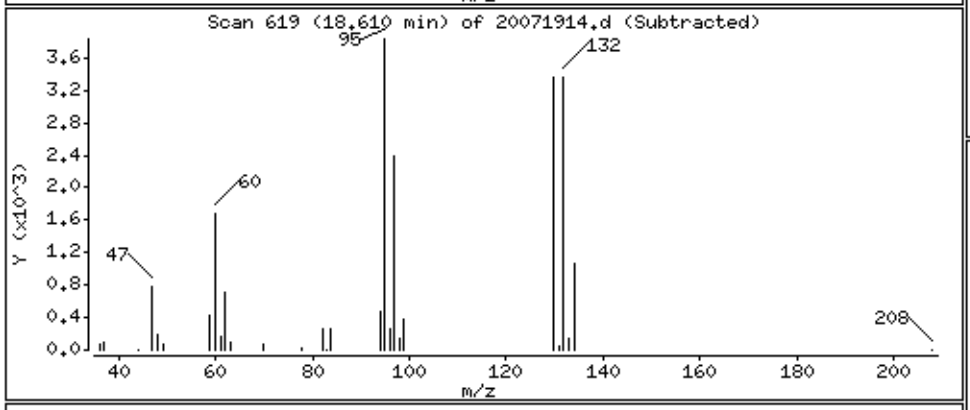
Column phase: RTX-624

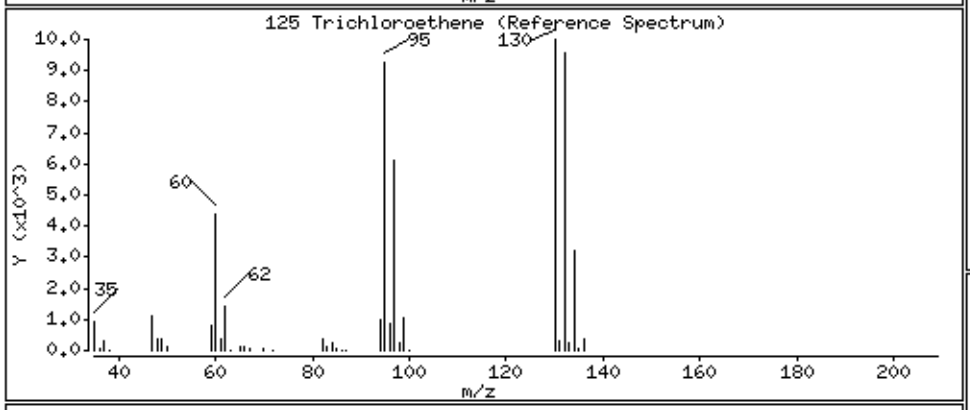
Column diameter: 0.32

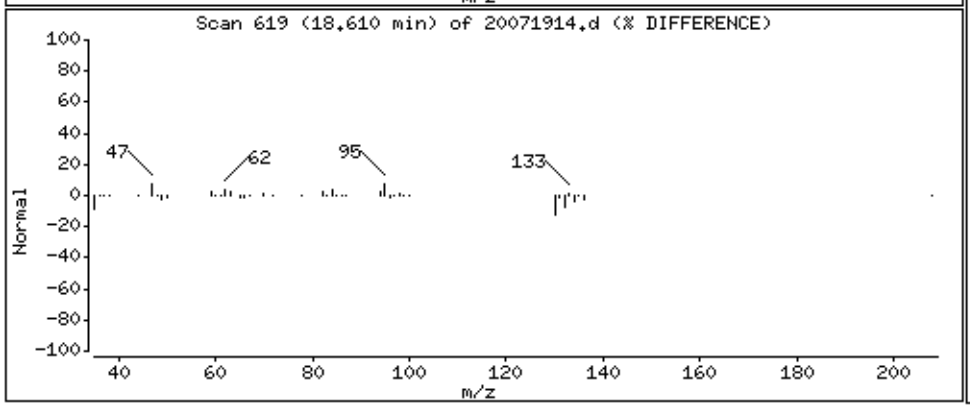
125 Trichloroethene

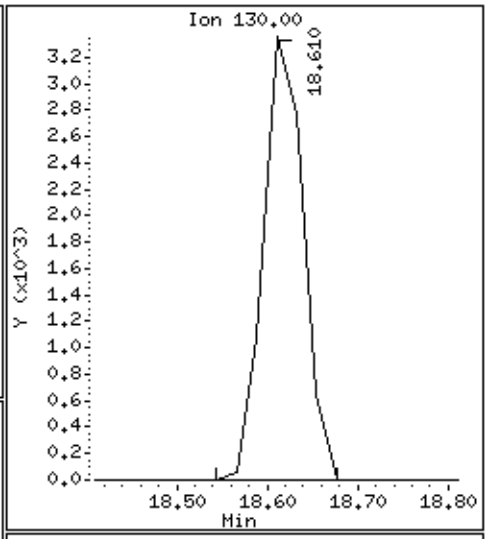
Concentration: 0.5435 PPBV

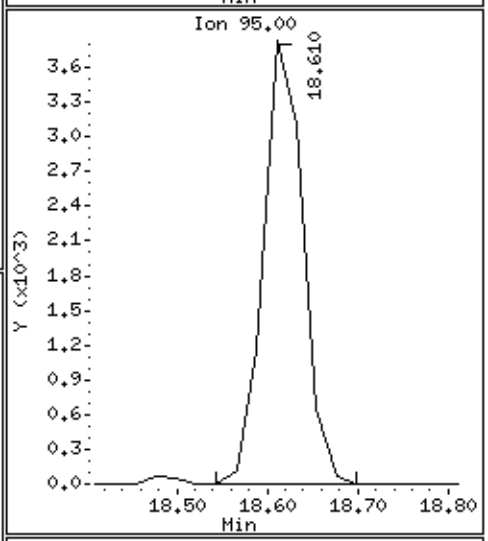


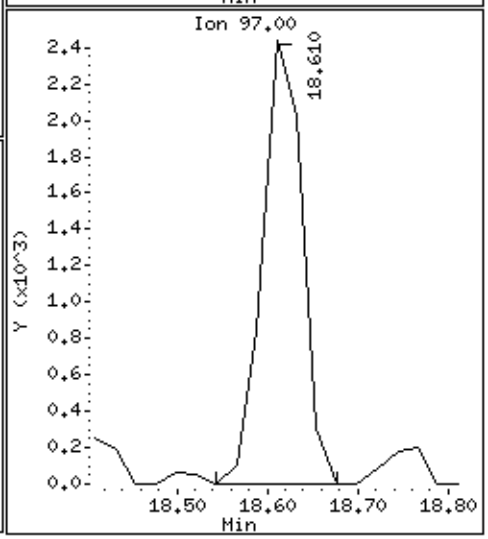












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

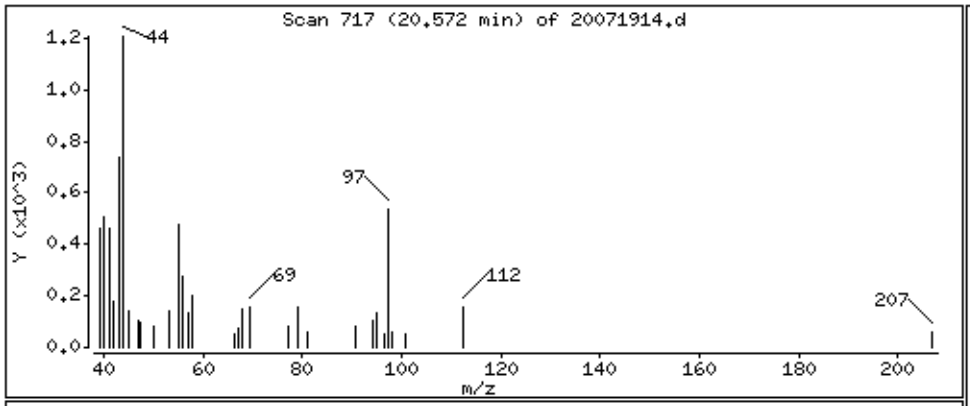
Operator: gh

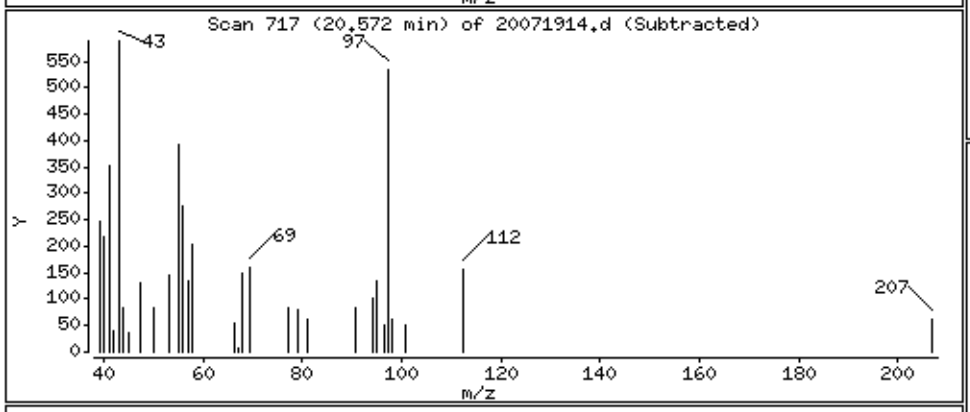
Column phase: RTX-624

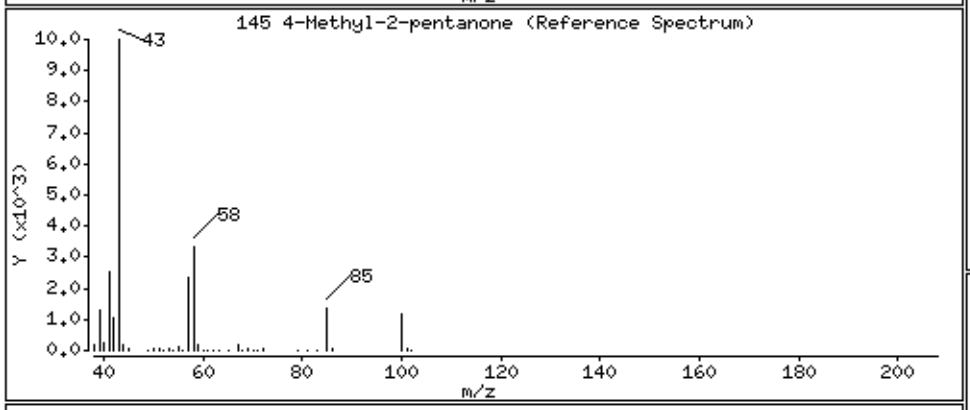
Column diameter: 0.32

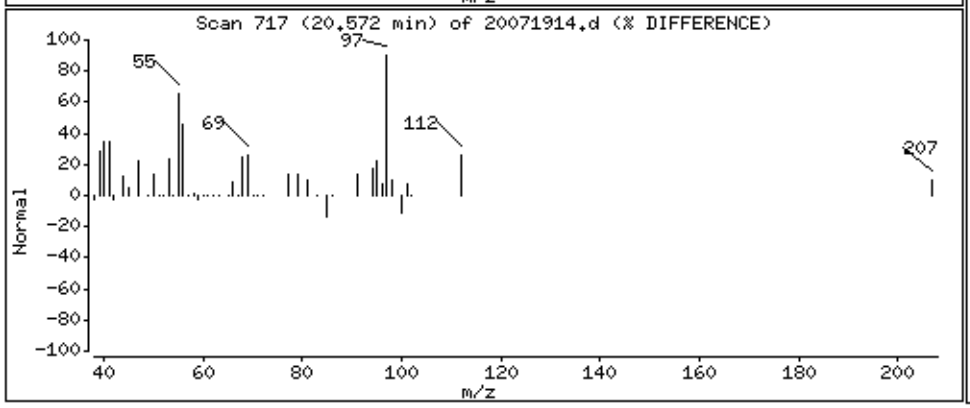
145 4-Methyl-2-pentanone

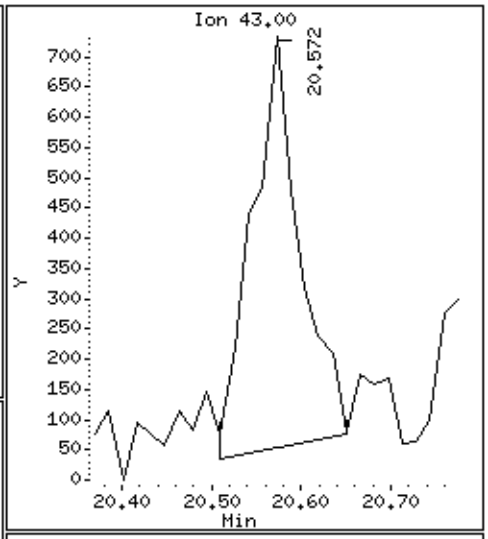
Concentration: 0.08681 PPBV

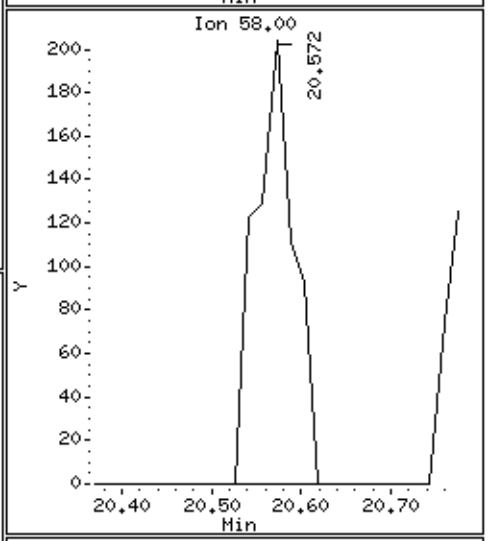


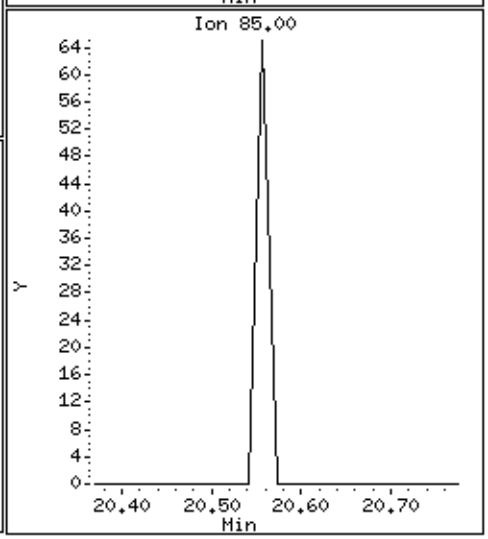












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

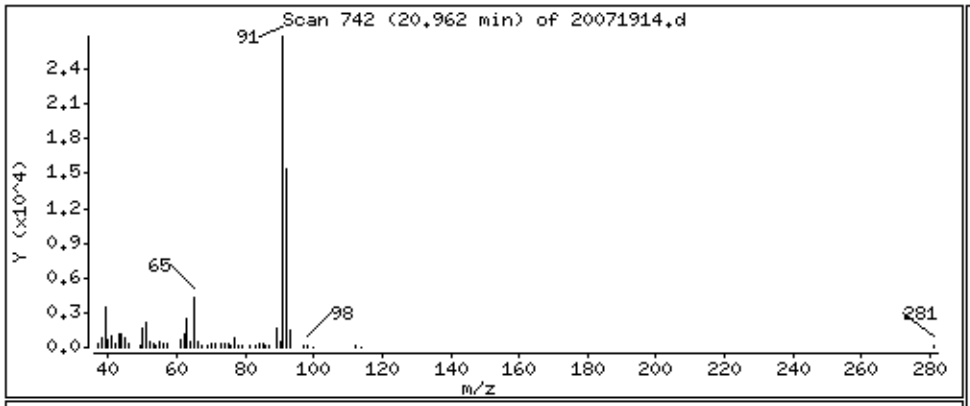
Operator: gh

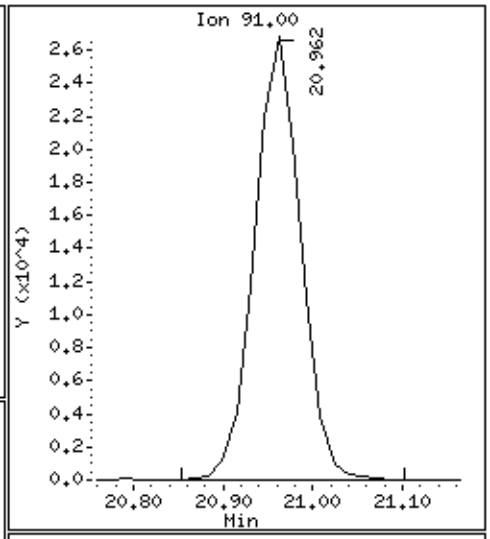
Column phase: RTX-624

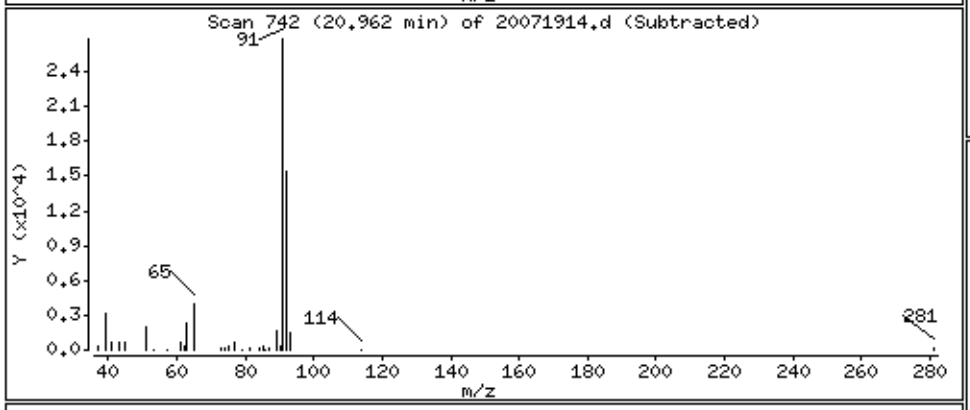
Column diameter: 0.32

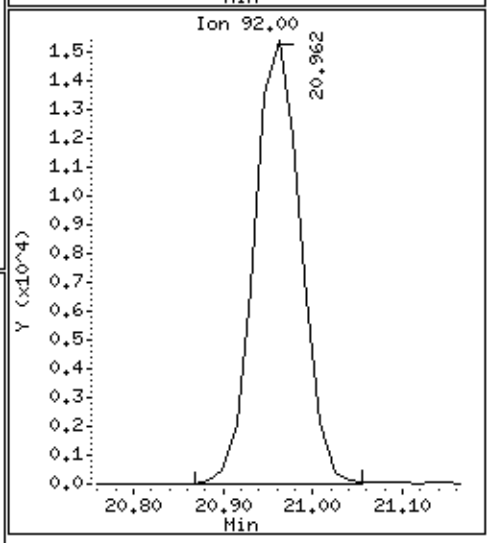
147 Toluene

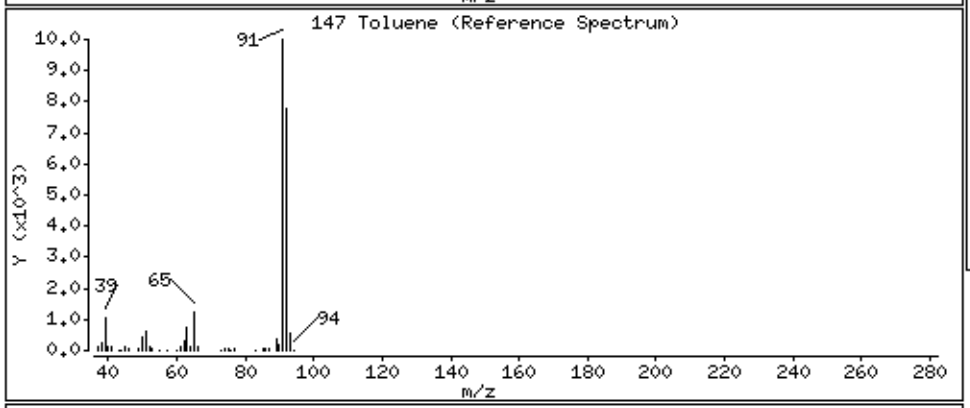
Concentration: 2.098 PPBV

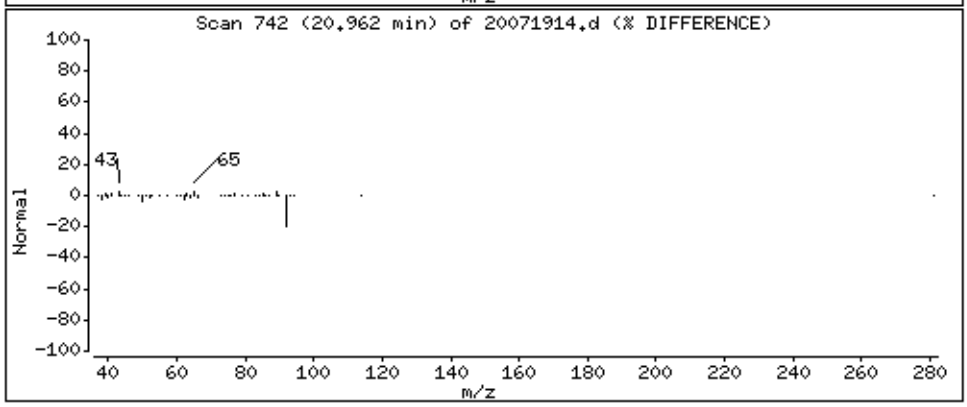












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

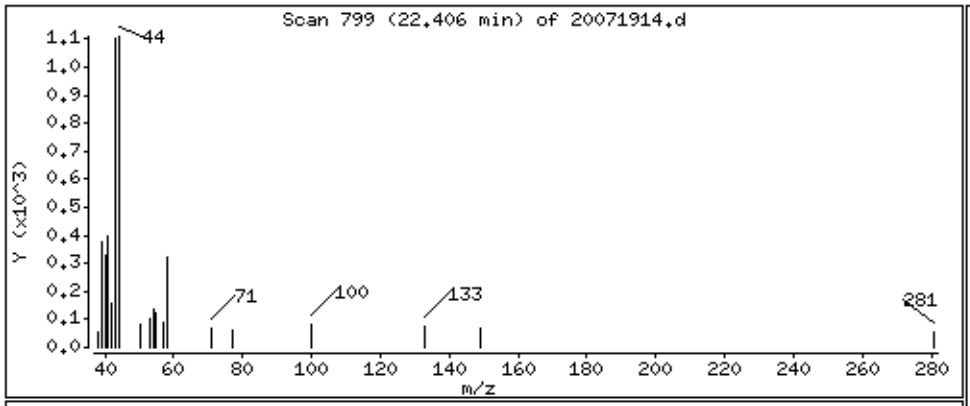
Operator: gh

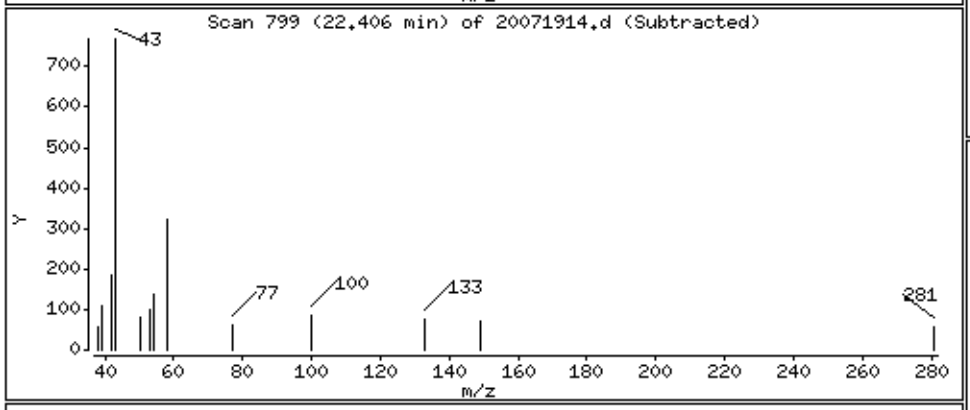
Column phase: RTX-624

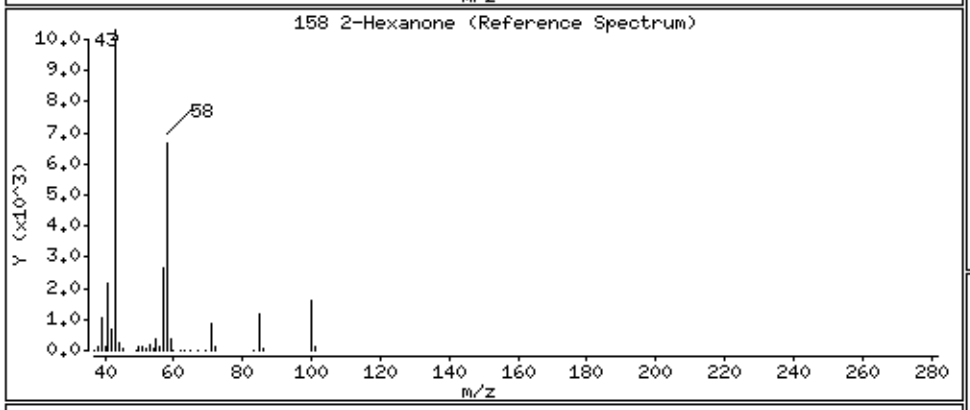
Column diameter: 0.32

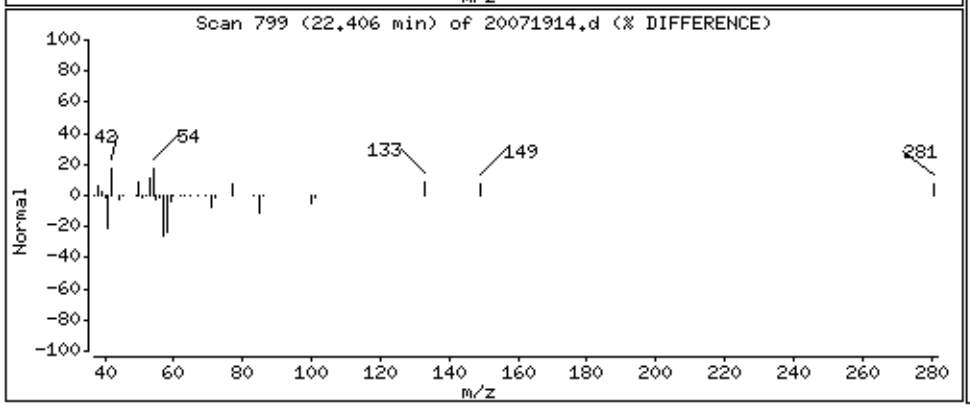
158 2-Hexanone

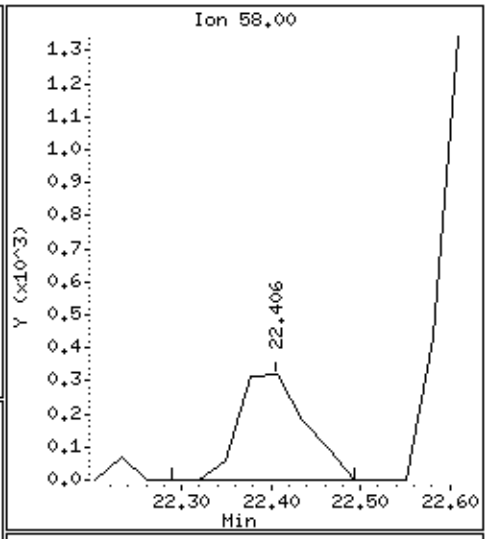
Concentration: 0.09881 PPBV

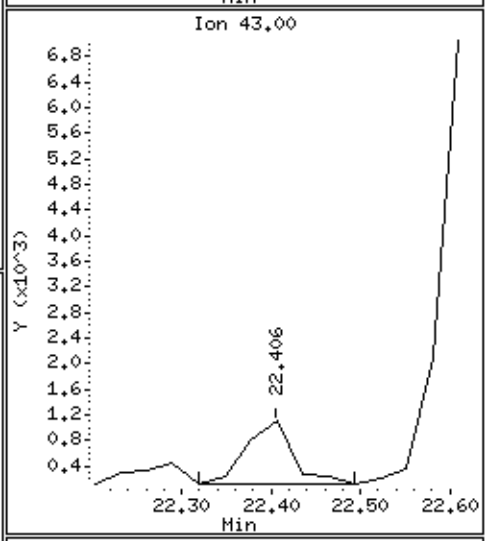


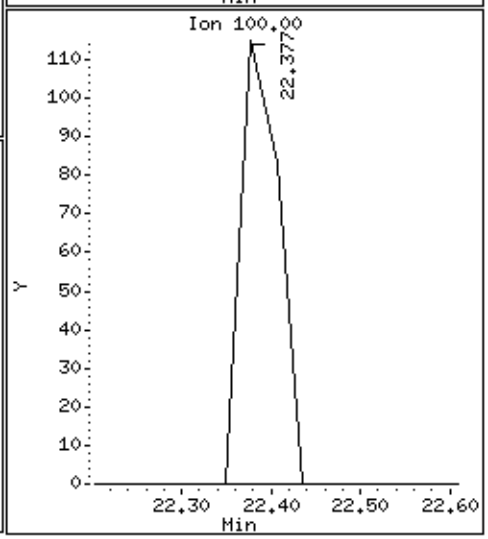












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

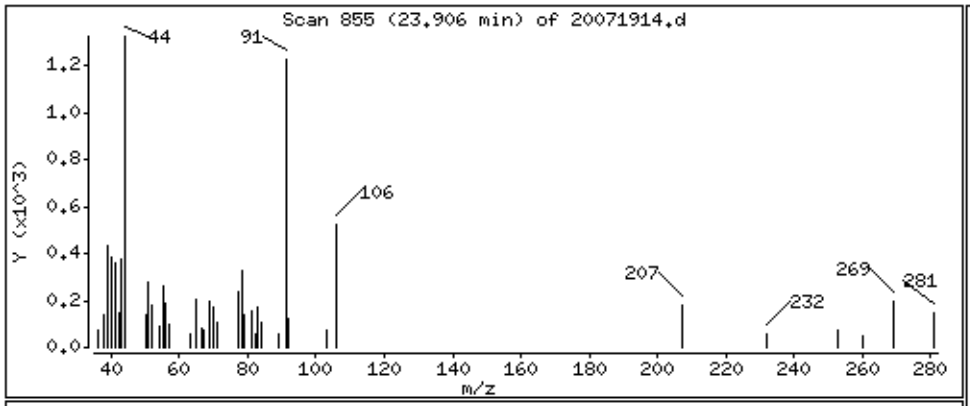
Operator: gh

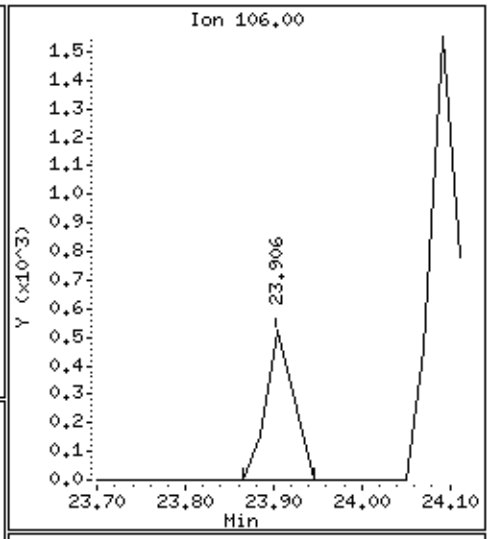
Column phase: RTX-624

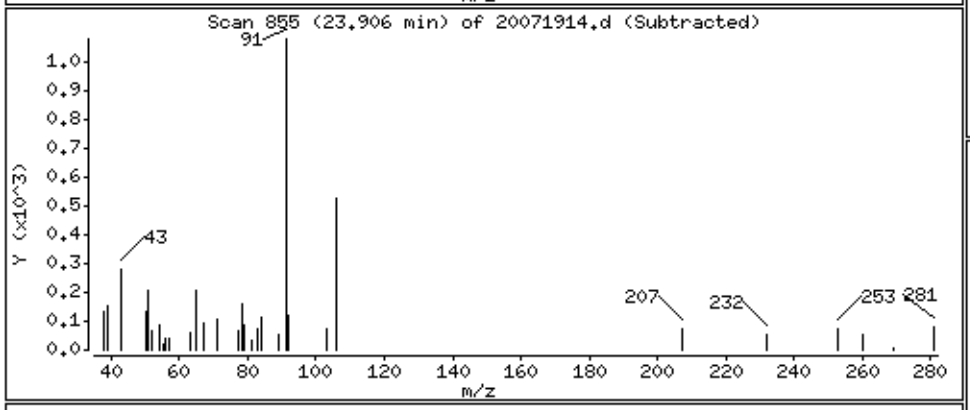
Column diameter: 0.32

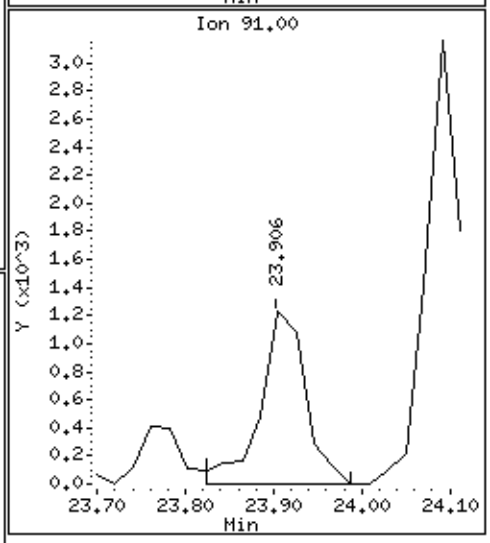
167 Ethyl Benzene

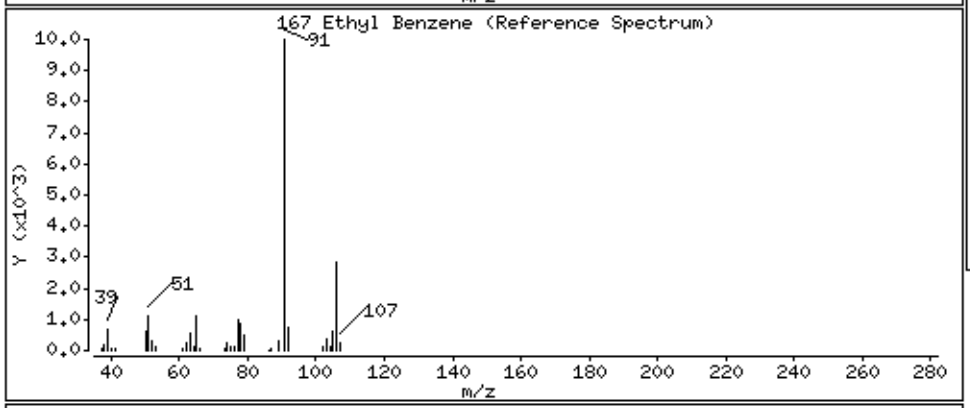
Concentration: 0.05767 PPBV

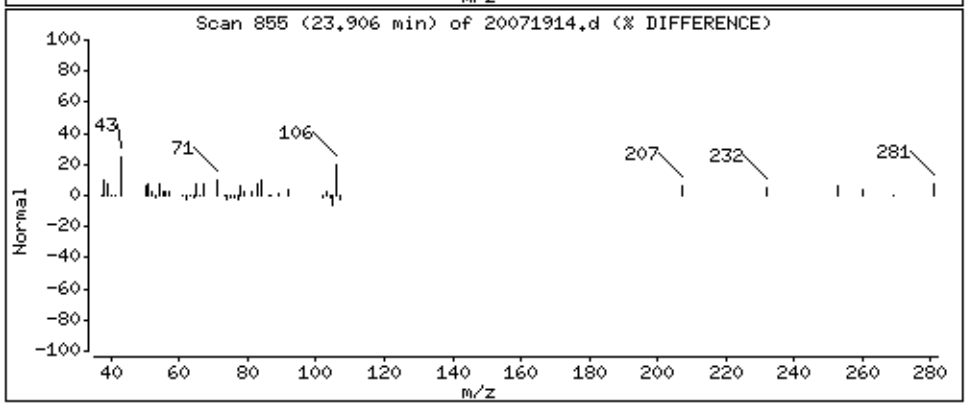












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

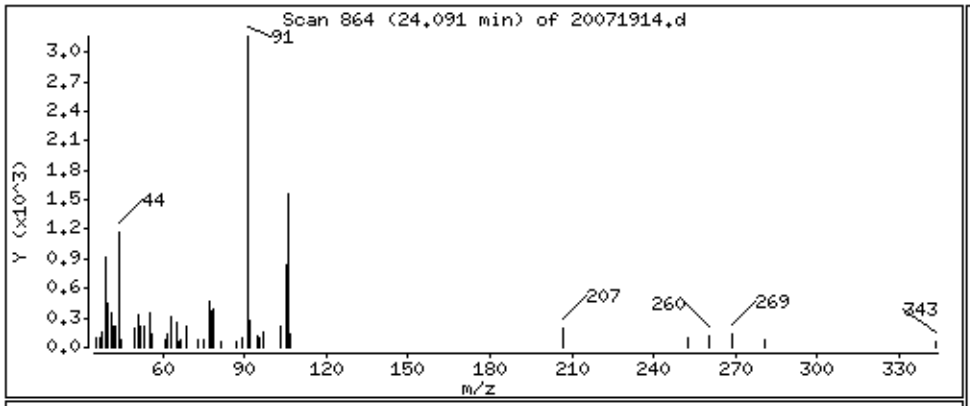
Operator: gh

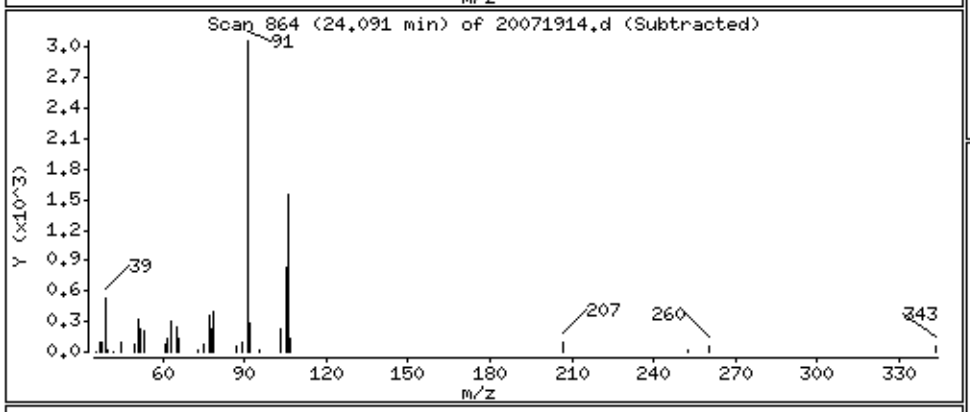
Column phase: RTX-624

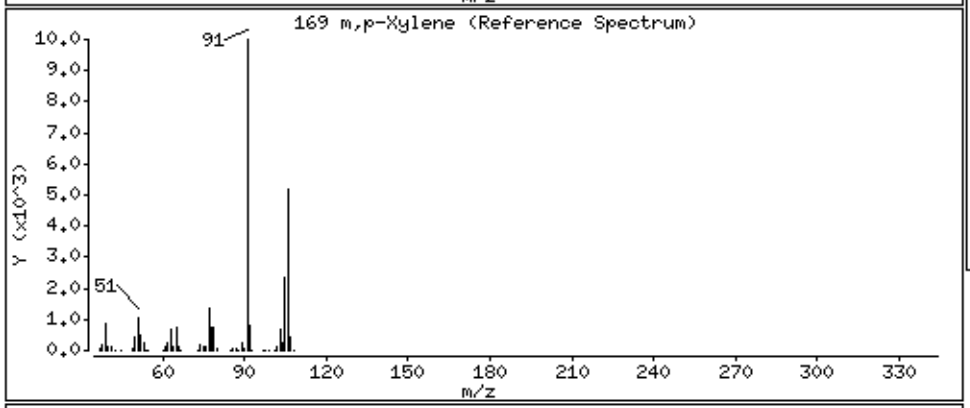
Column diameter: 0.32

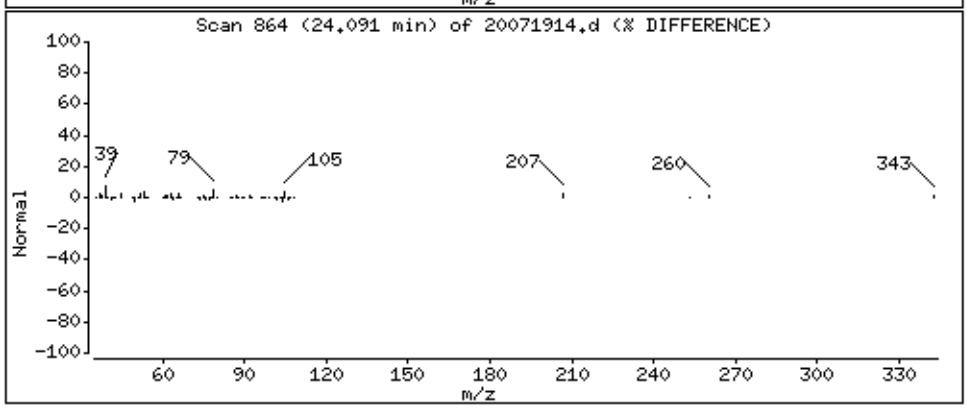
169 m,p-Xylene

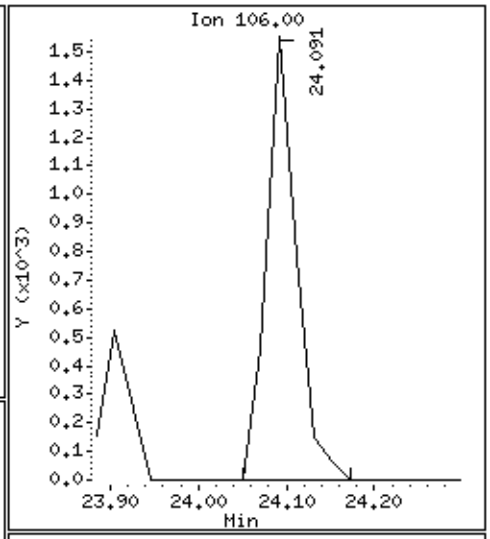
Concentration: 0.1725 PPBV

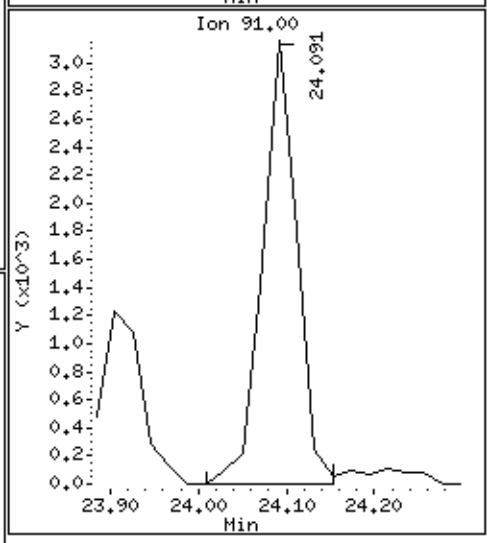












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

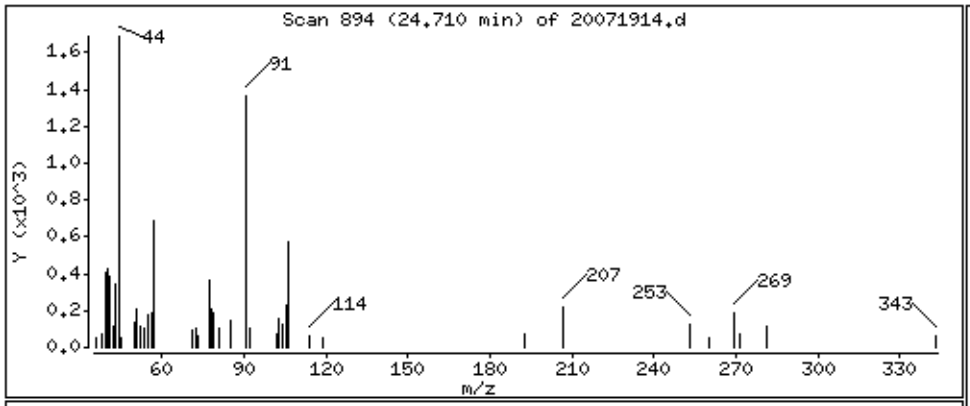
Operator: gh

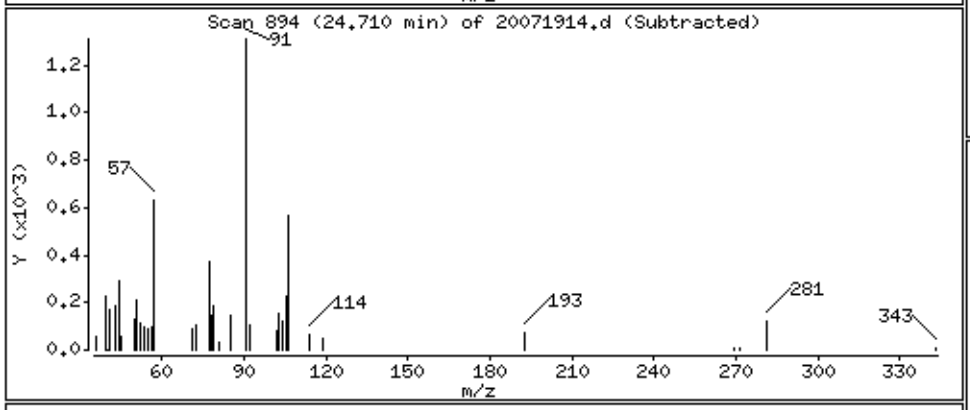
Column phase: RTX-624

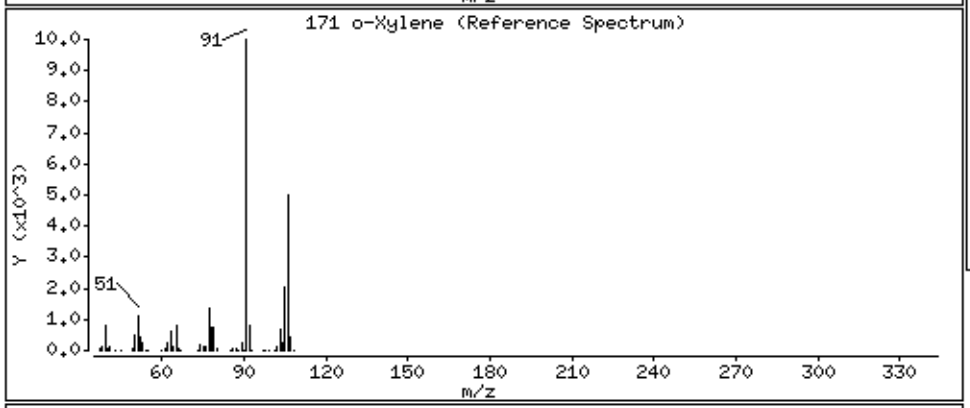
Column diameter: 0.32

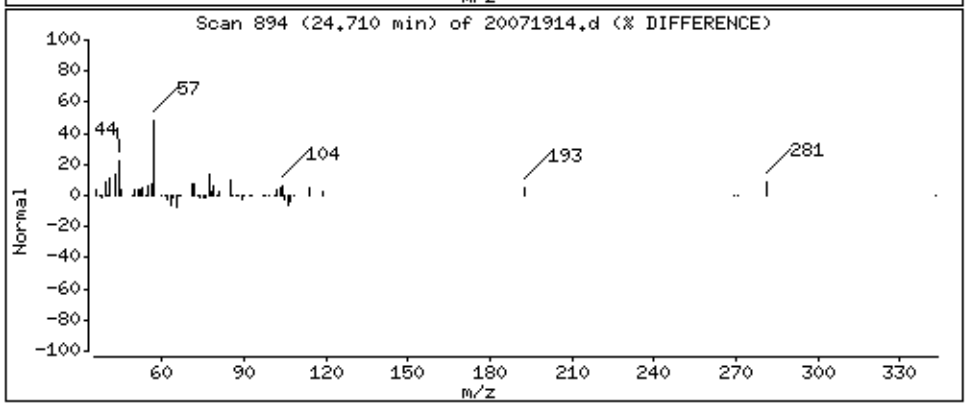
171 o-Xylene

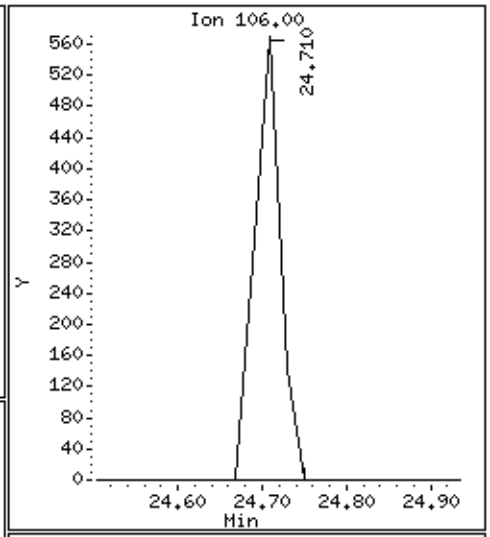
Concentration: 0.06029 PPBV

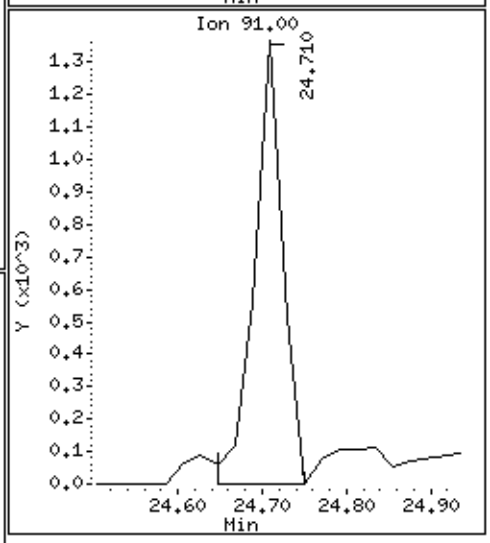












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

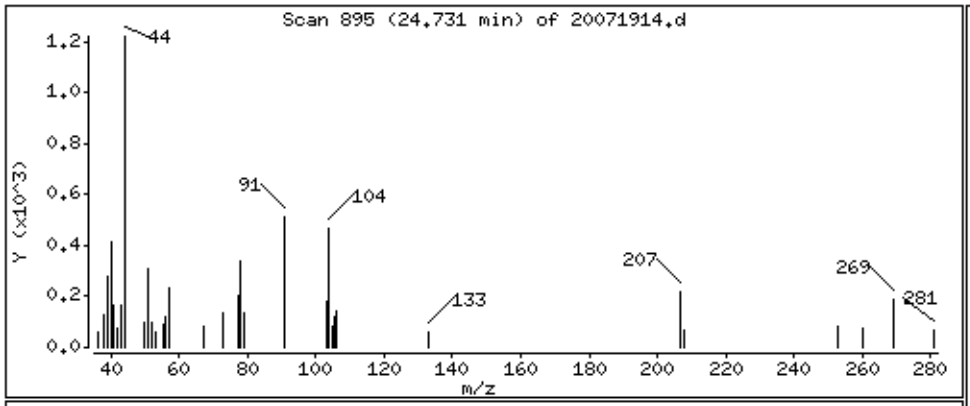
Operator: gh

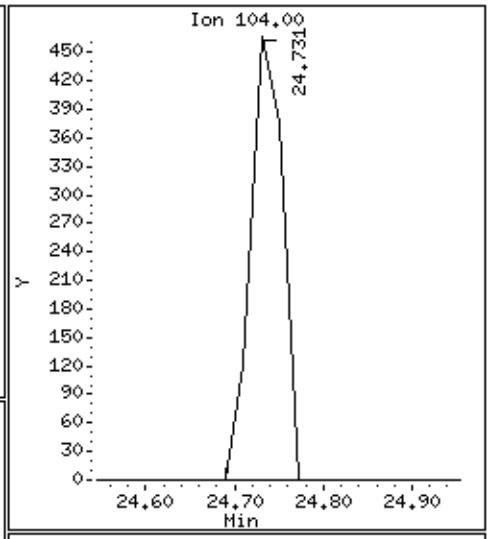
Column phase: RTX-624

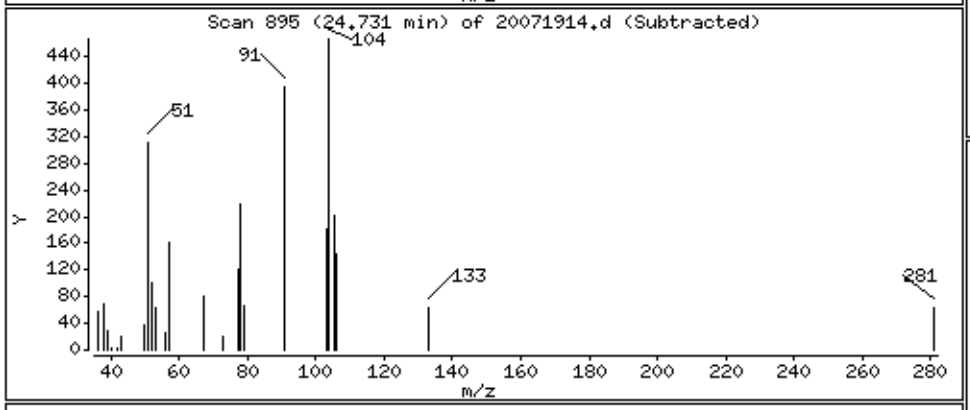
Column diameter: 0.32

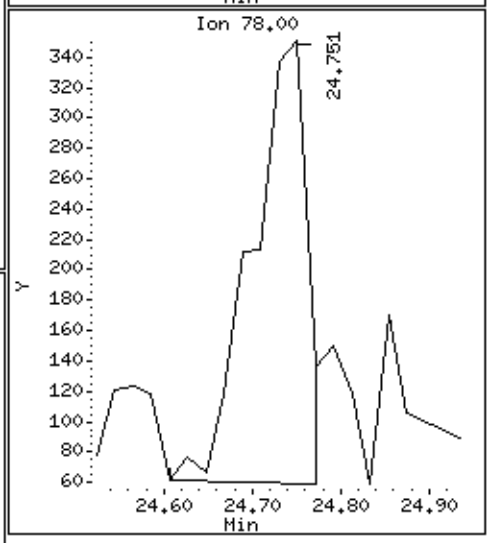
172 Styrene

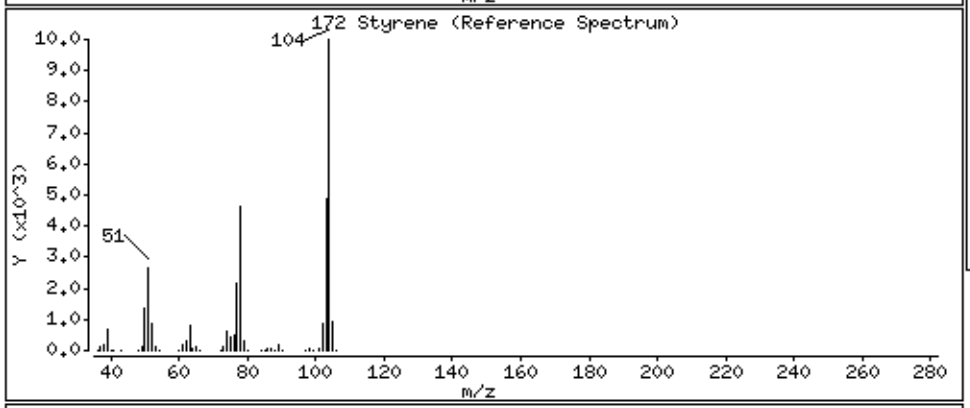
Concentration: 0.04116 PPBV

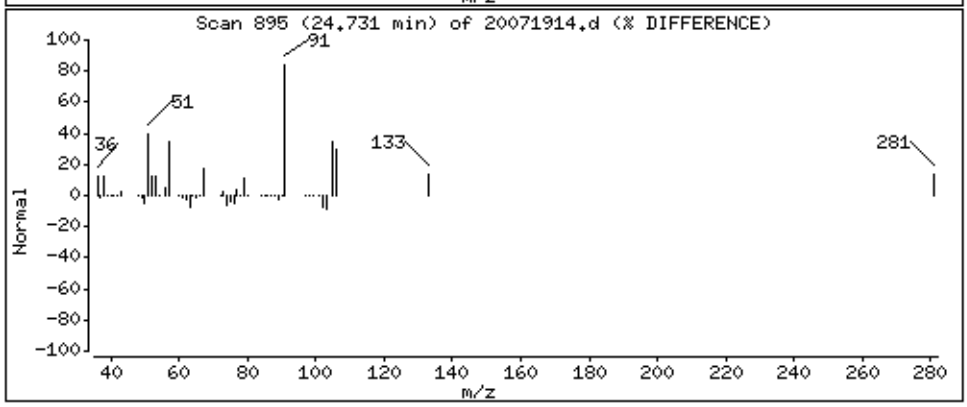












Data File: /chem/msd20.i/19Jul2016.b/20071914.d

Date : 19-JUL-2016 17:09

Client ID:

Instrument: msd20.i

Sample Info: 250mL#21011

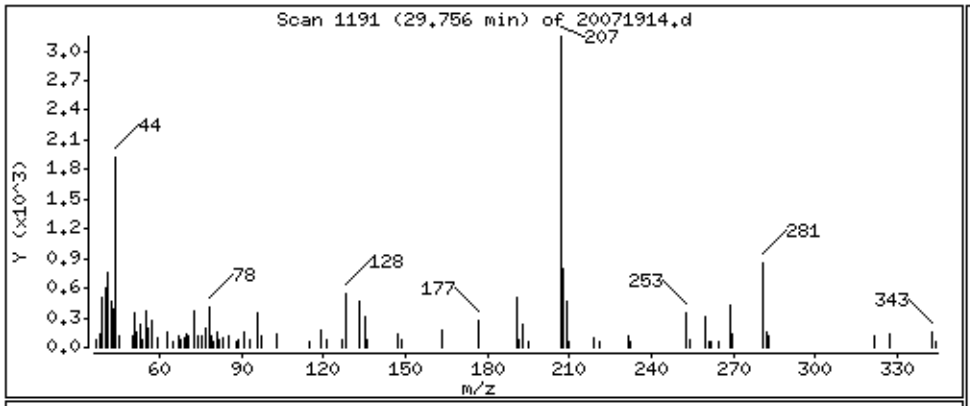
Operator: gh

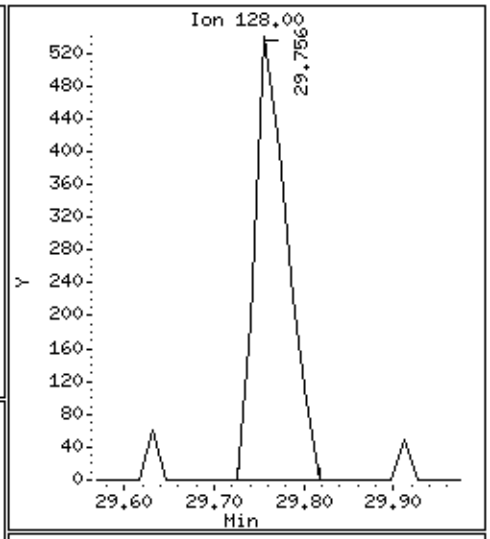
Column phase: RTX-624

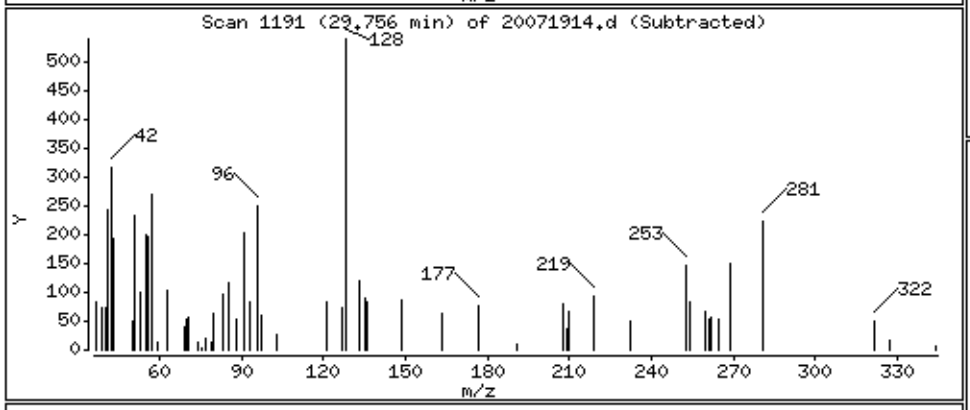
Column diameter: 0.32

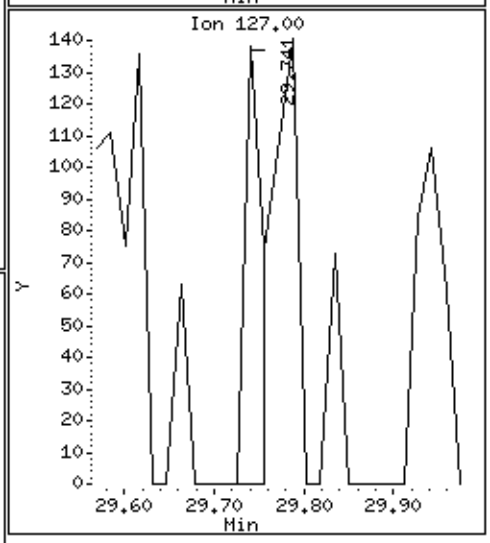
228 Naphthalene

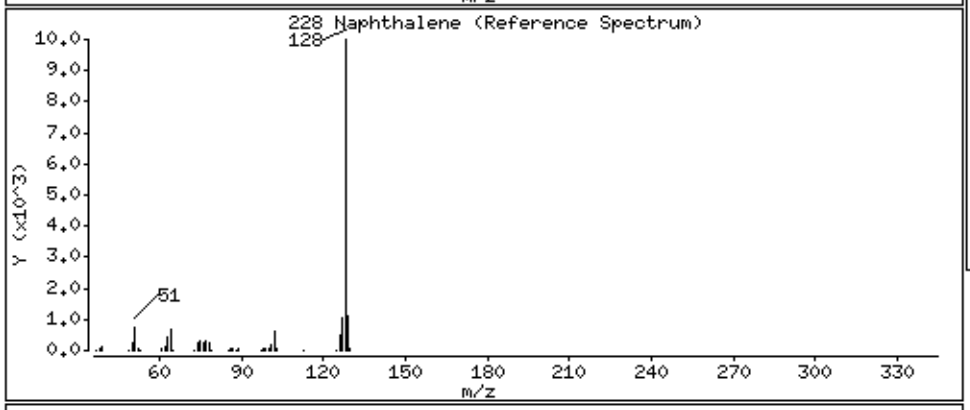
Concentration: 0.03489 PPBV

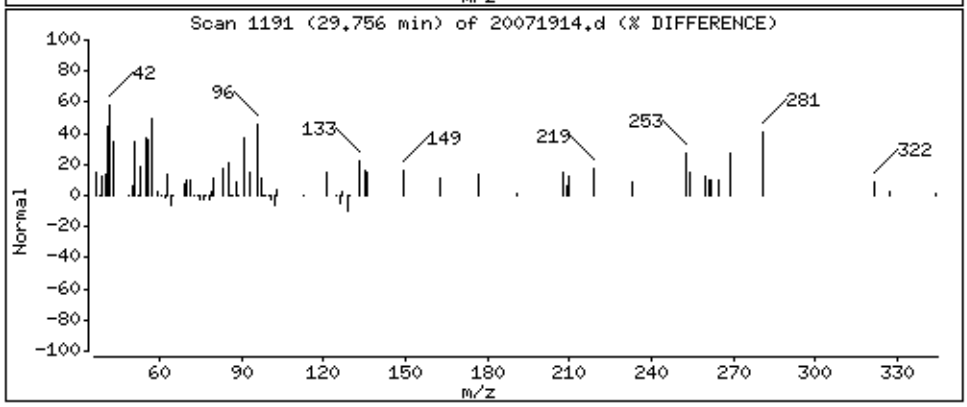












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18AA-071216

Lab ID#: 1607235D-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.79	3.0
Chloromethane	0.80	1.1	1.6	2.2
Freon 11	0.16	0.37	0.89	2.1
Ethanol	0.80	5.6	1.5	10
Freon 113	0.16	0.13 J	1.2	1.0 J
Acetone	0.80	37	1.9	87
2-Propanol	0.80	2.5	2.0	6.2
Methylene Chloride	0.32	0.26 J	1.1	0.89 J
Hexane	0.16	0.054 J	0.56	0.19 J
2-Butanone (Methyl Ethyl Ketone)	0.80	1.8	2.3	5.2
Carbon Tetrachloride	0.16	0.070 J	1.0	0.44 J
Benzene	0.16	0.10 J	0.51	0.32 J
Heptane	0.16	0.076 J	0.65	0.31 J
1,4-Dioxane	0.16	0.83	0.57	3.0
Toluene	0.16	0.38	0.60	1.4
m,p-Xylene	0.16	0.039 J	0.69	0.17 J
Styrene	0.16	0.016 J	0.68	0.070 J
Naphthalene	0.80	0.023 J	4.2	0.12 J

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Client Sample ID: B18AA-071216

Lab ID#: 1607235D-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071915**	**Date of Collection:**	**7/12/16 2:08:00 PM**
Dil. Factor:	**1.59**	**Date of Analysis:**	**7/19/16 06:00 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.62	0.79	3.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	1.1	1.6	2.2
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.35	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.37	0.89	2.1
Ethanol	0.80	5.6	1.5	10
Freon 113	0.16	0.13 J	1.2	1.0 J
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	37	1.9	87
2-Propanol	0.80	2.5	2.0	6.2
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.26 J	1.1	0.89 J
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.054 J	0.56	0.19 J
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	1.8	2.3	5.2
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.78	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	0.070 J	1.0	0.44 J
2,2,4-Trimethylpentane	0.80	Not Detected	3.7	Not Detected
Benzene	0.16	0.10 J	0.51	0.32 J
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	0.076 J	0.65	0.31 J
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	0.83	0.57	3.0
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.38	0.60	1.4
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.2	Not Detected

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Client Sample ID: B18AA-071216

Lab ID#: 1607235D-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071915**	**Date of Collection:**	**7/12/16 2:08:00 PM**
Dil. Factor:	**1.59**	**Date of Analysis:**	**7/19/16 06:00 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	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	0.039 J	0.69	0.17 J
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	0.016 J	0.68	0.070 J
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.5	Not Detected
Naphthalene	0.80	0.023 J	4.2	0.12 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071915.d
Lab Smp Id: 1607235D-14A
Inj Date : 19-JUL-2016 18:00
Operator : gh Inst ID: msd20.i
Smp Info : 250mL#12947
Misc Info : 4.7"Hg ->5psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 11
Dil Factor: 1.59000
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
* 98 Bromochloromethane						CAS #: 74-97-5	
16.726	16.726 (1.000)	130	85209	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	65784			47.94- 107.94	77.20
16.726	16.726 (1.000)	49	125602			102.10- 162.10	147.40
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
18.231	18.231 (1.000)	114	261560	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	43373			0.00- 45.77	16.58
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
23.761	23.761 (1.000)	117	257439	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	153963			26.51- 86.51	59.81
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
17.641	17.641 (1.055)	65	153810	6.22324	6.223	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	75665			32.47- 92.47	49.19
$ 146 Toluene-d8						CAS #: 2037-26-5	
20.821	20.822 (1.142)	98	243912	4.82812	4.828	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	34391			0.00- 41.37	14.10

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

$ 146 Toluene-d8 (continued)
 20.821  20.822 (1.142)   100    157707                    36.07-  96.07    64.66
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    132501 4.79373    4.794  80.00- 120.00   100.00
 25.485  25.466 (1.073)    95    167889                   89.67- 149.67   126.71
 25.485  25.485 (1.073)   176    126307                   67.40- 127.40    95.33
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.672   4.672 (0.279)    85     28009 0.38703   0.6154  80.00- 120.00   100.00
  4.624   4.672 (0.276)    87      3637                    2.54-  62.54    12.99
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.577   6.577 (0.393)    50     16246 0.67043    1.066  80.00- 120.00   100.00
  6.552   6.553 (0.392)    52      3186                    3.03-  63.03    19.61
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101     16335 0.23355   0.3713  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103     11944                   34.91-  94.91    73.12
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.296  12.269 (0.735)    45     31942 3.52852    5.610  80.00- 120.00   100.00
 12.296  12.269 (0.735)    46     13081                   11.72-  71.72    40.95
 12.296  12.269 (0.735)    43     10223                    0.00-  52.99    32.01
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.763  12.763 (0.763)   151      3991 0.08452   0.1344  80.00- 120.00   100.00(a)
 12.763  12.763 (0.763)   153      2683                   34.49-  94.49    67.22
 12.736  12.763 (0.761)   101      4125                   96.39- 156.39   103.34
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58    299878 23.0865   36.708  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43   1000258                  278.33- 338.33   333.55
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 13.587  13.533 (0.812)    45     63868 1.58984    2.528  80.00- 120.00   100.00
 13.587  13.533 (0.812)    43     31967                    0.00-  52.04    50.05
 13.560  13.533 (0.811)    59      2770                    0.00-  34.17     4.34
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 14.027  14.027 (0.839)    84      4266 0.16107   0.2561  80.00- 120.00   100.00(a)
 14.027  14.027 (0.839)    49      5513                   97.79- 157.79   129.23
 14.027  14.027 (0.839)    51      1919                    9.84-  69.84    44.98
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 14.878  14.878 (0.889)    57      1396 0.03384  0.05381  80.00- 120.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
78 Hexane (continued)							
14.933	14.878 (0.893)	43	3078			33.20- 93.20	220.42
0.000	14.878 (0.000)	86	0			0.00- 48.21	0.00
92 2-Butanone					CAS #: 78-93-3		
16.365	16.344 (0.978)	72	14686	1.11456	1.772	80.00- 120.00	100.00
16.365	16.344 (0.978)	43	65845			345.54- 405.54	448.35
16.365	16.344 (0.978)	57	4443			0.00- 59.64	30.26
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	2176	0.04382	0.06968	80.00- 120.00	100.00(a)
17.250	17.250 (1.031)	117	2662			75.13- 135.13	122.34
116 Benzene					CAS #: 71-43-2		
17.641	17.621 (0.968)	78	4037	0.06364	0.1012	80.00- 120.00	100.00(a)
17.621	17.621 (0.966)	77	1177			0.00- 54.04	29.17
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	830	0.04798	0.07629	80.00- 120.00	100.00(a)
17.847	17.847 (0.979)	100	369			9.17- 69.17	44.43
17.847	17.847 (0.979)	43	2199			158.08- 218.08	264.78
136 1,4-Dioxane					CAS #: 123-91-1		
19.213	19.213 (1.054)	88	8324	0.52092	0.8283	80.00- 120.00	100.00
19.213	19.213 (1.054)	58	6955			39.29- 99.29	83.55
19.213	19.213 (1.054)	57	3080			0.00- 52.49	37.00
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	16426	0.24152	0.3840	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	8561			30.04- 90.04	52.12
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	792	0.02452	0.03898	80.00- 120.00	100.00(a)
24.091	24.091 (1.014)	91	1626			170.44- 230.44	205.34
172 Styrene					CAS #: 100-42-5		
24.731	24.751 (1.041)	104	454	0.01042	0.01657	80.00- 120.00	100.00(a)
24.710	24.731 (1.040)	78	439			22.29- 82.29	96.74
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	852	0.01457	0.02316	80.00- 120.00	100.00(a)
29.756	29.772 (1.252)	127	523			0.00- 42.99	61.47

QC Flag Legend

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

Report Date: 27-Jul-2016 15:19

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071915.d
Lab Smp Id: 1607235D-14A
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 4.7"Hg ->5psi

Calibration Date: 19-JUL-2016
Calibration Time: 07:30

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	85209	-26.47
123 1,4-Difluorobenze	406395	243837	568953	261560	-35.64
163 Chlorobenzene-d5	363239	217943	508535	257439	-29.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:19

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 19Jul2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1607235D-14A
Level: LOW Operator: gh
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 4.7"Hg ->5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	6.223	124.46	70-130
$ 146 Toluene-d8	5.000	4.828	96.56	70-130
$ 177 4-Bromofluorobenze	5.000	4.794	95.87	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

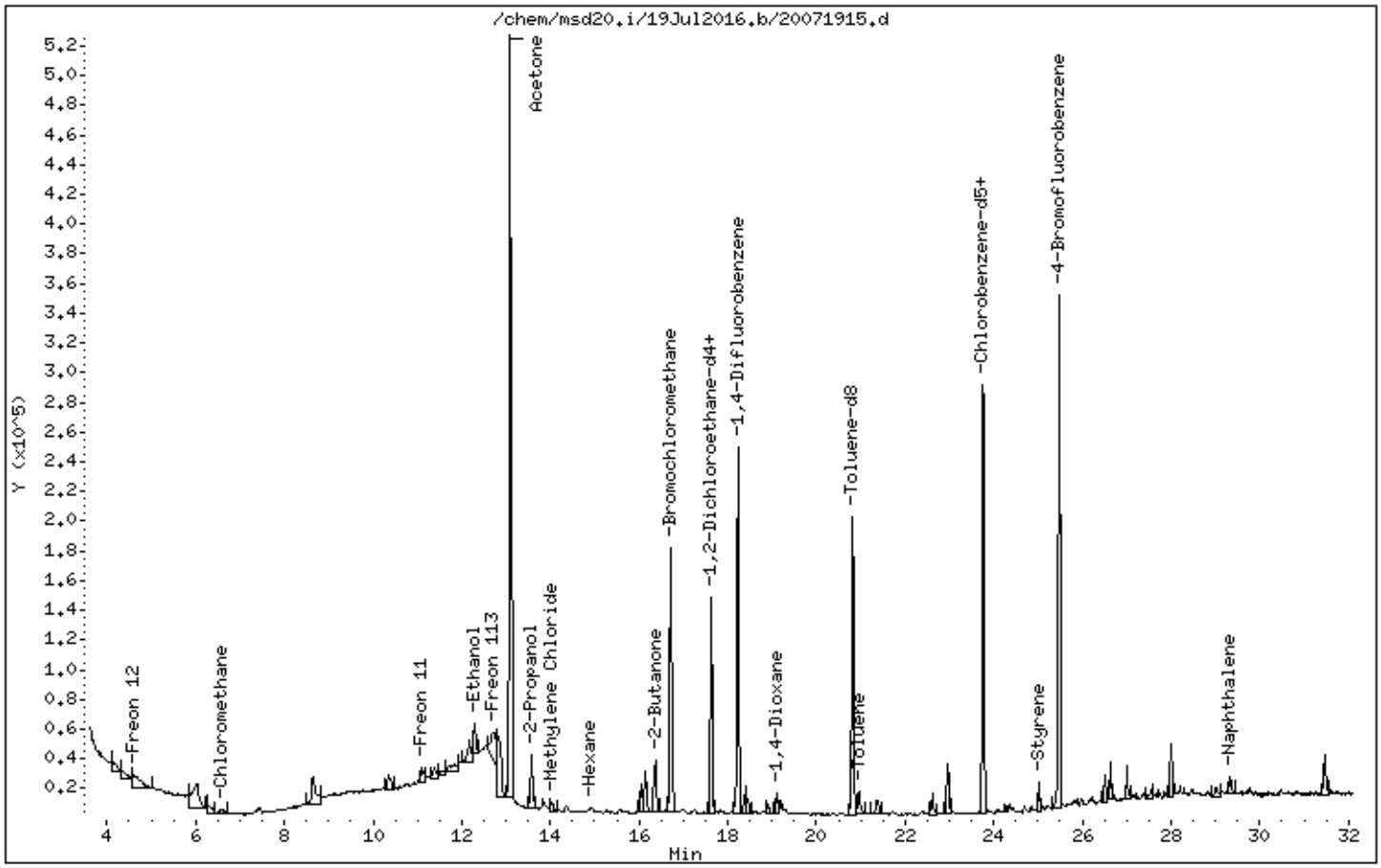
Instrument: msd20.i

Sample Info: 250mL#12947

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

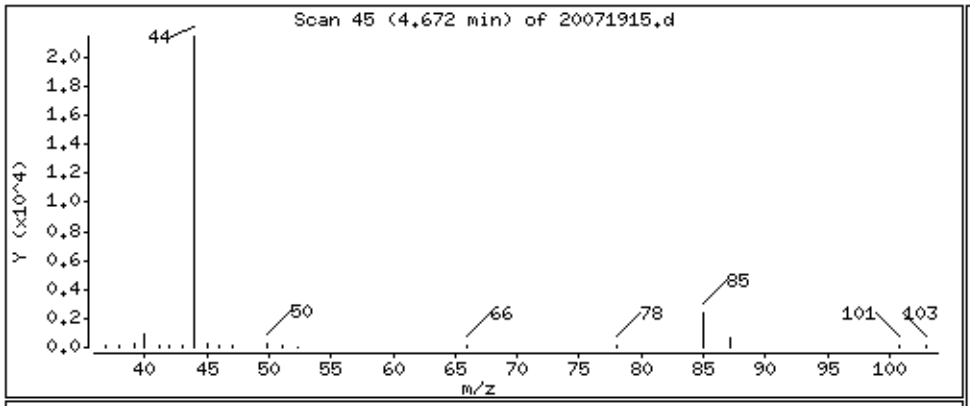
Operator: gh

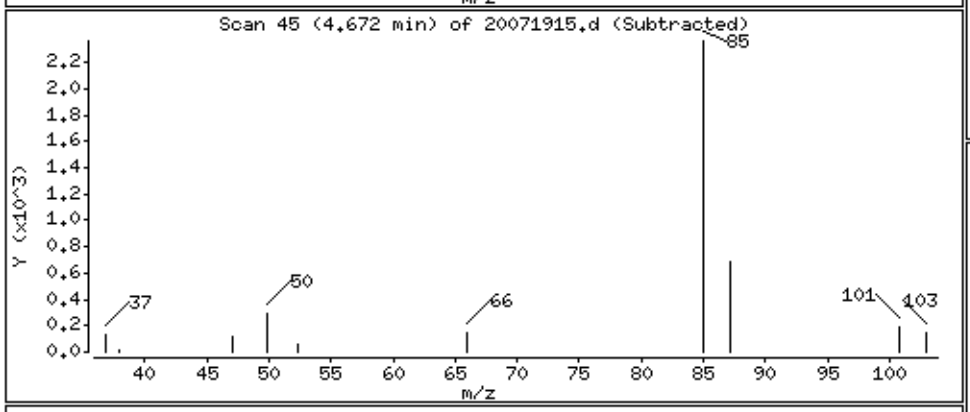
Column phase: RTX-624

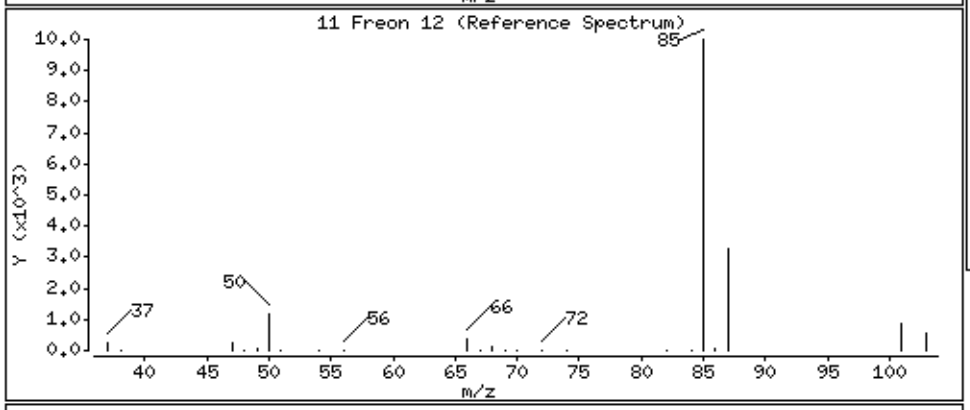
Column diameter: 0.32

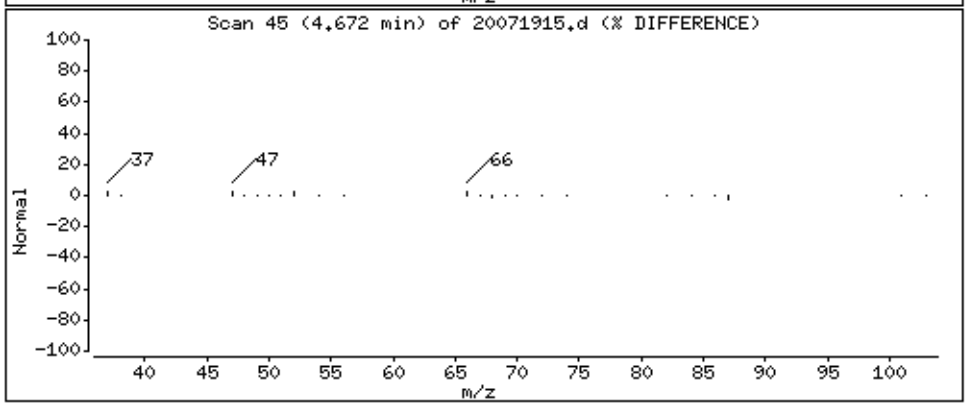
11 Freon 12

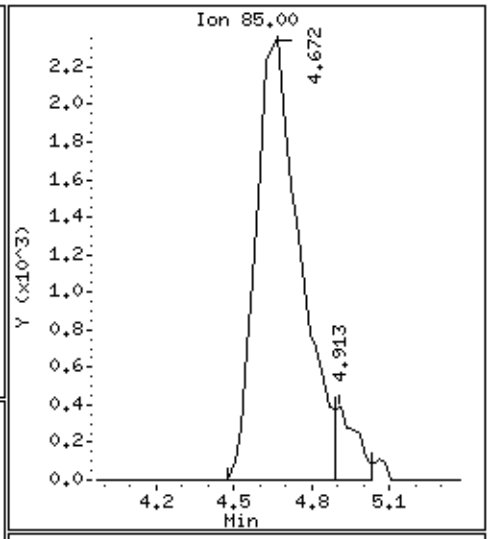
Concentration: 0.6154 PPBV

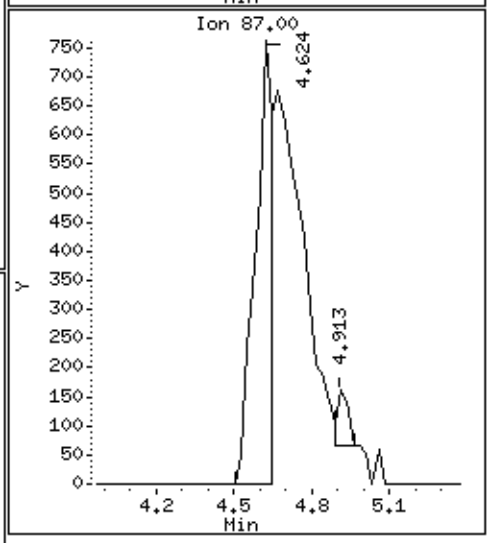












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

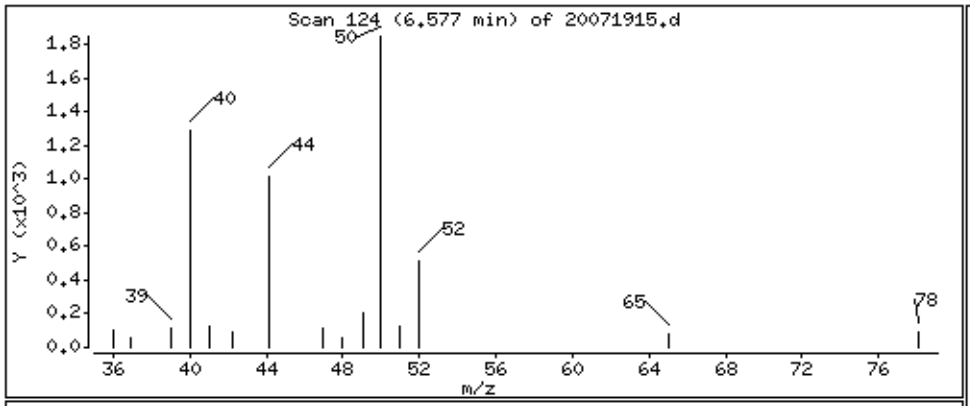
Operator: gh

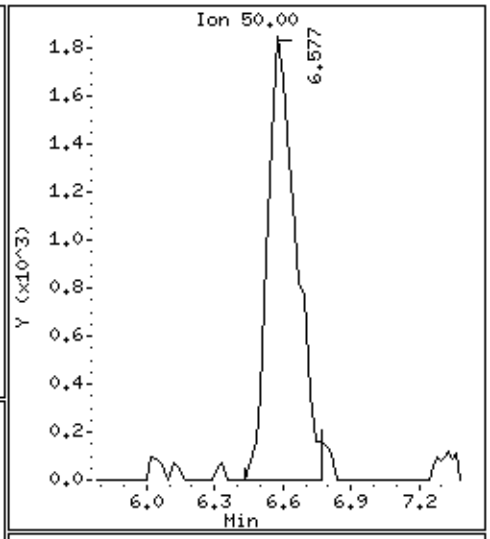
Column phase: RTX-624

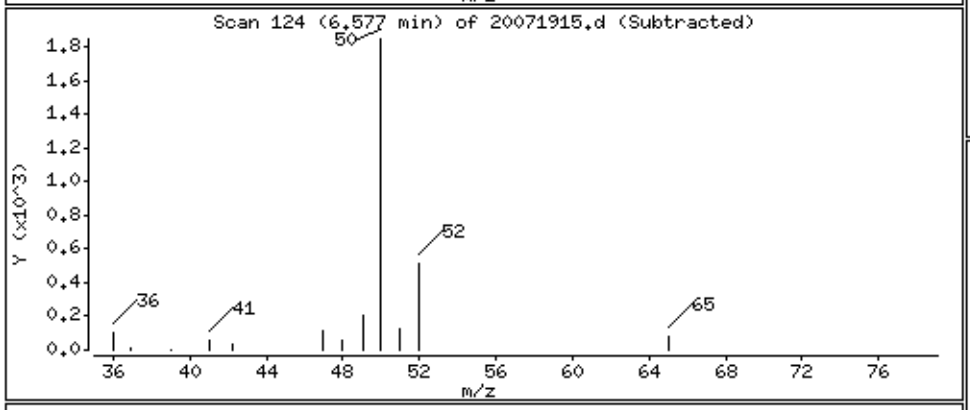
Column diameter: 0.32

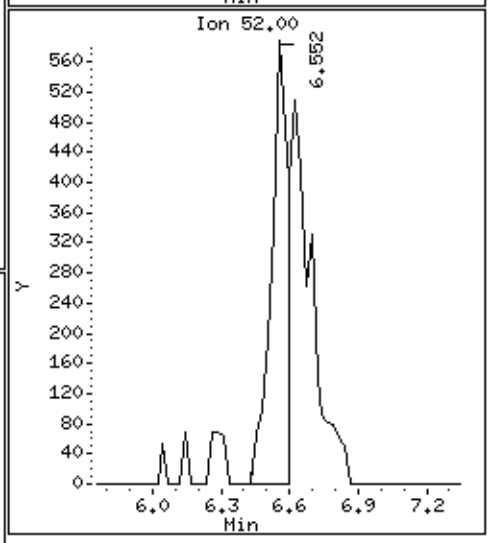
17 Chloromethane

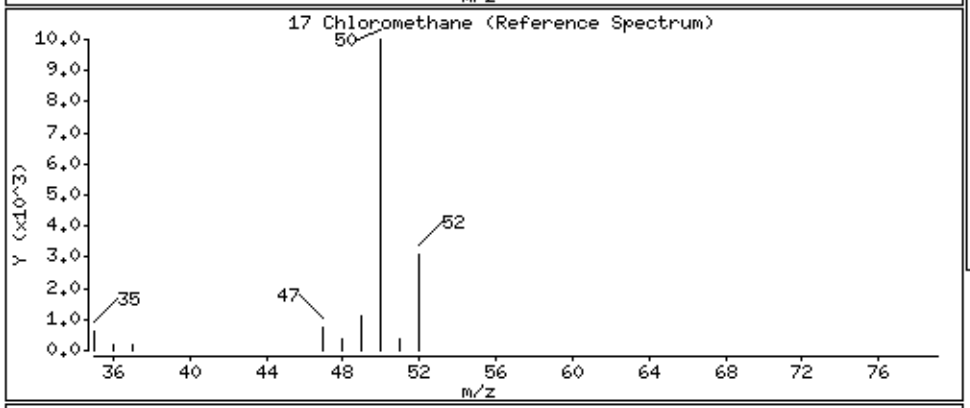
Concentration: 1.066 PPBV

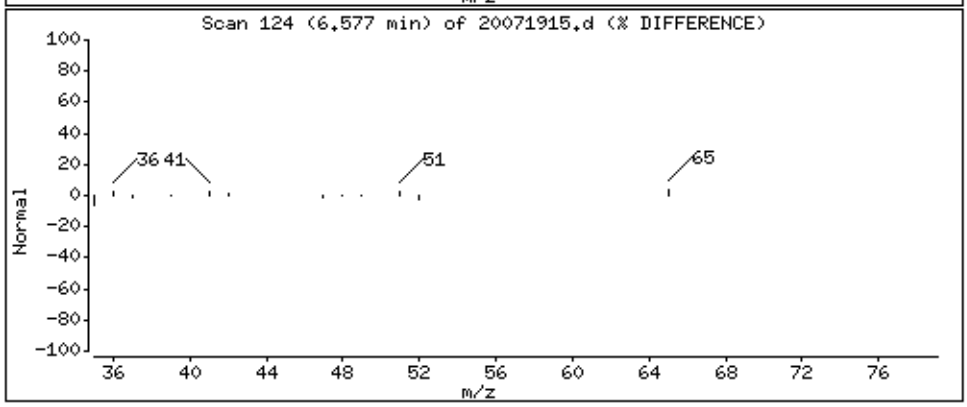












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

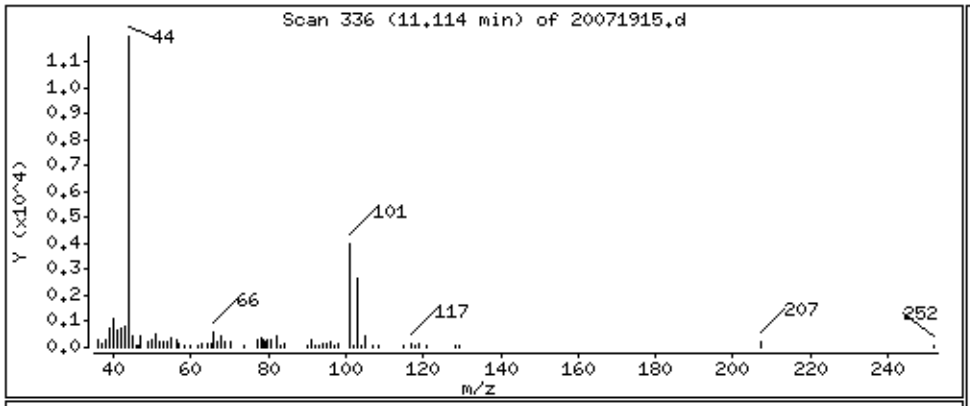
Operator: gh

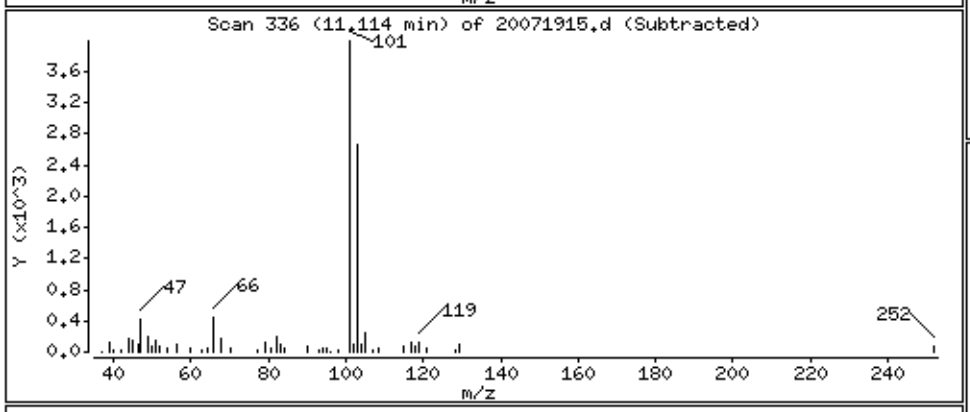
Column phase: RTX-624

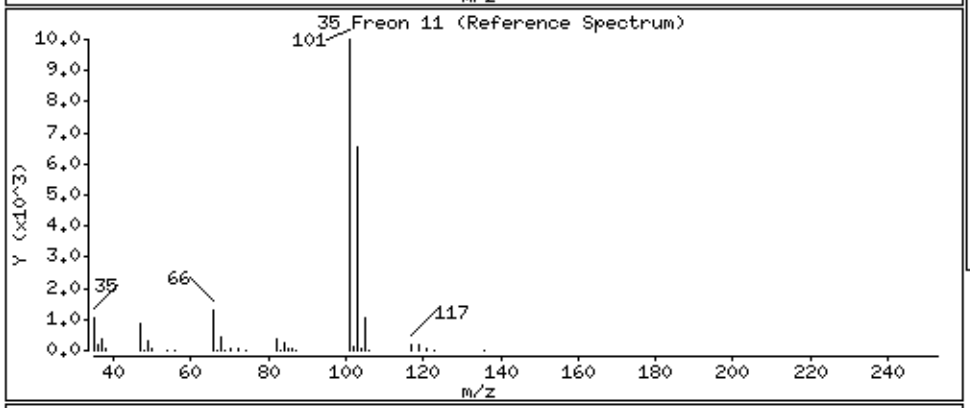
Column diameter: 0.32

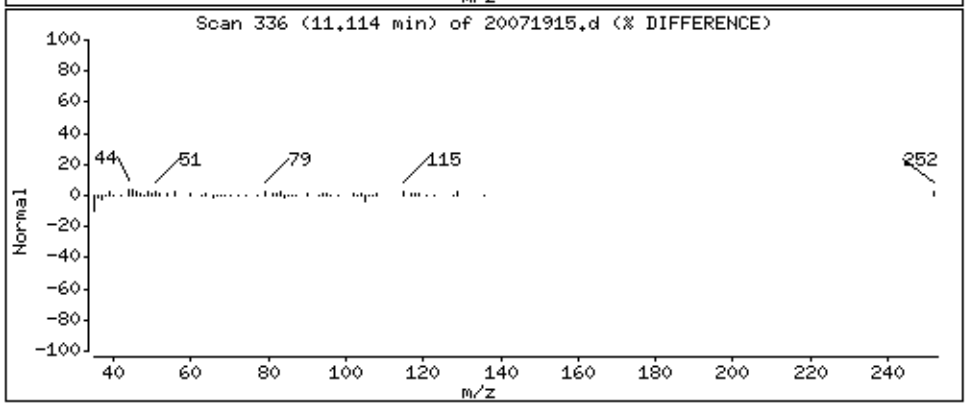
35 Freon 11

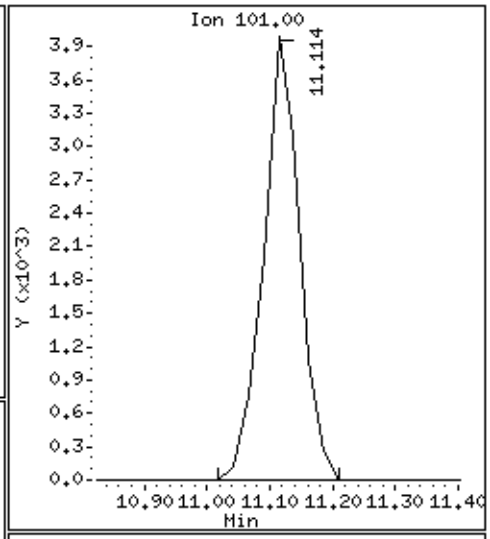
Concentration: 0.3713 PPBV

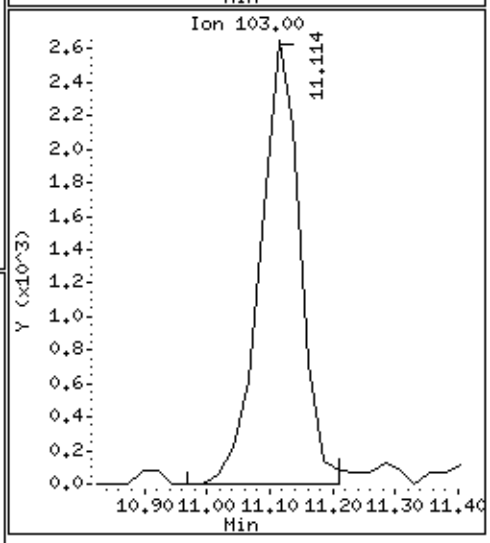












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

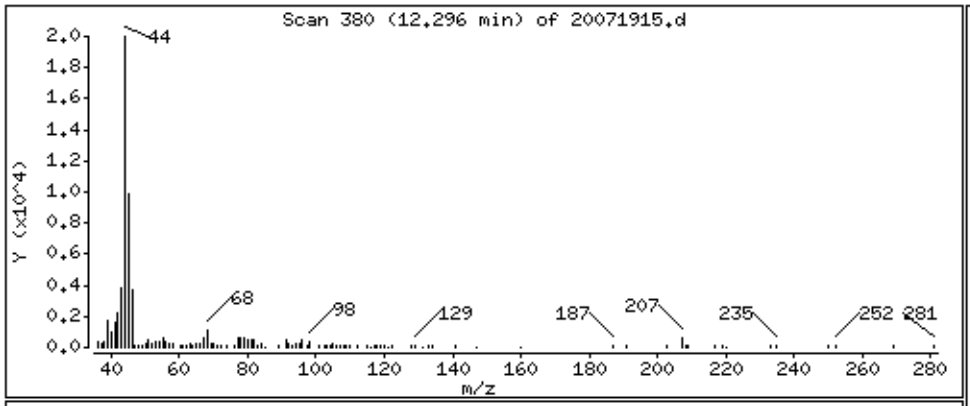
Operator: gh

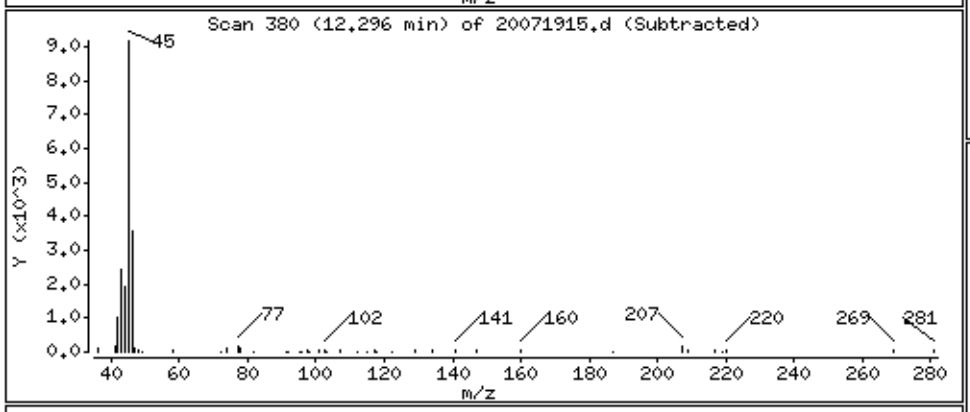
Column phase: RTX-624

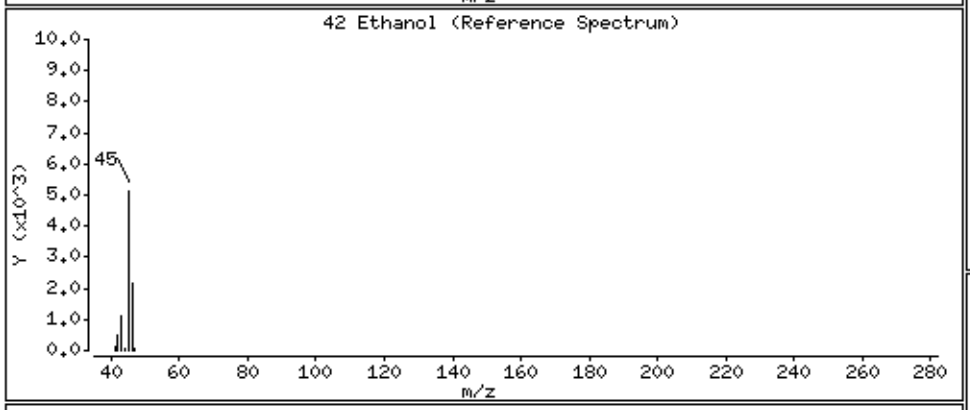
Column diameter: 0.32

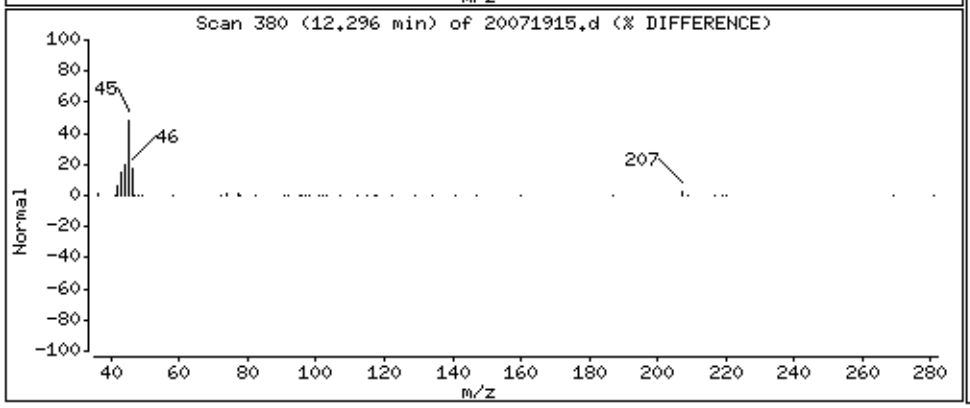
42 Ethanol

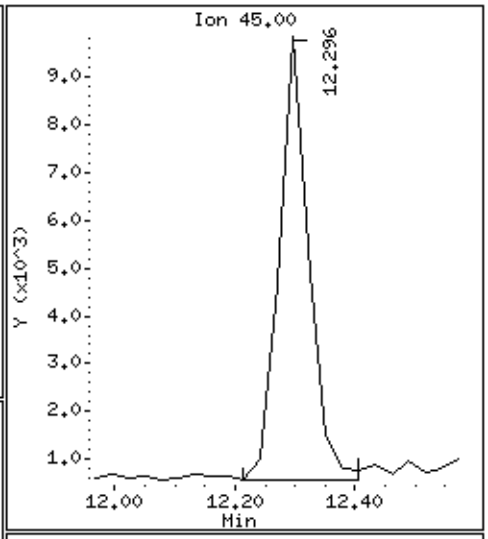
Concentration: 5.610 PPBV

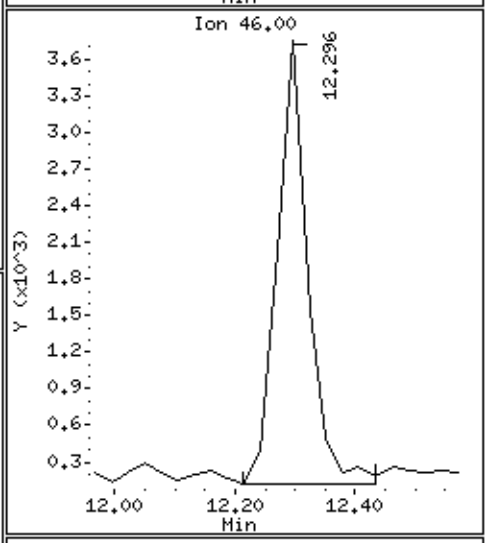


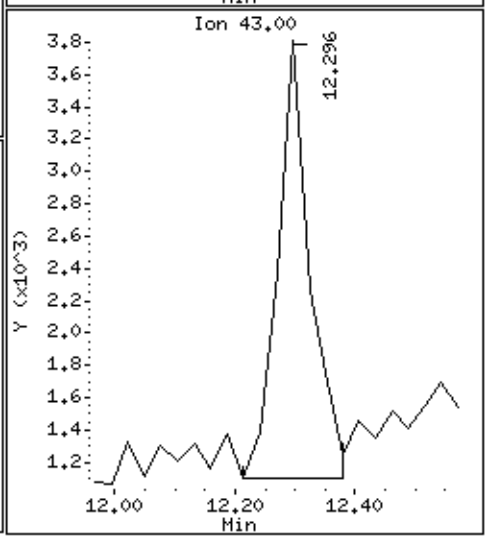












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

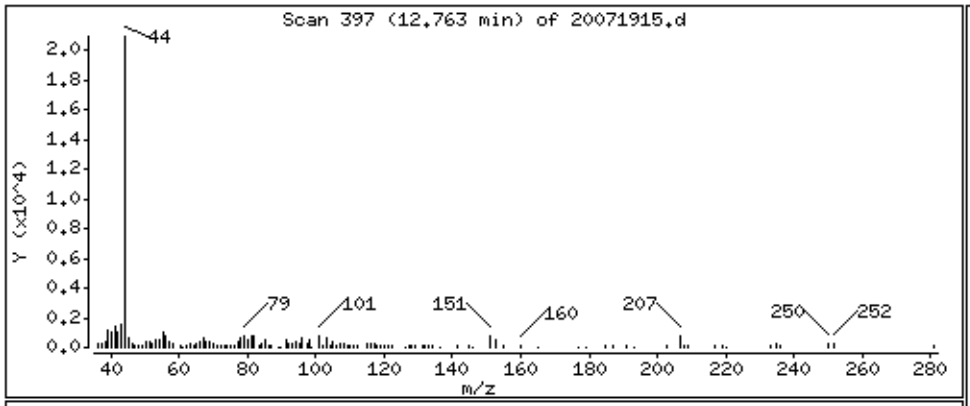
Operator: gh

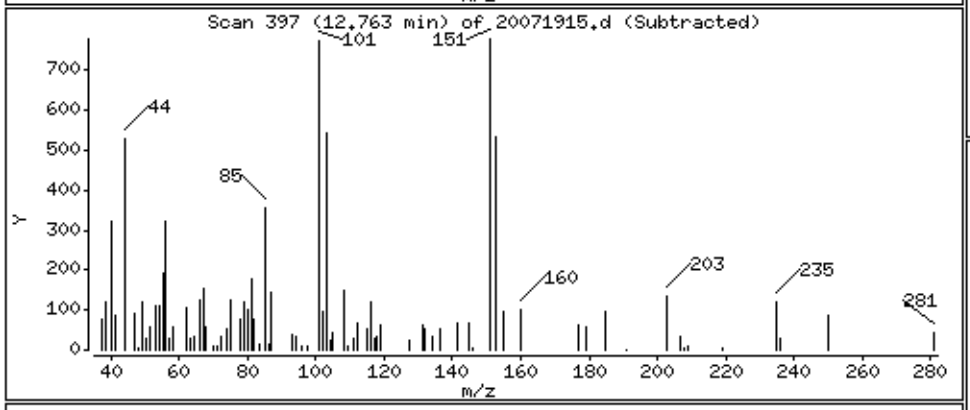
Column phase: RTX-624

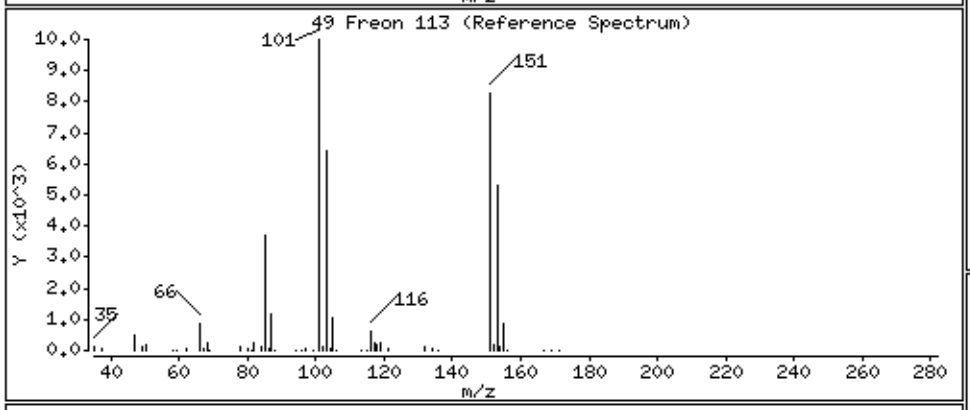
Column diameter: 0.32

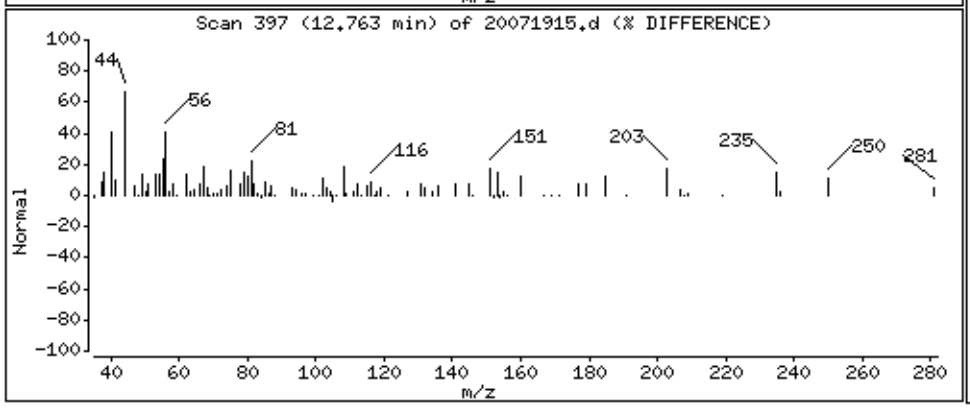
49 Freon 113

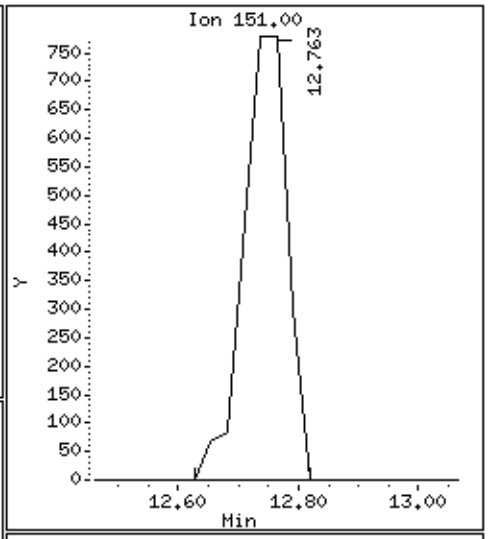
Concentration: 0.1344 PPBV

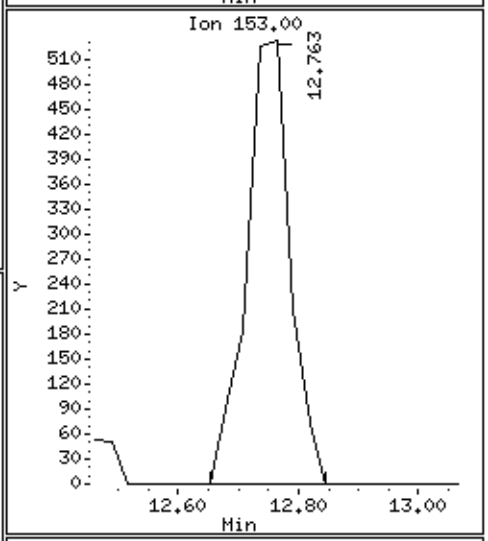


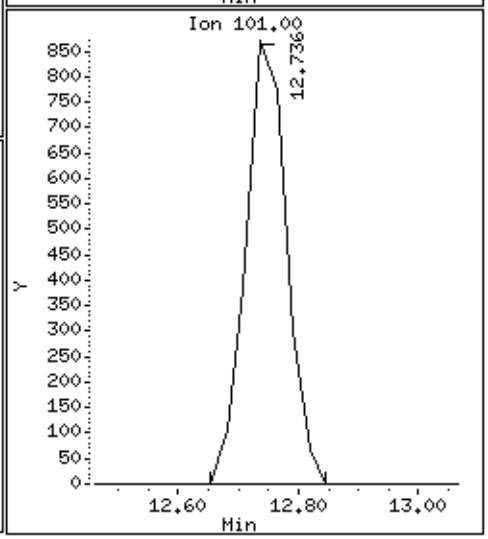












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

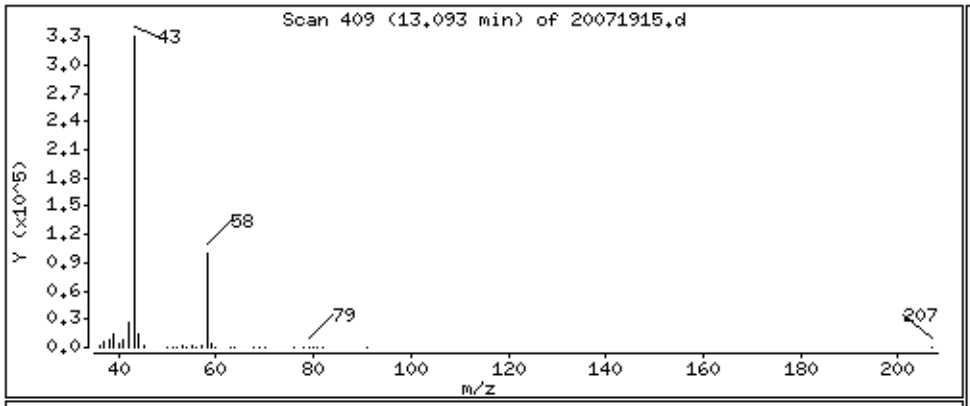
Operator: gh

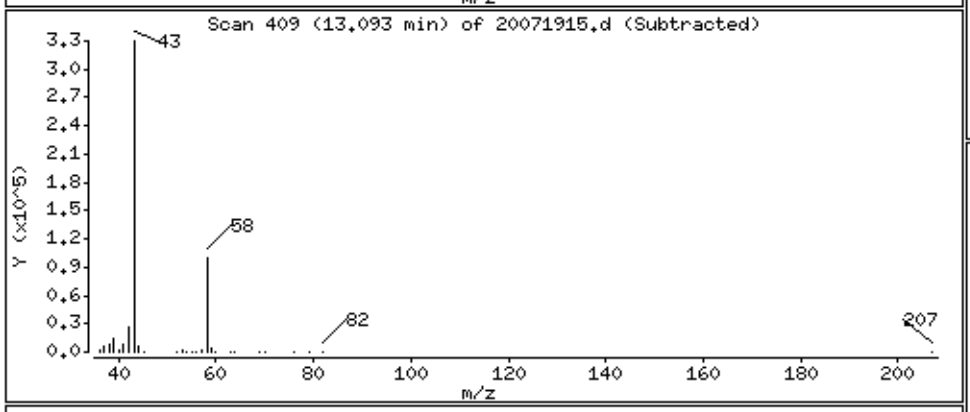
Column phase: RTX-624

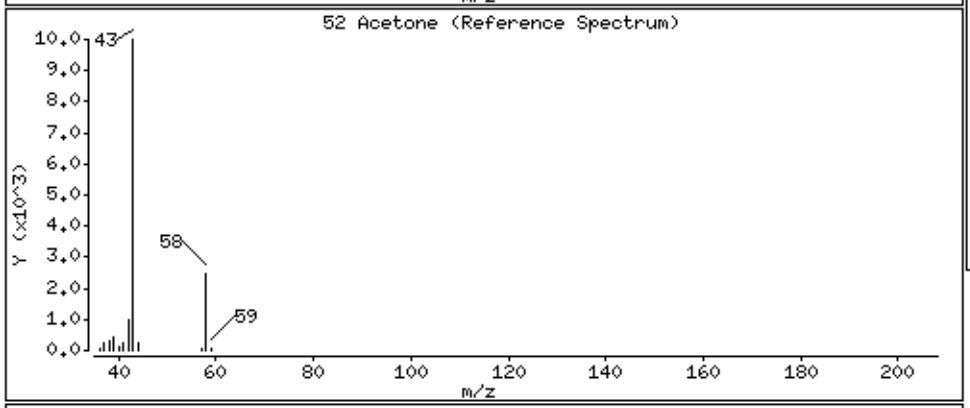
Column diameter: 0.32

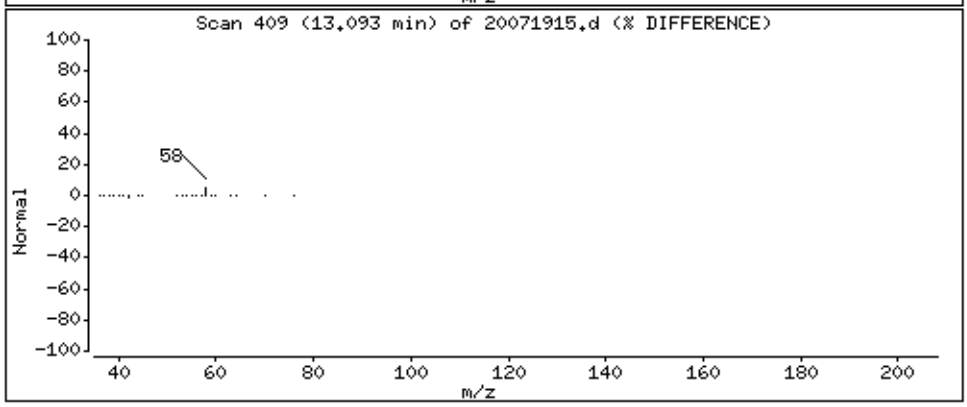
52 Acetone

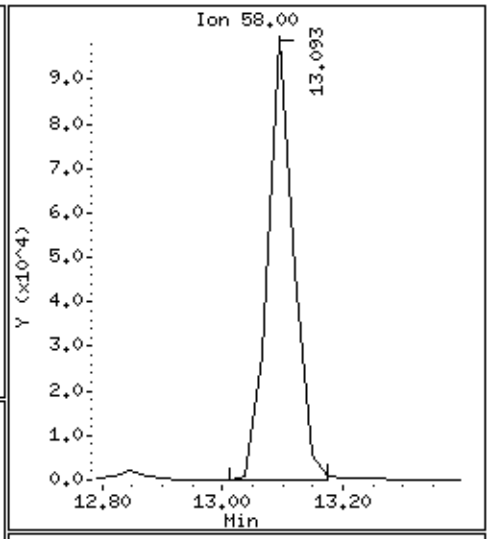
Concentration: 36.708 PPBV

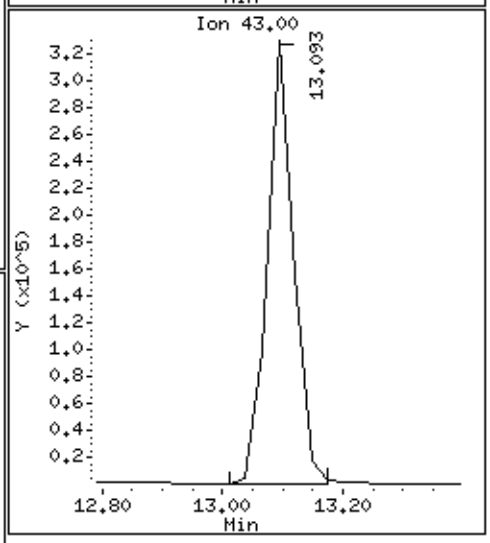












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

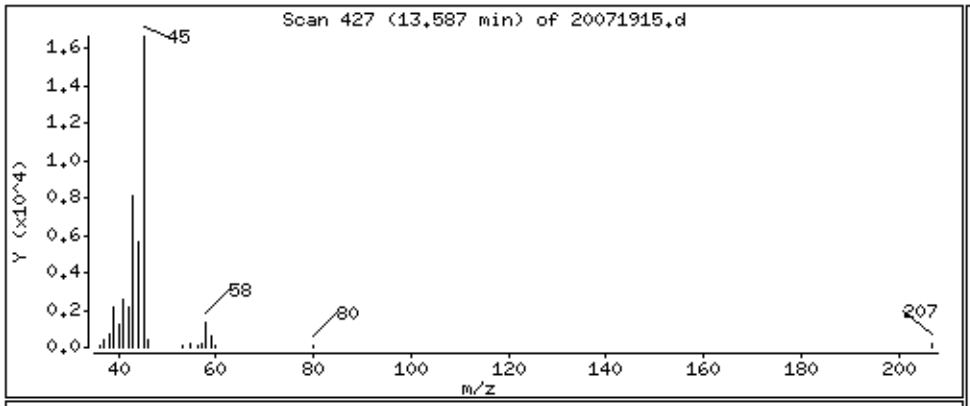
Operator: gh

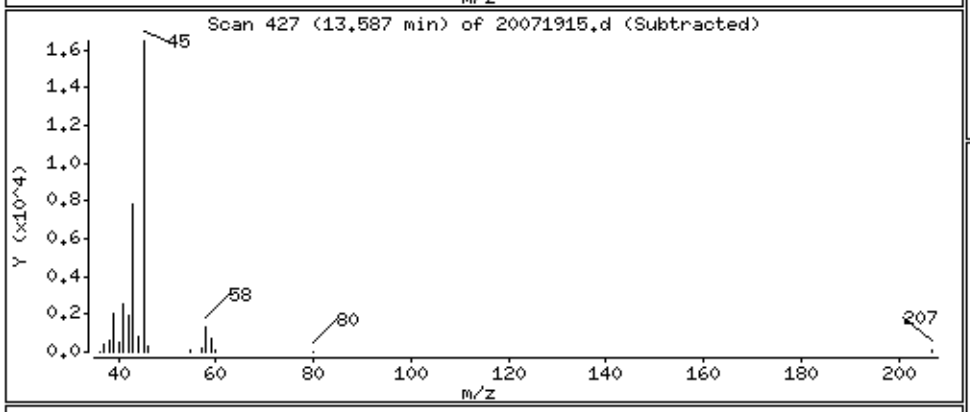
Column phase: RTX-624

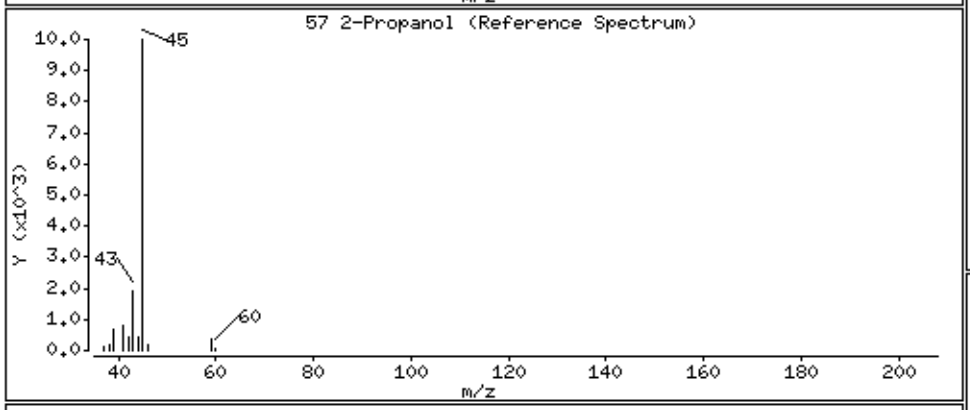
Column diameter: 0.32

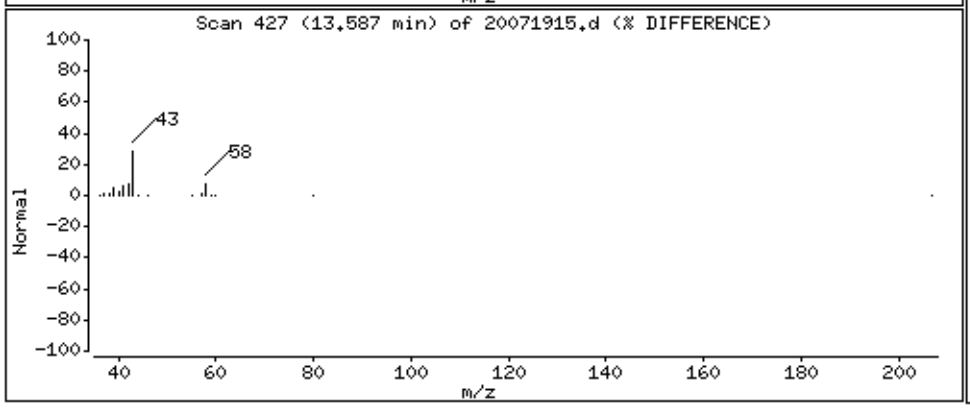
57 2-Propanol

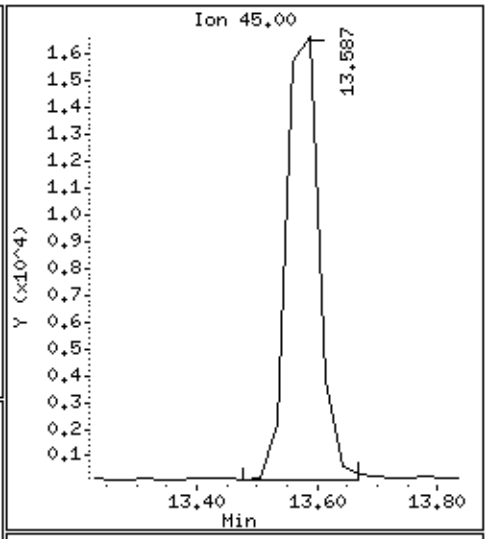
Concentration: 2.528 PPBV

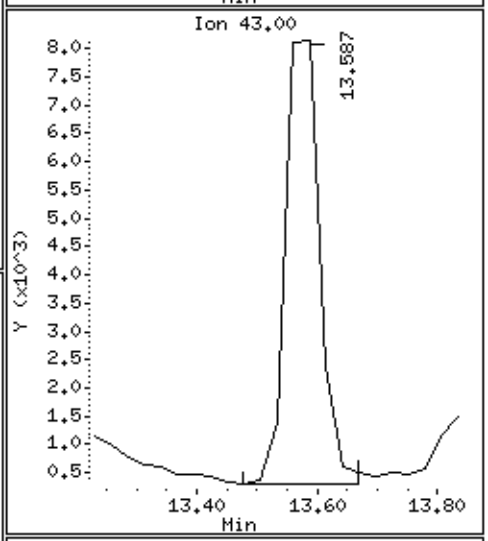


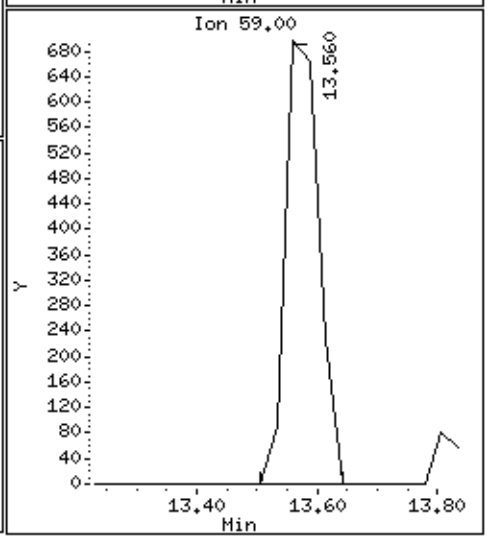












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

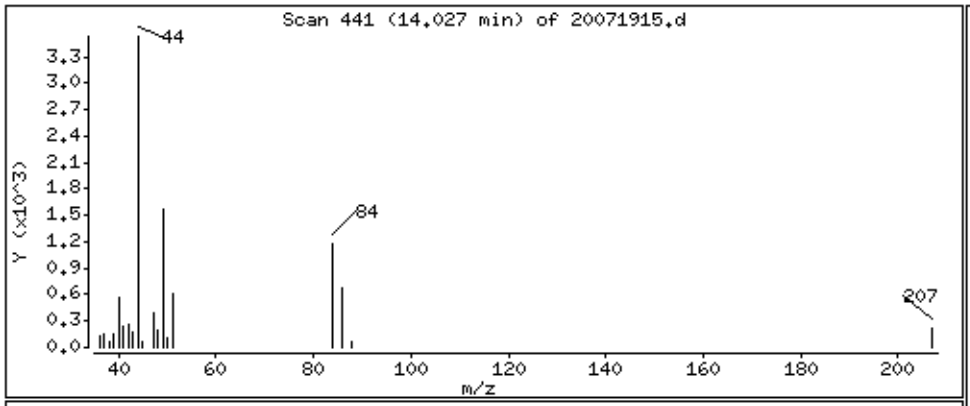
Operator: gh

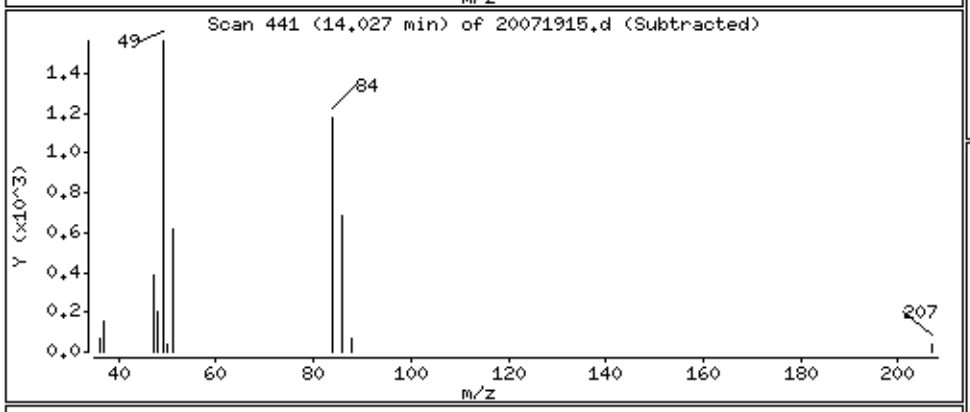
Column phase: RTX-624

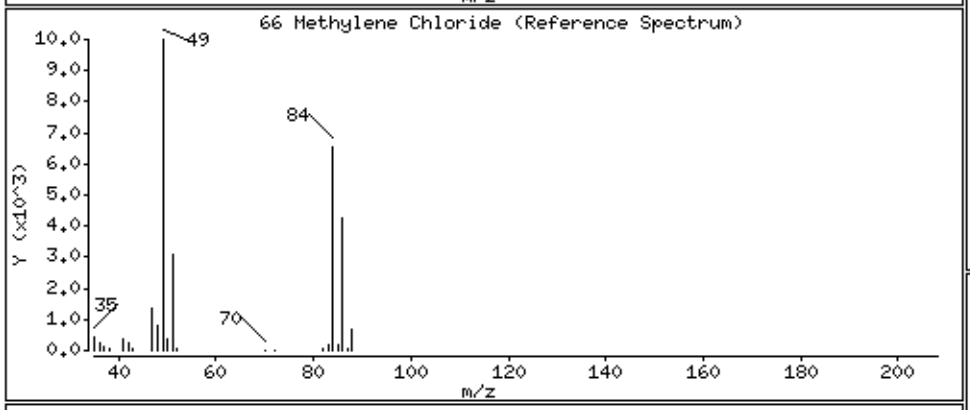
Column diameter: 0.32

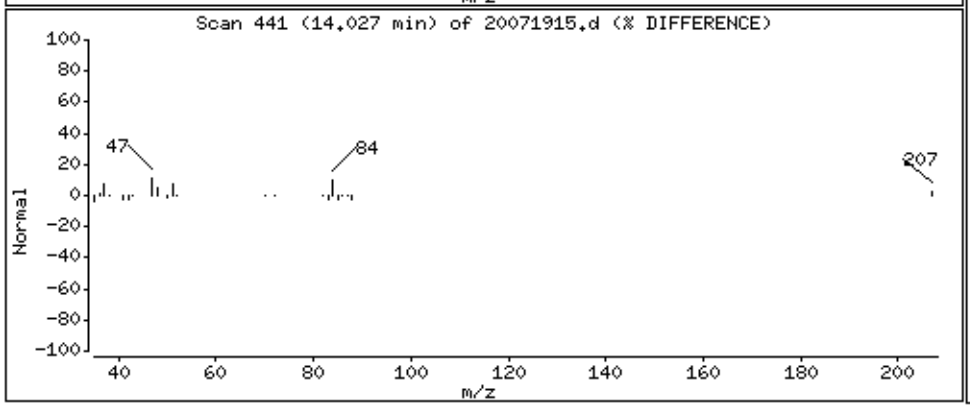
66 Methylene Chloride

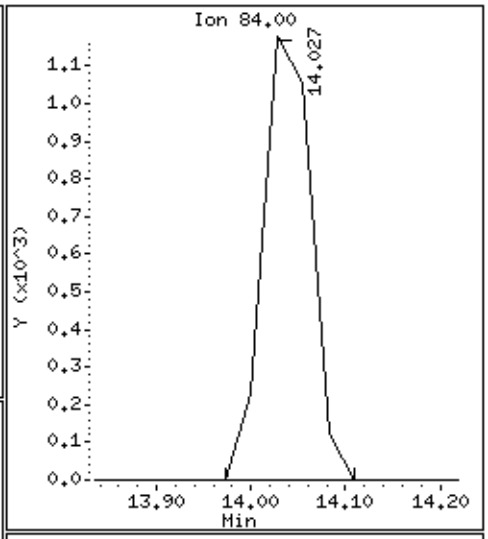
Concentration: 0.2561 PPBV

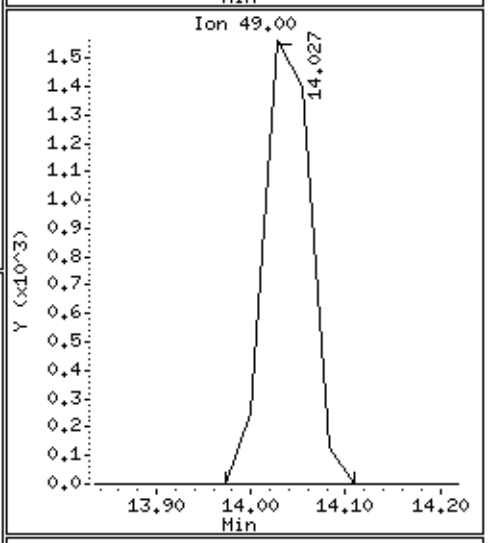


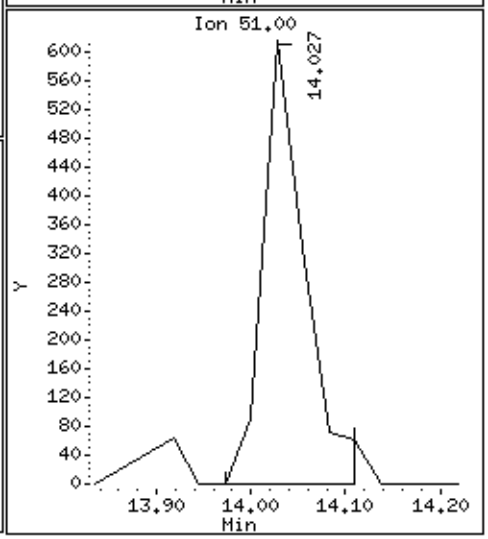












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

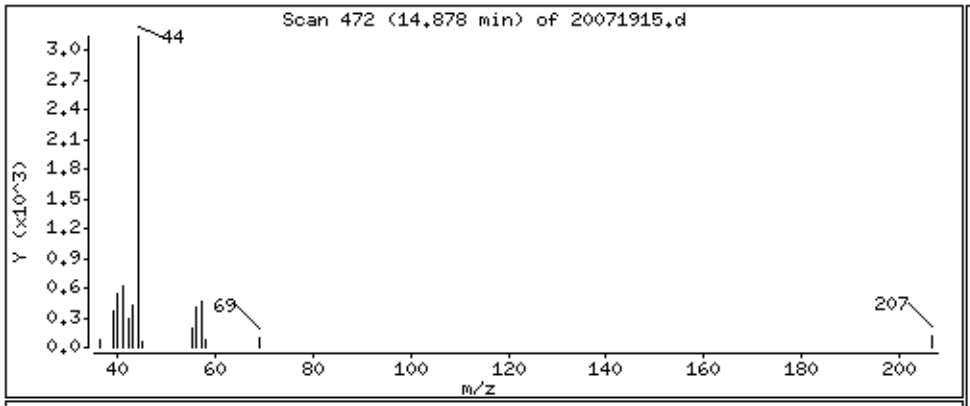
Operator: gh

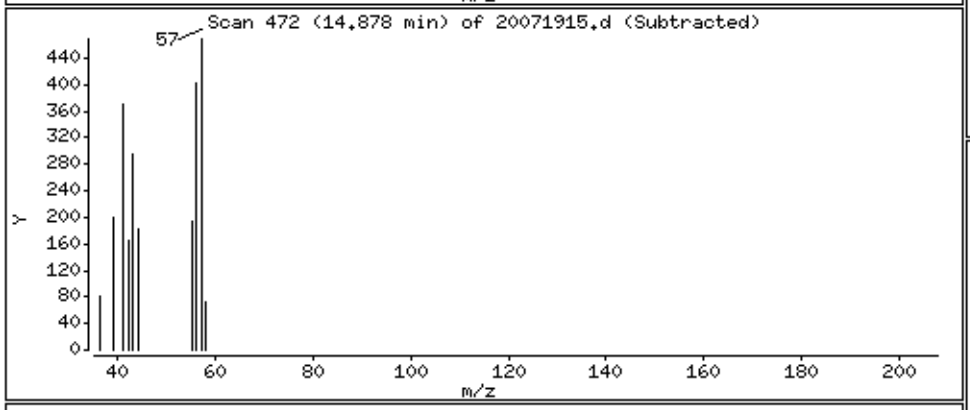
Column phase: RTX-624

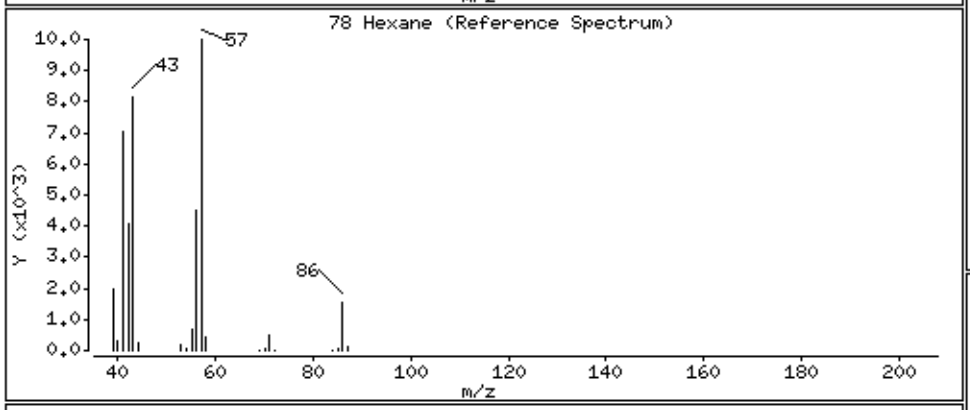
Column diameter: 0.32

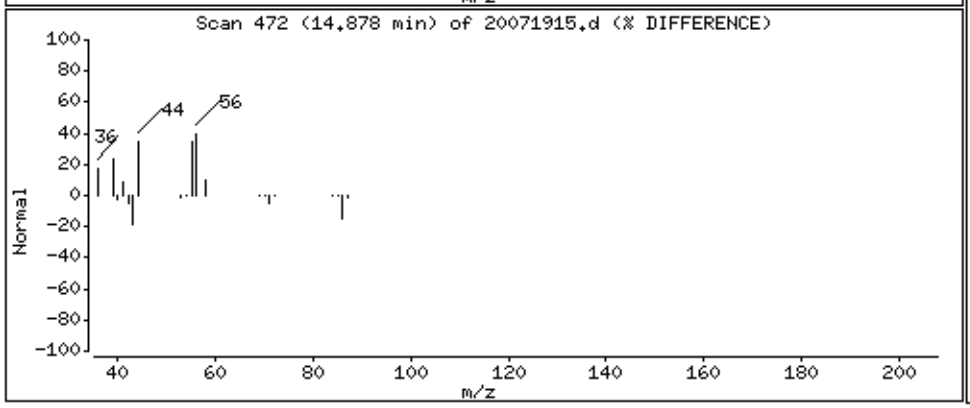
78 Hexane

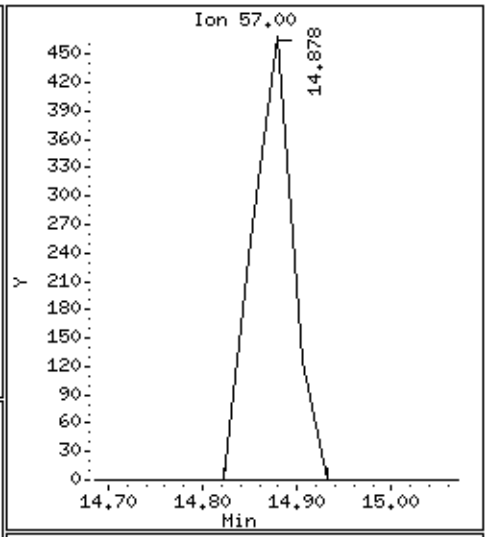
Concentration: 0.05381 PPBV

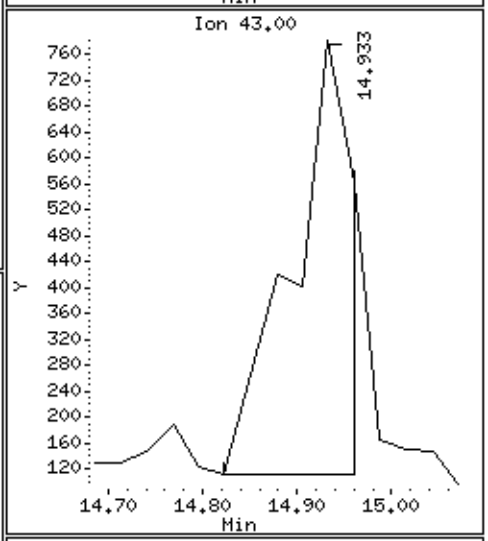


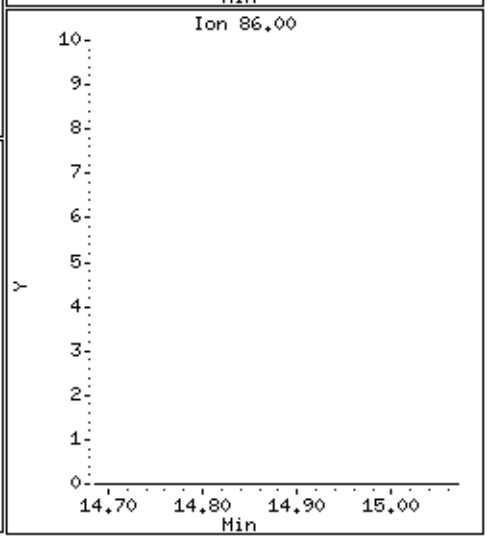












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

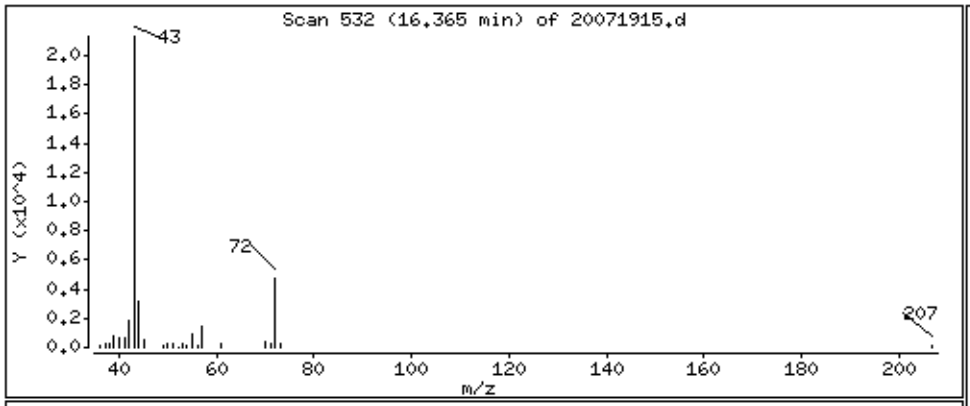
Operator: gh

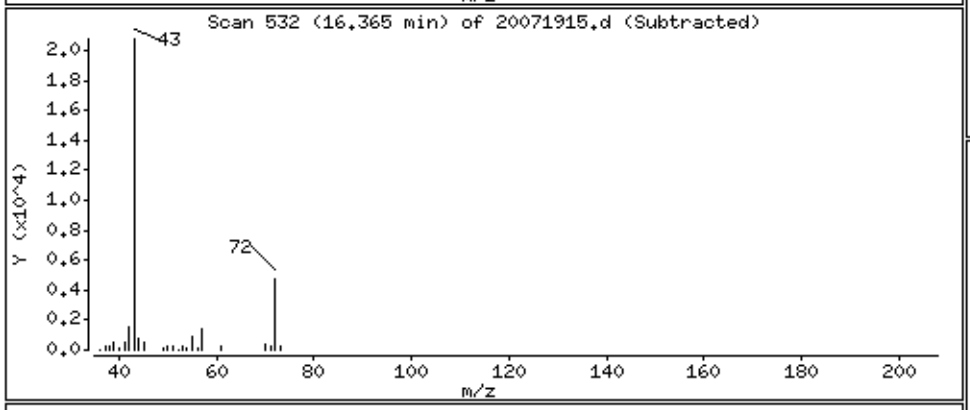
Column phase: RTX-624

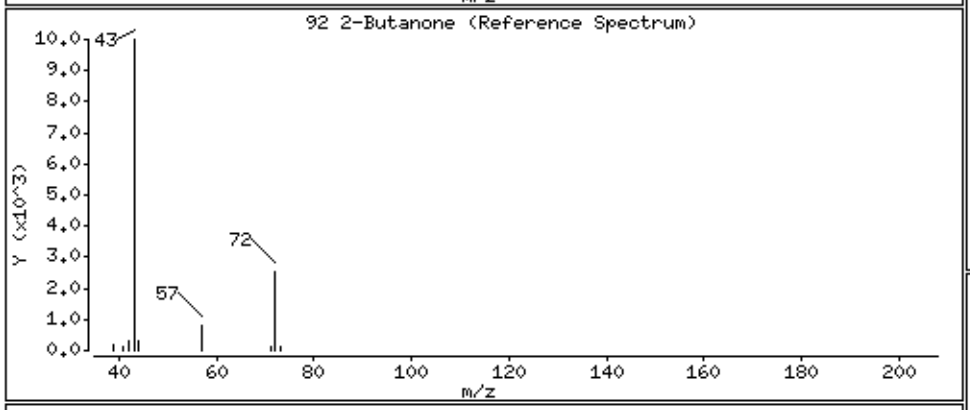
Column diameter: 0.32

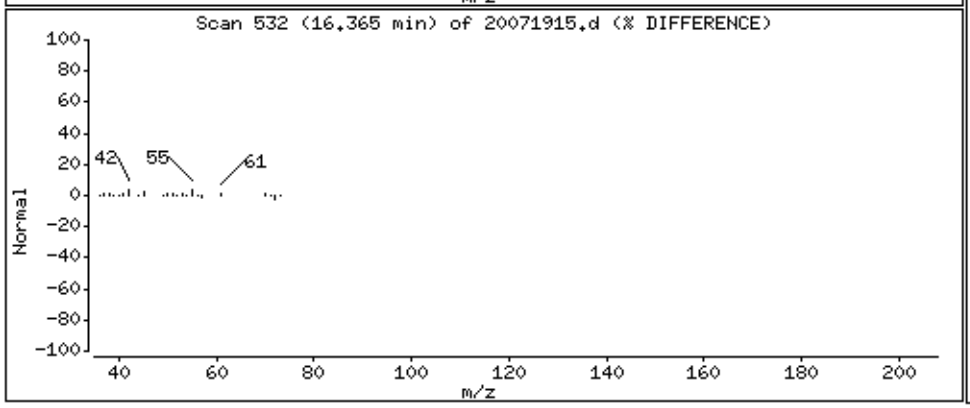
92 2-Butanone

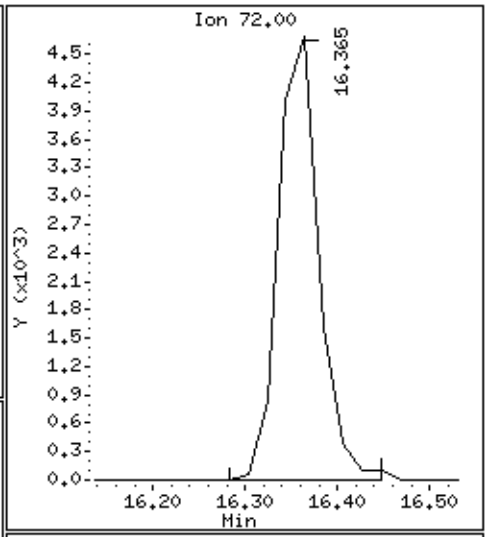
Concentration: 1.772 PPBV

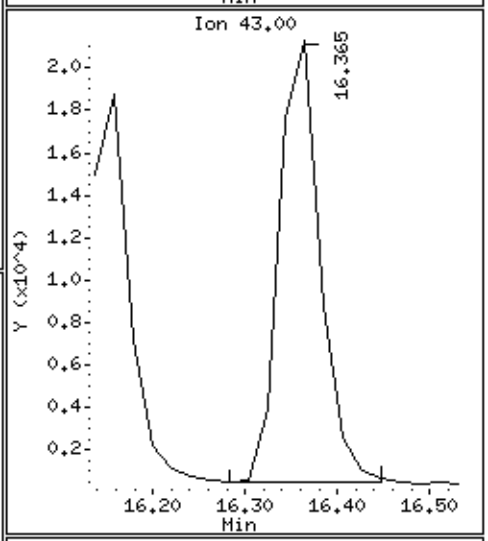


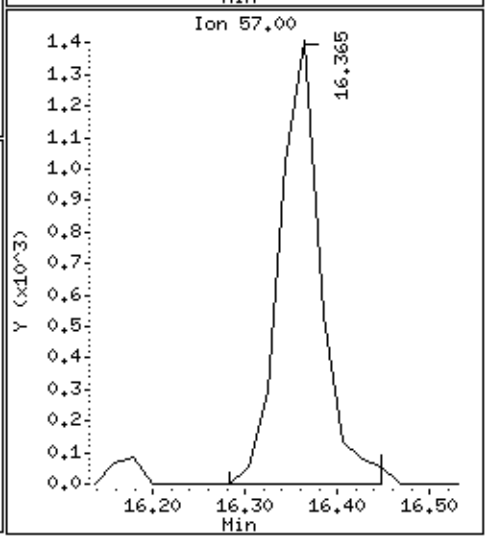












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

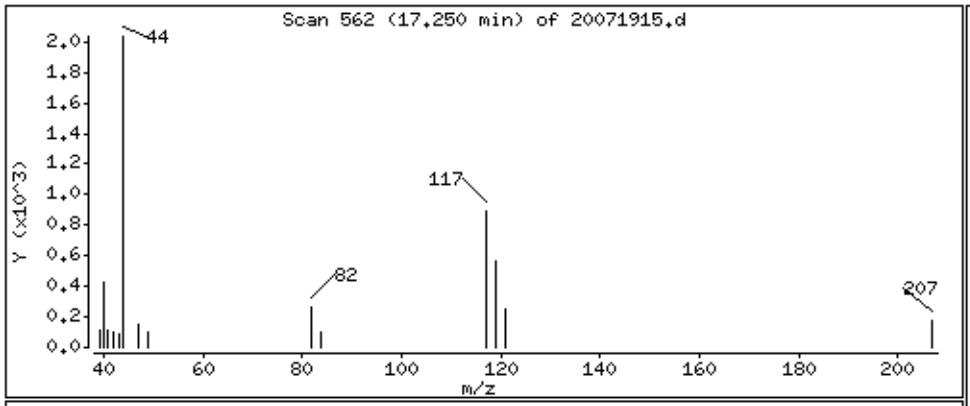
Operator: gh

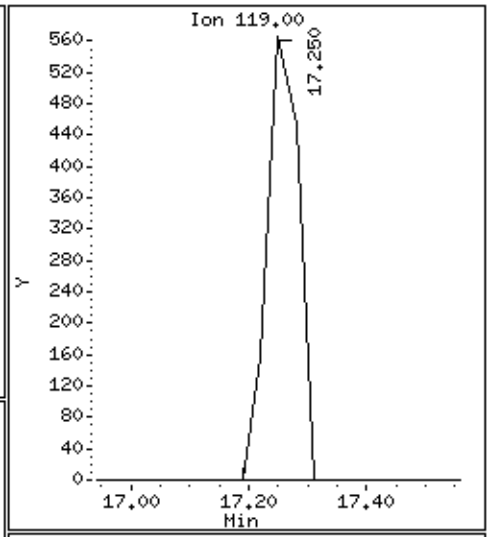
Column phase: RTX-624

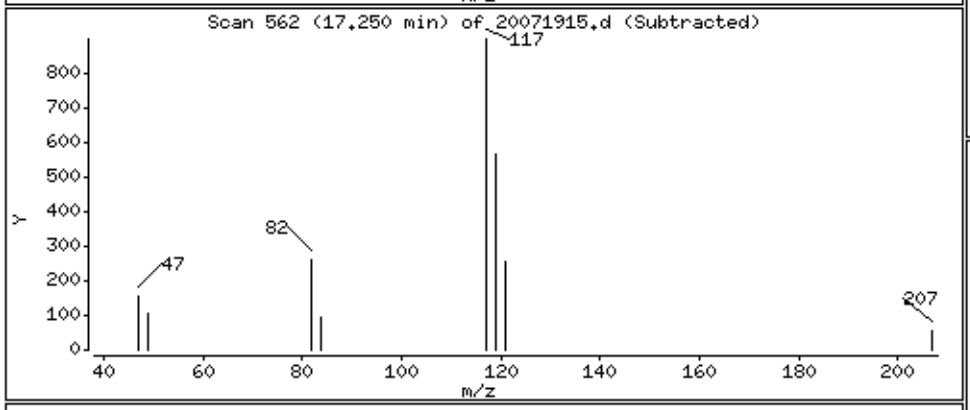
Column diameter: 0.32

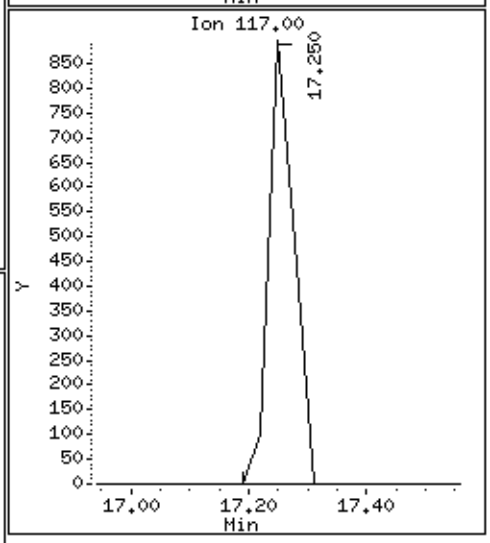
106 Carbon Tetrachloride

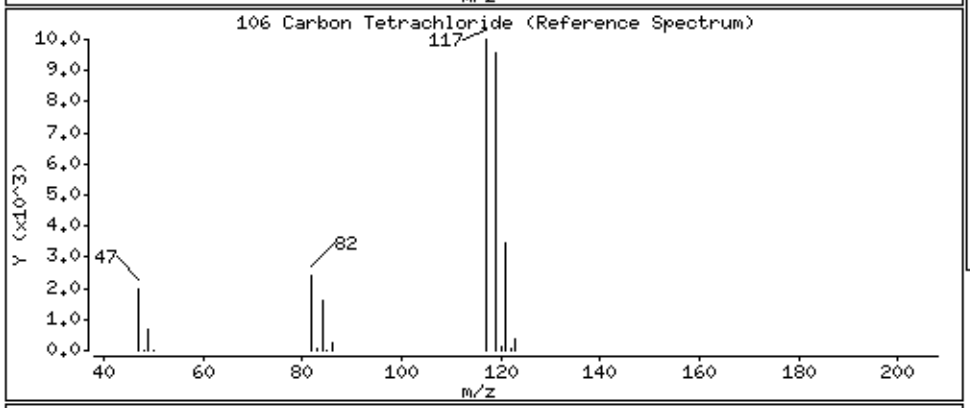
Concentration: 0.06968 PPBV

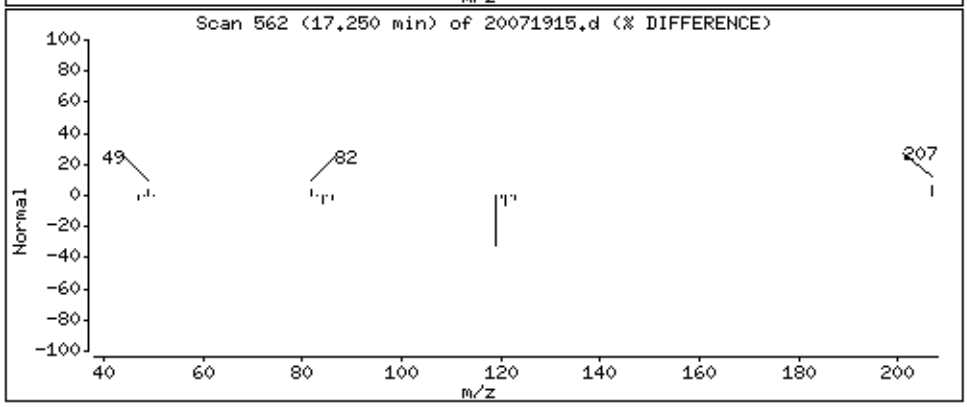












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

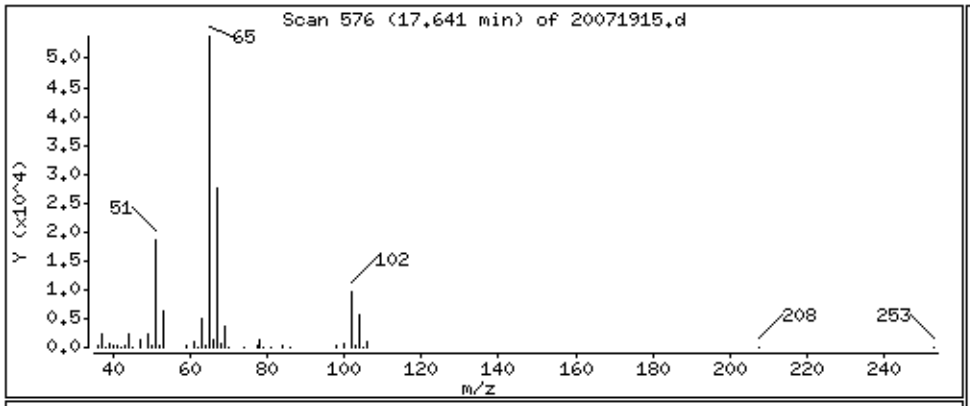
Operator: gh

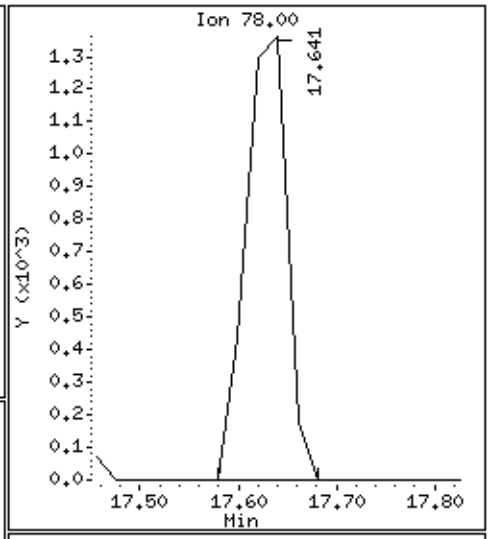
Column phase: RTX-624

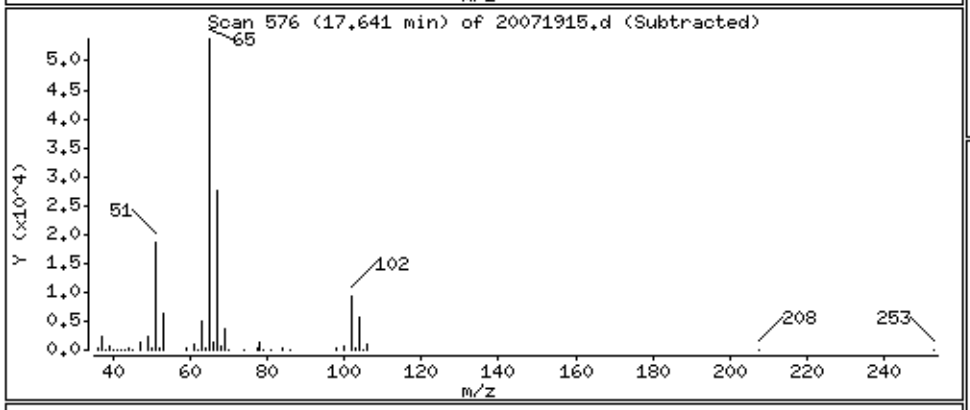
Column diameter: 0.32

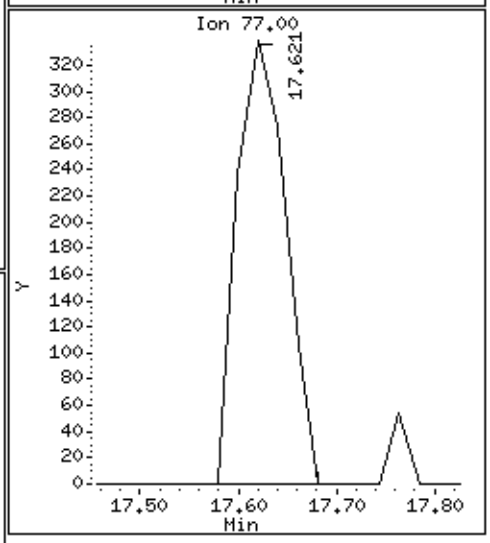
116 Benzene

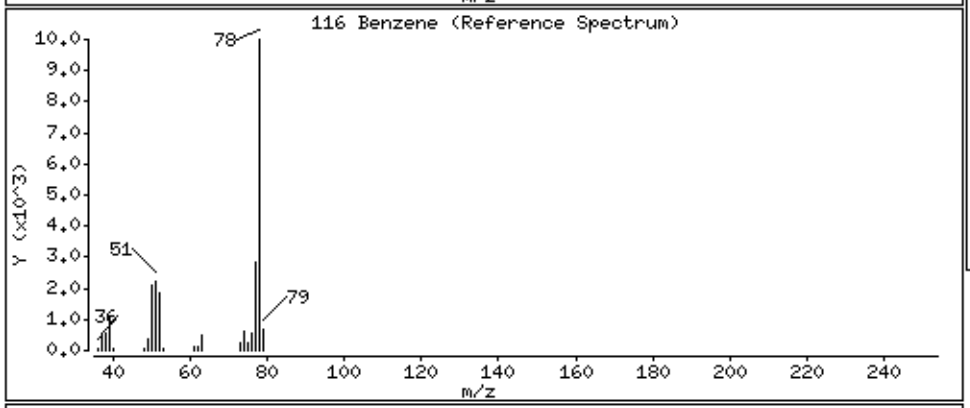
Concentration: 0.1012 PPBV

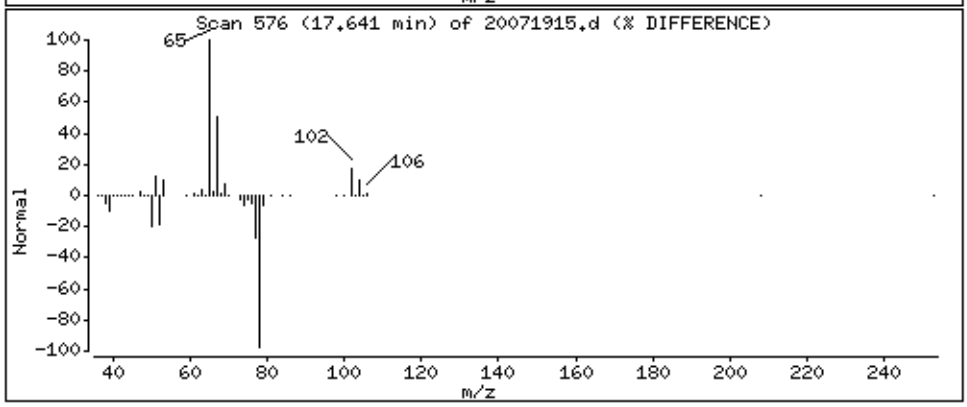












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

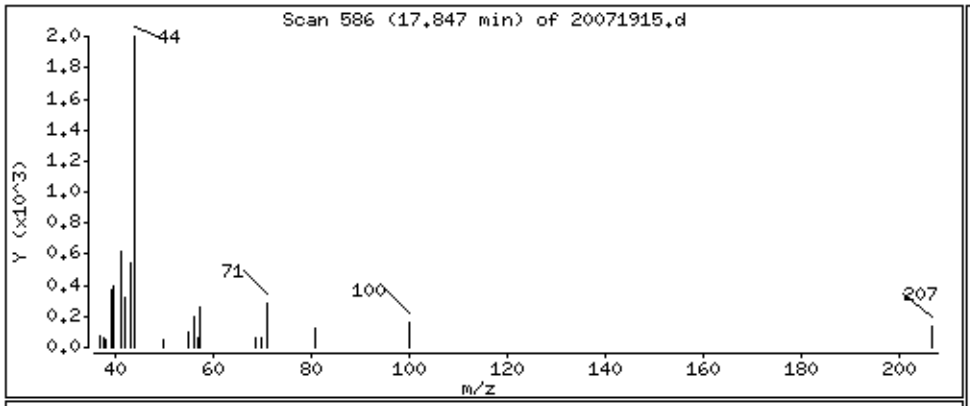
Operator: gh

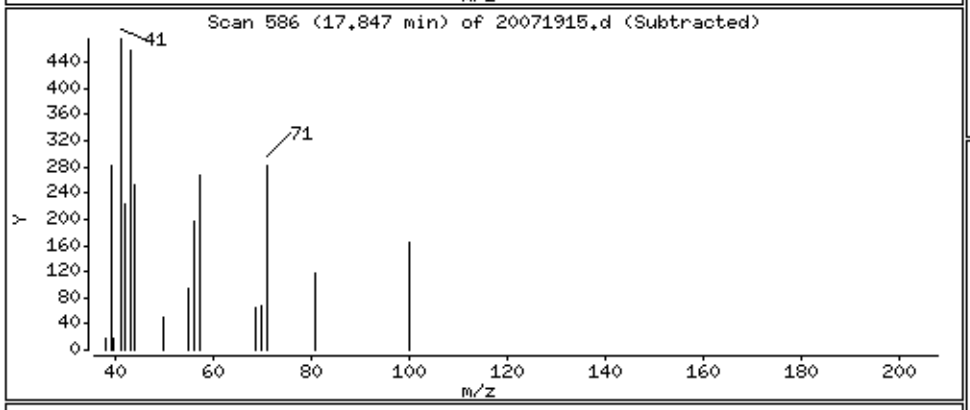
Column phase: RTX-624

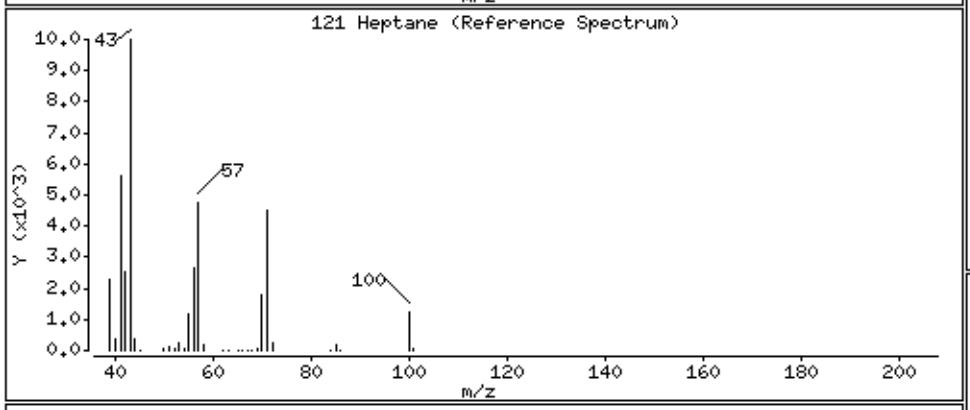
Column diameter: 0.32

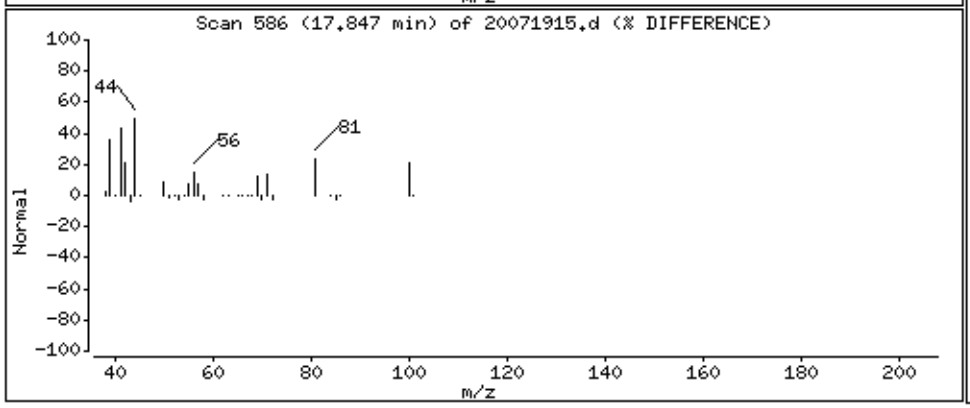
121 Heptane

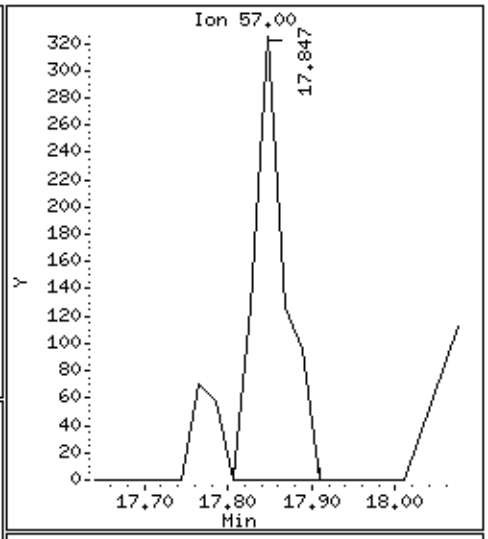
Concentration: 0.07629 PPBV

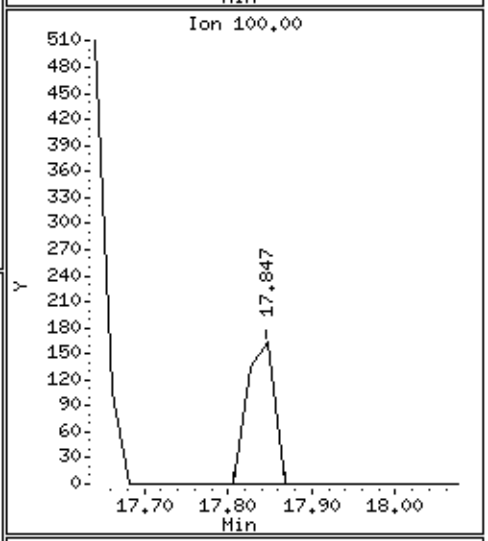


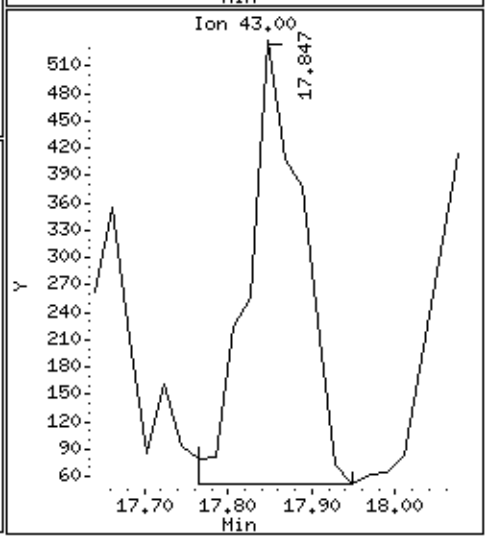












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

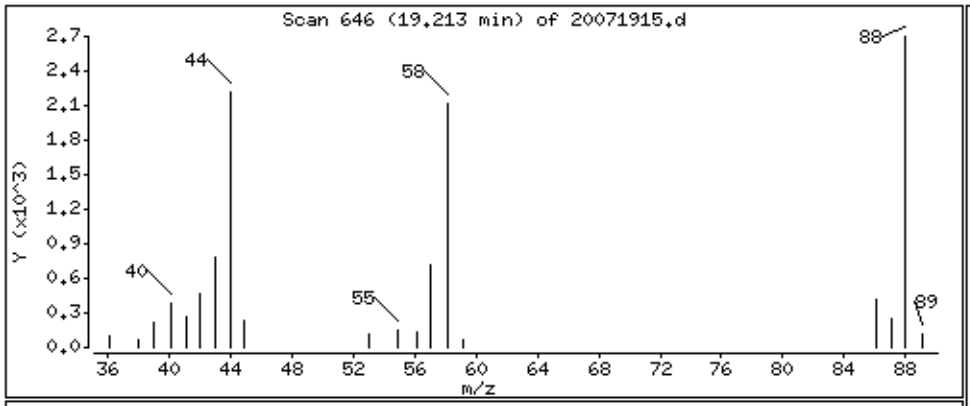
Operator: gh

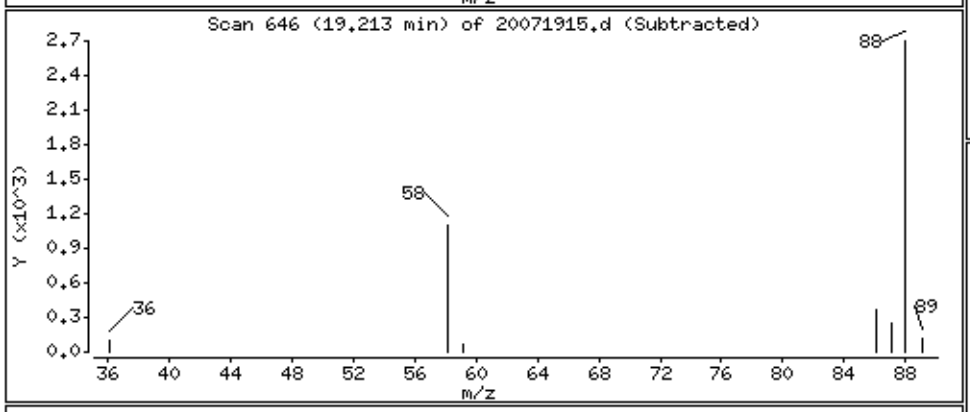
Column phase: RTX-624

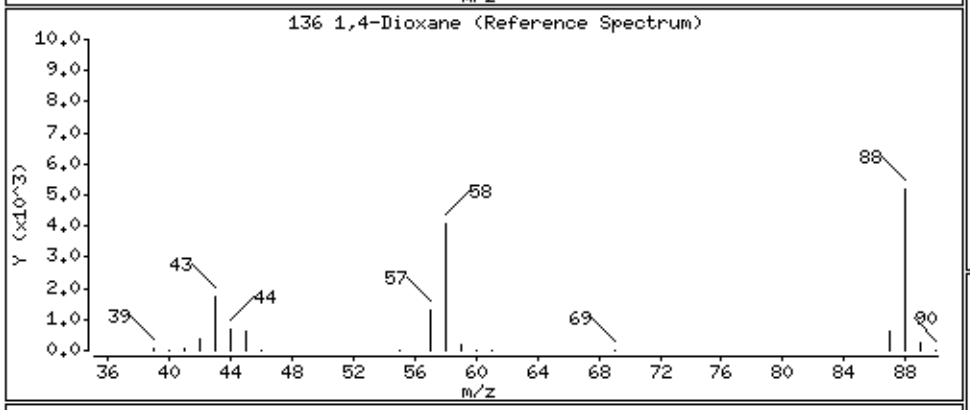
Column diameter: 0.32

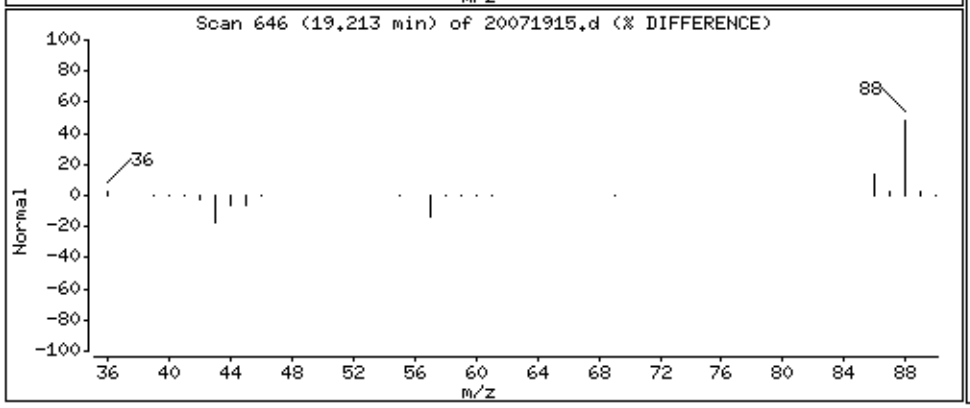
136 1,4-Dioxane

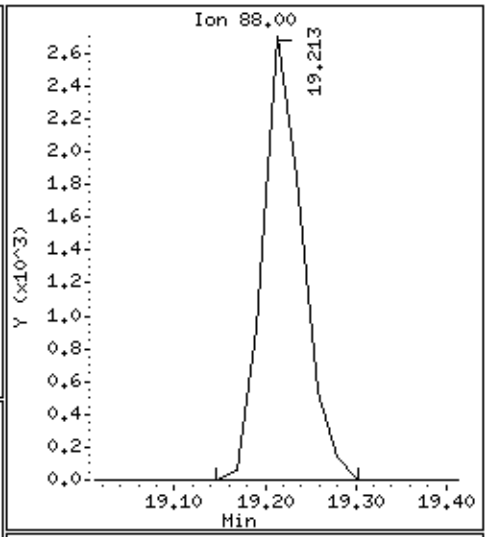
Concentration: 0.8283 PPBV

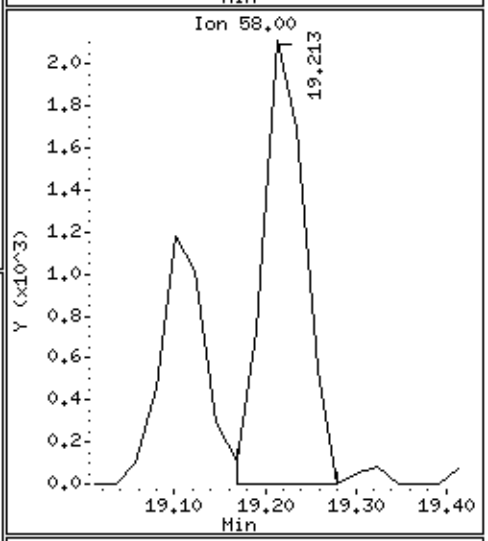


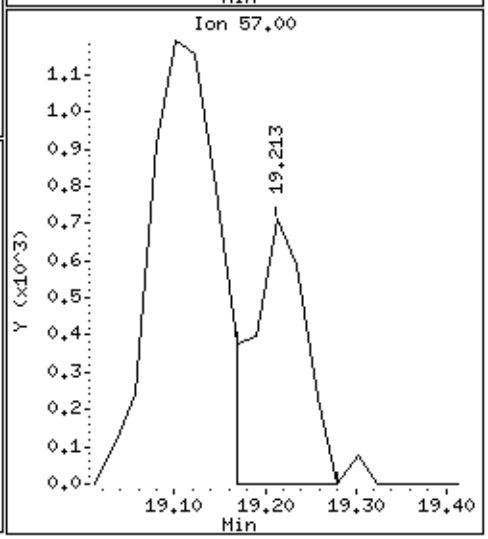












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

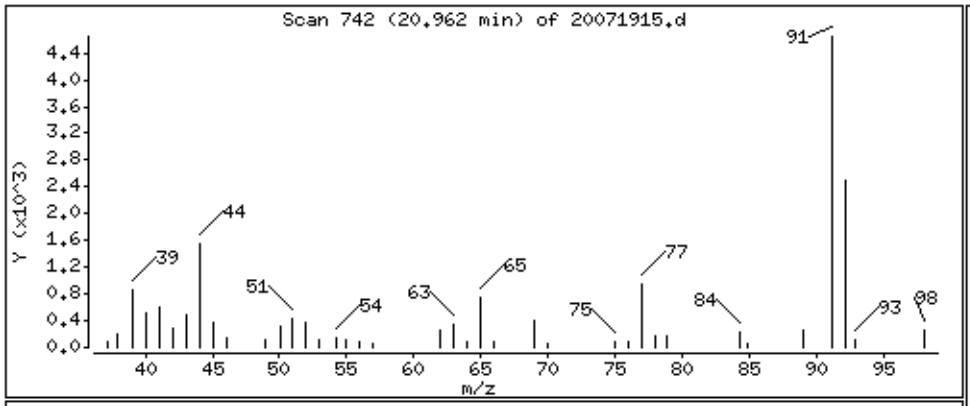
Operator: gh

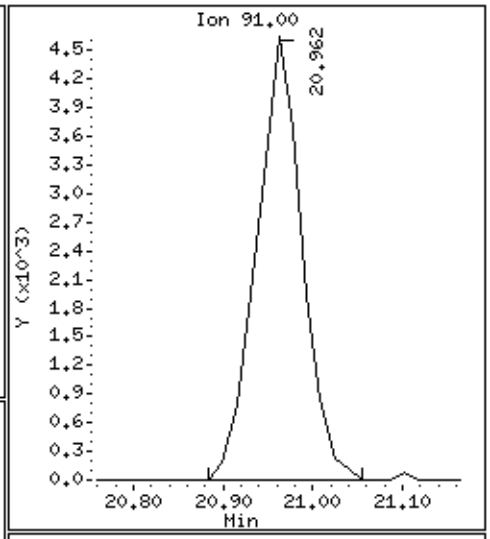
Column phase: RTX-624

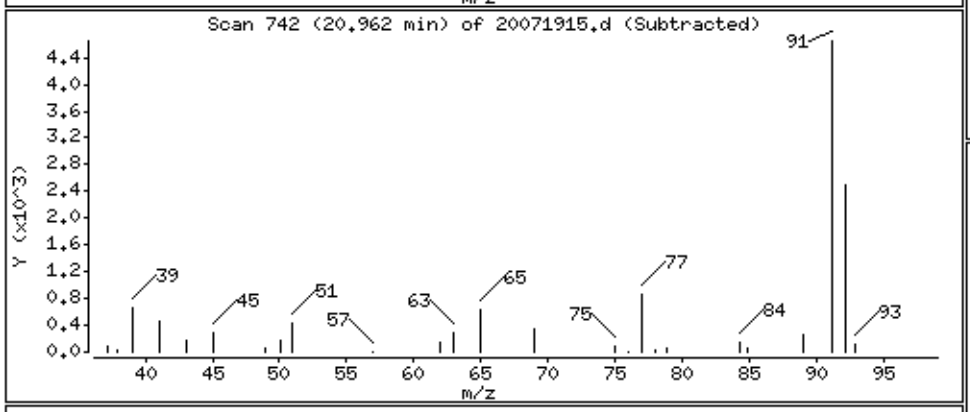
Column diameter: 0.32

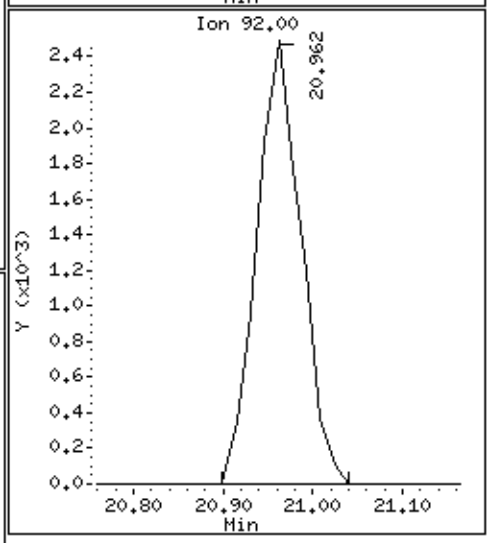
147 Toluene

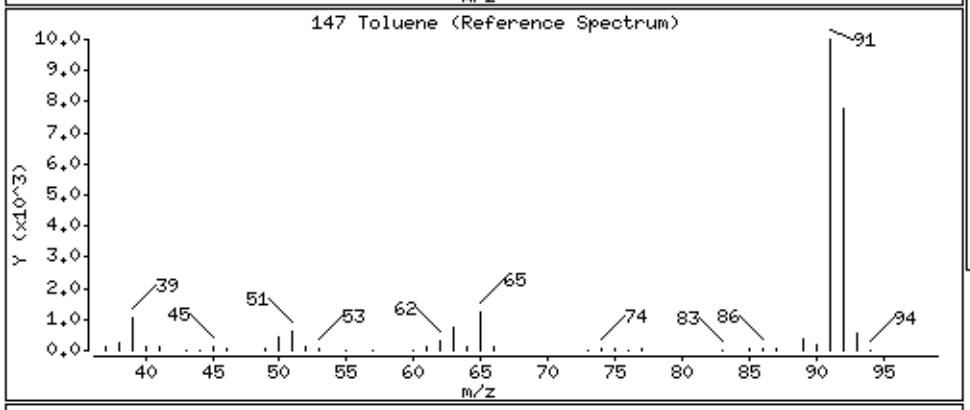
Concentration: 0.3840 PPBV

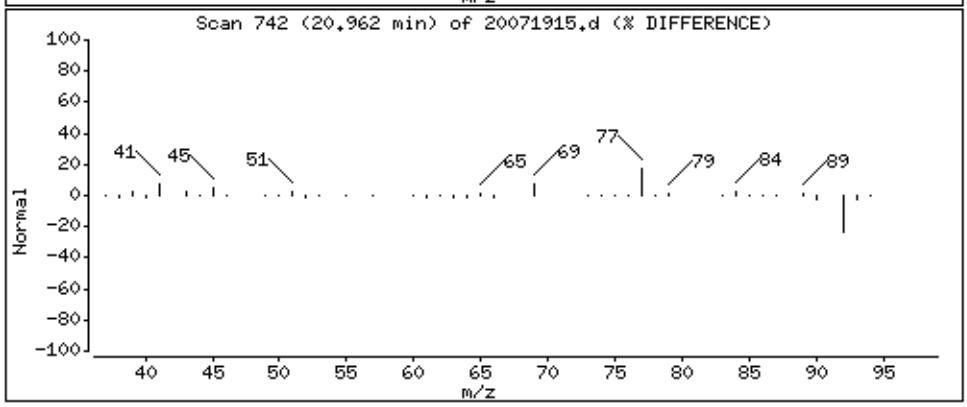












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

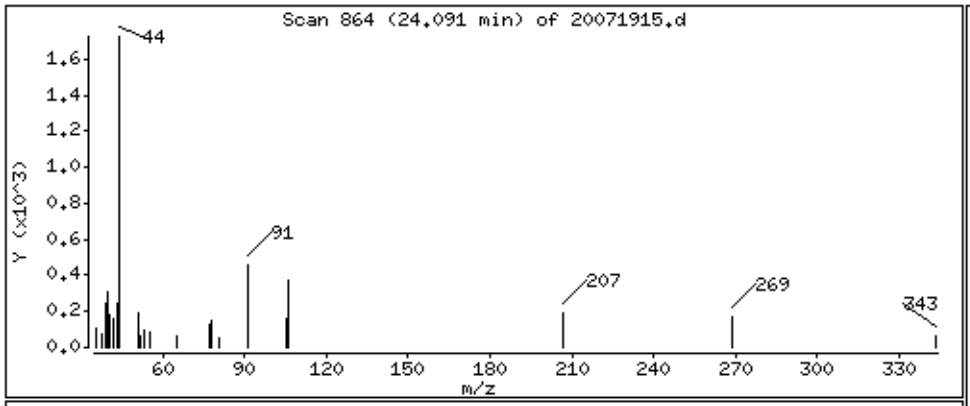
Operator: gh

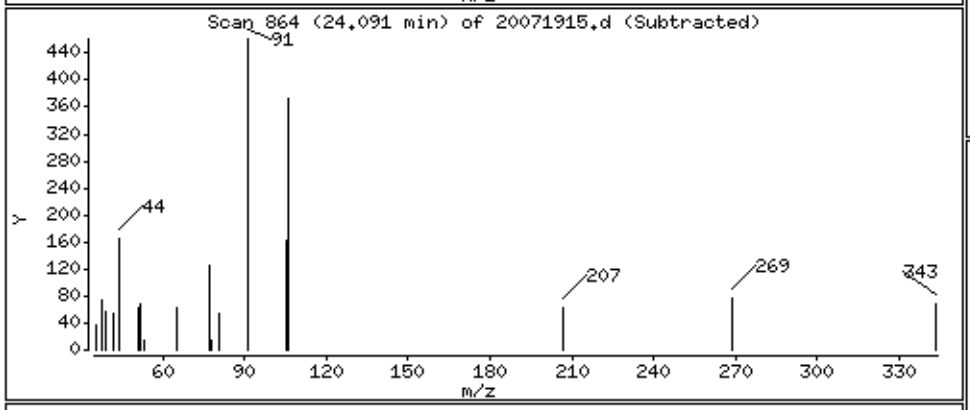
Column phase: RTX-624

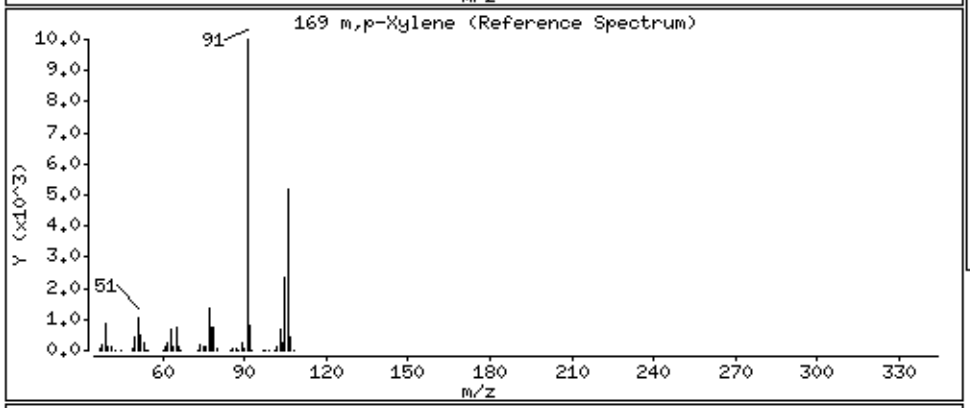
Column diameter: 0.32

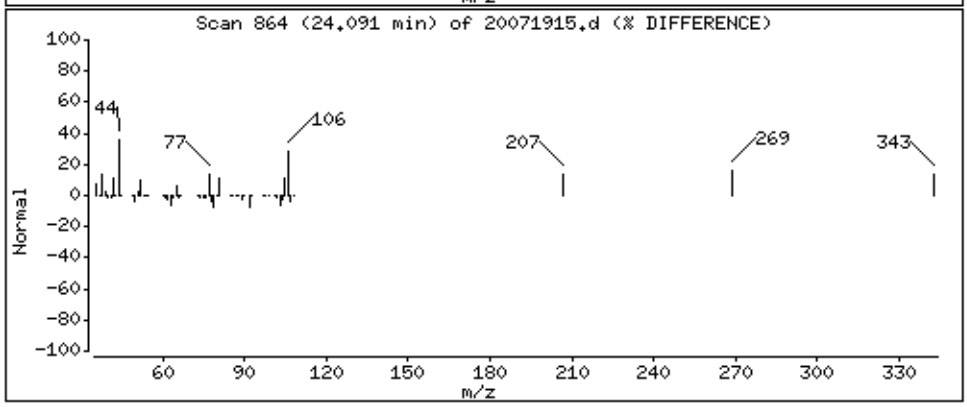
169 m,p-Xylene

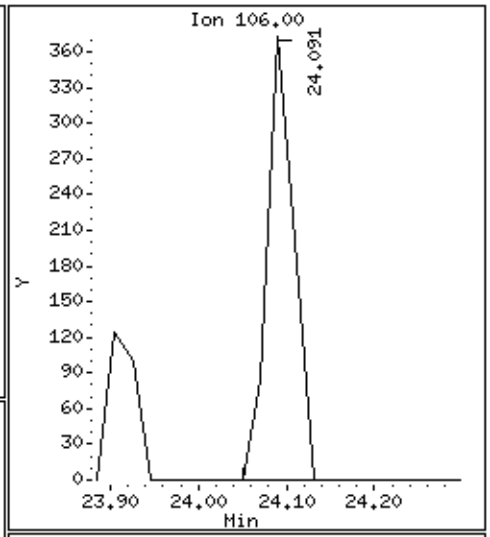
Concentration: 0.03898 PPBV

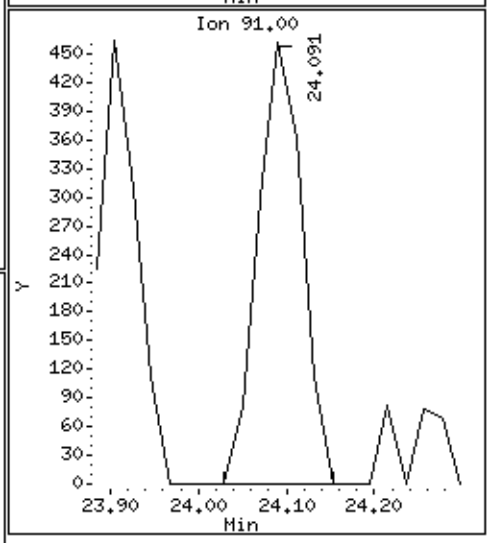












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

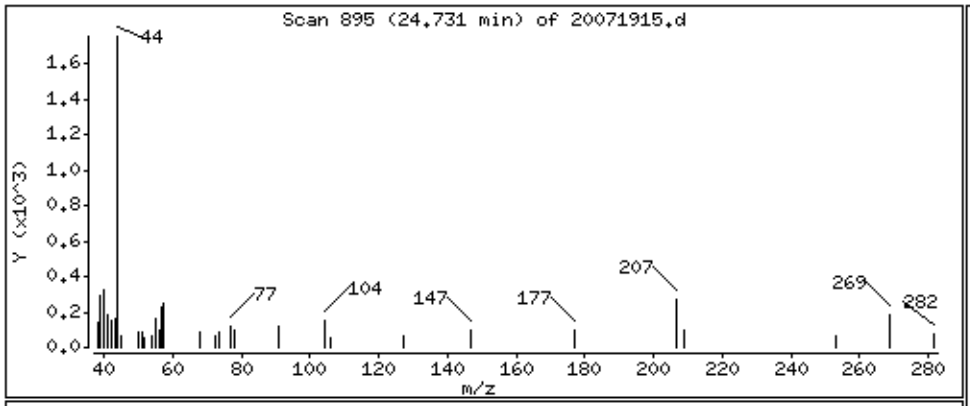
Operator: gh

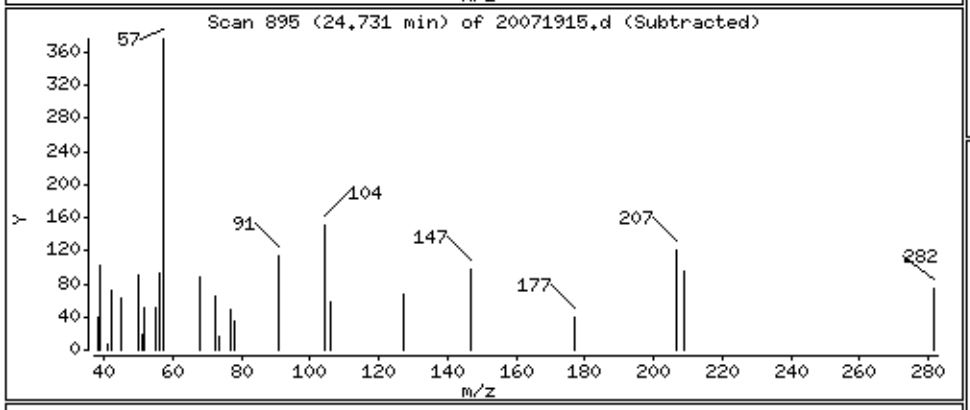
Column phase: RTX-624

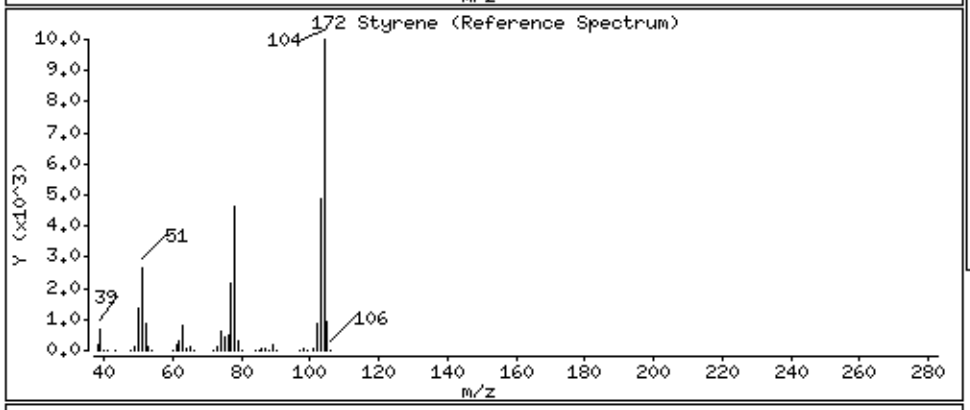
Column diameter: 0.32

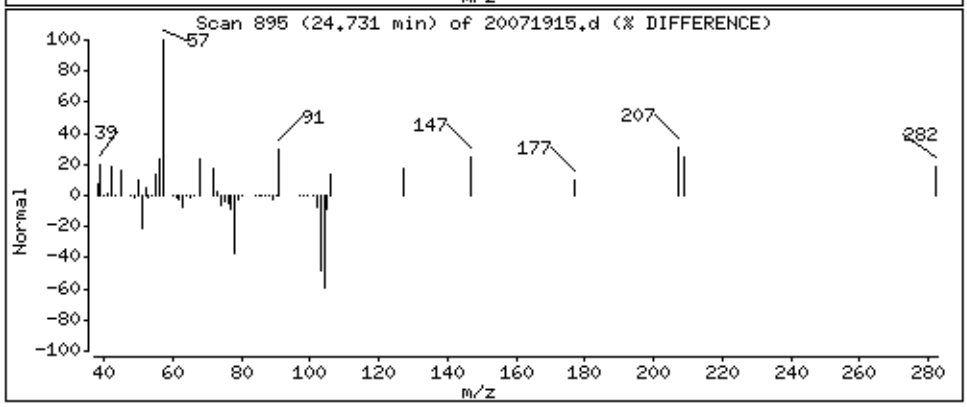
172 Styrene

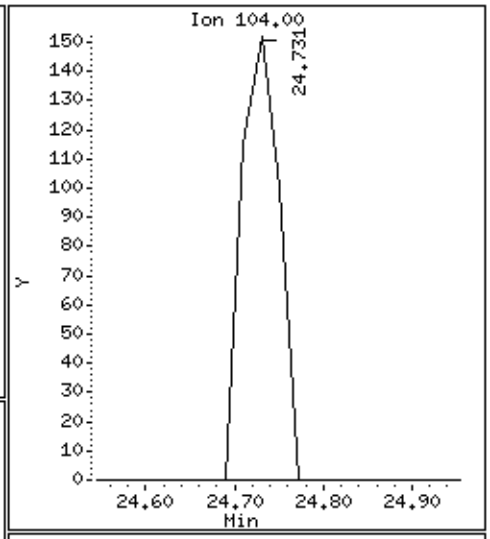
Concentration: 0.01657 PPBV

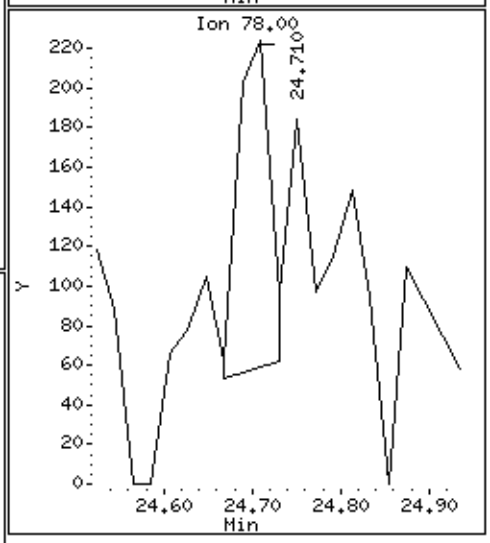












Data File: /chem/msd20.i/19Jul2016.b/20071915.d

Date : 19-JUL-2016 18:00

Client ID:

Instrument: msd20.i

Sample Info: 250mL#12947

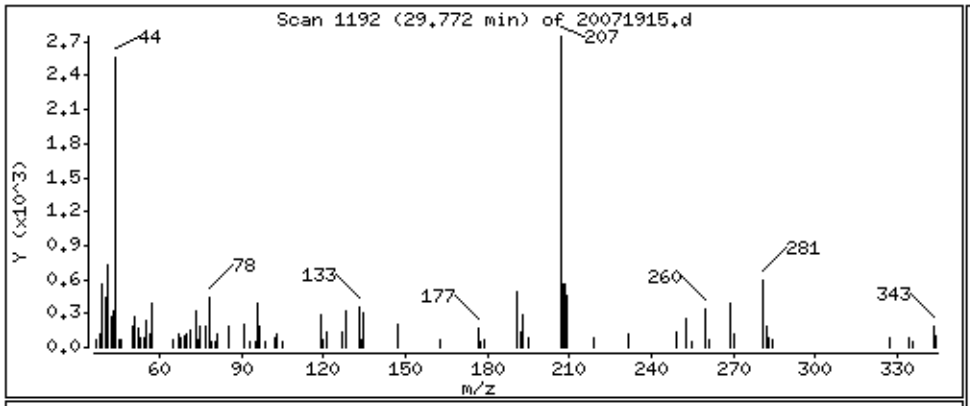
Operator: gh

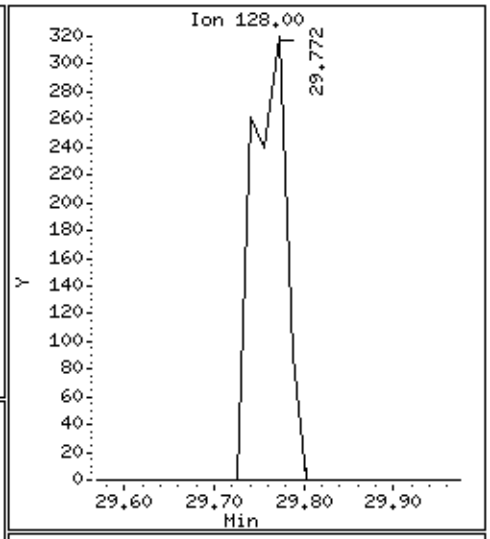
Column phase: RTX-624

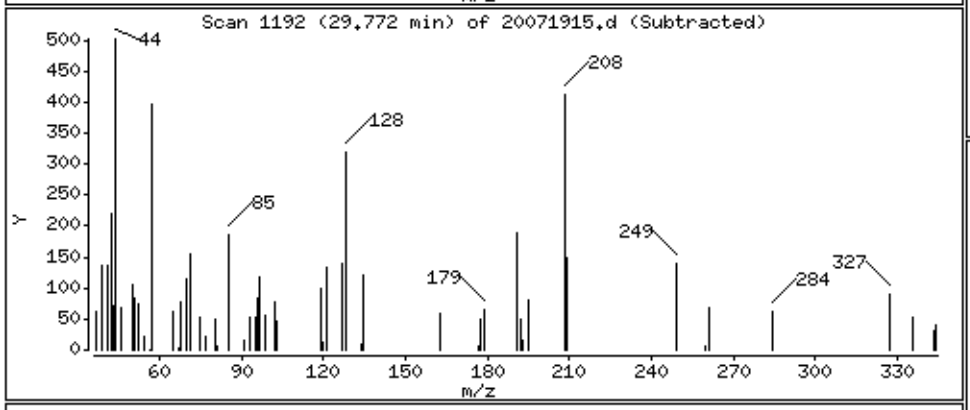
Column diameter: 0.32

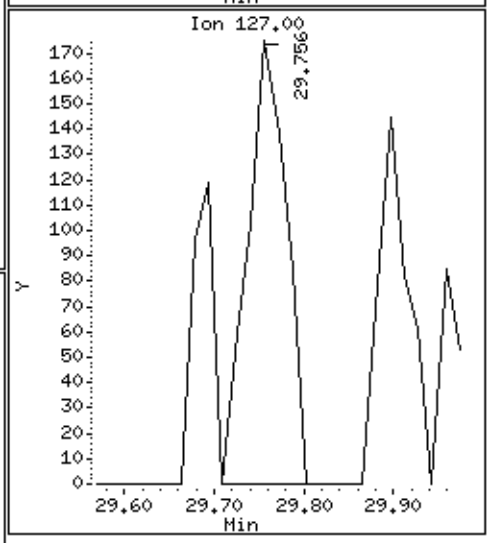
228 Naphthalene

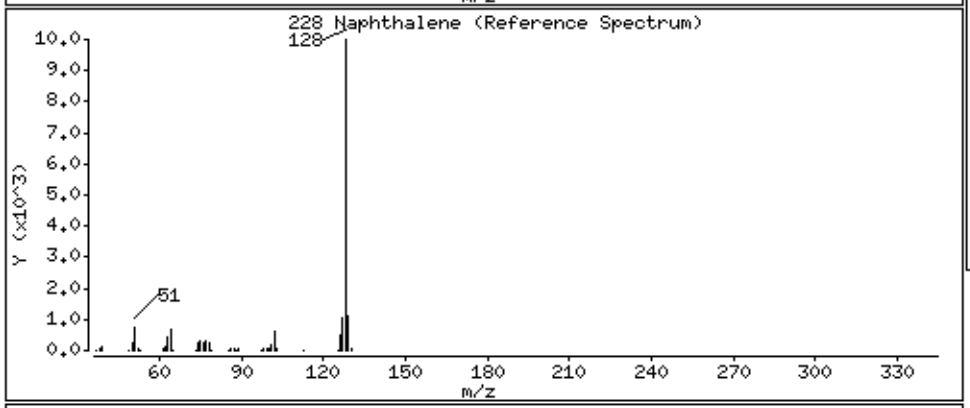
Concentration: 0.02316 PPBV

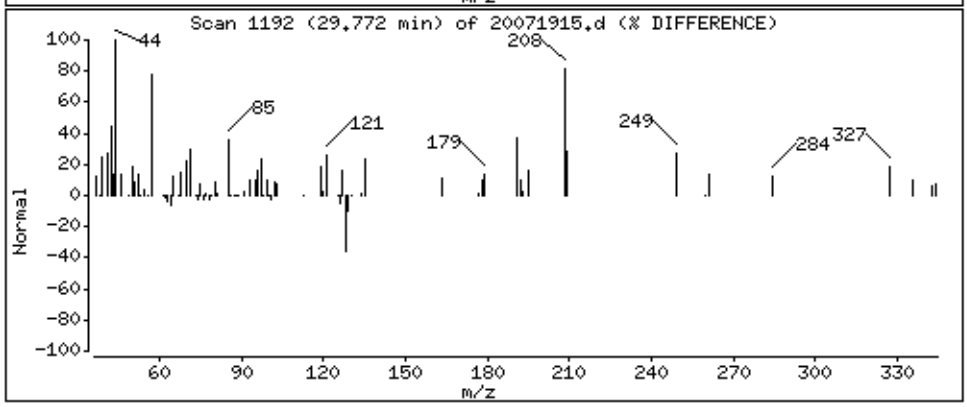












QC Results and Raw Data

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Client Sample ID: Lab Blank

Lab ID#: 1607235D-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071906a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 11:04 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	Not Detected	1.9	Not Detected
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	0.075 J	1.2	0.18 J
2-Propanol	0.50	0.18 J	1.2	0.44 J
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	0.039 J	0.69	0.13 J
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	Not Detected	0.32	Not Detected
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

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Client Sample ID: Lab Blank

Lab ID#: 1607235D-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071906a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 11:04 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	0.014 J	0.60	0.087 J
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	0.024 J	3.7	0.18 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	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	89	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071906a.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 19-JUL-2016 11:04
Operator : ef Inst ID: msd20.i
Smp Info : 250mL# 35248
Misc Info : Humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.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
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	111831	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	84664			47.94- 107.94	75.71
16.726	16.726 (1.000)	49	152314			102.10- 162.10	136.20
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	376421	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	61539			0.00- 45.77	16.35
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	333608	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	192782			26.51- 86.51	57.79
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	182338	5.62124	5.621	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	89743			32.47- 92.47	49.22
$ 146 Toluene-d8					CAS #: 2037-26-5		
20.821	20.822 (1.142)	98	369687	5.08484	5.085	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	44347			0.00- 41.37	12.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
20.821	20.822 (1.142)	100	242346			36.07- 96.07	65.55
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
25.485	25.485 (1.073)	174	159488	4.45267	4.453	80.00- 120.00	100.00
25.485	25.466 (1.073)	95	196071			89.67- 149.67	122.94
25.485	25.485 (1.073)	176	158285			67.40- 127.40	99.25
52 Acetone					CAS #: 67-64-1		
13.120	13.093 (0.784)	58	1277	0.07491	0.07491	80.00- 120.00	100.00(a)
13.120	13.093 (0.784)	43	4113			278.33- 338.33	322.06
57 2-Propanol					CAS #: 67-63-0		
13.560	13.533 (0.811)	45	9407	0.17842	0.1784	80.00- 120.00	100.00(a)
13.560	13.533 (0.811)	43	3892			0.00- 52.04	41.38
13.560	13.533 (0.811)	59	347			0.00- 34.17	3.70
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	1344	0.03867	0.03866	80.00- 120.00	100.00(a)
14.027	14.027 (0.839)	49	1655			97.79- 157.79	123.17
14.054	14.027 (0.840)	51	559			9.84- 69.84	41.66
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.903	26.919 (1.132)	146	911	0.01444	0.01444	80.00- 120.00	100.00(aH)
26.919	26.919 (1.133)	148	460			34.47- 94.47	50.52
26.903	26.919 (1.132)	111	263			8.85- 68.85	28.95
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	1345	0.02418	0.02418	80.00- 120.00	100.00(a)
29.382	29.382 (1.237)	182	1366			63.91- 123.91	101.54

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071906a.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: Humid

Calibration Date: 19-JUL-2016
Calibration Time: 07:30
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	111831	-3.50
123 1,4-Difluorobenze	406395	243837	568953	376421	-7.38
163 Chlorobenzene-d5	363239	217943	508535	333608	-8.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 27-Jul-2016 15:34

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 19Jul2016
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: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.621	112.42	70-130
$ 146 Toluene-d8	5.000	5.085	101.70	70-130
$ 177 4-Bromofluorobenze	5.000	4.453	89.05	70-130

Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

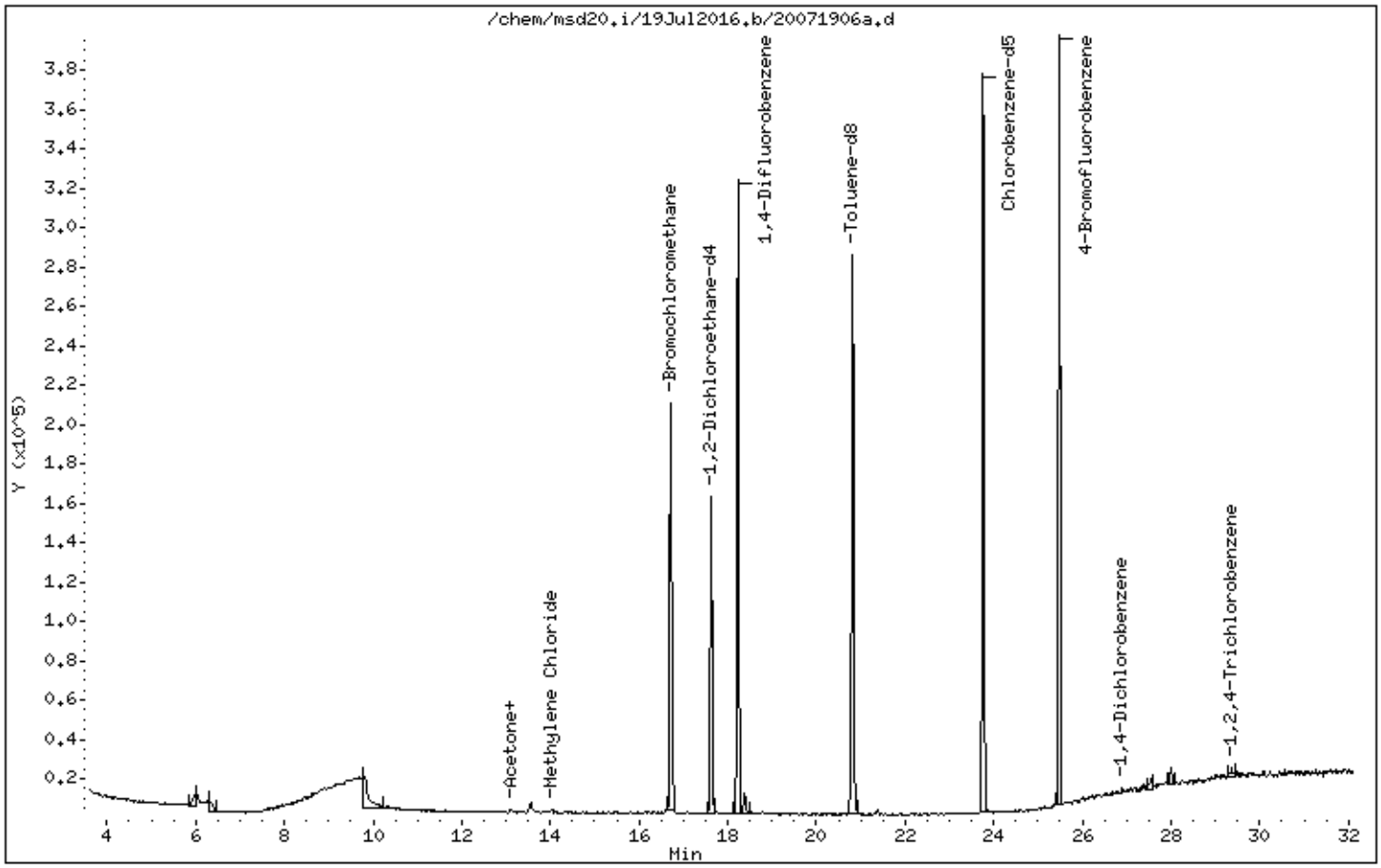
Instrument: msd20.i

Sample Info: 250mL# 35248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

Instrument: msd20.i

Sample Info: 250mL# 35248

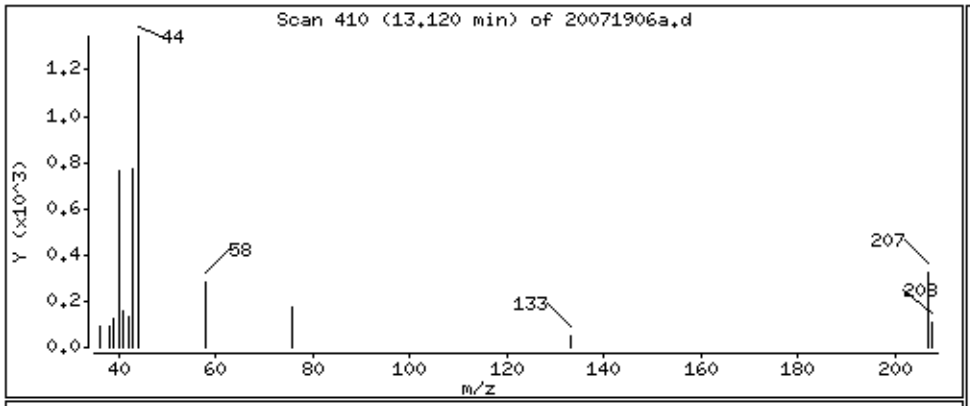
Operator: ef

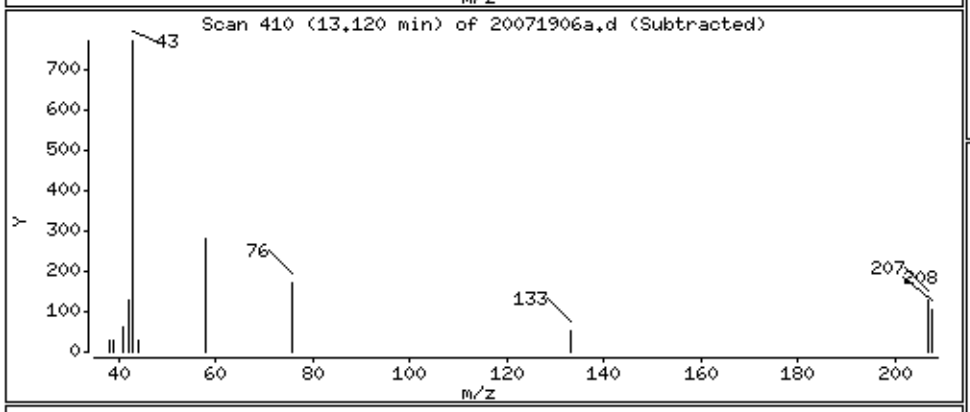
Column phase: RTX-624

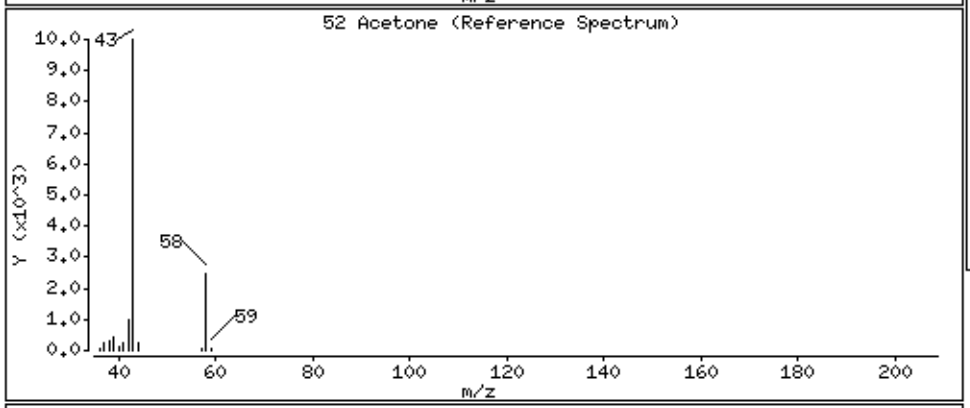
Column diameter: 0.32

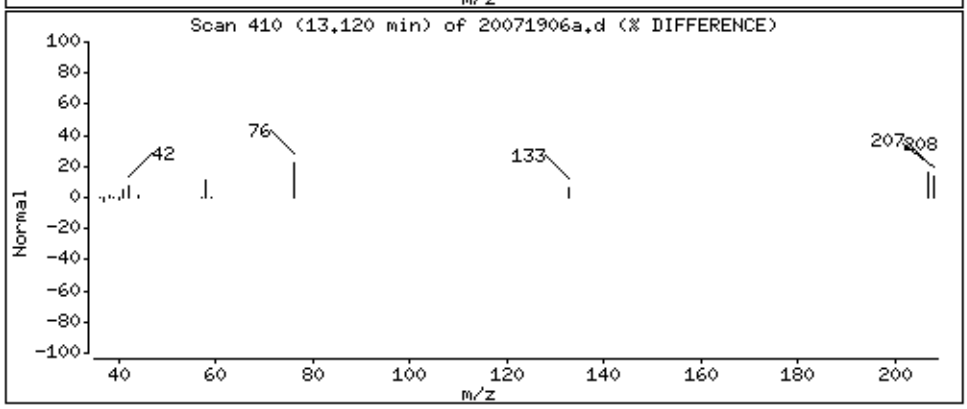
52 Acetone

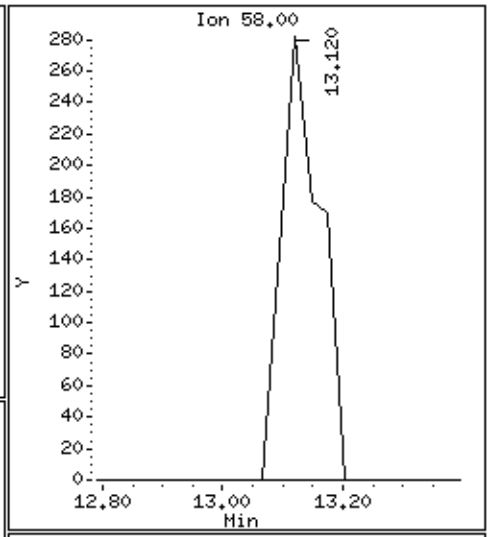
Concentration: 0.07491 PPBV

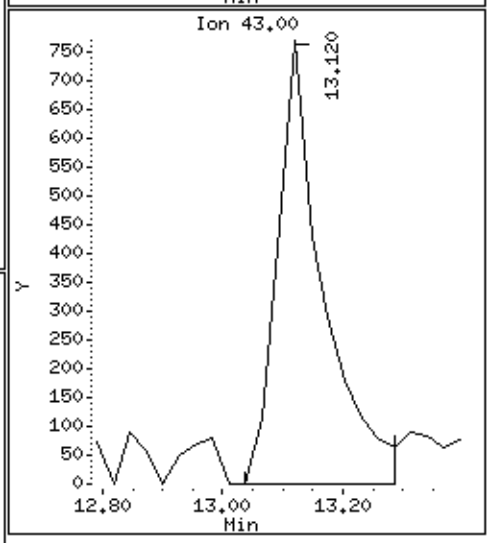












Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

Instrument: msd20.i

Sample Info: 250mL# 35248

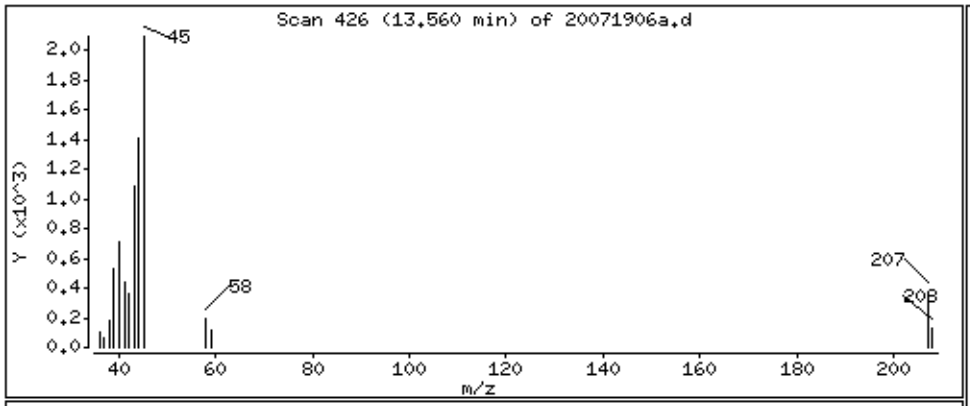
Operator: ef

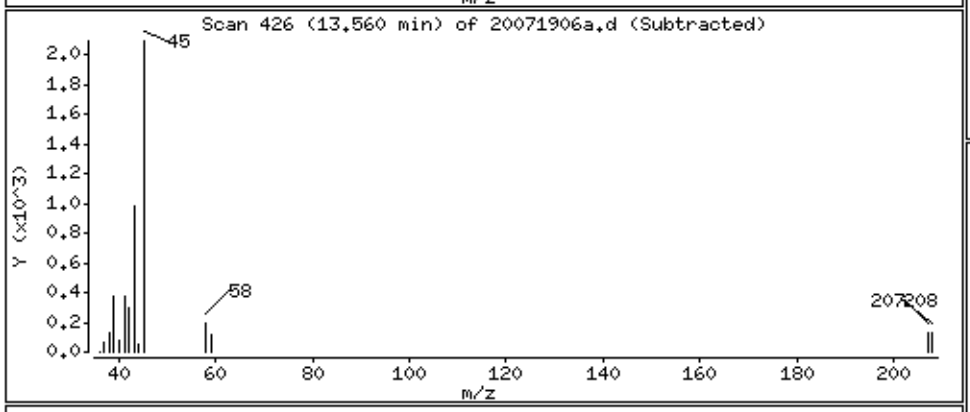
Column phase: RTX-624

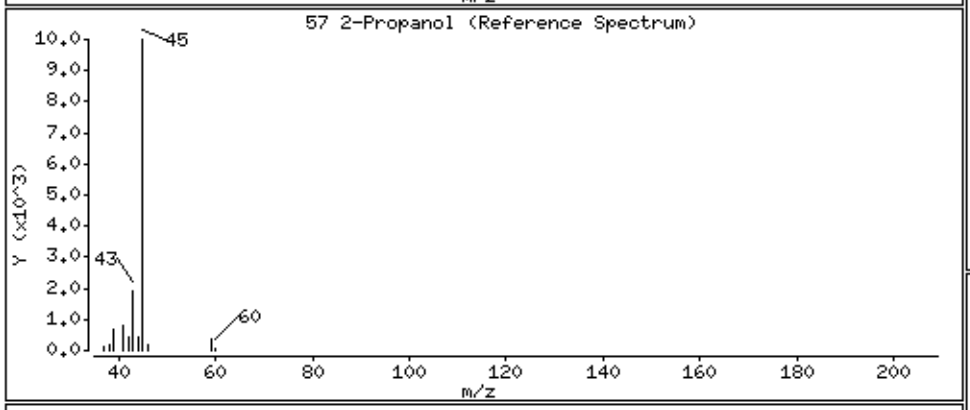
Column diameter: 0.32

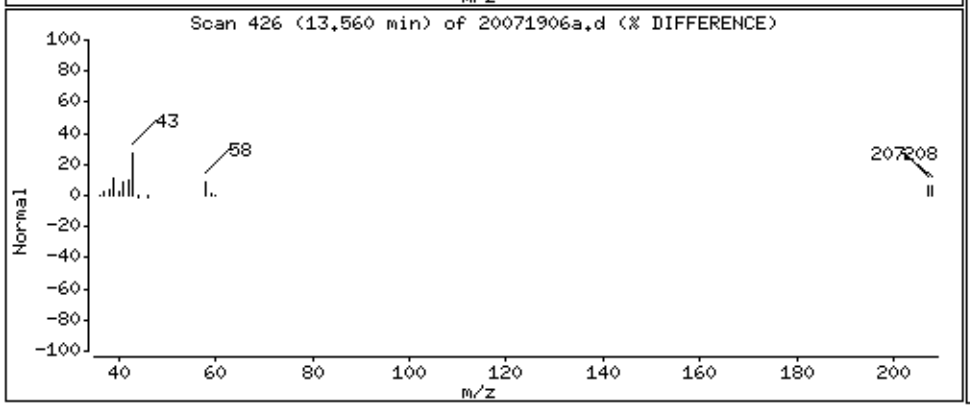
57 2-Propanol

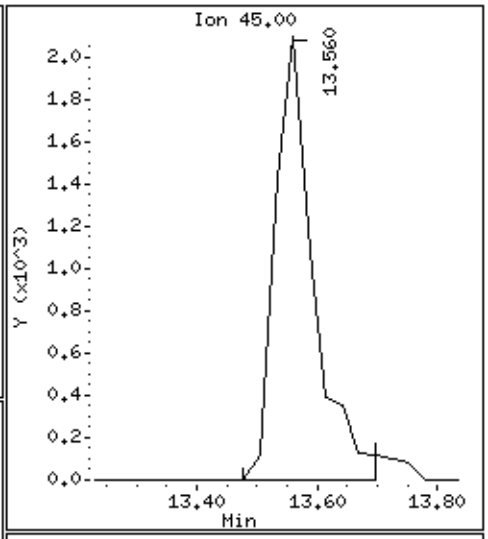
Concentration: 0.1784 PPBV

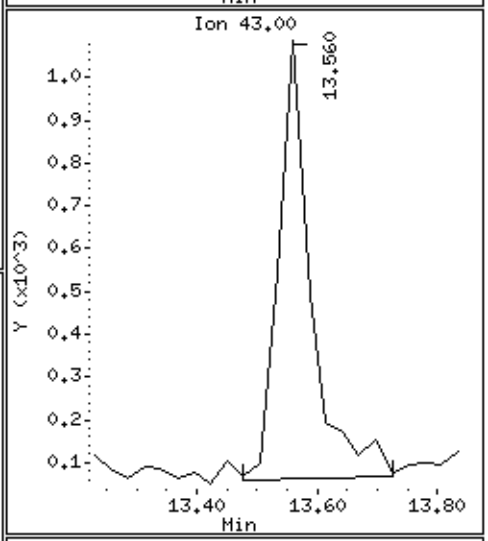


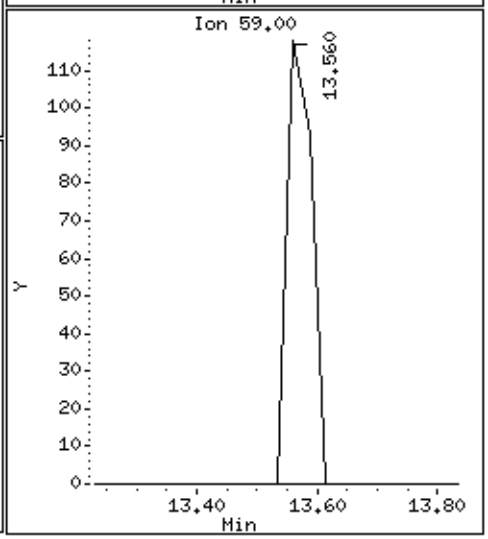












Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

Instrument: msd20.i

Sample Info: 250mL# 35248

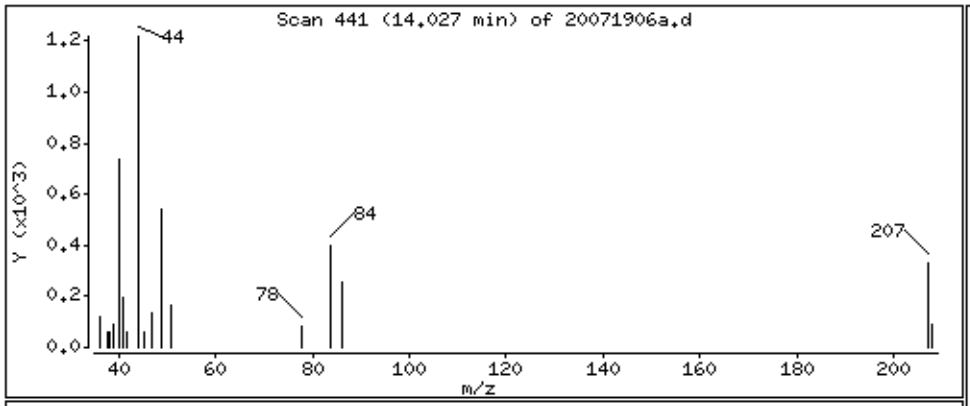
Operator: ef

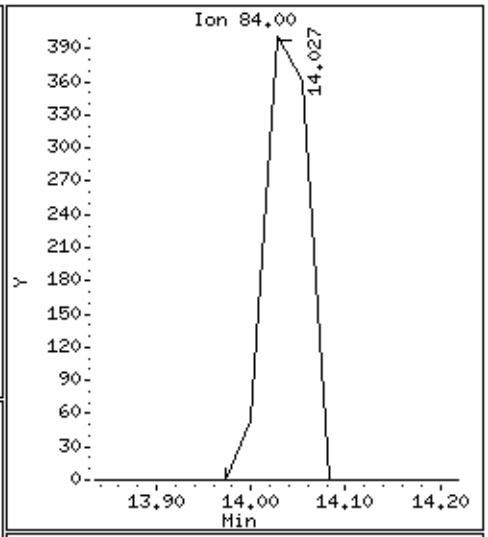
Column phase: RTX-624

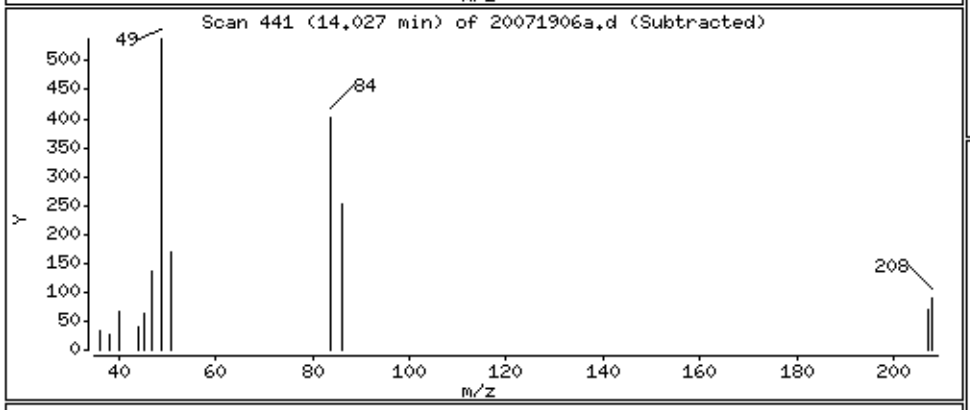
Column diameter: 0.32

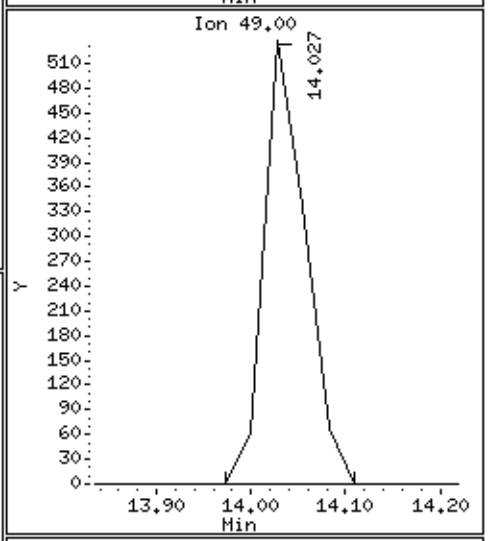
66 Methylene Chloride

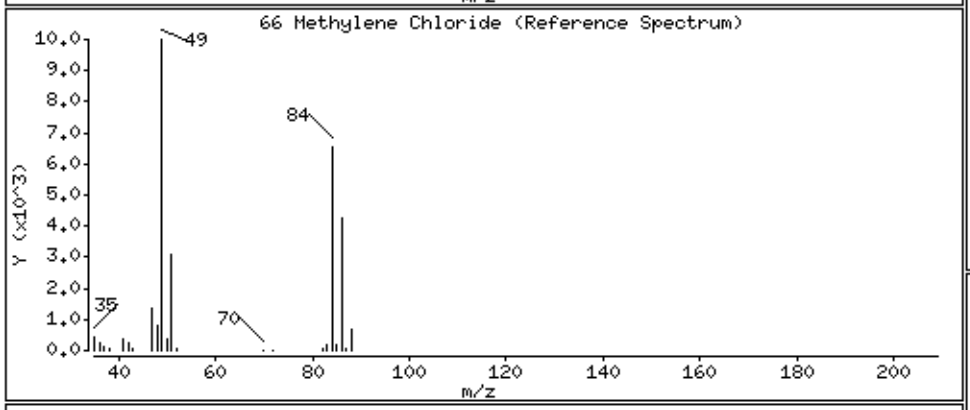
Concentration: 0.03866 PPBV

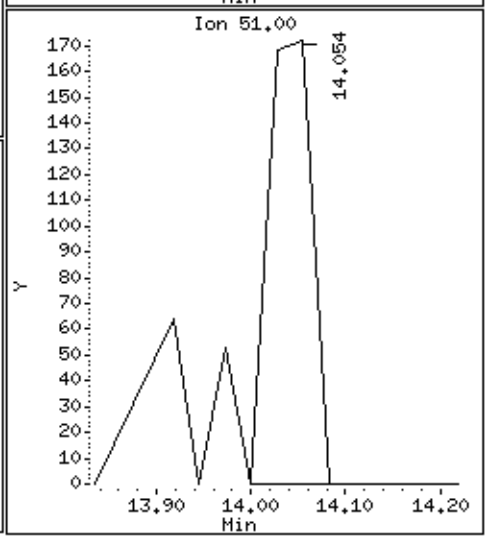


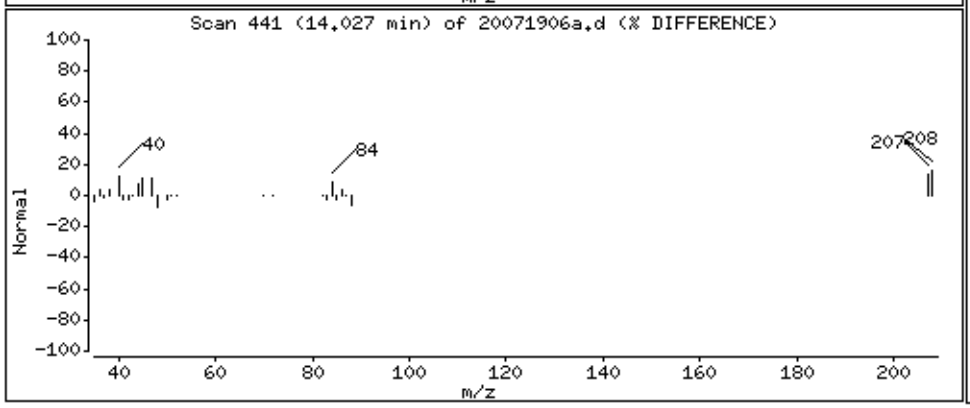












Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

Instrument: msd20.i

Sample Info: 250mL# 35248

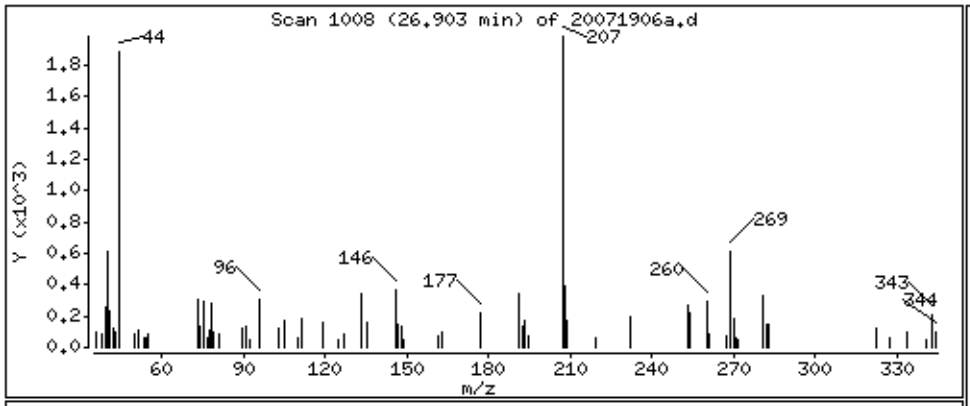
Operator: ef

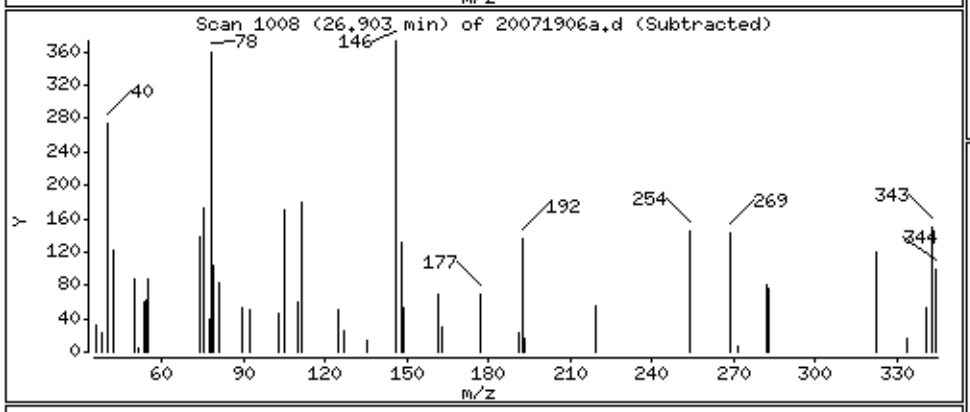
Column phase: RTX-624

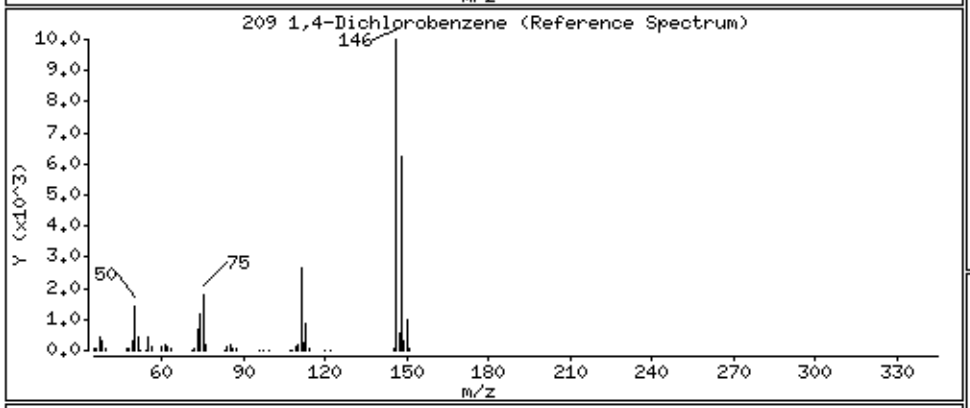
Column diameter: 0.32

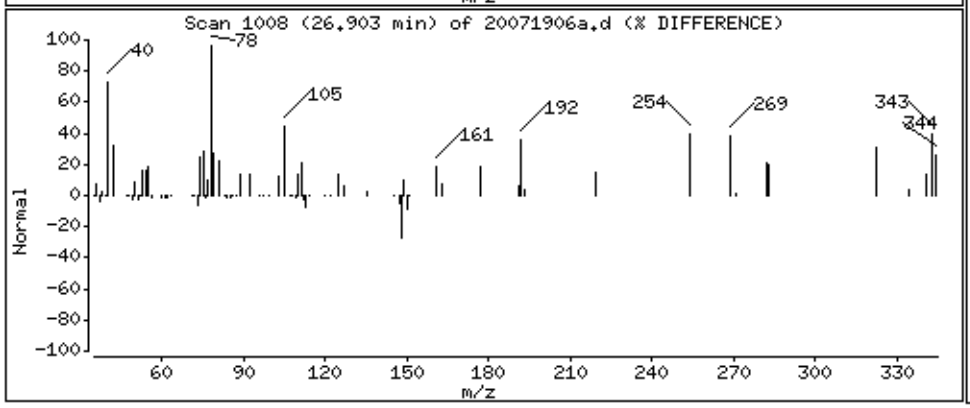
209 1,4-Dichlorobenzene

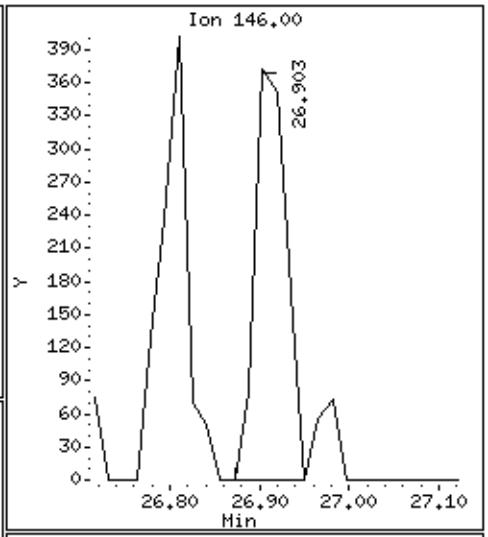
Concentration: 0.01444 PPBV

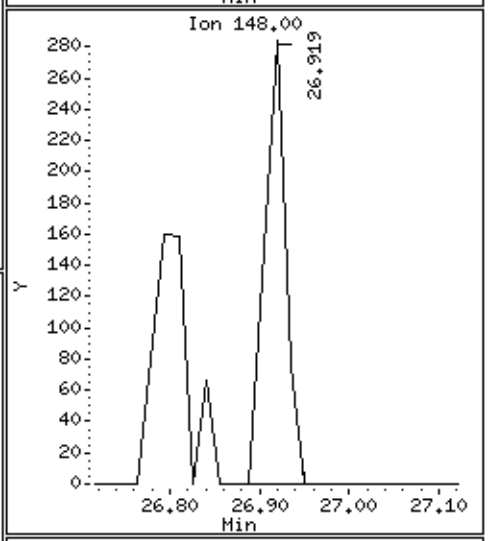


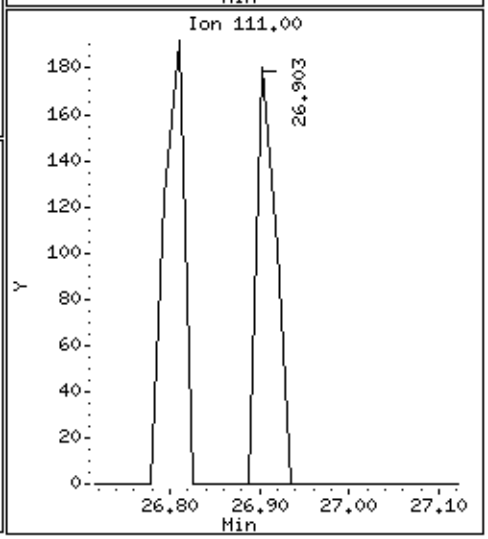












Data File: /chem/msd20.i/19Jul2016.b/20071906a.d

Date : 19-JUL-2016 11:04

Client ID: Lab Blank

Instrument: msd20.i

Sample Info: 250mL# 35248

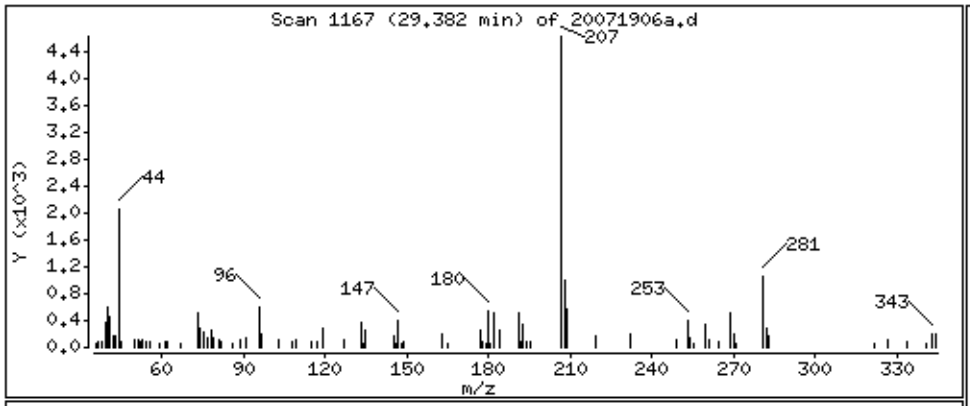
Operator: ef

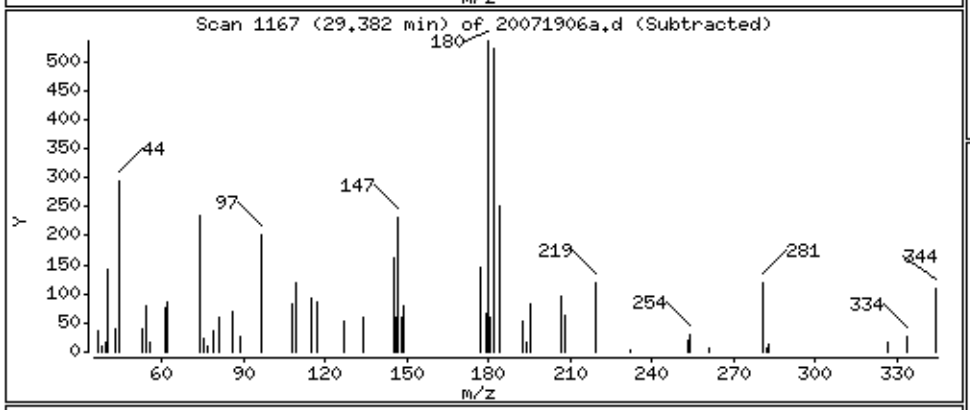
Column phase: RTX-624

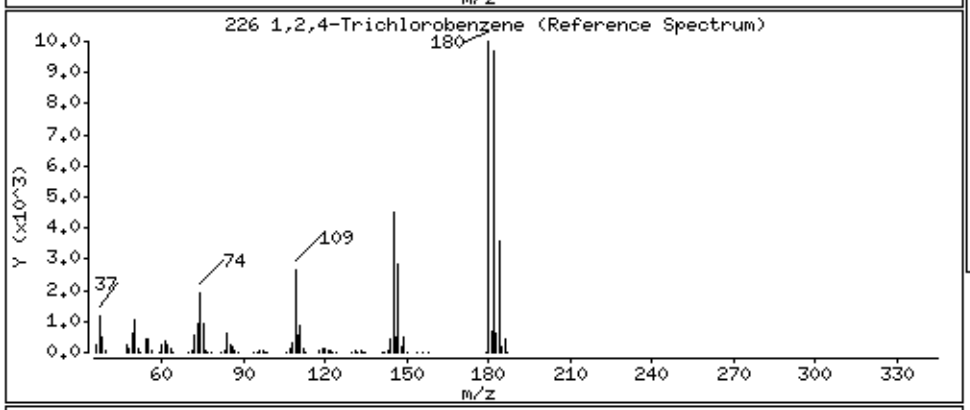
Column diameter: 0.32

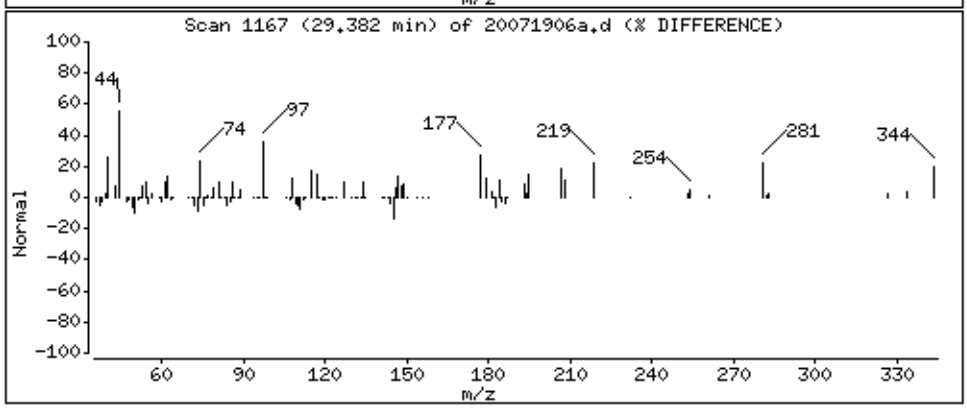
226 1,2,4-Trichlorobenzene

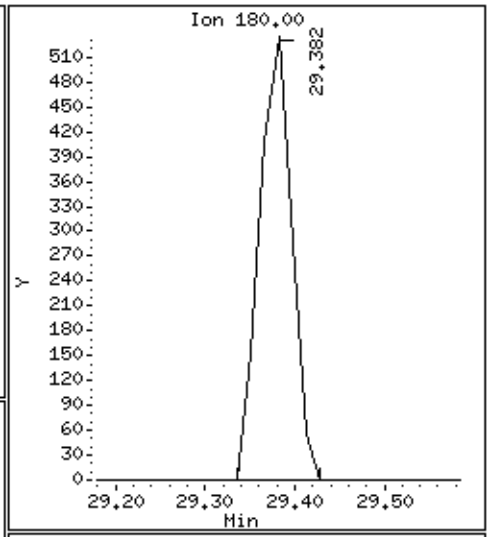
Concentration: 0.02418 PPBV

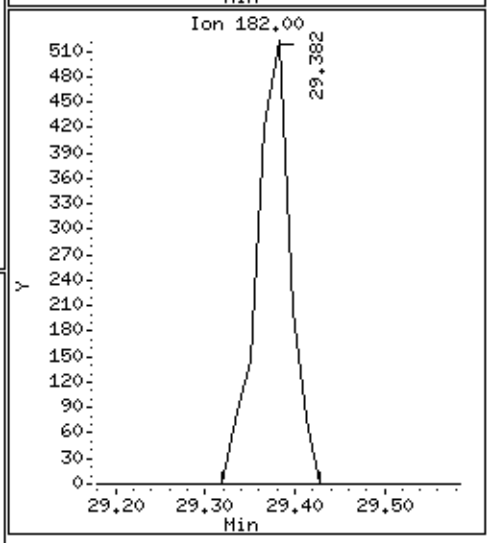












LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1607235D

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B18IA-1	118		100		102				0
02	B18IA-2	122		103		92				0
03	B18IA-3	119		102		102				0
04	B18IA-4	126		103		93				0
05	B18IA-5	127		103		90				0
06	B18IA-1D	121		106		93				0
07	B18AA-071216	124		96		96				0
08	Lab Blank	112		102		89				0
09	CCV	106		111		107				0
10	LCS	108		112		106				0
11	LCSD	104		108		104				0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

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:	1607235D
Lab File ID:	20071902.d	Date Analyzed:	07/19/2016
Instrument ID:	msd20.i	Time Analyzed:	07:30 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	363239		23.76		406395		18.23		115886		16.73	
	UPPER LIMIT	508535		24.09		568953		18.56		162240		17.06	
	LOWER LIMIT	217943		23.43		243837		17.90		69532		16.40	
	CLIENT SAMPLE NO												
01	B18IA-1	301560		23.76		324667		18.23		95419		16.73	
02	B18IA-2	301119		23.76		313690		18.23		92869		16.73	
03	B18IA-3	265845		23.76		274159		18.23		91340		16.73	
04	B18IA-4	267501		23.76		272672		18.23		88835		16.73	
05	B18IA-5	271352		23.76		273855		18.23		87104		16.73	
06	B18IA-1D	284604		23.76		292429		18.23		90293		16.73	
07	B18AA-071216	257439		23.76		261560		18.23		85209		16.73	
08	Lab Blank	333608		23.76		376421		18.23		111831		16.73	
09	CCV	363239		23.76		406395		18.23		115886		16.73	
10	LCS	375006		23.76		418592		18.23		117658		16.73	
11	LCSD	390155		23.76		441816		18.23		119439		16.73	
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: 20071904.d & 20071903.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/19/16 & 7/19/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
71-55-6	1,1,1-Trichloroethane	108		108		0	
79-34-5	1,1,2,2-Tetrachloroethane	120		119		0.84	
79-00-5	1,1,2-Trichloroethane	109		106		2.8	
75-34-3	1,1-Dichloroethane	103		103		0	
75-35-4	1,1-Dichloroethene	96		96		0	
120-82-1	1,2,4-Trichlorobenzene	86		86		0	
95-63-6	1,2,4-Trimethylbenzene	110		109		0.91	
106-93-4	1,2-Dibromoethane (EDB)	113		111		1.8	
95-50-1	1,2-Dichlorobenzene	106		105		0.95	
107-06-2	1,2-Dichloroethane	122		118		3.3	
78-87-5	1,2-Dichloropropane	119		116		2.6	
108-67-8	1,3,5-Trimethylbenzene	117		114		2.6	
106-99-0	1,3-Butadiene	104		104		0	
541-73-1	1,3-Dichlorobenzene	105		103		1.9	
106-46-7	1,4-Dichlorobenzene	99		99		0	
123-91-1	1,4-Dioxane	109		104		4.7	
540-84-1	2,2,4-Trimethylpentane	107		108		0.93	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	102		104		1.9	
591-78-6	2-Hexanone	114		113		0.88	
67-63-0	2-Propanol	104		107		2.8	
107-05-1	3-Chloropropene	103		102		0.98	
622-96-8	4-Ethyltoluene	101		101		0	
108-10-1	4-Methyl-2-pentanone	130		126		3.1	
67-64-1	Acetone	100		98		2.0	
100-44-7	alpha-Chlorotoluene	135		136		0.74	
71-43-2	Benzene	115		112		2.6	
75-27-4	Bromodichloromethane	123		122		0.82	
75-25-2	Bromoform	136		132		3.0	
74-83-9	Bromomethane	94		100		6.2	
75-15-0	Carbon Disulfide	95		96		1.0	
56-23-5	Carbon Tetrachloride	120		119		0.84	
108-90-7	Chlorobenzene	108		106		1.9	
75-00-3	Chloroethane	111		112		0.90	
67-66-3	Chloroform	109		108		0.92	
74-87-3	Chloromethane	110		108		1.8	
156-59-2	cis-1,2-Dichloroethene	96		97		1.0	
10061-01-5	cis-1,3-Dichloropropene	111		109		1.8	
98-82-8	Cumene	119		117		1.7	
110-82-7	Cyclohexane	101		101		0	
124-48-1	Dibromochloromethane	128		126		1.6	
64-17-5	Ethanol	107		108		0.93	
100-41-4	Ethyl Benzene	112		110		1.8	
75-69-4	Freon 11	110		109		0.91	
76-13-1	Freon 113	95		95		0	
76-14-2	Freon 114	111		110		0.90	

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: 20071904.d & 20071903.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/19/16 & 7/19/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-71-8	Freon 12	121		118		2.5	
142-82-5	Heptane	122		120		1.6	
87-68-3	Hexachlorobutadiene	84		84		0	
110-54-3	Hexane	102		102		0	
108-38-3	m,p-Xylene	115		111		3.5	
1634-04-4	Methyl tert-butyl ether	97		98		1.0	
75-09-2	Methylene Chloride	98		98		0	
91-20-3	Naphthalene	80		83		3.7	
95-47-6	o-Xylene	114		114		0	
103-65-1	Propylbenzene	112		112		0	
100-42-5	Styrene	122		120		1.6	
127-18-4	Tetrachloroethene	104		104		0	
109-99-9	Tetrahydrofuran	106		106		0	
108-88-3	Toluene	119		114		4.3	
156-60-5	trans-1,2-Dichloroethene	101		102		0.98	
10061-02-6	trans-1,3-Dichloropropene	119		118		0.84	
79-01-6	Trichloroethene	110		108		1.8	
75-01-4	Vinyl Chloride	112		109		2.7	

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 : 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Calibration File Names:
Level 5: /chem/msd20.i/24Jun2016.b/20062406.d
Level 6: /chem/msd20.i/24Jun2016.b/20062407.d
Level 7: /chem/msd20.i/18Jul2016.b/20071805.d
Level 8: /chem/msd20.i/18Jul2016.b/20071806.d
Level 12: /chem/msd20.i/18Jul2016.b/20071807.d
Level 13: /chem/msd20.i/24Jun2016.b/20062411.d
Level 15: /chem/msd20.i/24Jun2016.b/20062412.d
Level 16: /chem/msd20.i/24Jun2016.b/20062413.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	RRF	% RSD
	20.000 Level 15	40.000 Level 16						
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
7 Freon 134a	+++++	+++++	1.47172	1.32628	1.35159	+++++		
	+++++	+++++					1.38320	5.617

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Propylene	+++++	+++++	+++++	1.37710	1.39557	1.31528		
	1.29522	1.18560					1.31375	6.309
10 1,1-Difluoroethane	+++++	+++++	0.83511	0.67467	0.71437	+++++		
	+++++	+++++					0.74139	11.271
11 Freon 12	+++++	4.48086	4.32343	4.59596	4.62982	4.21116		
	3.98009	3.50449					4.24655	9.384
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
13 Chlorodifluoromethane	+++++	+++++	2.25397	2.07809	2.07323	+++++		
	+++++	+++++					2.13510	4.823
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
15 Freon 114	3.16796	3.04906	3.05938	3.16481	3.03653	2.83281		
	2.70202	2.44857					2.93264	8.618
16 Freon 142b	+++++	+++++	3.34723	2.93014	3.03371	+++++		
	+++++	+++++					3.10369	6.997
17 Chloromethane	+++++	+++++	1.61473	1.56795	1.50122	1.36758		
	1.29423	1.18587					1.42193	11.758

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
23 Butane	+++++	+++++	0.35125	0.35440	0.37139	0.35543		
	0.34461	0.31407					0.34852	5.466
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
25 Vinyl Chloride	+++++	1.74609	1.59679	1.67932	1.66903	1.57426		
	1.49486	1.34203					1.58605	8.510
26 1,3-Butadiene	+++++	1.41583	1.22405	1.21984	1.23141	1.18662		
	1.15797	1.05917					1.21356	8.839
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Bromomethane	+++++	+++++	0.94345	0.97384	1.00250	1.06579		
	1.06827	0.97376					1.00460	5.161
30 Chloroethane	+++++	+++++	0.67554	0.76110	0.78398	0.72912		
	0.70861	0.64835					0.71779	7.125
31 Isopentane	+++++	+++++	1.27739	1.35364	1.31507	1.22575		
	1.18824	1.07235					1.23874	8.147
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Freon 11	4.34959	4.51281	4.17809	4.36632	4.31945	3.96505		
	3.75437	3.38763					4.10416	9.223
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
37 Dichlorofluoromethane	+++++	+++++	3.64074	3.50246	3.51256	+++++		
	+++++	+++++					3.55192	2.170

Eurofins Air Toxics Inc.

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Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Ethanol	+++++	+++++	0.51254	0.48248	0.55193	0.55701		
	0.56159	0.52162					0.53120	5.853
43 1,2-Dichloro-1-fluoroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
48 Freon 123	+++++	+++++	3.76330	3.70951	3.74303	+++++		
	+++++	+++++					3.73862	0.727
49 Freon 113	3.21370	2.91848	2.81417	2.92656	2.81584	2.58782		
	2.53589	2.35523					2.77096	9.717
50 1,1-Dichloroethene	+++++	0.99216	0.95600	1.02417	0.99369	0.95821		
	0.93089	0.85416					0.95847	5.768
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
52 Acetone	+++++	+++++	0.80222	0.84425	0.76617	0.74242		
	0.73276	0.68540					0.76220	7.307
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Carbon Disulfide	+++++	+++++	4.02197	4.21728	4.64049	4.46744		
	4.41803	4.08549					4.30845	5.567
57 2-Propanol	+++++	+++++	1.96768	2.07328	2.47775	2.54446		
	2.61067	2.46996					2.35730	11.365

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	20.000 Level 15	40.000 Level 16						
58 3-Chloropropene	+++++	0.69003	0.49949	0.51405	0.63842	0.66076		
	0.67213	0.60700					0.61170	12.496
59 Cyclopentene	+++++	+++++	1.56426	1.55239	1.88073	+++++		
	+++++	+++++					1.66579	11.180
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
66 Methylene Chloride	+++++	1.86416	1.48231	1.64785	1.59874	1.52138		
	1.45611	1.30827					1.55412	11.243
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
71 tert-Butyl alcohol	+++++	+++++	2.39171	2.53434	2.97997	2.99942		
	3.02881	2.82460					2.79314	9.635
72 Methyl tert-butyl ether	+++++	4.34751	4.02616	4.38554	4.67050	4.38690		
	4.30457	3.93687					4.29401	5.713
73 trans-1,2-Dichloroethene	+++++	1.09356	1.08325	1.10068	1.06236	1.00777		
	0.98531	0.90006					1.03328	7.092
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
78 Hexane	+++++	2.57746	2.31688	2.42046	2.62545	2.46063		
	2.38749	2.15451					2.42041	6.551
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
82 1,1-Dichloroethane	+++++	3.18866	3.00972	3.11834	3.12525	2.96372		
	2.84292	2.55453					2.97188	7.324
83 Isopropyl ether	+++++	+++++	4.85151	5.16425	5.56652	5.25064		
	5.12157	4.58602					5.09008	6.635
84 1-Propanol	+++++	+++++	0.16097	0.16352	0.21763	+++++		
	+++++	+++++					0.18071	17.710
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
86 Vinyl Acetate	+++++	+++++	0.27982	0.34734	0.37996	0.40094		
	0.41545	0.39826					0.37030	13.539
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
88 Ethyl-tert-butyl ether	+++++	+++++	4.62559	4.83776	5.48111	5.26684		
	5.21833	4.83600					5.04427	6.466
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
90 2,2-Dichloropropane	+++++	+++++	2.31402	2.33284	2.48360	+++++		
	+++++	+++++					2.37682	3.911
91 cis-1,2-Dichloroethene	+++++	1.02376	1.10957	1.13434	1.17293	1.11447		
	1.07509	0.97936					1.08707	6.127
92 2-Butanone	+++++	+++++	0.67334	0.75095	0.84092	0.82058		
	0.80442	0.74889					0.77319	7.944
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
99 Tetrahydrofuran	+++++	+++++	1.60168	1.75050	1.96147	1.90122		
	1.86010	1.71367					1.79811	7.426
100 Chloroform	+++++	3.51683	3.33466	3.49319	3.59895	3.39317		
	3.26816	2.97519					3.36859	6.146
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 Cyclohexane	+++++	2.53023	2.16083	2.27007	2.45994	2.37545		
	2.31099	2.11638					2.31770	6.500
103 1,1,1-Trichloroethane	3.85245	3.60400	3.35438	3.53222	3.66515	3.45617		
	3.41409	3.15273					3.50390	6.048
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
106 Carbon Tetrachloride	2.33743	2.55871	2.43703	2.65744	3.48674	3.36716		
	3.34313	3.12121					2.91361	15.954
107 1,1-Dichloropropene	+++++	+++++	0.54766	0.52355	0.62833	+++++		
	+++++	+++++					0.56652	9.687
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
113 2,2,4-Trimethylpentane	+++++	2.35972	2.18580	2.42741	2.47968	2.42319		
	2.41629	2.17852					2.35294	5.175
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
115 Isobutanol	+++++	+++++	0.78944	0.85849	0.91560	+++++		
	+++++	+++++					0.85451	7.393
116 Benzene	+++++	1.42297	1.17967	1.18638	1.27034	1.17944		
	1.15040	1.09956					1.21268	8.721
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
119 tert-Amyl methyl ether	+++++	+++++	0.23710	0.21598	0.27524	0.26773		
	0.26536	0.26827					0.25495	9.111
120 1,2-Dichloroethane	0.61343	0.53033	0.53851	0.51893	0.57115	0.51947		
	0.50004	0.47417					0.53325	8.047

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	20.000 Level 15	40.000 Level 16						
121 Heptane	+++++	0.29539	0.32477	0.30224	0.37195	0.34188		
	0.34497	0.33348					0.33067	7.934
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 n-Butanol	+++++	+++++	0.34234	0.34303	0.47108	+++++		
	+++++	+++++					0.38549	19.229
125 Trichloroethene	0.58776	0.53885	0.54690	0.53726	0.58598	0.55022		
	0.54361	0.53750					0.55351	3.812
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
127 Methylcyclohexane	+++++	+++++	0.65585	0.66759	0.77480	0.73392		
	0.71631	0.69375					0.70704	6.247
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
132 1,2-Dichloropropane	+++++	0.49465	0.45623	0.43102	0.49863	0.46829		
	0.45520	0.44793					0.46456	5.301
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
136 1,4-Dioxane	+++++	0.30434	0.27055	0.29154	0.33804	0.31949		
	0.31226	0.30203					0.30546	6.982
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
138 Bromodichloromethane	0.78089	0.92046	0.85676	0.87245	1.06141	1.01817		
	0.96598	0.95883					0.92937	9.808
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
140 bis(chloromethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 2-Chloroethyl Vinyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 cis-1,3-Dichloropropene	+++++	0.62888	0.60069	0.62451	0.80755	0.79375		
	0.81024	0.80674					0.72462	13.832
145 4-Methyl-2-pentanone	+++++	0.67137	0.67289	0.72725	0.93039	0.94423		
	0.94300	0.91491					0.82915	15.841
147 Toluene	+++++	1.34514	1.22073	1.22994	1.39280	1.32025		
	1.31255	1.27928					1.30010	4.745
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
150 trans-1,3-Dichloropropene	+++++	0.56997	0.58691	0.59496	0.79588	0.81216		
	0.77501	0.76787					0.70039	15.720
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
152 1-Chloro-2-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 1,1,2-Trichloroethane	0.59349	0.67398	0.62318	0.56350	0.66490	0.62401		
	0.57865	0.56579					0.61094	7.011
156 Tetrachloroethene	0.95169	0.90362	0.85642	0.80005	0.89383	0.86492		
	0.82342	0.82157					0.86444	5.824
157 1,3-Dichloropropane	+++++	+++++	0.75259	0.72027	0.71889	+++++		
	+++++	+++++					0.73058	2.610
158 2-Hexanone	+++++	+++++	0.33808	0.38028	0.53107	0.57034		
	0.58583	0.59596					0.50026	22.445
159 Butyl Acetate	+++++	+++++	0.07344	0.06075	0.08243	+++++		
	+++++	+++++					0.07221	15.081
160 Dibromochloromethane	0.71198	0.72631	0.77321	0.77914	1.09040	1.10451		
	1.06769	1.09353					0.91835	20.043
161 1,2-Dibromoethane (EDB)	0.81934	0.88244	0.81990	0.83257	0.99574	0.95822		
	0.92483	0.91533					0.89355	7.430
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
165 Chlorobenzene	+++++	1.36936	1.23551	1.19091	1.36349	1.29719		
	1.24360	1.24143					1.27736	5.341
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
167 Ethyl Benzene	+++++	0.58861	0.52589	0.51548	0.62744	0.61983		
	0.60966	0.61228					0.58560	7.858
168 1,1,1,2-Tetrachloroethane	+++++	+++++	0.70062	0.71551	0.68383	+++++		
	+++++	+++++					0.69999	2.264
169 m,p-Xylene	+++++	0.63447	0.57683	0.54951	0.65737	0.65575		
	0.65197	0.66614					0.62744	7.269
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 o-Xylene	+++++	0.58670	0.52305	0.52253	0.62216	0.63489		
	0.62614	0.63908					0.59351	8.625
172 Styrene	+++++	0.73891	0.65293	0.66082	0.89970	0.95526		
	0.97738	1.03618					0.84588	18.772
173 2-Heptanone	+++++	+++++	0.43134	0.40547	0.56751	+++++		
	+++++	+++++					0.46811	18.597

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	20.000 Level 15	40.000 Level 16						
174 Bromoform	0.63698	0.64951	0.70470	0.66667	1.05273	1.13100		
	1.15089	1.21577					0.90103	28.569
175 Cumene	+++++	1.89579	1.59703	1.60646	2.05350	2.09831		
	2.06328	2.12907					1.92049	11.970
176 Cyclohexanone	+++++	+++++	0.37774	0.39120	0.52814	+++++		
	+++++	+++++					0.43236	19.248
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 Bromobenzene	+++++	+++++	0.63884	0.61190	0.67100	+++++		
	+++++	+++++					0.64058	4.620
181 1,1,2,2-Tetrachloroethane	1.11934	1.13993	1.11968	1.11782	1.32451	1.30037		
	1.24986	1.22123					1.19909	7.176
182 Propylbenzene	+++++	2.32965	1.77440	1.57734	1.84660	1.85050		
	1.89310	1.99809					1.89567	12.170
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
184 trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
185 1,2,3-Trichloropropane	+++++	+++++	0.40979	0.39544	0.39361	+++++		
	+++++	+++++					0.39962	2.217
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
188 4-Ethyltoluene	2.03742	1.88054	1.55912	1.37983	1.45207	1.44669		
	1.48157	1.57099					1.60103	14.561
189 2-Chlorotoluene	+++++	+++++	0.38260	0.35191	0.42552	+++++		
	+++++	+++++					0.38668	9.561
190 1,3,5-Trimethylbenzene	1.58405	1.59498	1.29377	1.22719	1.25707	1.28724		
	1.29722	1.28127					1.35285	10.930
191 4-Chlorotoluene	+++++	+++++	0.35415	0.31296	0.37332	+++++		
	+++++	+++++					0.34681	8.892
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
195 tert-Butylbenzene	+++++	+++++	1.13153	0.91850	1.01108	+++++		
	+++++	+++++					1.02037	10.469
196 1,2,4-Trimethylbenzene	1.73301	1.60038	1.41363	1.29292	1.25605	1.20998		
	1.19978	1.15532					1.35763	15.378
197 Pentachloroethane	+++++	+++++	0.31051	0.31978	0.35030	+++++		
	+++++	+++++					0.32686	6.369
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
203 sec-Butylbenzene	+++++	+++++	1.44839	1.37144	1.25594	+++++		
	+++++	+++++					1.35859	7.130
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
206 bis(2-Chloroethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
207 p-Cymene	+++++	+++++	1.47655	1.29667	1.12130	+++++		
	+++++	+++++					1.29817	13.683
208 1,3-Dichlorobenzene	1.24056	1.17902	0.89605	0.86643	0.93828	0.96564		
	0.95781	1.00830					1.00651	13.280
209 1,4-Dichlorobenzene	1.18993	1.25730	0.87396	0.78412	0.83400	0.84571		
	0.85641	0.92408					0.94569	18.700
210 1,2,3-Trimethylbenzene	+++++	+++++	0.57685	0.53380	0.53821	+++++		
	+++++	+++++					0.54962	4.309
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
212 alpha-Chlorotoluene	+++++	0.73213	0.68029	0.73334	1.06975	1.24071		
	1.35591	1.47466					1.04097	31.573 <-
213 Butylbenzene	+++++	+++++	0.40569	0.39383	0.35845	+++++		
	+++++	+++++					0.38599	6.367
214 1,2-Dichlorobenzene	1.07922	1.01622	0.82610	0.77244	0.85407	0.88055		
	0.87880	0.92063					0.90350	11.117

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	20.000 Level 15	40.000 Level 16						
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
216 4-Ethyl-1,2-dimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
220 1,2,4,5-tetramethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
221 1,2-Dibromo-3-chloropropane	+++++	+++++	0.38323	0.39053	0.49426	+++++		
	+++++	+++++					0.42267	14.694
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
226 1,2,4-Trichlorobenzene	1.11514	0.59782	0.99469	0.87174	0.69445	0.83092		
	0.79793	0.76777					0.83381	19.615
227 Hexachlorobutadiene	+++++	0.58183	0.82277	0.68184	0.50534	0.58245		
	0.60421	0.71475					0.64188	16.442
228 Naphthalene	+++++	+++++	+++++	1.20932	0.98465	1.20786		
	1.17080	1.10691					1.13591	8.294
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 237 1,2-Dichloroethene (Total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 239 Total Xylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 240 3 and 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
241 Total Volatile Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
242 TPH reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
243 TPH reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
244 TPH reference to Gasoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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245 TPH reference MineralSpirits	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
246 TPH reference to Stoddard	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
247 TVOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
248 TVOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
249 TVOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
250 TVOC reference to Toluene-d8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
251 NMOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
252 NMOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
253 NMOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
262 C5 - C6 Aliphatic ref C5 + C6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
263 C6-C8 Aliphatic ref Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
264 C8-C10 Aliphatic ref Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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265 C10-C12 Aliphatic ref Dodecan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
267 C8-C10 Aromatic ref 1,2,3-TMB	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
269 C10-C12 Aromatic 1,2,4,5-TMB	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
270 C10-C12 Aromatic Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 117 1,2-Dichloroethane-d4	1.56794	1.40848	1.42919	1.49282	1.40397	1.39781		
	1.44727	1.45477					1.45028	3.933
$ 146 Toluene-d8	0.94660	0.94780	0.96082	0.96799	0.98629	0.97461		
	0.97432	0.96738					0.96572	1.408
$ 177 4-Bromofluorobenzene	0.49792	0.51780	0.50296	0.51220	0.53765	0.56311		
	0.57473	0.58832					0.53684	6.456

Calibration History

Method : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Start Cal Date: 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
24-JUN-2016 12:35	Level5	/chem/msd20.i/24Jun2016.b/20062406.d
Cal Level: 6 , Cal Amount: 0.10000		
24-JUN-2016 13:14	Level6	/chem/msd20.i/24Jun2016.b/20062407.d
Cal Level: 7 , Cal Amount: 0.50000		
18-JUL-2016 10:30	AT1	/chem/msd20.i/18Jul2016.b/20071805.d
24-JUN-2016 13:54	HILOcrvFULL	/chem/msd20.i/24Jun2016.b/20062408.d
Cal Level: 8 , Cal Amount: 1.00000		
18-JUL-2016 11:09	AT1	/chem/msd20.i/18Jul2016.b/20071806.d
24-JUN-2016 14:33	HILOcrvFULL	/chem/msd20.i/24Jun2016.b/20062409.d
Cal Level: 12, Cal Amount: 5.00000		
18-JUL-2016 11:53	AT1	/chem/msd20.i/18Jul2016.b/20071807.d
24-JUN-2016 15:36	HILOcrvFULL	/chem/msd20.i/24Jun2016.b/20062410.d
Cal Level: 13, Cal Amount: 10.00000		
24-JUN-2016 16:15	HILOcrvFULL	/chem/msd20.i/24Jun2016.b/20062411.d
Cal Level: 15, Cal Amount: 20.00000		
24-JUN-2016 17:00	HILOcrvFULL	/chem/msd20.i/24Jun2016.b/20062412.d

```
+------------------+-----------------+----------------------------------------+
| Cal Level: 16, Cal Amount: 40.00000                                          |
+==============================================================================+
|24-JUN-2016 18:55 |HILOcrvFULL      |/chem/msd20.i/24Jun2016.b/20062413.d    |
+------------------+-----------------+----------------------------------------+
```

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 13

```
+------------------+-----------------+----------------------------------------+
| Ccal Level: 13, Ccal Amount: 10.000                                          |
+==============================================================================+
|18-JUL-2016 07:40 |AT12             |/chem/msd20.i/18Jul2016.b/20071802.d    |
+------------------+-----------------+----------------------------------------+
| Ccal Level: 8 , Ccal Amount: 1.000                                           |
+==============================================================================+
|18-JUL-2016 11:09 |AT1CCV           |/chem/msd20.i/18Jul2016.b/20071806a.d   |
+------------------+-----------------+----------------------------------------+
```

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JUN-2016 12:35
End Cal Date : 18-JUL-2016 11:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Cal Date : 18-Jul-2016 16:41 jscarbro
Curve Type : Average

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

Calibration File Names:
Level 5: /chem/msd20.i/24Jun2016.b/20062406.d
Level 6: /chem/msd20.i/24Jun2016.b/20062407.d
Level 7: /chem/msd20.i/18Jul2016.b/20071805.d
Level 8: /chem/msd20.i/18Jul2016.b/20071806.d
Level 12: /chem/msd20.i/18Jul2016.b/20071807.d
Level 13: /chem/msd20.i/24Jun2016.b/20062411.d
Level 15: /chem/msd20.i/24Jun2016.b/20062412.d
Level 16: /chem/msd20.i/24Jun2016.b/20062413.d

JNL 7/18/16

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
1 Dimethyl Ether	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Freon 14	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Acetaldehyde	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Hexafluoropropene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Freon 13	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 143a	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Freon 134a	+++++ / +++++	+++++ / +++++	1.47172	1.32628	1.35159	+++++	1.38320	5.617

Curve Name: 2016L0624B

Initial Calibration Narrative

An initial calibration curve was analyzed on 6/24/16 on MSD-20.

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

Tune File: 20062401, 20062701, & 20071801.
ICAL: One (1) out. Alpha-chlorotoluene @ 32% RSD
ICV: Zero (0) out.
In House control limits: Zero (0) out.
DOD control limits: Zero (0) out.
File 20062704a.

BTEX R.L. Verification Spike: 20062407x.
Naphthalene was calibrated from 0.1ppbv to 4.0ppbv.

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

Freon 114	Bromodichloromethane	4-Ethyltoluene
Freon 11	1,1,2-Trichloroethane	1,3,5-Trimethylbenzene
Freon 113	Tetrachloroethene	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
Trichloroethene	1,1,2,2-Tetrachloroethane	1,2,4-Trichlorobenzene

A 3 point calibration for **AT-1** compounds was analyzed on 7/18/16 on MSD-20. **0 out.**

Eurofins Air Toxics, Inc. **MSD-20** **Logbook #2796**

BFB Verification of 176/174 m/z Ratio: (341568/354944)x100=	96.23%
Method Name: 2016L0624A/2016S0624A	

IS/S Std. #: 2789-227		Exp. Date: 10/14/16
BCM	LL: 123047	SIM: 126252
1,4-DFB	457254	476048
CB-d5	403496	413264

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

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	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
	✓	20071801	BFB Tune Check	2299-1484	50ng	2.0ml	1.00	SU	7/18/16	0700	SU/QM	
	✓	02	CCV (50 ppbv)	2789-175	10.0 ppbv	50ml	1.00	SU	7/18/16	0740	SU/QM	Exp: 9/9/16 LL: ∅ out SIM: ∅ out
	✓	03	LCS (50 ppbv)	2789-168	10.0 ppbv	50ml	1.00	SU		0828	QM	Exp: 9/6/16 LL: 4 out SIM: ∅ out
	✓	04	LCSD (50ppbv)	2789-168	10 ppbv	50ml	1.00	QM		0907	QM	
	✓	05	ICAL Level #7	2789-129	0.5ppbv	25ml	1.00	QM		1030	QM	ATI; exp. 8/4/16
	✓	06	ICAL Level #8	2789-129	1.0ppbv	50ml	1.00	QM		1109	QM	ATI; exp. 8/4/16; ccv
	✓	07	ICAL Level #12	2789-129	5.0ppbv	250ml	1.00	QM		1153	QM	ATI; exp. 8/4/16
	X	08	Can cert	06L0640	01307162016	250ml	1.00	QM		1244	QM	>RL
	✓	09	Dewar cert	Houseline	Dry	250ml	1.00	QM		1330	QM	CPM102F107
	X	10	Can cert/lab blank	06L0640	01307162016	250ml	1.00	QM		NA	QM	~~7RL~~ QM 7/18/16 - ~~[illegible]~~ No data collected
	X	11	Lab blank	96107	Humid	250ml	1.00	QM		1555	QM	IS out
		12										
3												
4												
5												
6												
7												QM 7/18/16

QM
Reviewed

7/18/16
Date

0294 of 0668

Eurofins Air Toxics, Inc. **MSD-20** **Logbook #2796**

BFB Verification of 176/174 m/z Ratio:	(475286/491818)100=96.64%
Method Name:	2016L0624A / 2016S0624A

IS/S Std. #:	2789-89	Exp. Date:	7/2/16
BCM	LL: 142903	Sim:	145576
1,4-DFB	579240		601742
CB-d5	477544		498735

Verified CCV IS vs ICAL mid-point (-40%D): 88

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	20062401	BFB Tune check	2789-1484	50ng	2uL	1.00	88	6/24/16	0936	88	
2	/	02	ICAL level 1	2789-199	0.003ppbv	15mL	1.00	88		0959	88	exp. 9/9/16
3	/	03	2		0.005ppbv	25mL	1.00	88		1038	88	
4	/	04	3		0.01 ppbv 88 6/27/16	50mL	1.00	88		1117	88	
5	/	05	4		0.02ppbv	100mL	1.00	88		1156	88	
6	/	06	5		0.05ppbv	250mL	1.00	88		1235	88	
7	/	07	6	2789-200	0.1ppbv	25mL	1.00	88		1314	88	
8	/	08	7		0.5ppbv	125mL	1.00	88		1354	88	
9	/	09	8		1.0ppbv	250mL	1.00	88		1433	88	
10	/	10	12	2789-173	5.0ppbv	25mL	1.00	88		1536	88	
11	/	11	13		10ppbv	50mL	1.00	88		1615	88	CCV
12	/	12	15		20ppbv	100mL	1.00	88		1700	88	
13	/	13	16		40ppbv	200mL	1.00	88		1855	88	
14		14	5/5 Soln Blank	Humidifier	Dry	250mL	1.00	88	6/27/16	NA		
15												
16												
17												

Reviewed 6/27/16 Date 88 6/27/16

Eurofins Air Toxics, Inc.

MSD-20

Logbook #2796

BFB Verification of 176/174 m/z Ratio: (462972/477568)×100 = 96.93	
Method Name: 20160606224A / 20160506224A	

IS/S Std. #: 2787-89		Exp. Date: 7/21/16
BCM	4: 153352	5m: 154837
1,4-DFB	625000	646132
CB-d5	585708	529138

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

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	20062201	BFB Tune check	2299-1484	50ng	2.0ml	1.00	ES	6/22/16	0934	ES	
2	X	02	ccv (50ppbv)	2789-160	5.0ppbv	25ml	1.00	ES		0958	ES	Exp. 7/4/16 Too many out w/ 1 out
3	/	03	ccv (50ppbv)	2789-173	5.0ppbv	25ml	1.00	ES		1044	ES	Exp. 9/9/16 5m: ∅ out
4	/	04	lcs (50ppbv) / ICV	2789-168	5.0ppbv	25ml	1.00	ES		1132	ES	Exp. 9/16/16 ∅ out
5		05	lcsd (50ppbv)	2789-103	5.0ppbv	25ml	1.00	ES				Exp 9/16/16
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												83 6/27/16

Reviewed

6/27/16
Date

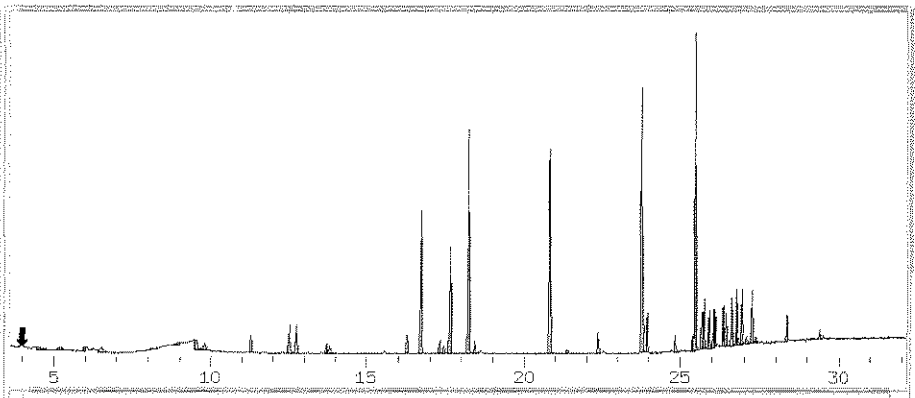
TargetReview: eeyore: ICAL: /chem/msd20.i/18Jul2016.b/20071805.d

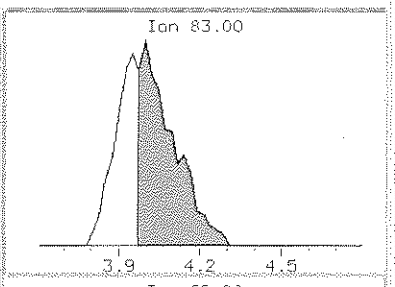
File Security Edit Display Process Spectra Help

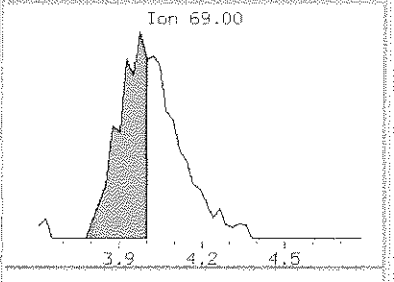
Sample: ICAL Type: CALIB_7 Inj.Date: 18-JUL-2016 10:30

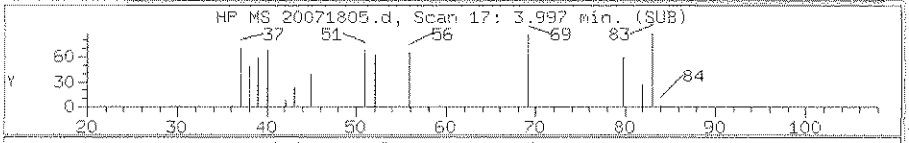
- * 7 Freon 134a
- + 10 1,1-Difluoroeth
- + 13 Chlorodifluoro
- + 16 Freon 142b
- + 37 Dichlorofluoro
- + 48 Freon 123
- + 59 Cyclopentene
- + 84 1-Propanol
- + 90 2,2-Dichloropr
- ** 98 Bromochlorometh
- + 107 1,1-Dichloropr
- + 115 Isobutanol
- ** 123 1,4-Difluorobe
- + 124 n-Butanol
- + 157 1,3-Dichloropr
- + 159 Butyl Acetate
- ** 163 Chlorobenzene-
- + 168 1,1,1,2-Tetrac
- + 173 2-Heptanone
- + 176 Cyclohexanone
- + 180 Bromobenzene
- + 185 1,2,3-Trichlor
- + 189 2-Chlorotoluen
- + 191 4-Chlorotoluen
- + 195 tert-Butylbenz

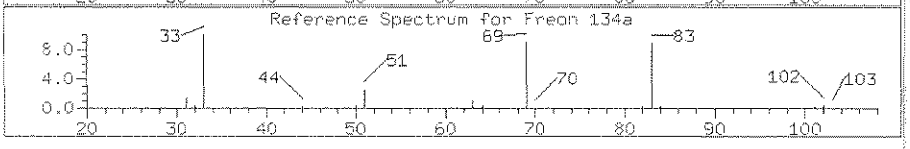
20071805.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
	3.973	8437			104		
	0.000	0			0		
2	3.997	11965	0.3944	0.3944	100	Ta	
	3.973	8437			71		
	0.000	0			0		

- Mark Freon 134a Undetected.

Before

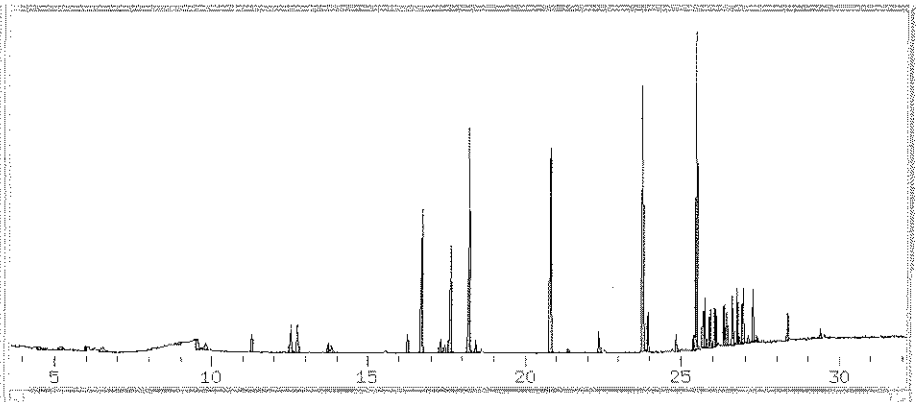
TargetReview: eeyore: ICAL: /chem/msd20.i/18Jul2016.b/20071805.d

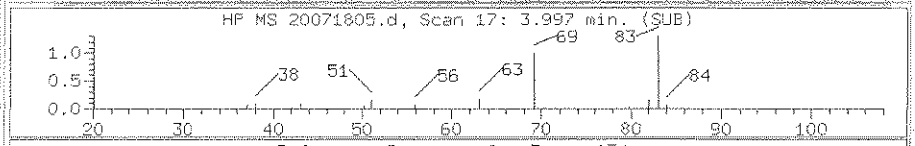
File Security Edit Display Process Spectra Help

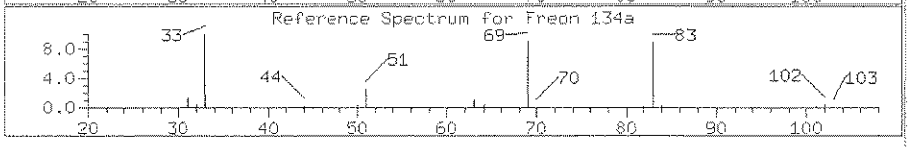
Sample: ICAL Type: CALIB_7 Inj.Date: 18-JUL-2016 10:30

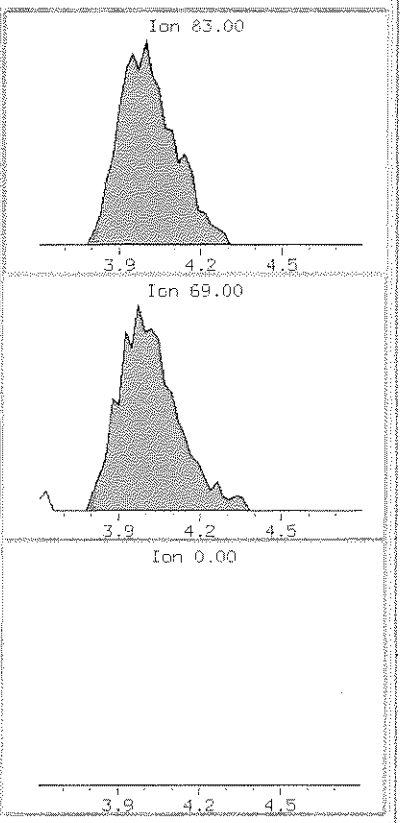
*| 7 Freon 134a
*| 10 1,1-Difluoroeth
+ 13 Chlorodifluoro
+ 16 Freon 142b
+ 37 Dichlorofluoro
+ 48 Freon 123
+ 59 Cyclopentene
+ 84 1-Propanol
+ 90 2,2-Dichloropr
** 98 Bromochlorometh
+ 107 1,1-Dichloropr
+ 115 Isobutanol
** 123 1,4-Difluorobe
+ 124 n-Butanol
+ 157 1,3-Dichloropr
+ 159 Butyl Acetate
** 163 Chlorobenzene-
+ 168 1,1,1,2-Tetrac
+ 173 2-Heptanone
+ 176 Cyclohexanone
+ 180 Bromobenzene
+ 185 1,2,3-Trichlor
+ 189 2-Chlorotoluen
+ 191 4-Chlorotoluen
+ 195 tert-Butylbenz

20071805.d









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	3.997	18432	0.5000	0.5000	100	TaM	
	3.973	16487			89		
	0.000	0			0		

- Mark Freon 134a Undetected.

ES 7/18/16

Team A

Date/Initial	QH 7/18/16
Integr	
Split Peak	
Peak Tailing	
Background Subtracted	
Zoom In	
Peak	

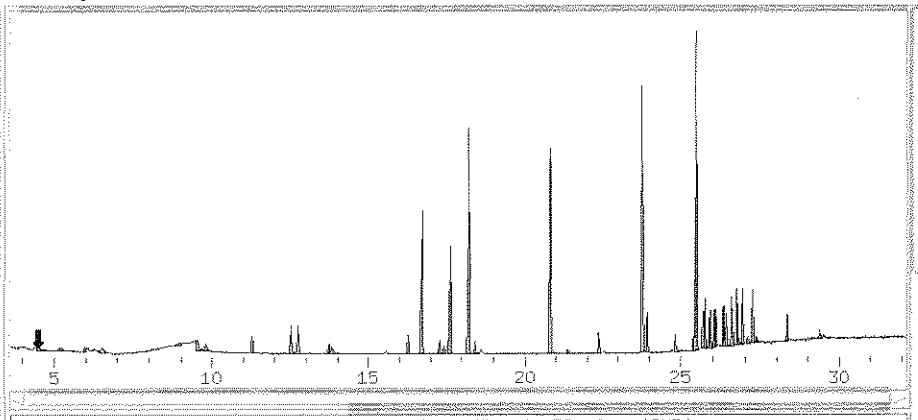
TargetReview: eeyore: ICAL: /chem/msd20.i/18Jul2016.b/20071805.d

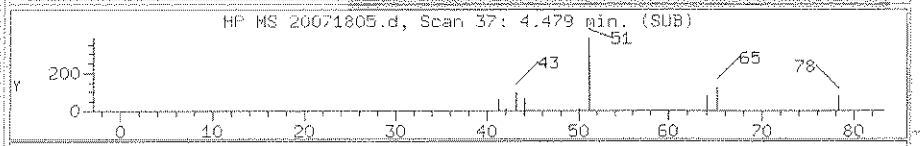
File Security Edit Display Process Spectra Help

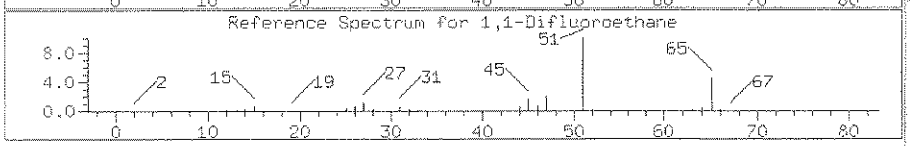
Sample: ICAL Type: CALIB_7 Inj.Date: 18-JUL-2016 10:30

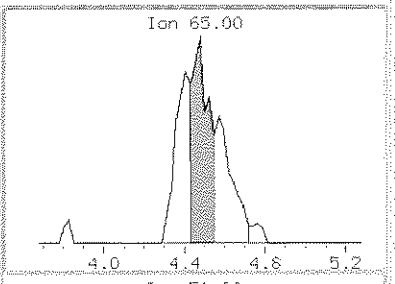
+ 7 Freon 134a
* 10 1,1-Difluoroet
+ 13 Chlorodifluoro
+ 16 Freon 142b
+ 37 Dichlorofluoro
+ 46 Freon 123
+ 59 Cyclopentene
+ 84 1-Propanol
+ 90 2,2-Dichloropr
*+ 98 Bromochlorometh
+ 107 1,1-Dichloropr
+ 115 Isobutanol
*+ 123 1,4-Difluorobe
+ 124 n-Butanol
+ 157 1,3-Dichloropr
+ 159 Butyl Acetate
*+ 163 Chlorobenzene-
+ 168 1,1,1,2-Tetrac
+ 173 2-Heptanone
+ 176 Cyclohexanone
+ 180 Bromobenzene
+ 185 1,2,3-Trichlor
+ 189 2-Chlorotoluen
+ 191 4-Chlorotoluen
+ 195 tert-Butylbenz

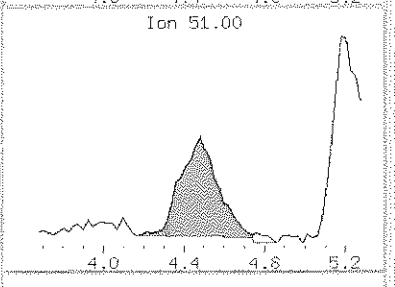
20071805.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
	4.479	17461			483		
2	4.479	4923	0.3308	0.3308	100	a	
	4.479	17461			355		
3	4.576	3052	0.2051	0.2051	100	Ta	
	4.479	17461			572		
4	4.769	363	0.02440	0.02440	100	Ta	

Before

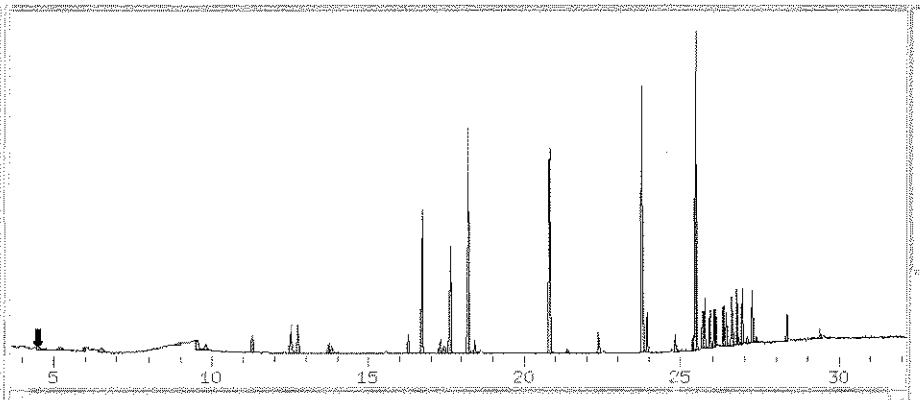
TargetReview: eeyore: ICAL: /chem/msd20.i/18Jul2016.b/20071805.d

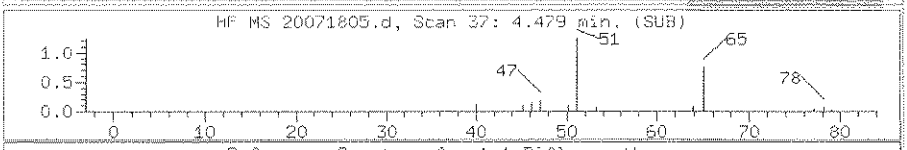
File Security Edit Display Process Spectra Help

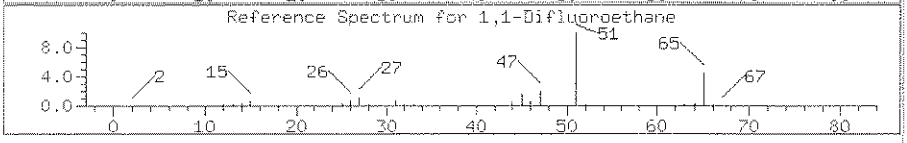
Sample: ICAL Type: CALIB_7 Inj.Date: 18-JUL-2016 10:30

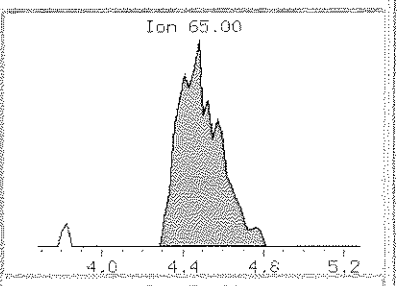
+! 7 Freon 134a
+! 10 1,1-Difluoroet
+ 13 Chlorodifluoro
+ 16 Freon 142b
+ 37 Dichlorofluoro
+ 48 Freon 123
+ 59 Cyclopentene
+ 84 1-Propanol
+ 90 2,2-Dichloropr
*+ 98 Bromochlorometh
+ 107 1,1-Dichloropr
+ 115 Isobutanol
*+ 123 1,4-Difluorobe
+ 124 n-Butanol
+ 157 1,3-Dichloropr
+ 159 Butyl Acetate
*+ 163 Chlorobenzene-
+ 168 1,1,1,2-Tetrach
+ 173 2-Heptanone
+ 176 Cyclohexanone
+ 180 Bromobenzene
+ 185 1,2,3-Trichlor
+ 189 2-Chlorotoluen
+ 191 4-Chlorotoluen
+ 195 tert-Butylbenz

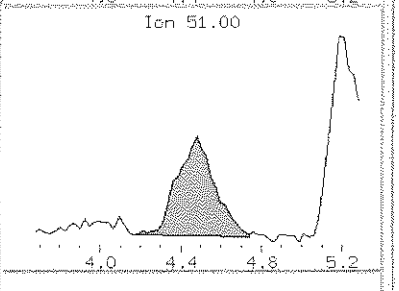
20071805.d











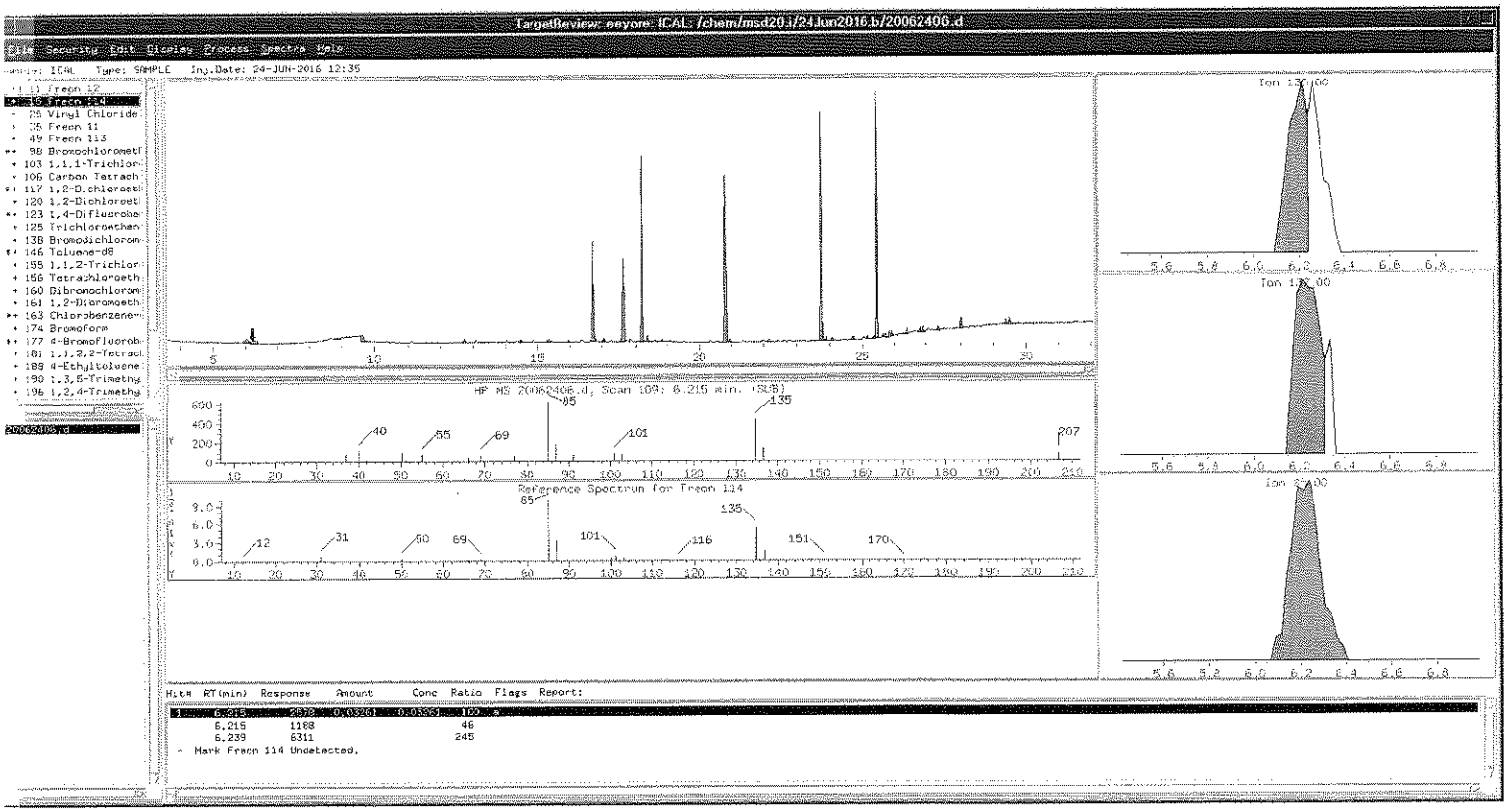
Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	4.479	10459	0.5000	0.5000	100	aM	
	4.479	17460			167		

- Mark 1,1-Difluoroethane Undetected.

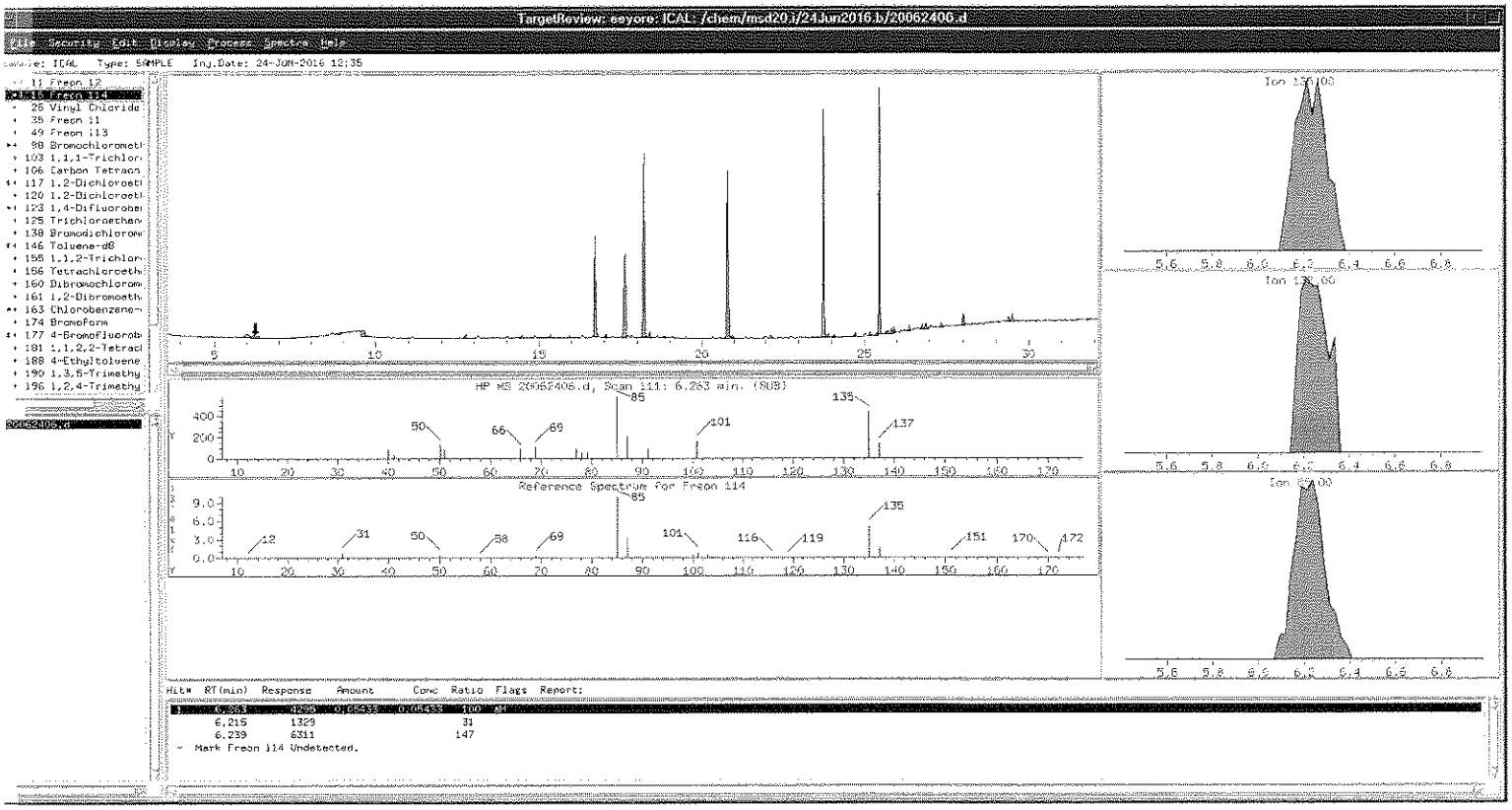
GS 7/18/16

Team A

Integration	DJH 7/18/16
Split Peak	
Peak Tailing	
Background Subtraction	
Zoom In	
Split Peak	


TargetReview: eeyore: ICAL: /chem/msd20.i/24Jun2016.b/20062406.d
File Security Edit Display Process Spectra Help
Inst: ICAL Type: SAMPLE Inj.Date: 24-JUN-2016 12:35
11 Freon 12
16 Freon 22
25 Vinyl Chloride
35 Freon 11
49 Freon 113
98 Bromochloromethane
103 1,1,1-Trichloroethane
106 Carbon Tetrachloride
117 1,2-Dichloroethane
120 1,2-Dichloroethane
123 1,4-Difluorobenzene
125 Trichlorotrifluoroethane
138 Bromodichloromethane
146 Toluene-d8
155 1,1,2-Trichloroethane
156 Tetrachloroethene
160 Dibromochloromethane
161 1,2-Dibromoethane
163 Chlorobenzene-d5
174 Bromoform
177 4-Bromofluorobenzene
181 1,1,2,2-Tetrachloroethane
189 4-Ethyltoluene
190 1,3,5-Trimethylbenzene
196 1,2,4-Trimethylbenzene
20062406.d
HP MS 20062406.d, Scan 109: 6.215 min. (SUB)
Reference Spectrum for Freon 114
Ion 130.00
Ion 131.00
Ion 132.00
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.215 2878 0.03261 0.03561 100 *
6.215 1188 46
6.239 6311 245
- Mark Freon 114 Undetected.

Before

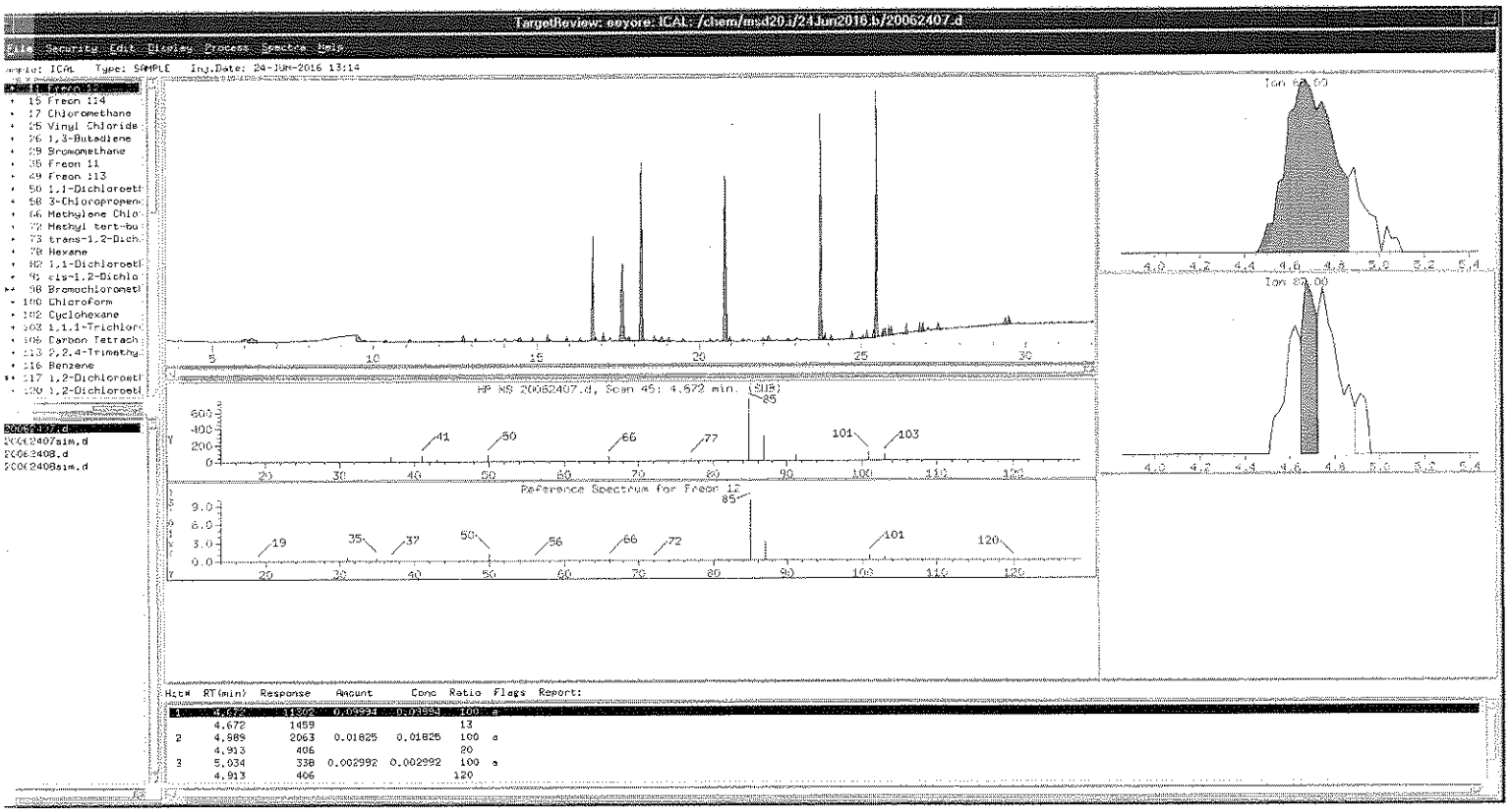


83 6/24/16

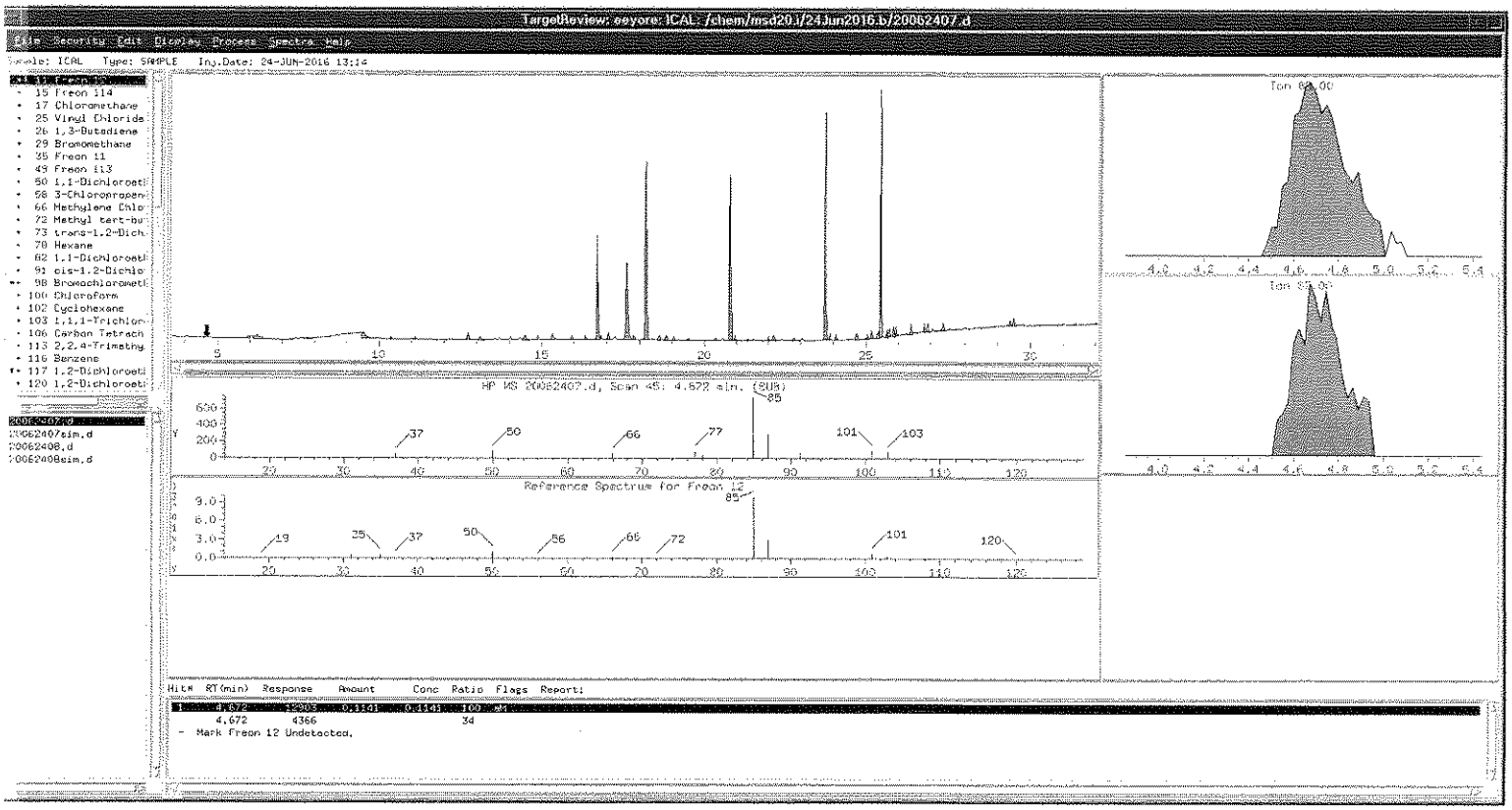
85 6/28/16

After

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


TargetReview: eeyore: ICAL: /chem/msd20.i/24Jun2016.b/20062407.d
File Security Edit Display Process Spectra Help
Sample: ICAL Type: SAMPLE Inj.Date: 24-JUN-2016 13:14
15 Freon 114
17 Chloromethane
25 Vinyl Chloride
26 1,3-Butadiene
29 Bromomethane
35 Freon 11
49 Freon 113
50 1,1-Dichloroeth
58 3-Chloropropene
66 Methylene Chlo
72 Methyl tert-bu
73 trans-1,2-Dich
78 Hexane
82 1,1-Dichloroeth
91 cis-1,2-Dichlo
98 Bromochlorometh
100 Chloroform
102 Cyclohexane
103 1,1,1-Trichlor
106 Carbon Tetrach
113 2,2,4-Trimethy
116 Benzene
117 1,2-Dichloroeth
120 1,2-Dichloroeth
20062407.d
20062407sim.d
20062408.d
20062408sim.d
HP MS 20062407.d, Scan 45: 4.672 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 4.672 11802 0.09994 0.09994 100 a
4.672 1459 13
2 4.989 2063 0.01825 0.01825 100 a
4.913 406 20
3 5.034 338 0.002992 0.002992 100 a
4.913 406 120

Before

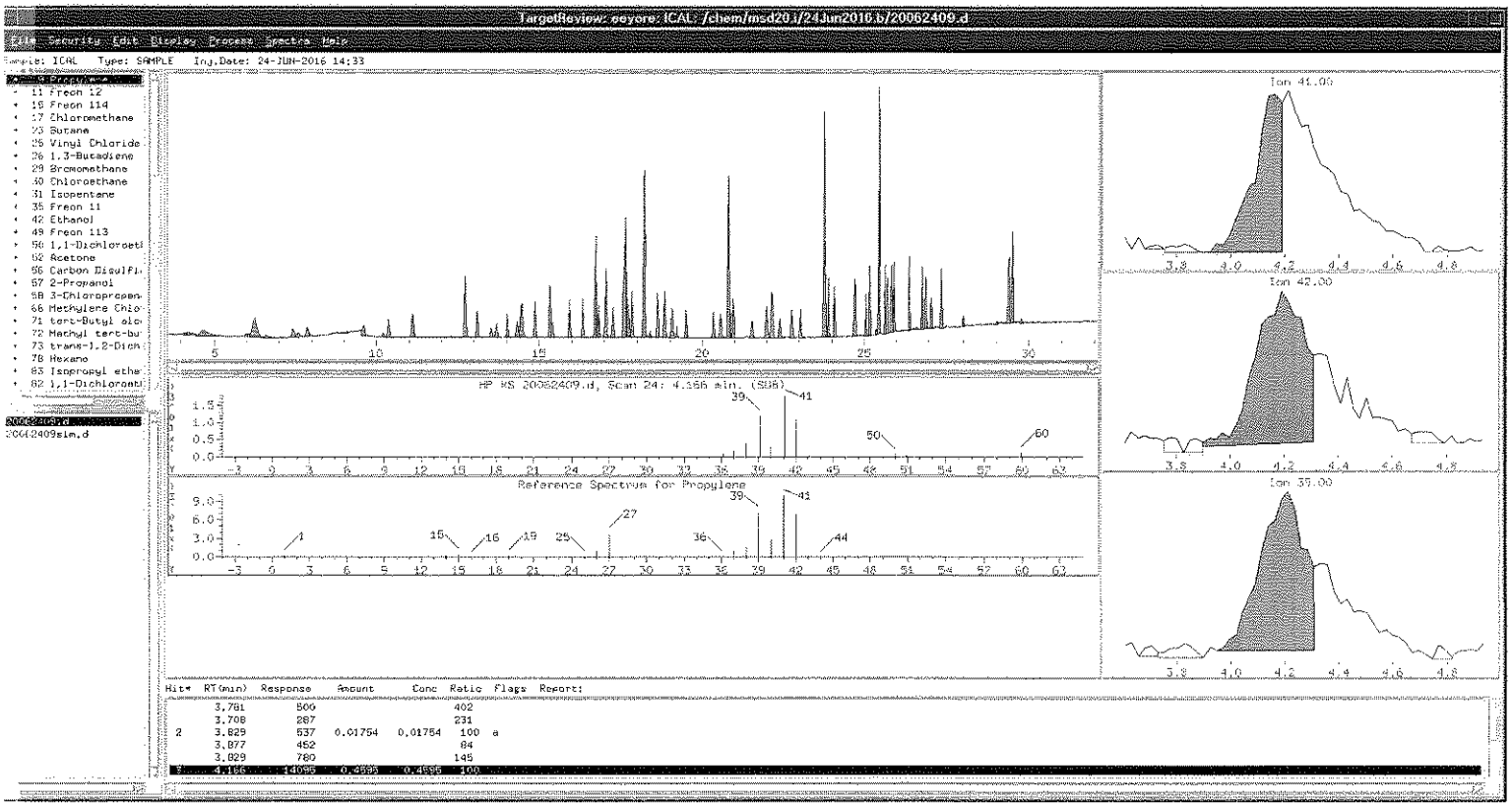


SB 6/27/16

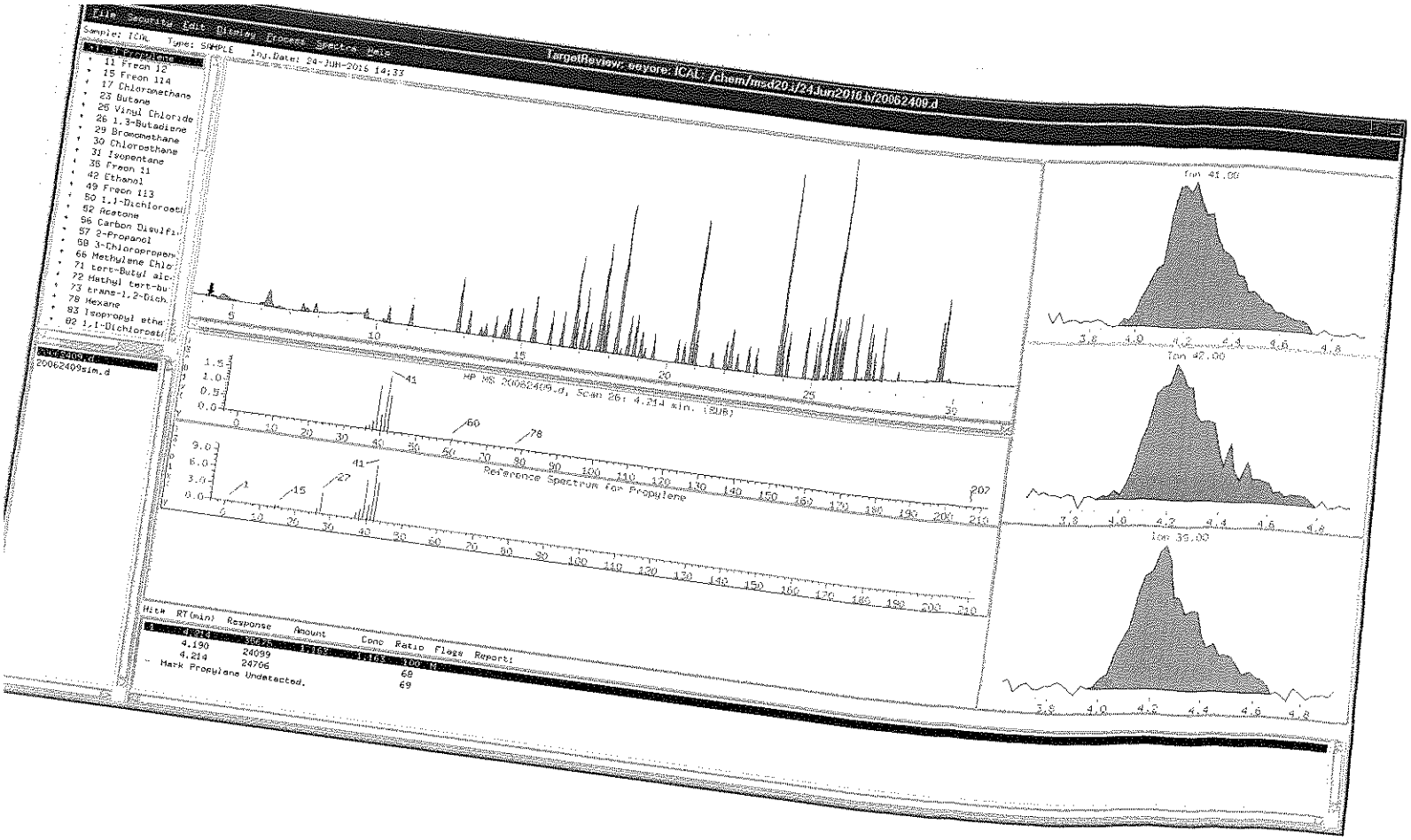
ES 6/28/16

After

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


TargetReview: soyore: ICAL: /chem/msd201/24Jun2016.b/20062409.d
File Security Edit Display Process Spectra Help
Sample: ICAL Type: SAMPLE Inj.Date: 24-JUN-2016 14:33
11 Freon 12
18 Freon 114
17 Chloromethane
23 Butane
25 Vinyl Chloride
26 1,3-Butadiene
29 Bromomethane
30 Chloroethane
31 Isopentane
35 Freon 11
42 Ethanol
48 Freon 113
50 1,1-Dichloroeth
52 Acetone
56 Carbon Disulfi
57 2-Propanol
58 3-Chloroprope
66 Methylene Chlo
71 tert-Butyl alc
72 Methyl tert-bu
73 trans-1,2-Dich
78 Hexane
83 Isopropyl ethe
82 1,1-Dichloroeth
20062409.d
20062409slm.d
HP MS 20062409.d, Scan 24: 4.166 min. (SB6)
Reference Spectrum for Propylene
Ion 41.00
Ion 42.00
Ion 39.00
Hit* RT(min) Response Amount Conc Ratio Flags Report:
3.781 506 402
3.708 287 231
2 3.829 537 0.01754 0.01754 100 a
3.877 452 84
3.829 780 145
* 4.166 14095 0.4695 0.4695 100

Before



83 6/24/16

SS 6/28/16

After

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

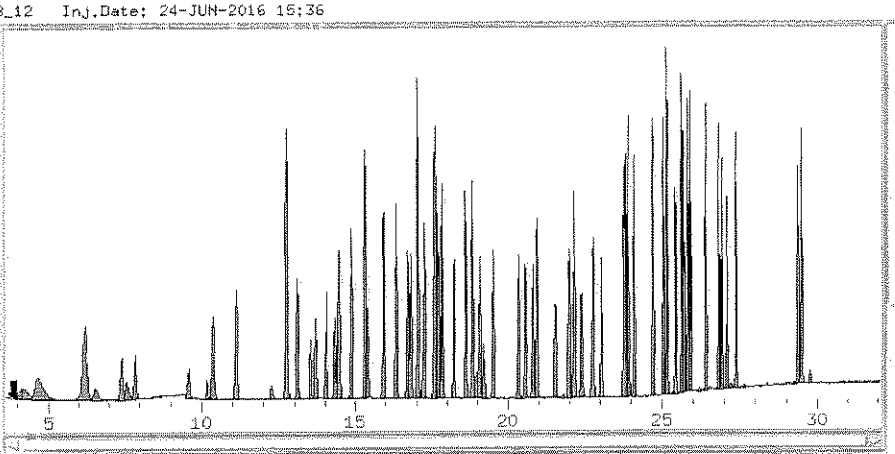
TargetReview: eeyore: ICAL: /chem/msd20.i/24Jun2016.b/20062410.d

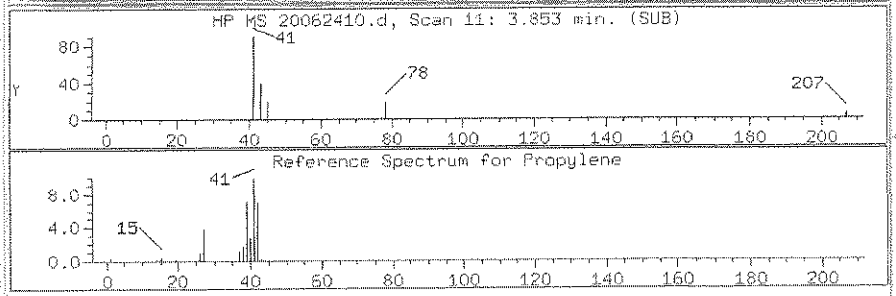
File Security Edit Display Process Spectra Help

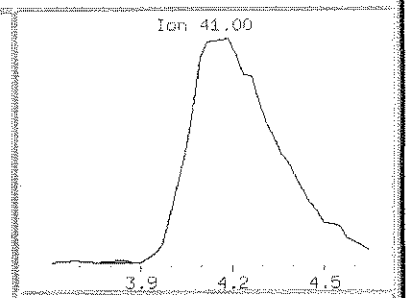
Sample: ICAL Type: CALIB_12 Inj.Date: 24-JUN-2016 15:36

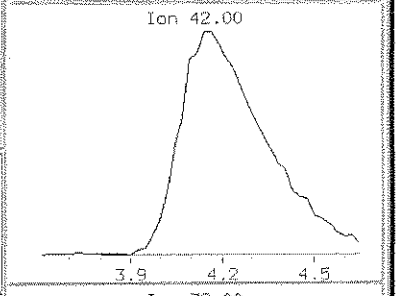
- 9 Propylene
- 11 Freon 12
- 15 Freon 114
- 17 Chloromethane
- 23 Butane
- 25 Vinyl Chloride
- 26 1,3-Butadiene
- 29 Bromomethane
- 30 Chloroethane
- 31 Isopentane
- 35 Freon 11
- 42 Ethanol
- 49 Freon 113
- 50 1,1-Dichloroetl
- 52 Acetone
- 56 Carbon Disulfi
- 57 2-Propanol
- 58 3-Chloropropen
- 66 Methylene Chlo
- 71 tert-Butyl alc
- 72 Methyl tert-bu
- 73 trans-1,2-Dich
- 78 Hexane
- 83 Isopropyl ethe
- 82 1,1-Dichloroetl

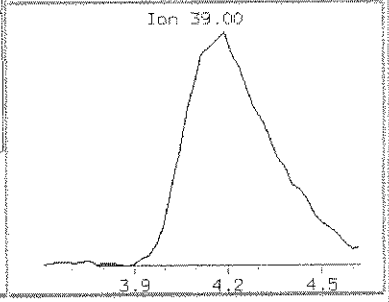
20062406.d
20062407.d
20062409.d
20062410.d





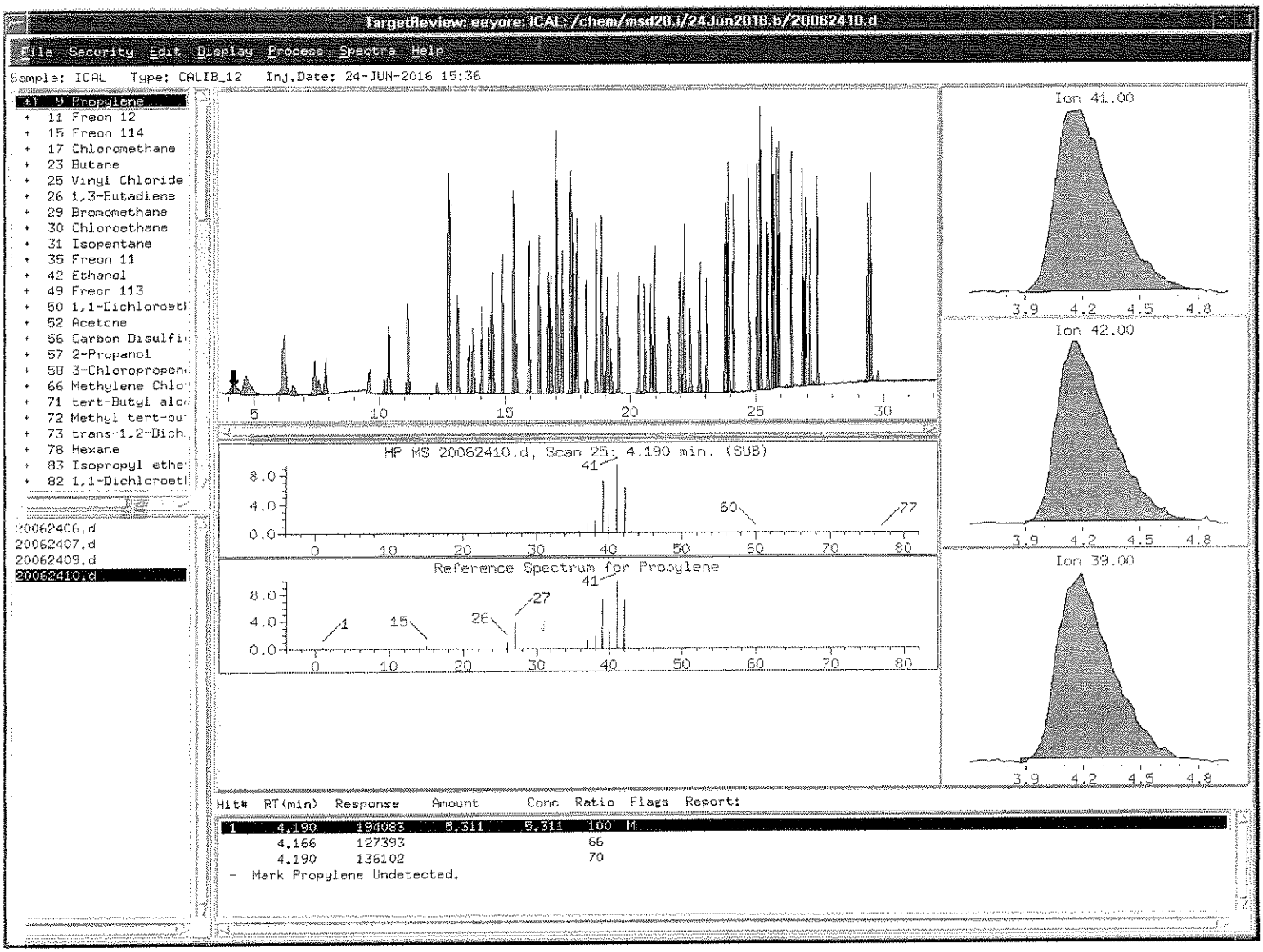






Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	3.853	464	0.01612	0.01612	100	a	
	3.853	179			39		
	3.829	379			82		
2	4.817	324	0.01125	0.01125	100	Ta	
	4.166	133329			41163		
	4.190	145242			44841		

Before



AS 6/28/16

SS 6/28/16

After

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

Modified EPA Methods TO-14A/TO-15 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/msd20.i/27Jun2016.b/20062704.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 27-JUN-2016 11:32
Operator : ef Inst ID: msd20.i
Smp Info : 25mL# 2789-168
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/27Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 11:28 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 16:15 Cal File: 20062411.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	146883	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	111694			47.94- 107.94	76.04
16.726	16.726 (1.000)	49	183313			102.10- 162.10	124.80
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	595567	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	93747			0.00- 45.77	15.74
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	507576	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	281016			26.51- 86.51	55.36
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	194169	4.55749	4.557	80.00- 120.00	100.00
17.620	17.641 (1.053)	67	111570			32.47- 92.47	57.46
$ 146 Toluene-d8					CAS #: 2037-26-5		
20.821	20.806 (1.142)	98	592645	5.15206	5.152	80.00- 120.00	100.00
20.806	20.822 (1.141)	70	66725			0.00- 41.37	11.26

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

$ 146 Toluene-d8 (continued)
 20.821  20.806 (1.142)   100    398600                    36.07-  96.07    67.26
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.466 (1.073)   174    277621 5.09425    5.094  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    331536                   89.67- 149.67   119.42
 25.485  25.466 (1.073)   176    275948                   67.40- 127.40    99.40
-------------------------------------------------------------------------------
    9 Propylene                                     CAS #: 115-07-1
  4.142   4.166 (0.248)    41    204437 5.29717    5.297  80.00- 120.00   100.00
  4.142   4.142 (0.248)    42    134566                   37.70-  97.70    65.82
  4.142   4.166 (0.248)    39    146047                   41.61- 101.61    71.44
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.672   4.672 (0.279)    85    694574 5.56777    5.568  80.00- 120.00   100.00
  4.672   4.648 (0.279)    87    224388                    2.54-  62.54    32.31
-------------------------------------------------------------------------------
   15 Freon 114                                     CAS #: 76-14-2
  6.215   6.215 (0.372)   135    484979 5.62940    5.629  80.00- 120.00   100.00
  6.215   6.215 (0.372)   137    154417                    1.78-  61.78    31.84
  6.191   6.191 (0.370)    85    645655                  116.61- 176.61   133.13
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.552   6.577 (0.392)    50    222914 5.33651    5.336  80.00- 120.00   100.00
  6.576   6.577 (0.393)    52     74690                    3.03-  63.03    33.51
-------------------------------------------------------------------------------
   23 Butane                                        CAS #: 106-97-8
  7.416   7.417 (0.443)    58     57762 5.64167    5.642  80.00- 120.00   100.00
  7.416   7.417 (0.443)    43    387959                  656.82- 716.82   671.65
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.573   7.573 (0.453)    62    256332 5.50154    5.502  80.00- 120.00   100.00
  7.573   7.573 (0.453)    64     84029                    1.50-  61.50    32.78
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  7.868   7.868 (0.470)    54    184095 5.16393    5.164  80.00- 120.00   100.00
  7.850   7.868 (0.469)    39    178817                   69.00- 129.00    97.13
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.596   9.596 (0.574)    94    158616 5.37468    5.375  80.00- 120.00   100.00
  9.596   9.596 (0.574)    96    150653                   63.60- 123.60    94.98
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.174  10.174 (0.608)    64    119107 5.64860    5.648  80.00- 120.00   100.00
 10.174  10.174 (0.608)    49     29084                    0.00-  55.63    24.42
 10.174  10.174 (0.608)    66     38639                    2.70-  62.70    32.44
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	198670	5.45948	5.459	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	287256			115.62- 175.62	144.59
10.367	10.367 (0.620)	42	253385			100.35- 160.35	127.54
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	651465	5.40337	5.403	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	422103			34.91- 94.91	64.79
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	88137	5.64810	5.648	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	36299			11.72- 71.72	41.18
12.269	12.269 (0.734)	43	20108			0.00- 52.99	22.81
49 Freon 113					CAS #: 76-13-1		
12.763	12.764 (0.763)	151	417939	5.13430	5.134	80.00- 120.00	100.00
12.763	12.764 (0.763)	153	273268			34.49- 94.49	65.38
12.763	12.764 (0.763)	101	519289			96.39- 156.39	124.25
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	152224	5.40634	5.406	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	391536			227.70- 287.70	257.21
12.736	12.736 (0.761)	96	243440			125.12- 185.12	159.92
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	112950	5.04445	5.044	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	343354			278.33- 338.33	303.99
56 Carbon Disulfide					CAS #: 75-15-0		
13.120	13.121 (0.784)	76	604204	4.77376	4.774	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
13.532	13.533 (0.809)	45	385886	5.57240	5.572	80.00- 120.00	100.00
13.532	13.533 (0.809)	43	82587			0.00- 52.04	21.40
13.532	13.533 (0.809)	59	15808			0.00- 34.17	4.10
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	97503	5.42598	5.426	80.00- 120.00	100.00
13.697	13.697 (0.819)	41	252659			236.04- 296.04	259.13
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	240275	5.26288	5.263	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	292808			97.79- 157.79	121.86
14.027	14.027 (0.839)	51	89982			9.84- 69.84	37.45
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.439	14.439 (0.863)	73	695933	5.51700	5.517	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
14.439	14.439 (0.863)	57	154195			0.00- 52.45	22.16
14.439	14.439 (0.863)	41	155352			0.00- 53.55	22.32
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.493	14.494 (0.866)	98	140629	4.63290	4.633	80.00- 120.00	100.00
14.493	14.494 (0.866)	61	306588			194.43- 254.43	218.01
14.493	14.494 (0.866)	96	218540			127.78- 187.78	155.40
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	398638	5.60645	5.606	80.00- 120.00	100.00
14.878	14.878 (0.889)	43	249139			33.20- 93.20	62.50
14.878	14.878 (0.889)	86	74583			0.00- 48.21	18.71
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	464676	5.32253	5.322	80.00- 120.00	100.00
15.345	15.345 (0.917)	65	147629			1.84- 61.84	31.77
86 Vinyl Acetate					CAS #: 108-05-4		
15.400	15.400 (0.921)	86	61017	5.60920	5.609	80.00- 120.00	100.00
15.400	15.400 (0.921)	42	51261			55.70- 115.70	84.01
15.400	15.400 (0.921)	43	590524			963.84-1023.84	967.80
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.323	16.324 (0.976)	98	194501	6.09062	6.091	80.00- 120.00	100.00
16.323	16.324 (0.976)	61	383667			172.98- 232.98	197.26
16.323	16.324 (0.976)	96	300791			124.81- 184.81	154.65
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	124510	5.48174	5.482	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	451240			345.54- 405.54	362.41
16.344	16.344 (0.977)	57	36250			0.00- 59.64	29.11
99 Tetrahydrofuran					CAS #: 109-99-9		
16.695	16.696 (0.998)	42	279000	5.28187	5.282	80.00- 120.00	100.00
16.695	16.696 (0.998)	71	116049			10.37- 70.37	41.59
16.695	16.696 (0.998)	72	125278			13.30- 73.30	44.90
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	527450	5.33005	5.330	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	341887			35.08- 95.08	64.82
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	377401	5.54299	5.543	80.00- 120.00	100.00
17.035	17.035 (1.018)	56	419636			82.51- 142.51	111.19
17.035	17.035 (1.018)	41	225285			30.91- 90.91	59.69

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.066 (1.020)	97	545807	5.30257	5.302	80.00- 120.00	100.00
17.065	17.066 (1.020)	99	348210			34.55- 94.55	63.80
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	519949	6.07475	6.075	80.00- 120.00	100.00
17.250	17.250 (1.031)	117	534562			75.13- 135.13	102.81
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
17.579	17.579 (1.051)	56	390397	5.64798	5.648	80.00- 120.00	100.00
17.579	17.579 (1.051)	57	1184773			266.38- 326.38	303.48
17.579	17.579 (1.051)	41	299989			47.04- 107.04	76.84
116 Benzene					CAS #: 71-43-2		
17.620	17.621 (0.966)	78	780013	5.40003	5.400	80.00- 120.00	100.00
17.620	17.621 (0.966)	77	184293			0.00- 54.04	23.63
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	325908	5.13098	5.131	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	103076			2.26- 62.26	31.63
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	223943	5.68570	5.686	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	86505			9.17- 69.17	38.63
17.847	17.847 (0.979)	43	414832			158.08- 218.08	185.24
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	371961	5.64171	5.642	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	349802			67.33- 127.33	94.04
18.610	18.610 (1.021)	97	222183			32.56- 92.56	59.73
127 Methylcyclohexane					CAS #: 108-87-2		
18.833	18.834 (1.033)	83	496579	5.89639	5.896	80.00- 120.00	100.00
18.833	18.834 (1.033)	55	375485			48.63- 108.63	75.61
18.833	18.834 (1.033)	56	122916			0.00- 55.66	24.75
132 1,2-Dichloropropane					CAS #: 78-87-5		
19.056	19.057 (1.045)	63	301011	5.43972	5.440	80.00- 120.00	100.00
19.056	19.057 (1.045)	62	216144			41.89- 101.89	71.81
19.056	19.057 (1.045)	41	168237			27.78- 87.78	55.89
136 1,4-Dioxane					CAS #: 123-91-1		
19.213	19.213 (1.054)	88	189433	5.20636	5.206	80.00- 120.00	100.00
19.213	19.213 (1.054)	58	131495			39.29- 99.29	69.42
19.213	19.213 (1.054)	57	41583			0.00- 52.49	21.95

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
19.503	19.503 (0.821)	83	549253	5.82175	5.822	80.00- 120.00	100.00
19.503	19.503 (0.821)	85	352188			34.81- 94.81	64.12
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
20.338	20.339 (1.116)	75	472177	5.47056	5.470	80.00- 120.00	100.00
20.338	20.339 (1.116)	77	149335			1.96- 61.96	31.63
20.338	20.339 (1.116)	39	226381			18.92- 78.92	47.94
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.556	20.557 (1.128)	43	571242	5.78398	5.784	80.00- 120.00	100.00
20.556	20.557 (1.128)	58	233810			9.48- 69.48	40.93
20.556	20.557 (1.128)	85	102917			0.00- 47.76	18.02
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	881952	5.69518	5.695	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	527938			30.04- 90.04	59.86
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
21.535	21.535 (0.906)	75	421886	5.93364	5.934	80.00- 120.00	100.00
21.535	21.535 (0.906)	77	140236			1.00- 61.00	33.24
21.535	21.535 (0.906)	39	191269			15.93- 75.93	45.34
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
21.999	22.000 (0.926)	97	336228	5.42132	5.421	80.00- 120.00	100.00
21.999	22.000 (0.926)	99	210279			32.15- 92.15	62.54
21.999	22.000 (0.926)	83	289515			55.54- 115.54	86.11
156 Tetrachloroethene					CAS #: 127-18-4		
22.145	22.145 (0.932)	166	481790	5.49024	5.490	80.00- 120.00	100.00
22.145	22.145 (0.932)	129	338766			40.48- 100.48	70.31
22.145	22.145 (0.932)	131	327252			38.27- 98.27	67.92
158 2-Hexanone					CAS #: 591-78-6		
22.377	22.377 (0.942)	58	284841	5.60889	5.609	80.00- 120.00	100.00
22.406	22.377 (0.943)	43	507272			153.17- 213.17	178.09
22.406	22.406 (0.943)	100	62743			0.00- 52.35	22.03
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	579729	6.21852	6.218	80.00- 120.00	100.00
22.784	22.784 (0.959)	127	446276			46.57- 106.57	76.98
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	515121	5.67886	5.679	80.00- 120.00	100.00
23.045	23.045 (0.970)	109	488000			64.70- 124.70	94.74

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	713190	5.50000	5.500	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	227417			2.37- 62.37	31.89
23.823	23.823 (1.003)	77	407638			28.30- 88.30	57.16
167 Ethyl Benzene					CAS #: 100-41-4		
23.905	23.906 (1.006)	106	331632	5.57861	5.579	80.00- 120.00	100.00
23.905	23.906 (1.006)	91	1031080			282.65- 342.65	310.91
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	351284	5.51516	5.515	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	688709			170.44- 230.44	196.05
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	343714	5.70479	5.705	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	715481			177.28- 237.28	208.16
172 Styrene					CAS #: 100-42-5		
24.730	24.731 (1.041)	104	508925	5.92669	5.927	80.00- 120.00	100.00
24.730	24.731 (1.041)	78	256664			22.29- 82.29	50.43
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	763880	8.35128	8.351	80.00- 120.00	100.00
25.068	25.068 (1.055)	171	389938			20.98- 80.98	51.05
175 Cumene					CAS #: 98-82-8		
25.182	25.182 (1.060)	105	1078539	5.53213	5.532	80.00- 120.00	100.00
25.182	25.182 (1.060)	120	296036			0.00- 56.93	27.45
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	681760	5.60076	5.601	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	442955			33.69- 93.69	64.97
182 Propylbenzene					CAS #: 103-65-1		
25.731	25.732 (1.083)	91	1003898	5.21670	5.217	80.00- 120.00	100.00
25.731	25.732 (1.083)	120	238295			0.00- 53.87	23.74
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	785051	4.83023	4.830	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	240456			0.21- 60.21	30.63
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	766299	5.57980	5.580	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	387408			20.26- 80.26	50.56
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	767433	5.56835	5.568	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
26.395	26.395 (1.111)	120	370315			17.68- 77.68	48.25
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	512599	5.01682	5.017	80.00- 120.00	100.00
26.794	26.794 (1.128)	148	329443			34.18- 94.18	64.27
26.794	26.794 (1.128)	111	202263			9.70- 69.70	39.46
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	448040	4.66700	4.667	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	289757			34.47- 94.47	64.67
26.919	26.919 (1.133)	111	172825			8.85- 68.85	38.57
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	622513	5.89087	5.891	80.00- 120.00	100.00
27.075	27.075 (1.139)	126	131215			0.00- 51.19	21.08
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	456168	4.97353	4.974	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	291417			33.68- 93.68	63.88
27.371	27.371 (1.152)	111	192108			11.24- 71.24	42.11
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	345337	4.07987	4.080	80.00- 120.00	100.00
29.382	29.382 (1.237)	182	333835			63.91- 123.91	96.67
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	249809	3.83373	3.834	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	158629			31.90- 91.90	63.50
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	52079	0.45164	0.4516	80.00- 120.00	100.00(a)
29.772	29.772 (1.253)	127	6048			0.00- 42.99	11.61

QC Flag Legend

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

Report Date: 28-Jun-2016 11:29

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062704.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/27Jun2016.b/2016l0624a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 27-JUN-2016
Calibration Time: 10:44
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	153352	92011	214693	146883	-4.22
123 1,4-Difluorobenze	625009	375005	875013	595567	-4.71
163 Chlorobenzene-d5	505908	303545	708271	507576	0.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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: 28-Jun-2016 11:29

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 27Jun2016
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: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AT12.sub
Method File: /chem/msd20.i/27Jun2016.b/2016l0624a.m
Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	5.000	5.297	105.94	60-140
11 Freon 12	5.000	5.568	111.36	70-130
15 Freon 114	5.000	5.629	112.59	70-130
17 Chloromethane	5.000	5.336	106.73	70-130
23 Butane	5.000	5.642	112.83	60-140
25 Vinyl Chloride	5.000	5.502	110.03	70-130
26 1,3-Butadiene	5.000	5.164	103.28	70-130
29 Bromomethane	5.000	5.375	107.49	70-130
30 Chloroethane	5.000	5.648	112.97	70-130
31 Isopentane	5.000	5.459	109.19	60-140
35 Freon 11	5.000	5.403	108.07	70-130
42 Ethanol	5.000	5.648	112.96	70-130
49 Freon 113	5.000	5.134	102.69	70-130
50 1,1-Dichloroethene	5.000	5.406	108.13	70-130
52 Acetone	5.000	5.044	100.89	70-130
56 Carbon Disulfide	5.000	4.774	95.48	70-130
57 2-Propanol	5.000	5.572	111.45	70-130
58 3-Chloropropene	5.000	5.426	108.52	70-130
66 Methylene Chloride	5.000	5.263	105.26	70-130
72 Methyl tert-butyl	5.000	5.517	110.34	70-130
73 trans-1,2-Dichloro	4.250	4.633	109.01	70-130
78 Hexane	5.000	5.606	112.13	70-130
82 1,1-Dichloroethane	5.000	5.322	106.45	70-130
86 Vinyl Acetate	5.000	5.609	112.18	60-140
91 cis-1,2-Dichloroet	5.650	6.091	107.80	70-130
92 2-Butanone	5.000	5.482	109.63	70-130
99 Tetrahydrofuran	5.000	5.282	105.64	70-130
100 Chloroform	5.000	5.330	106.60	70-130
103 1,1,1-Trichloroeth	5.000	5.302	106.05	70-130
106 Carbon Tetrachlori	5.000	6.075	121.49	70-130
102 Cyclohexane	5.000	5.543	110.86	70-130
113 2,2,4-Trimethylpen	5.000	5.648	112.96	70-130
116 Benzene	5.000	5.400	108.00	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	5.000	5.131	102.62	70-130
121 Heptane	5.000	5.686	113.71	70-130
125 Trichloroethene	5.000	5.642	112.83	70-130
127 Methylcyclohexane	5.000	5.896	117.93	60-140
132 1,2-Dichloropropan	5.000	5.440	108.79	70-130
136 1,4-Dioxane	5.000	5.206	104.13	70-130
138 Bromodichlorometha	5.000	5.822	116.44	70-130
144 cis-1,3-Dichloropr	5.000	5.470	109.41	70-130
145 4-Methyl-2-pentano	5.000	5.784	115.68	70-130
147 Toluene	5.000	5.695	113.90	70-130
150 trans-1,3-Dichloro	5.000	5.934	118.67	70-130
155 1,1,2-Trichloroeth	5.000	5.421	108.43	70-130
156 Tetrachloroethene	5.000	5.490	109.80	70-130
158 2-Hexanone	5.000	5.609	112.18	70-130
160 Dibromochlorometha	5.000	6.218	124.37	70-130
161 1,2-Dibromoethane	5.000	5.679	113.58	70-130
165 Chlorobenzene	5.000	5.500	110.00	70-130
167 Ethyl Benzene	5.000	5.579	111.57	70-130
169 m,p-Xylene	5.000	5.515	110.30	70-130
171 o-Xylene	5.000	5.705	114.10	70-130
172 Styrene	5.000	5.927	118.53	70-130
174 Bromoform	6.500	8.351	128.48	70-130
175 Cumene	5.000	5.532	110.64	70-130
181 1,1,2,2-Tetrachlor	5.000	5.601	112.02	70-130
182 Propylbenzene	5.000	5.217	104.33	70-130
188 4-Ethyltoluene	5.000	4.830	96.60	70-130
190 1,3,5-Trimethylben	5.000	5.580	111.60	70-130
196 1,2,4-Trimethylben	5.000	5.568	111.37	70-130
208 1,3-Dichlorobenzen	5.000	5.017	100.34	70-130
209 1,4-Dichlorobenzen	5.000	4.667	93.34	70-130
212 alpha-Chlorotoluen	5.000	5.891	117.82	70-130
214 1,2-Dichlorobenzen	5.000	4.974	99.47	70-130
226 1,2,4-Trichloroben	5.000	4.080	81.60	70-130
227 Hexachlorobutadien	5.000	3.834	76.67	70-130
228 Naphthalene	0.5000	0.4516	90.33	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.557	91.15	70-130
$ 146 Toluene-d8	5.000	5.152	103.04	70-130
$ 177 4-Bromofluorobenze	5.000	5.094	101.88	70-130

Data File: /chem/msd20.i/27Jun2016.b/20062704.d

Date : 27-JUN-2016 11:32

Client ID: LCS

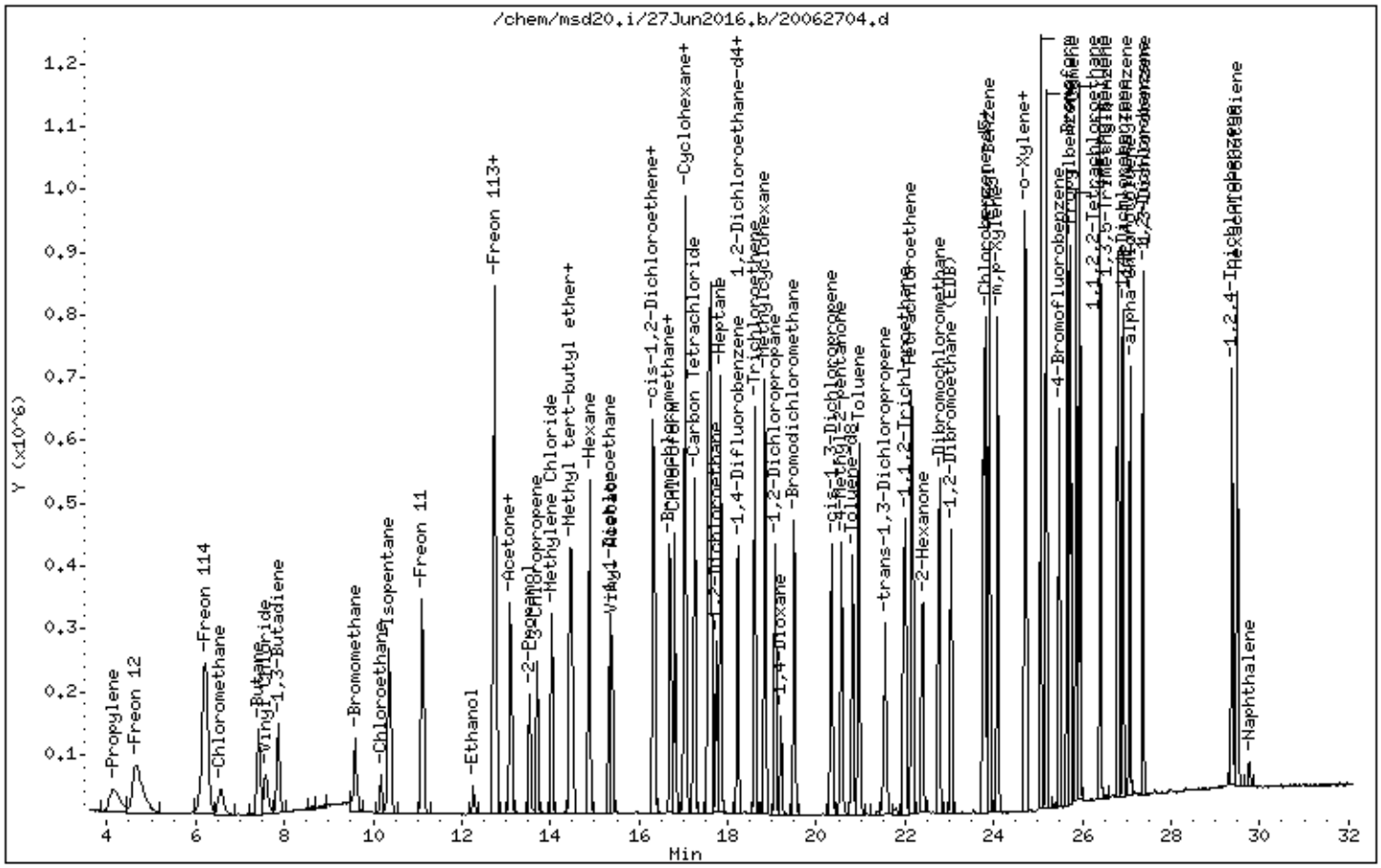
Instrument: msd20.i

Sample Info: 25mL# 2789-168

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062406.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 24-JUN-2016 12:35
Operator : sab Inst ID: msd20.i
Smp Info : 250mL# 2789-199
Misc Info : 0.05ppbv (0.05ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 12:35 Cal File: 20062406.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level5.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
15 Freon 114					CAS #: 76-14-2		
6.263	6.263 (0.374)	135	4295	0.05000	0.05401	80.00- 120.00	100.00(aM)
6.215	6.215 (0.372)	137	1329			1.78- 61.78	30.94
6.239	6.239 (0.373)	85	6311			116.61- 176.61	146.94
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	5897	0.05000	0.05299	80.00- 120.00	100.00(a)
11.114	11.114 (0.664)	103	3911			34.91- 94.91	66.32
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	4357	0.05000	0.05799	80.00- 120.00	100.00(a)
12.763	12.763 (0.763)	153	2796			34.49- 94.49	64.17
12.763	12.763 (0.763)	101	5127			96.39- 156.39	117.67
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	135576	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	107218			47.94- 107.94	79.08
16.726	16.726 (1.000)	49	180323			102.10- 162.10	133.01
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.065 (1.020)	97	5223	0.05000	0.05497	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)
 17.034  17.034 (1.018)    99      3001                    34.55-  94.55    57.46
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 17.250  17.250 (1.031)   119      3169 0.05000  0.04011  80.00- 120.00   100.00(a)
 17.250  17.250 (1.031)   117      2397                    75.13- 135.13    75.64
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 17.641  17.641 (1.055)    65    212575 5.00000    5.406  80.00- 120.00   100.00
 17.641  17.641 (1.055)    67    112348                    32.47-  92.47    52.85
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 17.744  17.744 (0.973)    62      3609 0.05000  0.05752  80.00- 120.00   100.00(a)
 17.744  17.744 (0.973)    64      1501                     2.26-  62.26    41.59
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 18.231  18.231 (1.000)   114    588332 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     93729                     0.00-  45.77    15.93
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 18.610  18.610 (1.021)   130      3458 0.05000  0.05309  80.00- 120.00   100.00(a)
 18.610  18.610 (1.021)    95      2971                    67.33- 127.33    85.92
 18.610  18.610 (1.021)    97      2135                    32.56-  92.56    61.74
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 19.503  19.503 (0.821)    83      3717 0.05000  0.04201  80.00- 120.00   100.00(a)
 19.525  19.525 (0.822)    85      2099                    34.81-  94.81    56.47
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 20.821  20.821 (1.142)    98    556914 5.00000    4.901  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     64570                     0.00-  41.37    11.59
 20.821  20.821 (1.142)   100    376671                    36.07-  96.07    67.64
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 21.999  21.999 (0.926)    97      2825 0.05000  0.04857  80.00- 120.00   100.00(a)
 21.999  21.999 (0.926)    99      1531                    32.15-  92.15    54.19
 21.999  21.999 (0.926)    83      2415                    55.54- 115.54    85.49
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 22.144  22.144 (0.932)   166      4530 0.05000  0.05505  80.00- 120.00   100.00(a)
 22.174  22.174 (0.933)   129      2929                    40.48- 100.48    64.66
 22.174  22.174 (0.933)   131      2966                    38.27-  98.27    65.47
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 22.784  22.784 (0.959)   129      3389 0.05000  0.03876  80.00- 120.00   100.00(a)
 22.754  22.754 (0.958)   127      2662                    46.57- 106.57    78.55
-------------------------------------------------------------------------------
```

```
                                        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
 23.045  23.045 (0.970)   107      3900 0.05000  0.04585  80.00- 120.00   100.00(a)
 23.045  23.045 (0.970)   109      3501                   64.70- 124.70    89.77
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    475994 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    267955                   26.51-  86.51    56.29
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 25.068  25.068 (1.055)   173      3032 0.05000  0.03535  80.00- 120.00   100.00(a)
 25.068  25.068 (1.055)   171      1440                   20.98-  80.98    47.49
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                           CAS #: 460-00-4
 25.466  25.466 (1.072)   174    237007 5.00000    4.638  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    291864                   89.67- 149.67   123.15
 25.466  25.466 (1.072)   176    234719                   67.40- 127.40    99.03
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 25.656  25.656 (1.080)    83      5328 0.05000  0.04667  80.00- 120.00   100.00(a)
 25.656  25.656 (1.080)    85      2886                   33.69-  93.69    54.17
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                 CAS #: 622-96-8
 25.864  25.864 (1.089)   105      9698 0.05000  0.06363  80.00- 120.00   100.00(a)
 25.864  25.864 (1.089)   120      2939                    0.21-  60.21    30.31
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                         CAS #: 108-67-8
 25.940  25.940 (1.092)   105      7540 0.05000  0.05854  80.00- 120.00   100.00(a)
 25.940  25.940 (1.092)   120      4327                   20.26-  80.26    57.39
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                         CAS #: 95-63-6
 26.395  26.395 (1.111)   105      8249 0.05000  0.06382  80.00- 120.00   100.00(a)
 26.395  26.395 (1.111)   120      2944                   17.68-  77.68    35.69
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                            CAS #: 541-73-1
 26.794  26.794 (1.128)   146      5905 0.05000  0.06163  80.00- 120.00   100.00(a)
 26.810  26.810 (1.128)   148      4042                   34.18-  94.18    68.45
 26.794  26.794 (1.128)   111      2138                    9.70-  69.70    36.21
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                            CAS #: 106-46-7
 26.903  26.903 (1.132)   146      5664 0.05000  0.06291  80.00- 120.00   100.00(a)
 26.919  26.919 (1.133)   148      3667                   34.47-  94.47    64.74
 26.919  26.919 (1.133)   111      2553                    8.85-  68.85    45.07
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                            CAS #: 95-50-1
 27.371  27.371 (1.152)   146      5137 0.05000  0.05972  80.00- 120.00   100.00(a)
 27.371  27.371 (1.152)   148      3646                   33.68-  93.68    70.98
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
27.371	27.371 (1.152)	111	2007			11.24- 71.24	39.07
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	5308	0.05000	0.06687	80.00- 120.00	100.00(a)
29.382	29.382 (1.237)	182	4976			63.91- 123.91	93.75

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062406.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	135576	-5.13
123 1,4-Difluorobenze	579240	347544	810936	588332	1.57
163 Chlorobenzene-d5	477544	286526	668562	475994	-0.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062406.d

Date : 24-JUN-2016 12:35

Client ID: Level 5

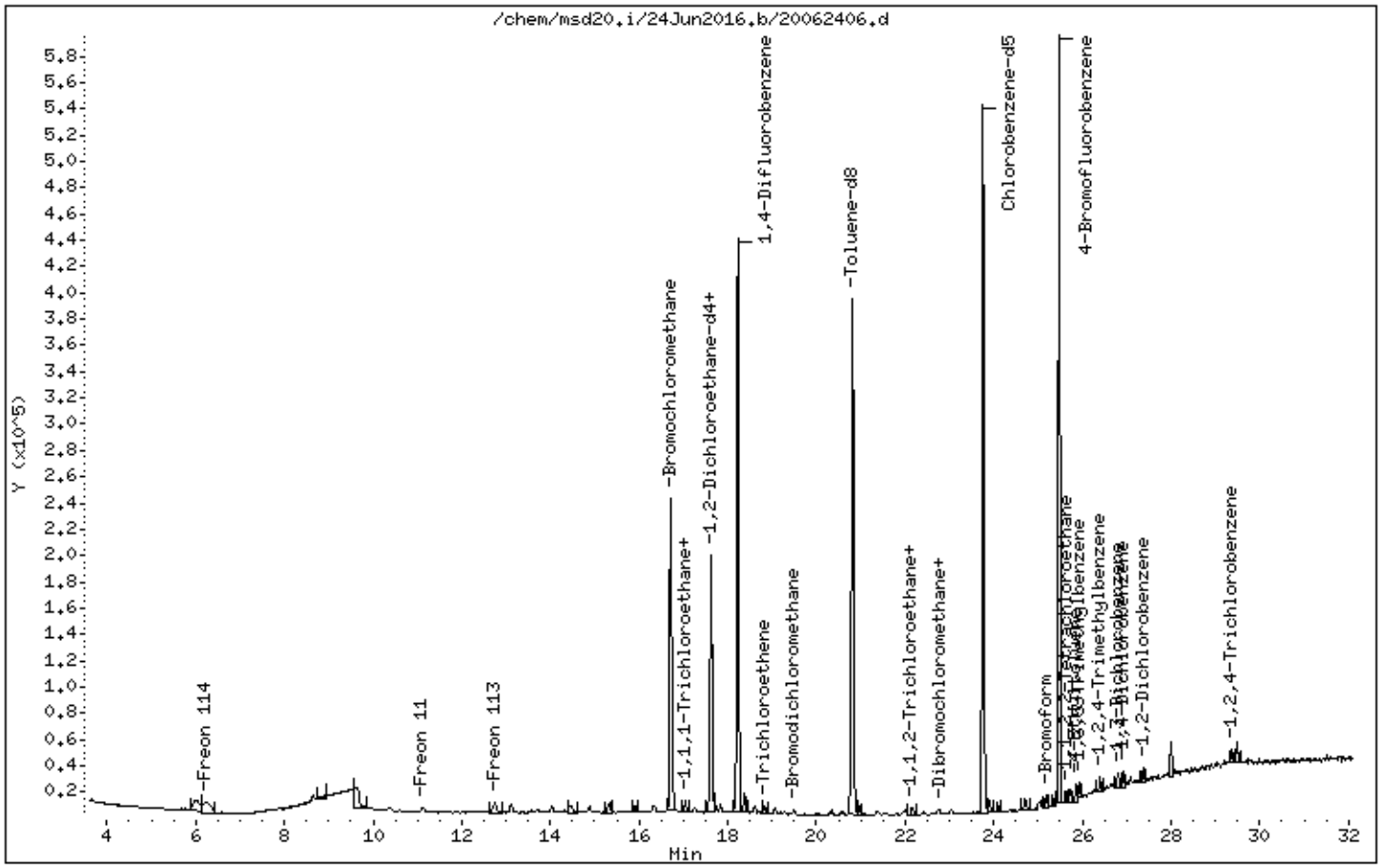
Instrument: msd20.i

Sample Info: 250mL# 2789-199

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062407.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 24-JUN-2016 13:14
Operator : sab Inst ID: msd20.i
Smp Info : 25mL# 2789-200
Misc Info : 0.1ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 13:14 Cal File: 20062407.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		
4.672	4.672 (0.279)	85	12903	0.10000	0.1055	80.00- 120.00	100.00(aM)
4.672	4.672 (0.279)	87	4366			2.54- 62.54	33.84
15 Freon 114					CAS #: 76-14-2		
6.239	6.239 (0.373)	135	8780	0.10000	0.1040	80.00- 120.00	100.00(a)
6.215	6.215 (0.372)	137	2746			1.78- 61.78	31.28
6.215	6.215 (0.372)	85	13201			116.61- 176.61	150.35
17 Chloromethane					CAS #: 74-87-3		
6.577	6.577 (0.393)	50	6246	0.10000	0.1525	80.00- 120.00	100.00(a)
6.552	6.552 (0.392)	52	1214			3.03- 63.03	19.44
25 Vinyl Chloride					CAS #: 75-01-4		
7.555	7.555 (0.452)	62	5028	0.10000	0.1101	80.00- 120.00	100.00(a)
7.538	7.538 (0.451)	64	1604			1.50- 61.50	31.90
26 1,3-Butadiene					CAS #: 106-99-0		
7.868	7.868 (0.470)	54	4077	0.10000	0.1167	80.00- 120.00	100.00(a)
7.868	7.868 (0.470)	39	3157			69.00- 129.00	77.43

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	12995	0.10000	0.1100	80.00- 120.00	100.00(a)
11.114	11.114 (0.664)	103	8187			34.91- 94.91	63.00
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	8404	0.10000	0.1053	80.00- 120.00	100.00(a)
12.763	12.763 (0.763)	153	5666			34.49- 94.49	67.42
12.763	12.763 (0.763)	101	10218			96.39- 156.39	121.58
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	2857	0.10000	0.1035	80.00- 120.00	100.00(a)
12.736	12.736 (0.761)	61	7684			227.70- 287.70	268.95
12.736	12.736 (0.761)	96	4533			125.12- 185.12	158.66
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	1987	0.10000	0.1128	80.00- 120.00	100.00(a)
13.697	13.697 (0.819)	41	4835			236.04- 296.04	243.33
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	5368	0.10000	0.1199	80.00- 120.00	100.00(a)
14.027	14.027 (0.839)	49	6582			97.79- 157.79	122.62
14.027	14.027 (0.839)	51	2599			9.84- 69.84	48.42
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.466	14.466 (0.865)	73	12519	0.10000	0.1012	80.00- 120.00	100.00(a)
14.439	14.439 (0.863)	57	3615			0.00- 52.45	28.88
14.466	14.466 (0.865)	41	4600			0.00- 53.55	36.74
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.494	14.494 (0.866)	98	3149	0.10000	0.1058	80.00- 120.00	100.00(a)
14.494	14.494 (0.866)	61	7461			194.43- 254.43	236.93
14.494	14.494 (0.866)	96	5618			127.78- 187.78	178.41
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	7422	0.10000	0.1065	80.00- 120.00	100.00(a)
14.878	14.878 (0.889)	43	5142			33.20- 93.20	69.28
14.878	14.878 (0.889)	86	1232			0.00- 48.21	16.60
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	9182	0.10000	0.1073	80.00- 120.00	100.00(a)
15.345	15.345 (0.917)	65	3138			1.84- 61.84	34.18
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.324	16.324 (0.976)	98	2948	0.10000	0.09418	80.00- 120.00	100.00(a)
16.324	16.324 (0.976)	61	7092			172.98- 232.98	240.57
16.324	16.324 (0.976)	96	5678			124.81- 184.81	192.61

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

*  98 Bromochloromethane                           CAS #: 74-97-5
 16.726  16.726 (1.000)   130    143979 5.00000           80.00- 120.00   100.00
 16.726  16.726 (1.000)   128    113556                   47.94- 107.94    78.87
 16.726  16.726 (1.000)    49    190761                  102.10- 162.10   132.49
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83     10127 0.10000   0.1044  80.00- 120.00   100.00(a)
 16.819  16.819 (1.006)    85      6534                   35.08-  95.08    64.52
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84      7286 0.10000   0.1092  80.00- 120.00   100.00
 17.035  17.035 (1.018)    56      7515                   82.51- 142.51   103.14
 17.035  17.035 (1.018)    41      4414                   30.91-  90.91    60.58
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 17.065  17.065 (1.020)    97     10378 0.10000   0.1028  80.00- 120.00   100.00(a)
 17.065  17.065 (1.020)    99      6454                   34.55-  94.55    62.19
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 17.250  17.250 (1.031)   119      7368 0.10000  0.08782  80.00- 120.00   100.00(a)
 17.250  17.250 (1.031)   117      7397                   75.13- 135.13   100.39
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 17.579  17.579 (1.051)    56      6795 0.10000   0.1003  80.00- 120.00   100.00(a)
 17.579  17.579 (1.051)    57     18919                  266.38- 326.38   278.43
 17.579  17.579 (1.051)    41      5793                   47.04- 107.04    85.25
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 17.621  17.621 (0.966)    78     16547 0.10000   0.1173  80.00- 120.00   100.00(a)
 17.621  17.621 (0.966)    77      4824                    0.00-  54.04    29.15
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 17.621  17.621 (1.053)    65    202791 5.00000    4.856  80.00- 120.00   100.00
 17.641  17.641 (1.055)    67    104709                   32.47-  92.47    51.63
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 17.744  17.744 (0.973)    62      6167 0.10000  0.09945  80.00- 120.00   100.00(a)
 17.744  17.744 (0.973)    64      2274                    2.26-  62.26    36.87
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 17.847  17.847 (0.979)    57      3435 0.10000  0.08933  80.00- 120.00   100.00(a)
 17.847  17.847 (0.979)   100      1213                    9.17-  69.17    35.31
 17.847  17.847 (0.979)    43      7258                  158.08- 218.08   211.30
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 18.231  18.231 (1.000)   114    581426 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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

* 123 1,4-Difluorobenzene (continued)
 18.231  18.231 (1.000)    88     93523                     0.00-  45.77    16.09
-------------------------------------------------------------------------------
  125 Trichloroethene                                CAS #: 79-01-6
 18.610  18.610 (1.021)   130      6266 0.10000  0.09735  80.00- 120.00   100.00(a)
 18.610  18.610 (1.021)    95      6727                   67.33- 127.33   107.36
 18.610  18.610 (1.021)    97      4449                   32.56-  92.56    71.00
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                            CAS #: 78-87-5
 19.057  19.057 (1.045)    63      5752 0.10000   0.1065  80.00- 120.00   100.00(a)
 19.079  19.079 (1.046)    62      4148                   41.89- 101.89    72.11
 19.079  19.079 (1.046)    41      3403                   27.78-  87.78    59.16
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                    CAS #: 123-91-1
 19.213  19.213 (1.054)    88      3539 0.10000  0.09963  80.00- 120.00   100.00(a)
 19.213  19.213 (1.054)    58      2315                   39.29-  99.29    65.41
 19.213  19.213 (1.054)    57       993                    0.00-  52.49    28.06
-------------------------------------------------------------------------------
  138 Bromodichloromethane                           CAS #: 75-27-4
 19.503  19.503 (0.821)    83      8690 0.10000  0.09904  80.00- 120.00   100.00(a)
 19.503  19.503 (0.821)    85      5594                   34.81-  94.81    64.37
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                        CAS #: 10061-01-5
 20.338  20.338 (1.116)    75      7313 0.10000  0.08679  80.00- 120.00   100.00(a)
 20.338  20.338 (1.116)    77      2484                    1.96-  61.96    33.97
 20.338  20.338 (1.116)    39      3799                   18.92-  78.92    51.95
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                           CAS #: 108-10-1
 20.572  20.572 (1.128)    43      7807 0.10000  0.08097  80.00- 120.00   100.00(a)
 20.557  20.557 (1.128)    58      2633                    9.48-  69.48    33.73
 20.557  20.557 (1.128)    85      1234                    0.00-  47.76    15.81
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                     CAS #: 2037-26-5
 20.806  20.806 (1.141)    98    551074 5.00000    4.907  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     62958                    0.00-  41.37    11.42
 20.821  20.821 (1.142)   100    375722                   36.07-  96.07    68.18
-------------------------------------------------------------------------------
  147 Toluene                                        CAS #: 108-88-3
 20.962  20.962 (1.150)    91     15642 0.10000   0.1035  80.00- 120.00   100.00(a)
 20.946  20.946 (1.149)    92      9241                   30.04-  90.04    59.08
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                      CAS #: 10061-02-6
 21.535  21.535 (0.906)    75      5381 0.10000  0.08138  80.00- 120.00   100.00(a)
 21.535  21.535 (0.906)    77      2505                    1.00-  61.00    46.55
 21.564  21.564 (0.908)    39      4240                   15.93-  75.93    78.80
-------------------------------------------------------------------------------
```

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

  155 1,1,2-Trichloroethane                          CAS #: 79-00-5
 21.999  21.999 (0.926)    97      6363 0.10000   0.1103  80.00- 120.00   100.00(a)
 21.999  21.999 (0.926)    99      3707                   32.15-  92.15    58.26
 21.999  21.999 (0.926)    83      5284                   55.54- 115.54    83.04
-------------------------------------------------------------------------------
  156 Tetrachloroethene                              CAS #: 127-18-4
 22.174  22.174 (0.933)   166      8531 0.10000   0.1045  80.00- 120.00   100.00(a)
 22.145  22.145 (0.932)   129      5900                   40.48- 100.48    69.16
 22.145  22.145 (0.932)   131      6127                   38.27-  98.27    71.82
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 22.784  22.784 (0.959)   129      6857 0.10000  0.07909  80.00- 120.00   100.00(a)
 22.784  22.784 (0.959)   127      5881                   46.57- 106.57    85.77
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 23.045  23.045 (0.970)   107      8331 0.10000  0.09876  80.00- 120.00   100.00(a)
 23.045  23.045 (0.970)   109      7929                   64.70- 124.70    95.17
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    472045 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    267211                   26.51-  86.51    56.61
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 23.823  23.823 (1.003)   112     12928 0.10000   0.1072  80.00- 120.00   100.00(a)
 23.823  23.823 (1.003)   114      3867                    2.37-  62.37    29.91
 23.823  23.823 (1.003)    77     13231                   28.30-  88.30   102.34
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 23.906  23.906 (1.006)   106      5557 0.10000   0.1005  80.00- 120.00   100.00(a)
 23.906  23.906 (1.006)    91     16561                  282.65- 342.65   298.02
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 24.091  24.091 (1.014)   106      5990 0.10000   0.1011  80.00- 120.00   100.00(a)
 24.091  24.091 (1.014)    91     10916                  170.44- 230.44   182.24
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 24.710  24.710 (1.040)   106      5539 0.10000  0.09885  80.00- 120.00   100.00(a)
 24.710  24.710 (1.040)    91     11503                  177.28- 237.28   207.67
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 24.751  24.751 (1.042)   104      6976 0.10000  0.08735  80.00- 120.00   100.00(a)
 24.751  24.751 (1.042)    78      4364                   22.29-  82.29    62.56
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 25.068  25.068 (1.055)   173      6132 0.10000  0.07208  80.00- 120.00   100.00(a)
 25.068  25.068 (1.055)   171      3251                   20.98-  80.98    53.02
-------------------------------------------------------------------------------
```

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

  175 Cumene                                          CAS #: 98-82-8
 25.182  25.182 (1.060)   105     17898 0.10000  0.09871  80.00- 120.00   100.00(a)
 25.182  25.182 (1.060)   120      4901                    0.00-  56.93    27.38
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                            CAS #: 460-00-4
 25.466  25.466 (1.072)   174    244423 5.00000    4.823  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    297348                   89.67- 149.67   121.65
 25.466  25.466 (1.072)   176    238640                   67.40- 127.40    97.63
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                       CAS #: 79-34-5
 25.656  25.656 (1.080)    83     10762 0.10000  0.09507  80.00- 120.00   100.00(a)
 25.656  25.656 (1.080)    85      6799                   33.69-  93.69    63.18
-------------------------------------------------------------------------------
  182 Propylbenzene                                   CAS #: 103-65-1
 25.732  25.732 (1.083)    91     21994 0.10000   0.1229  80.00- 120.00   100.00(a)
 25.732  25.732 (1.083)   120      4765                    0.00-  53.87    21.66
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                  CAS #: 622-96-8
 25.864  25.864 (1.089)   105     17754 0.10000   0.1174  80.00- 120.00   100.00(a)
 25.864  25.864 (1.089)   120      5612                    0.21-  60.21    31.61
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                          CAS #: 108-67-8
 25.940  25.940 (1.092)   105     15058 0.10000   0.1179  80.00- 120.00   100.00(a)
 25.940  25.940 (1.092)   120      7554                   20.26-  80.26    50.17
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                          CAS #: 95-63-6
 26.395  26.395 (1.111)   105     15109 0.10000   0.1179  80.00- 120.00   100.00(a)
 26.395  26.395 (1.111)   120      6775                   17.68-  77.68    44.84
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                             CAS #: 541-73-1
 26.794  26.794 (1.128)   146     11131 0.10000   0.1171  80.00- 120.00   100.00(a)
 26.810  26.810 (1.128)   148      7255                   34.18-  94.18    65.18
 26.794  26.794 (1.128)   111      4470                    9.70-  69.70    40.16
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                             CAS #: 106-46-7
 26.919  26.919 (1.133)   146     11870 0.10000   0.1330  80.00- 120.00   100.00(a)
 26.903  26.903 (1.132)   148      7412                   34.47-  94.47    62.44
 26.903  26.903 (1.132)   111      4023                    8.85-  68.85    33.89
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                             CAS #: 100-44-7
 27.075  27.075 (1.139)    91      6912 0.10000  0.07033  80.00- 120.00   100.00(a)
 27.075  27.075 (1.139)   126      1501                    0.00-  51.19    21.72
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                             CAS #: 95-50-1
 27.371  27.371 (1.152)   146      9594 0.10000   0.1125  80.00- 120.00   100.00(a)
 27.371  27.371 (1.152)   148      6616                   33.68-  93.68    68.96
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)								
27.371	27.371	(1.152)	111	4477			11.24- 71.24	46.66
226 1,2,4-Trichlorobenzene						CAS #: 120-82-1		
29.382	29.382	(1.237)	180	5644	0.10000	0.07170	80.00- 120.00	100.00(a)
29.382	29.382	(1.237)	182	5162			63.91- 123.91	91.46
227 Hexachlorobutadiene						CAS #: 87-68-3		
29.491	29.491	(1.241)	225	5493	0.10000	0.09064	80.00- 120.00	100.00(a)
29.491	29.491	(1.241)	223	3734			31.90- 91.90	67.98

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062407.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 0.1ppbv (1.0ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	143979	0.75
123 1,4-Difluorobenze	579240	347544	810936	581426	0.38
163 Chlorobenzene-d5	477544	286526	668562	472045	-1.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062407.d

Date : 24-JUN-2016 13:14

Client ID: Level 6

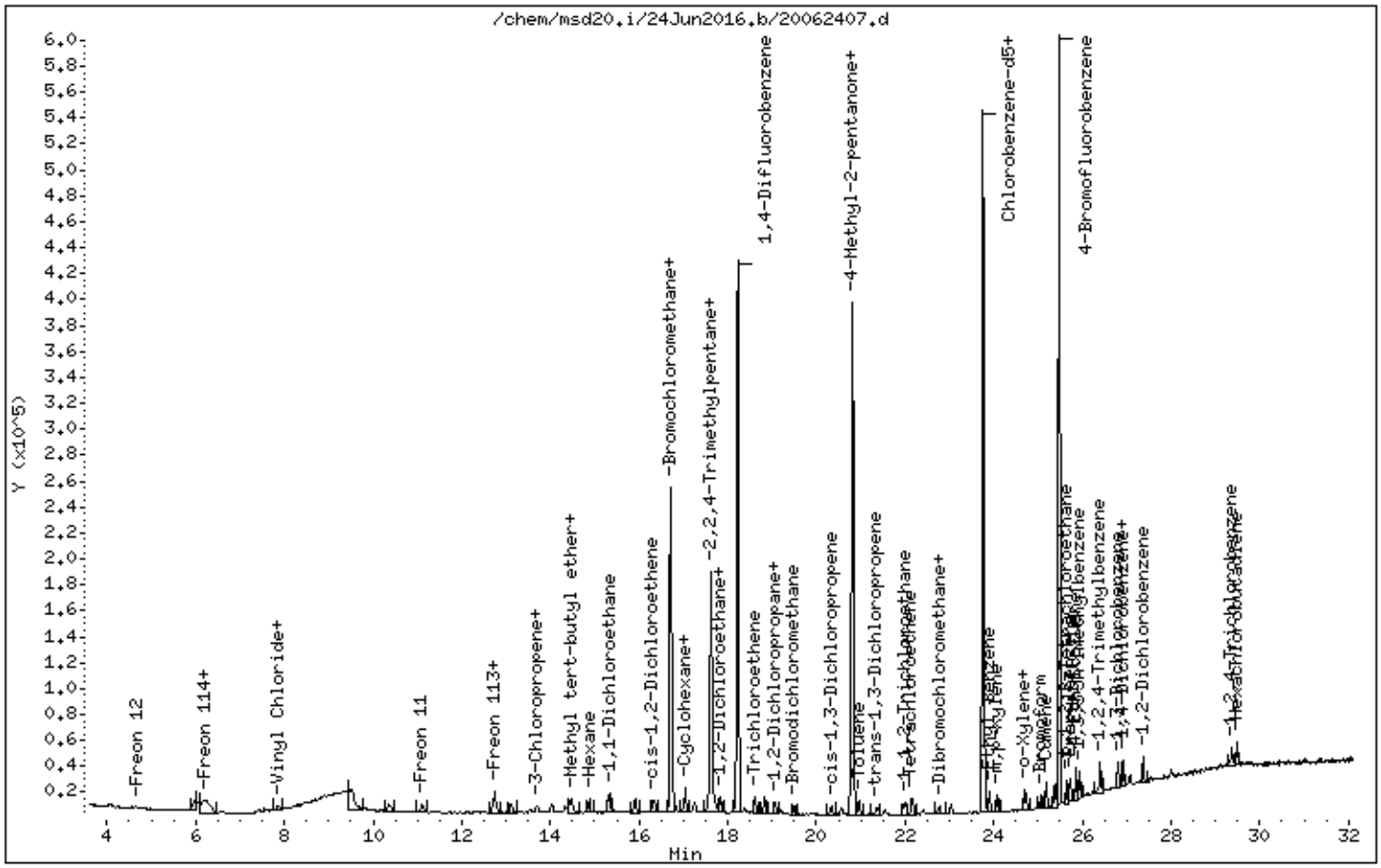
Instrument: msd20.i

Sample Info: 25mL# 2789-200

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/18Jul2016.b/20071805.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 18-JUL-2016 10:30
Operator : jg Inst ID: msd20.i
Smp Info : 25mL# 2789-129
Misc Info : 5ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 11:01 jscarbro Quant Type: ISTD
Cal Date : 18-JUL-2016 10:30 Cal File: 20071805.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.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
7 Freon 134a					CAS #: 811-97-2		
3.997	3.997 (0.239)	83	18432	0.50000	0.5320	0.00- 0.00	100.00(TaM)
3.973	3.973 (0.238)	69	16487			0.00- 0.00	89.45
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
4.479	4.479 (0.268)	65	10459	0.50000	0.5632	0.00- 0.00	100.00(aM)
4.479	4.479 (0.268)	51	17460			0.00- 0.00	166.94
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.179	5.179 (0.310)	51	28229	0.50000	0.5278	0.00- 0.00	100.00(Ta)
5.179	5.179 (0.310)	67	5533			0.00- 0.00	19.60
0.000	1.000 (0.000)	85	0			0.00- 0.00	0.00
16 Freon 142b					CAS #: 75-68-3		
6.528	6.528 (0.390)	65	41921	0.50000	0.5392	0.00- 0.00	100.00(a)
6.504	6.504 (0.389)	45	9664			0.00- 0.00	23.05
6.552	6.552 (0.392)	81	2191			0.00- 0.00	5.23
37 Dichlorofluoromethane					CAS #: 75-43-4		
11.283	11.283 (0.675)	67	45597	0.50000	0.5125	0.00- 0.00	100.00(a)

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

   37 Dichlorofluoromethane (continued)
 11.283  11.283 (0.675)    69     15012                     0.00-   0.00    32.92
 11.283  11.283 (0.675)    47      4747                     0.00-   0.00    10.41
-------------------------------------------------------------------------------
   48 Freon 123                                    CAS #: 306-83-2
 12.736  12.736 (0.761)    83     47132 0.50000   0.5033   0.00-   0.00   100.00(a)
 12.736  12.736 (0.761)   133      9927                     0.00-   0.00    21.06
 12.736  12.736 (0.761)    85     31768                     0.00-   0.00    67.40
-------------------------------------------------------------------------------
   59 Cyclopentene                                 CAS #: 142-29-0
 13.725  13.725 (0.821)    67     19591 0.50000   0.4695   0.00-   0.00   100.00(a)
 13.725  13.725 (0.821)    68      7751                     0.00-   0.00    39.56
 13.725  13.725 (0.821)    53      4125                     0.00-   0.00    21.06
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 15.564  15.564 (0.931)    59      2016 0.50000   0.4454   0.00-   0.00   100.00(a)
 15.564  15.564 (0.931)    42      1862                     0.00-   0.00    92.36
 15.564  15.564 (0.931)    41      2393                     0.00-   0.00   118.70
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 16.282  16.282 (0.973)    77     28981 0.50000   0.4868   0.00-   0.00   100.00(a)
 16.282  16.282 (0.973)    79     10054                     0.00-   0.00    34.69
 16.261  16.261 (0.972)    97      5254                     0.00-   0.00    18.13
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 16.726  16.726 (1.000)   130    125241 5.00000            80.00- 120.00   100.00
 16.726  16.726 (1.000)   128     98179                    47.94- 107.94    78.39
 16.726  16.726 (1.000)    49    171805                   102.10- 162.10   137.18
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                         CAS #: 563-58-6
 17.312  17.312 (1.035)   110      6859 0.50000   0.4834   0.00-   0.00   100.00(a)
 17.312  17.312 (1.035)    75     19712                     0.00-   0.00   287.39
-------------------------------------------------------------------------------
  115 Isobutanol                                  CAS #: 78-83-1
 17.456  17.456 (1.044)    43      9887 0.50000   0.4619   0.00-   0.00   100.00(a)
 17.456  17.456 (1.044)    41     10910                     0.00-   0.00   110.35
 17.456  17.456 (1.044)    55      1500                     0.00-   0.00    15.17
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 18.231  18.231 (1.000)   114    424456 5.00000            80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     69832                     0.00-  45.77    16.45
-------------------------------------------------------------------------------
  124 n-Butanol                                   CAS #: 71-36-3
 18.432  18.432 (1.011)    56     14531 0.50000   0.4440   0.00-   0.00   100.00(a)
 18.432  18.432 (1.011)    41     12465                     0.00-   0.00    85.78
 18.432  18.432 (1.011)    43      7706                     0.00-   0.00    53.03
-------------------------------------------------------------------------------
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```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  157 1,3-Dichloropropane                          CAS #: 142-28-9
 22.377  22.377 (1.227)    76     31944 0.50000   0.5150   0.00-   0.00   100.00(a)
 22.377  22.377 (1.227)    41     21305                    0.00-   0.00    66.69
 22.377  22.377 (1.227)    78      8760                    0.00-   0.00    27.42
-------------------------------------------------------------------------------
  159 Butyl Acetate                                CAS #: 123-86-4
 22.522  22.522 (0.948)    56      2720 0.50000   0.5086   0.00-   0.00   100.00(a)
 22.551  22.551 (0.949)    73       993                    0.00-   0.00    36.51
 22.551  22.551 (0.949)    43      3795                    0.00-   0.00   139.52
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    370356 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    215009                   26.51-  86.51    58.05
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 23.947  23.947 (1.008)   131     25948 0.50000   0.5004   0.00-   0.00   100.00(a)
 23.947  23.947 (1.008)   117     17516                    0.00-   0.00    67.50
 23.947  23.947 (1.008)    95     11541                    0.00-   0.00    44.48
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 24.854  24.854 (1.046)    58     15975 0.50000   0.4607   0.00-   0.00   100.00(a)
 24.854  24.854 (1.046)    43     26618                    0.00-   0.00   166.62
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 25.428  25.428 (1.070)    55     13990 0.50000   0.4368   0.00-   0.00   100.00(a)
 25.428  25.428 (1.070)    98      5676                    0.00-   0.00    40.57
 25.428  25.428 (1.070)    42     10287                    0.00-   0.00    73.53
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 25.694  25.694 (1.081)   156     23660 0.50000   0.4986   0.00-   0.00   100.00(a)
 25.694  25.694 (1.081)   158     22196                    0.00-   0.00    93.81
 25.694  25.694 (1.081)    77     39314                    0.00-   0.00   166.16
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 25.751  25.751 (1.084)   110     15177 0.50000   0.5127   0.00-   0.00   100.00(a)
 25.751  25.751 (1.084)    75     39234                    0.00-   0.00   258.51
 25.751  25.751 (1.084)    61     10300                    0.00-   0.00    67.87
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 25.902  25.902 (1.090)   126     14170 0.50000   0.4947   0.00-   0.00   100.00(a)
 25.902  25.902 (1.090)    91     40327                    0.00-   0.00   284.59
 25.902  25.902 (1.090)    65      4905                    0.00-   0.00    34.62
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 26.035  26.035 (1.096)   126     13116 0.50000   0.5106   0.00-   0.00   100.00(a)
 26.035  26.035 (1.096)    91     38640                    0.00-   0.00   294.60
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
191 4-Chlorotoluene (continued)							
26.035	26.035 (1.096)	63	5561			0.00- 0.00	42.40
195 tert-Butylbenzene					CAS #: 98-06-6		
26.338	26.338 (1.108)	119	41907	0.50000	0.5545	0.00- 0.00	100.00(a)
26.338	26.338 (1.108)	134	10988			0.00- 0.00	26.22
26.338	26.338 (1.108)	91	29709			0.00- 0.00	70.89
197 Pentachloroethane					CAS #: 76-01-7		
26.433	26.433 (1.112)	167	11500	0.50000	0.4750	0.00- 0.00	100.00(a)
26.433	26.433 (1.112)	117	12267			0.00- 0.00	106.67
26.433	26.433 (1.112)	169	5443			0.00- 0.00	47.33
203 sec-Butylbenzene					CAS #: 135-98-8		
26.585	26.585 (1.119)	105	53642	0.50000	0.5330	0.00- 0.00	100.00(a)
26.585	26.585 (1.119)	134	11046			0.00- 0.00	20.59
26.585	26.585 (1.119)	91	9189			0.00- 0.00	17.13
207 p-Cymene					CAS #: 99-87-6		
26.748	26.748 (1.126)	119	54685	0.50000	0.5687	0.00- 0.00	100.00(a)
26.748	26.748 (1.126)	134	16103			0.00- 0.00	29.45
26.748	26.748 (1.126)	91	13955			0.00- 0.00	25.52
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
26.919	26.919 (1.133)	120	21364	0.50000	0.5248	0.00- 0.00	100.00(a)
26.919	26.919 (1.133)	105	52595			0.00- 0.00	246.19
26.919	26.919 (1.133)	77	7015			0.00- 0.00	32.84
213 Butylbenzene					CAS #: 104-51-8		
27.231	27.231 (1.146)	134	15025	0.50000	0.5255	0.00- 0.00	100.00(a)
27.231	27.231 (1.146)	91	58890			0.00- 0.00	391.95
27.231	27.231 (1.146)	92	30841			0.00- 0.00	205.26
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
28.353	28.353 (1.193)	157	14193	0.50000	0.4533	0.00- 0.00	100.00(a)
28.338	28.338 (1.193)	75	15531			0.00- 0.00	109.43
28.353	28.353 (1.193)	155	11478			0.00- 0.00	80.87

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071805.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: jg
Method File: /chem/msd20.i/18Jul2016.b/2016l0624b.m
Misc Info: 5ppbv (5.0ppbv)

Calibration Date: 18-JUL-2016
Calibration Time: 07:40
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	123047	73828	172266	125241	1.78
123 1,4-Difluorobenze	457254	274352	640156	424456	-7.17
163 Chlorobenzene-d5	403496	242098	564894	370356	-8.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/18Jul2016.b/20071805.d

Date : 18-JUL-2016 10:30

Client ID: Level 7

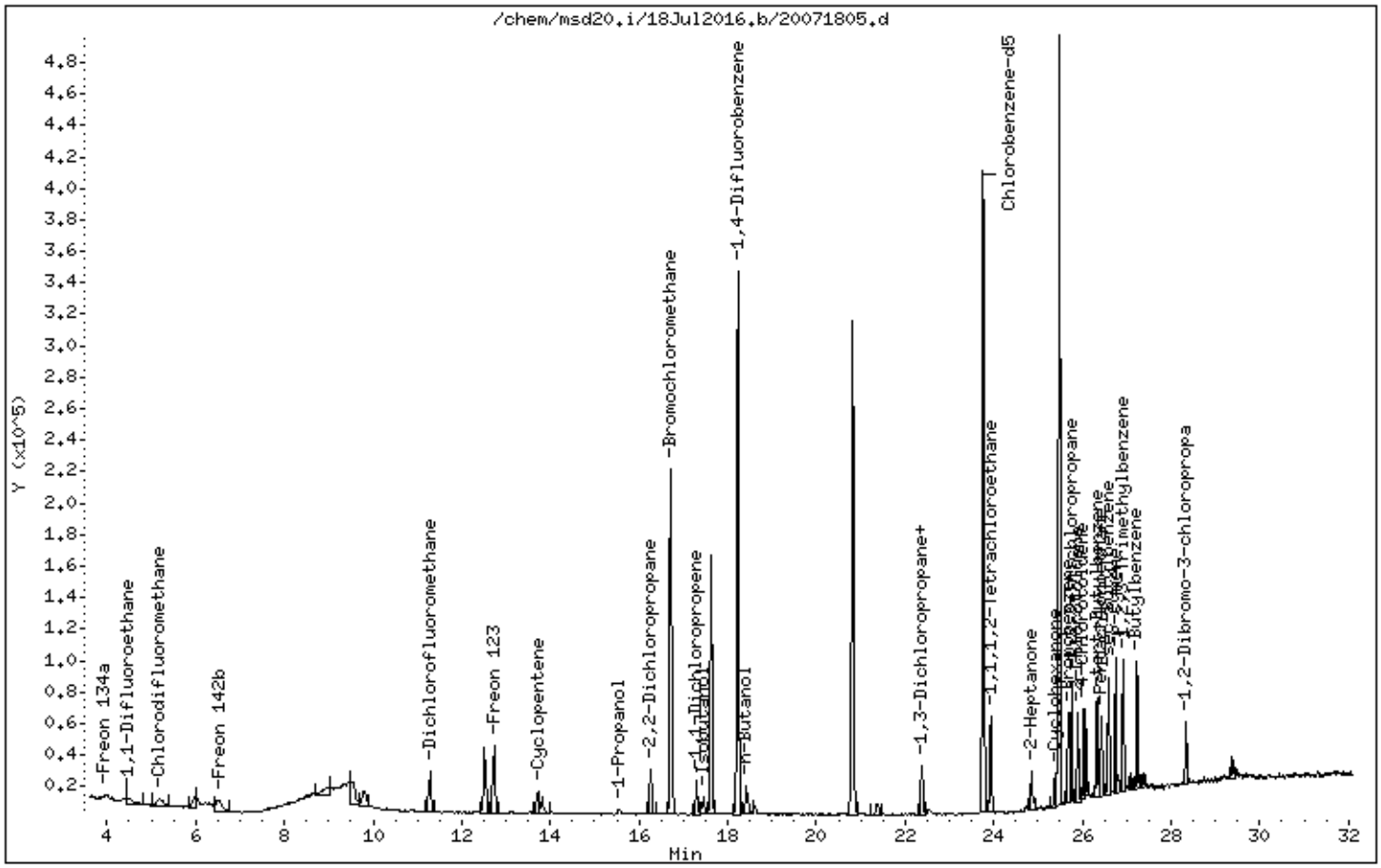
Instrument: msd20.i

Sample Info: 25mL# 2789-129

Operator: jg

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062408.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 24-JUN-2016 13:54
Operator : sab Inst ID: msd20.i
Smp Info : 125mL# 2789-200
Misc Info : 0.5ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 13:54 Cal File: 20062408.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		
4.696	4.696 (0.281)	85	60953	0.50000	0.5090	80.00- 120.00	100.00
4.721	4.721 (0.282)	87	11149			2.54- 62.54	18.29
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	43132	0.50000	0.5216	80.00- 120.00	100.00
6.239	6.239 (0.373)	137	13481			1.78- 61.78	31.26
6.215	6.215 (0.372)	85	62130			116.61- 176.61	144.05
17 Chloromethane					CAS #: 74-87-3		
6.577	6.577 (0.393)	50	22765	0.50000	0.5678	80.00- 120.00	100.00
6.577	6.577 (0.393)	52	8009			3.03- 63.03	35.18
23 Butane					CAS #: 106-97-8		
7.434	7.434 (0.444)	58	4952	0.50000	0.5039	80.00- 120.00	100.00
7.434	7.434 (0.444)	43	35010			656.82- 716.82	706.99
25 Vinyl Chloride					CAS #: 75-01-4		
7.590	7.590 (0.454)	62	22512	0.50000	0.5034	80.00- 120.00	100.00
7.573	7.573 (0.453)	64	7458			1.50- 61.50	33.13

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

   26 1,3-Butadiene                                CAS #: 106-99-0
  7.868   7.868 (0.470)    54     17257 0.50000   0.5043  80.00- 120.00   100.00
  7.868   7.868 (0.470)    39     18210                   69.00- 129.00   105.52
-------------------------------------------------------------------------------
   29 Bromomethane                                 CAS #: 74-83-9
  9.596   9.596 (0.574)    94     13301 0.50000   0.4696  80.00- 120.00   100.00
  9.596   9.596 (0.574)    96     12844                   63.60- 123.60    96.56
-------------------------------------------------------------------------------
   30 Chloroethane                                 CAS #: 75-00-3
 10.198  10.198 (0.610)    64      9524 0.50000   0.4706  80.00- 120.00   100.00
 10.198  10.198 (0.610)    49      2622                    0.00-  55.63    27.53
 10.198  10.198 (0.610)    66      3106                    2.70-  62.70    32.61
-------------------------------------------------------------------------------
   31 Isopentane                                   CAS #: 78-78-4
 10.367  10.367 (0.620)    57     18009 0.50000   0.5156  80.00- 120.00   100.00
 10.367  10.367 (0.620)    43     25733                  115.62- 175.62   142.89
 10.367  10.367 (0.620)    42     24311                  100.35- 160.35   134.99
-------------------------------------------------------------------------------
   35 Freon 11                                     CAS #: 75-69-4
 11.114  11.114 (0.664)   101     58904 0.50000   0.5090  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103     38704                   34.91-  94.91    65.71
-------------------------------------------------------------------------------
   42 Ethanol                                      CAS #: 64-17-5
 12.296  12.296 (0.735)    45      7226 0.50000   0.4824  80.00- 120.00   100.00
 12.296  12.296 (0.735)    46      2857                   11.72-  71.72    39.54
 12.296  12.296 (0.735)    43      2234                    0.00-  52.99    30.92
-------------------------------------------------------------------------------
   49 Freon 113                                    CAS #: 76-13-1
 12.763  12.763 (0.763)   151     39675 0.50000   0.5078  80.00- 120.00   100.00
 12.763  12.763 (0.763)   153     25493                   34.49-  94.49    64.25
 12.763  12.763 (0.763)   101     49658                   96.39- 156.39   125.16
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                           CAS #: 75-35-4
 12.736  12.736 (0.761)    98     13478 0.50000   0.4987  80.00- 120.00   100.00
 12.736  12.736 (0.761)    61     34062                  227.70- 287.70   252.72
 12.736  12.736 (0.761)    96     21501                  125.12- 185.12   159.53
-------------------------------------------------------------------------------
   52 Acetone                                      CAS #: 67-64-1
 13.093  13.093 (0.783)    58     11310 0.50000   0.5262  80.00- 120.00   100.00
 13.093  13.093 (0.783)    43     33041                  278.33- 338.33   292.14
-------------------------------------------------------------------------------
   56 Carbon Disulfide                             CAS #: 75-15-0
 13.120  13.120 (0.784)    76     56703 0.50000   0.4668  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                   CAS #: 67-63-0
 13.532  13.532 (0.809)    45     27741 0.50000   0.4174  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)							
13.560	13.560 (0.811)	43	7256			0.00- 52.04	26.16
13.532	13.532 (0.809)	59	1259			0.00- 34.17	4.54
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	7042	0.50000	0.4083	80.00- 120.00	100.00
13.697	13.697 (0.819)	41	20085			236.04- 296.04	285.22
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	20898	0.50000	0.4769	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	27969			97.79- 157.79	133.84
14.027	14.027 (0.839)	51	9283			9.84- 69.84	44.42
71 tert-Butyl alcohol					CAS #: 75-65-0		
14.329	14.329 (0.857)	59	33719	0.50000	0.4281	80.00- 120.00	100.00
14.329	14.329 (0.857)	41	10392			0.00- 56.82	30.82
14.329	14.329 (0.857)	57	4022			0.00- 41.10	11.93
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.439	14.439 (0.863)	73	56762	0.50000	0.4688	80.00- 120.00	100.00
14.439	14.439 (0.863)	57	13447			0.00- 52.45	23.69
14.439	14.439 (0.863)	41	16627			0.00- 53.55	29.29
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.494	14.494 (0.866)	98	15272	0.50000	0.5242	80.00- 120.00	100.00
14.494	14.494 (0.866)	61	32179			194.43- 254.43	210.71
14.494	14.494 (0.866)	96	23076			127.78- 187.78	151.10
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	32664	0.50000	0.4786	80.00- 120.00	100.00
14.878	14.878 (0.889)	43	20176			33.20- 93.20	61.77
14.878	14.878 (0.889)	86	5827			0.00- 48.21	17.84
83 Isopropyl ether					CAS #: 108-20-3		
15.317	15.317 (0.916)	45	68398	0.50000	0.4766	80.00- 120.00	100.00
15.317	15.317 (0.916)	87	19349			0.00- 57.99	28.29
15.317	15.317 (0.916)	59	8519			0.00- 41.78	12.46
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	42432	0.50000	0.5064	80.00- 120.00	100.00
15.345	15.345 (0.917)	65	13254			1.84- 61.84	31.24
86 Vinyl Acetate					CAS #: 108-05-4		
15.400	15.400 (0.921)	86	3945	0.50000	0.3778	80.00- 120.00	100.00
15.400	15.400 (0.921)	42	3590			55.70- 115.70	91.00
15.400	15.400 (0.921)	43	38964			963.84-1023.84	987.68

```
                                          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
 15.930  15.930 (0.952)    59     65213 0.50000   0.4585  80.00- 120.00   100.00
 15.930  15.930 (0.952)    87     26958                   12.28-  72.28    41.34
 15.930  15.930 (0.952)    41     15283                    0.00-  49.55    23.44
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 16.323  16.323 (0.976)    98     15643 0.50000   0.5103  80.00- 120.00   100.00
 16.323  16.323 (0.976)    61     31026                  172.98- 232.98   198.34
 16.323  16.323 (0.976)    96     24033                  124.81- 184.81   153.63
-------------------------------------------------------------------------------
   92 2-Butanone                                    CAS #: 78-93-3
 16.344  16.344 (0.977)    72      9493 0.50000   0.4354  80.00- 120.00   100.00
 16.344  16.344 (0.977)    43     34872                  345.54- 405.54   367.34
 16.344  16.344 (0.977)    57      3406                    0.00-  59.64    35.88
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 16.695  16.695 (0.998)    42     22581 0.50000   0.4454  80.00- 120.00   100.00
 16.695  16.695 (0.998)    71      9635                   10.37-  70.37    42.67
 16.726  16.726 (1.000)    72     10200                   13.30-  73.30    45.17
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 16.726  16.726 (1.000)   130    140983 5.00000           80.00- 120.00   100.00
 16.726  16.726 (1.000)   128    109457                   47.94- 107.94    77.64
 16.726  16.726 (1.000)    49    181656                  102.10- 162.10   128.85
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83     47013 0.50000   0.4950  80.00- 120.00   100.00
 16.819  16.819 (1.006)    85     30847                   35.08-  95.08    65.61
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84     30464 0.50000   0.4662  80.00- 120.00   100.00
 17.035  17.035 (1.018)    56     35309                   82.51- 142.51   115.90
 17.035  17.035 (1.018)    41     18884                   30.91-  90.91    61.99
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 17.065  17.065 (1.020)    97     47291 0.50000   0.4787  80.00- 120.00   100.00
 17.065  17.065 (1.020)    99     29111                   34.55-  94.55    61.56
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 17.250  17.250 (1.031)   119     34358 0.50000   0.4182  80.00- 120.00   100.00
 17.250  17.250 (1.031)   117     35615                   75.13- 135.13   103.66
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 17.579  17.579 (1.051)    56     30816 0.50000   0.4645  80.00- 120.00   100.00
 17.579  17.579 (1.051)    57     87084                  266.38- 326.38   282.59
 17.579  17.579 (1.051)    41     23938                   47.04- 107.04    77.68
-------------------------------------------------------------------------------
```

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

  116 Benzene                                        CAS #: 71-43-2
 17.620  17.620 (0.966)    78     67631 0.50000   0.4864  80.00- 120.00   100.00
 17.620  17.620 (0.966)    77     16716                    0.00-  54.04    24.72
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                          CAS #: 17060-07-0
 17.641  17.641 (1.055)    65    201492 5.00000    4.927  80.00- 120.00   100.00
 17.641  17.641 (1.055)    67    101750                   32.47-  92.47    50.50
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                         CAS #: 994-05-8
 17.703  17.703 (0.971)    87     13593 0.50000   0.4650  80.00- 120.00   100.00
 17.703  17.703 (0.971)    73     53804                  391.47- 451.47   395.82
 17.703  17.703 (0.971)    55     18780                   85.87- 145.87   138.16
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                             CAS #: 107-06-2
 17.744  17.744 (0.973)    62     30873 0.50000   0.5049  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64      9460                    2.26-  62.26    30.64
-------------------------------------------------------------------------------
  121 Heptane                                        CAS #: 142-82-5
 17.847  17.847 (0.979)    57     18619 0.50000   0.4911  80.00- 120.00   100.00
 17.847  17.847 (0.979)   100      5702                    9.17-  69.17    30.62
 17.847  17.847 (0.979)    43     32529                  158.08- 218.08   174.71
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 18.231  18.231 (1.000)   114    573304 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     91763                    0.00-  45.77    16.01
-------------------------------------------------------------------------------
  125 Trichloroethene                                CAS #: 79-01-6
 18.610  18.610 (1.021)   130     31354 0.50000   0.4940  80.00- 120.00   100.00
 18.610  18.610 (1.021)    95     29488                   67.33- 127.33    94.05
 18.610  18.610 (1.021)    97     20338                   32.56-  92.56    64.87
-------------------------------------------------------------------------------
  127 Methylcyclohexane                              CAS #: 108-87-2
 18.833  18.833 (1.033)    83     37600 0.50000   0.4638  80.00- 120.00   100.00
 18.833  18.833 (1.033)    55     30068                   48.63- 108.63    79.97
 18.833  18.833 (1.033)    56     10553                    0.00-  55.66    28.07
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                            CAS #: 78-87-5
 19.079  19.079 (1.046)    63     26156 0.50000   0.4910  80.00- 120.00   100.00
 19.079  19.079 (1.046)    62     17712                   41.89- 101.89    67.72
 19.056  19.056 (1.045)    41     16808                   27.78-  87.78    64.26
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                    CAS #: 123-91-1
 19.213  19.213 (1.054)    88     15511 0.50000   0.4428  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58     11429                   39.29-  99.29    73.68
 19.213  19.213 (1.054)    57      4015                    0.00-  52.49    25.88
-------------------------------------------------------------------------------
```

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

  138 Bromodichloromethane                          CAS #: 75-27-4
 19.503  19.503 (0.821)    83     40208 0.50000   0.4609  80.00- 120.00   100.00
 19.503  19.503 (0.821)    85     26464                   34.81-  94.81    65.82
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 20.338  20.338 (1.116)    75     34438 0.50000   0.4145  80.00- 120.00   100.00
 20.338  20.338 (1.116)    77     11615                    1.96-  61.96    33.73
 20.338  20.338 (1.116)    39     18275                   18.92-  78.92    53.07
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 20.572  20.572 (1.128)    43     38577 0.50000   0.4058  80.00- 120.00   100.00
 20.557  20.557 (1.128)    58     15959                    9.48-  69.48    41.37
 20.557  20.557 (1.128)    85      6772                    0.00-  47.76    17.55
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 20.821  20.821 (1.142)    98    550840 5.00000    4.974  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     62740                    0.00-  41.37    11.39
 20.821  20.821 (1.142)   100    368333                   36.07-  96.07    66.87
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 20.962  20.962 (1.150)    91     69985 0.50000   0.4695  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92     43947                   30.04-  90.04    62.79
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                     CAS #: 10061-02-6
 21.564  21.564 (0.908)    75     27544 0.50000   0.4190  80.00- 120.00   100.00
 21.564  21.564 (0.908)    77      8903                    1.00-  61.00    32.32
 21.535  21.535 (0.906)    39     13295                   15.93-  75.93    48.27
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 21.999  21.999 (0.926)    97     29246 0.50000   0.5100  80.00- 120.00   100.00
 21.999  21.999 (0.926)    99     17703                   32.15-  92.15    60.53
 21.999  21.999 (0.926)    83     23915                   55.54- 115.54    81.77
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 22.145  22.145 (0.932)   166     40192 0.50000   0.4954  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129     27524                   40.48- 100.48    68.48
 22.145  22.145 (0.932)   131     27168                   38.27-  98.27    67.60
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 22.406  22.406 (0.943)    58     15866 0.50000   0.3379  80.00- 120.00   100.00
 22.406  22.406 (0.943)    43     28515                  153.17- 213.17   179.72
 22.406  22.406 (0.943)   100      4046                    0.00-  52.35    25.50
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 22.784  22.784 (0.959)   129     36287 0.50000   0.4210  80.00- 120.00   100.00
 22.784  22.784 (0.959)   127     28493                   46.57- 106.57    78.52
-------------------------------------------------------------------------------
```

```
                                          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
 23.045  23.045 (0.970)   107     38478 0.50000   0.4588  80.00- 120.00   100.00
 23.045  23.045 (0.970)   109     36019                   64.70- 124.70    93.61
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    469303 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    261016                   26.51-  86.51    55.62
-------------------------------------------------------------------------------
  165 Chlorobenzene                                    CAS #: 108-90-7
 23.823  23.823 (1.003)   112     57983 0.50000   0.4836  80.00- 120.00   100.00
 23.823  23.823 (1.003)   114     17828                    2.37-  62.37    30.75
 23.823  23.823 (1.003)    77     39908                   28.30-  88.30    68.83
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                    CAS #: 100-41-4
 23.905  23.905 (1.006)   106     24680 0.50000   0.4490  80.00- 120.00   100.00
 23.905  23.905 (1.006)    91     79862                  282.65- 342.65   323.59
-------------------------------------------------------------------------------
  169 m,p-Xylene                                       CAS #: 108-38-3
 24.091  24.091 (1.014)   106     27071 0.50000   0.4597  80.00- 120.00   100.00
 24.091  24.091 (1.014)    91     51845                  170.44- 230.44   191.51
-------------------------------------------------------------------------------
  171 o-Xylene                                         CAS #: 95-47-6
 24.710  24.710 (1.040)   106     24547 0.50000   0.4406  80.00- 120.00   100.00
 24.710  24.710 (1.040)    91     53457                  177.28- 237.28   217.77
-------------------------------------------------------------------------------
  172 Styrene                                          CAS #: 100-42-5
 24.730  24.730 (1.041)   104     30642 0.50000   0.3859  80.00- 120.00   100.00
 24.730  24.730 (1.041)    78     18023                   22.29-  82.29    58.82
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 25.068  25.068 (1.055)   173     33072 0.50000   0.3910  80.00- 120.00   100.00
 25.068  25.068 (1.055)   171     15829                   20.98-  80.98    47.86
-------------------------------------------------------------------------------
  175 Cumene                                           CAS #: 98-82-8
 25.182  25.182 (1.060)   105     74949 0.50000   0.4158  80.00- 120.00   100.00
 25.182  25.182 (1.060)   120     20667                    0.00-  56.93    27.57
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 25.466  25.466 (1.072)   174    236039 5.00000    4.684  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    291713                   89.67- 149.67   123.59
 25.466  25.466 (1.072)   176    230766                   67.40- 127.40    97.77
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 25.656  25.656 (1.080)    83     52547 0.50000   0.4669  80.00- 120.00   100.00
 25.656  25.656 (1.080)    85     33875                   33.69-  93.69    64.47
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
182 Propylbenzene					CAS #: 103-65-1		
25.732	25.732 (1.083)	91	83273	0.50000	0.4680	80.00- 120.00	100.00
25.732	25.732 (1.083)	120	20303			0.00- 53.87	24.38
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	73170	0.50000	0.4869	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	22883			0.21- 60.21	31.27
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	60717	0.50000	0.4782	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	31311			20.26- 80.26	51.57
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	66342	0.50000	0.5206	80.00- 120.00	100.00
26.395	26.395 (1.111)	120	31735			17.68- 77.68	47.84
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	42052	0.50000	0.4451	80.00- 120.00	100.00
26.810	26.810 (1.128)	148	27432			34.18- 94.18	65.23
26.794	26.794 (1.128)	111	17790			9.70- 69.70	42.30
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	41015	0.50000	0.4621	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	26298			34.47- 94.47	64.12
26.919	26.919 (1.133)	111	15481			8.85- 68.85	37.74
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	31926	0.50000	0.3268	80.00- 120.00	100.00
27.075	27.075 (1.139)	126	6671			0.00- 51.19	20.90
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	38769	0.50000	0.4572	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	24430			33.68- 93.68	63.01
27.371	27.371 (1.152)	111	17086			11.24- 71.24	44.07
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	46681	0.50000	0.5965	80.00- 120.00	100.00
29.382	29.382 (1.237)	182	42498			63.91- 123.91	91.04
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	38613	0.50000	0.6409	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	23894			31.90- 91.90	61.88

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062408.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 0.5ppbv (1.0ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	140983	-1.34
123 1,4-Difluorobenze	579240	347544	810936	573304	-1.02
163 Chlorobenzene-d5	477544	286526	668562	469303	-1.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062408.d

Date : 24-JUN-2016 13:54

Client ID: Level 7

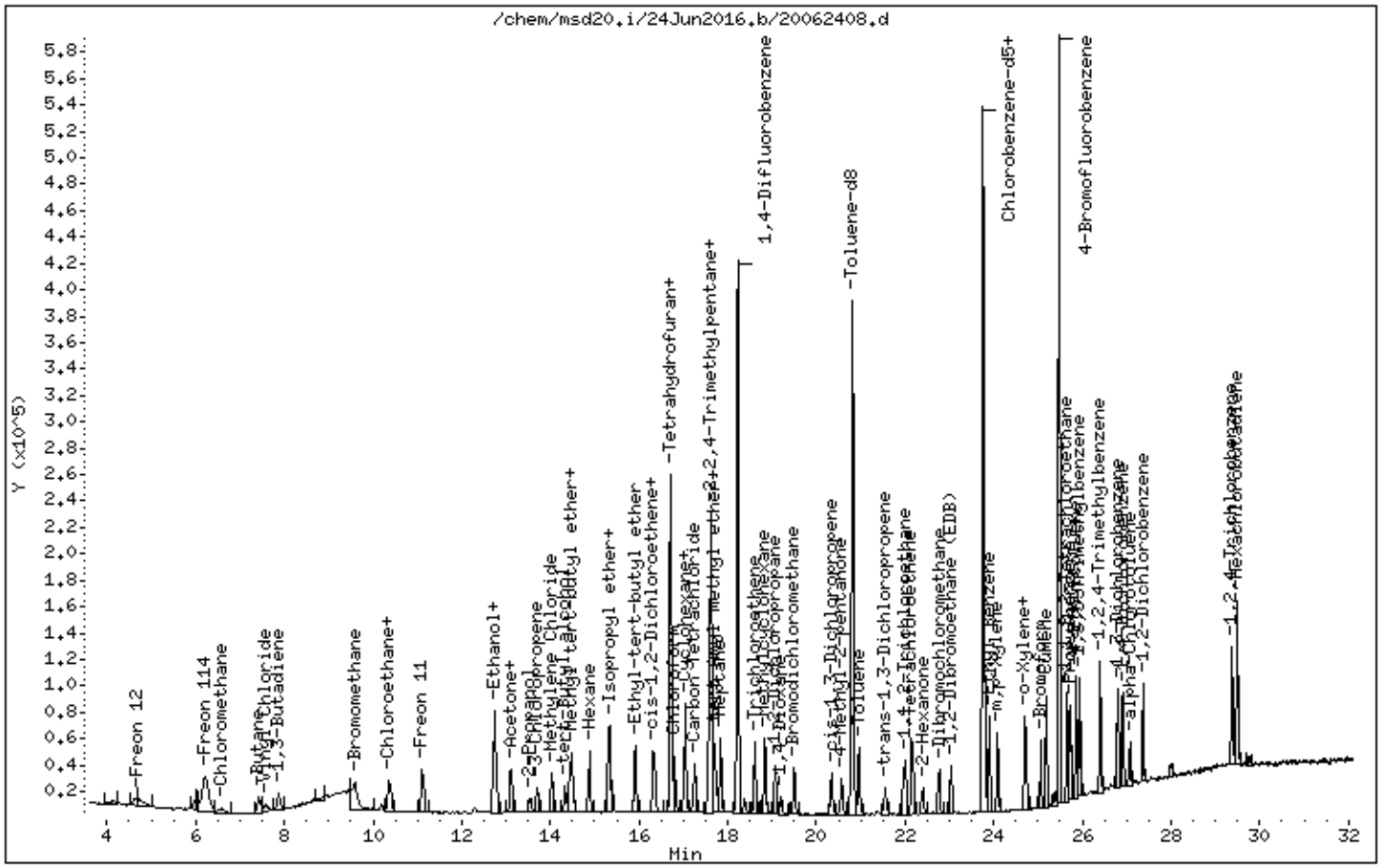
Instrument: msd20.i

Sample Info: 125mL# 2789-200

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/18Jul2016.b/20071806.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 18-JUL-2016 11:09
Operator : jg Inst ID: msd20.i
Smp Info : 50mL# 2789-129
Misc Info : 1.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 11:01 jscarbro Quant Type: ISTD
Cal Date : 18-JUL-2016 11:09 Cal File: 20071806.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.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
7 Freon 134a					CAS #: 811-97-2		
3.997	3.997 (0.239)	83	32086	1.00000	0.9588	0.00- 0.00	100.00(Ta)
3.973	3.973 (0.238)	69	26094			0.00- 0.00	81.33
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
4.479	4.479 (0.268)	65	16322	1.00000	0.9100	0.00- 0.00	100.00(a)
4.479	4.479 (0.268)	51	30472			0.00- 0.00	186.69
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.227	5.227 (0.312)	51	50274	1.00000	0.9733	0.00- 0.00	100.00(a)
5.251	5.251 (0.314)	67	9102			0.00- 0.00	18.10
5.178	5.178 (0.310)	85	187			0.00- 0.00	0.37
16 Freon 142b					CAS #: 75-68-3		
6.528	6.528 (0.390)	65	70887	1.00000	0.9441	0.00- 0.00	100.00(a)
6.528	6.528 (0.390)	45	17155			0.00- 0.00	24.20
6.552	6.552 (0.392)	81	2341			0.00- 0.00	3.30
37 Dichlorofluoromethane					CAS #: 75-43-4		
11.283	11.283 (0.675)	67	84733	1.00000	0.9861	0.00- 0.00	100.00(a)

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

   37 Dichlorofluoromethane (continued)
 11.283  11.283 (0.675)    69     27828                     0.00-   0.00    32.84
 11.283  11.283 (0.675)    47      8286                     0.00-   0.00     9.78
-------------------------------------------------------------------------------
   48 Freon 123                                   CAS #: 306-83-2
 12.736  12.736 (0.761)    83     89742 1.00000   0.9922   0.00-   0.00   100.00(a)
 12.736  12.736 (0.761)   133     19209                     0.00-   0.00    21.40
 12.736  12.736 (0.761)    85     56130                     0.00-   0.00    62.55
-------------------------------------------------------------------------------
   59 Cyclopentene                                CAS #: 142-29-0
 13.725  13.725 (0.821)    67     37556 1.00000   0.9319   0.00-   0.00   100.00(a)
 13.725  13.725 (0.821)    68     14345                     0.00-   0.00    38.20
 13.725  13.725 (0.821)    53      7632                     0.00-   0.00    20.32
-------------------------------------------------------------------------------
   84 1-Propanol                                  CAS #: 71-23-8
 15.564  15.564 (0.931)    59      3956 1.00000   0.9049   0.00-   0.00   100.00(a)
 15.564  15.564 (0.931)    42      4626                     0.00-   0.00   116.94
 15.564  15.564 (0.931)    41      4286                     0.00-   0.00   108.34
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                         CAS #: 594-20-7
 16.282  16.282 (0.973)    77     56437 1.00000   0.9815   0.00-   0.00   100.00(a)
 16.282  16.282 (0.973)    79     18931                     0.00-   0.00    33.54
 16.282  16.282 (0.973)    97     10173                     0.00-   0.00    18.03
-------------------------------------------------------------------------------
*  98 Bromochloromethane                         CAS #: 74-97-5
 16.726  16.726 (1.000)   130    120962 5.00000            80.00- 120.00   100.00
 16.726  16.726 (1.000)   128     93403                    47.94- 107.94    77.22
 16.726  16.726 (1.000)    49    166026                   102.10- 162.10   137.25
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                        CAS #: 563-58-6
 17.312  17.312 (1.035)   110     12666 1.00000   0.9242   0.00-   0.00   100.00(a)
 17.312  17.312 (1.035)    75     38234                     0.00-   0.00   301.86
-------------------------------------------------------------------------------
  115 Isobutanol                                 CAS #: 78-83-1
 17.456  17.456 (1.044)    43     20769 1.00000    1.005   0.00-   0.00   100.00(a)
 17.456  17.456 (1.044)    41     19400                     0.00-   0.00    93.41
 17.476  17.476 (1.045)    55      1807                     0.00-   0.00     8.70
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                        CAS #: 540-36-3
 18.231  18.231 (1.000)   114    420426 5.00000            80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     69206                     0.00-  45.77    16.46
-------------------------------------------------------------------------------
  124 n-Butanol                                  CAS #: 71-36-3
 18.432  18.432 (1.011)    56     28844 1.00000   0.8899   0.00-   0.00   100.00(a)
 18.432  18.432 (1.011)    41     26618                     0.00-   0.00    92.28
 18.432  18.432 (1.011)    43     18420                     0.00-   0.00    63.86
-------------------------------------------------------------------------------
```

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

  157 1,3-Dichloropropane                          CAS #: 142-28-9
 22.377  22.377 (1.227)    76     60564 1.00000   0.9859   0.00-   0.00   100.00(a)
 22.377  22.377 (1.227)    41     37469                    0.00-   0.00    61.87
 22.377  22.377 (1.227)    78     18524                    0.00-   0.00    30.59
-------------------------------------------------------------------------------
  159 Butyl Acetate                                CAS #: 123-86-4
 22.551  22.551 (0.949)    56      4367 1.00000   0.8414   0.00-   0.00   100.00(a)
 22.551  22.551 (0.949)    73      1347                    0.00-   0.00    30.84
 22.551  22.551 (0.949)    43     10413                    0.00-   0.00   238.45
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    359406 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    206440                   26.51-  86.51    57.44
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 23.947  23.947 (1.008)   131     51432 1.00000    1.022   0.00-   0.00   100.00(a)
 23.947  23.947 (1.008)   117     32808                    0.00-   0.00    63.79
 23.947  23.947 (1.008)    95     22107                    0.00-   0.00    42.98
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 24.854  24.854 (1.046)    58     29146 1.00000   0.8662   0.00-   0.00   100.00(a)
 24.854  24.854 (1.046)    43     48007                    0.00-   0.00   164.71
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 25.428  25.428 (1.070)    55     28120 1.00000   0.9048   0.00-   0.00   100.00(a)
 25.428  25.428 (1.070)    98     10832                    0.00-   0.00    38.52
 25.428  25.428 (1.070)    42     18682                    0.00-   0.00    66.44
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 25.694  25.694 (1.081)   156     43984 1.00000   0.9552   0.00-   0.00   100.00(a)
 25.694  25.694 (1.081)   158     43202                    0.00-   0.00    98.22
 25.675  25.675 (1.081)    77     76000                    0.00-   0.00   172.79
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 25.750  25.750 (1.084)   110     28425 1.00000   0.9896   0.00-   0.00   100.00(a)
 25.750  25.750 (1.084)    75     75090                    0.00-   0.00   264.17
 25.750  25.750 (1.084)    61     18584                    0.00-   0.00    65.38
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 25.902  25.902 (1.090)   126     25296 1.00000   0.9101   0.00-   0.00   100.00(a)
 25.902  25.902 (1.090)    91     77758                    0.00-   0.00   307.39
 25.883  25.883 (1.089)    65      7981                    0.00-   0.00    31.55
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 26.035  26.035 (1.096)   126     22496 1.00000   0.9024   0.00-   0.00   100.00(a)
 26.035  26.035 (1.096)    91     65768                    0.00-   0.00   292.35
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
191 4-Chlorotoluene (continued)							
26.035	26.035 (1.096)	63	10143			0.00- 0.00	45.09
195 tert-Butylbenzene					CAS #: 98-06-6		
26.338	26.338 (1.108)	119	66023	1.00000	0.9002	0.00- 0.00	100.00(a)
26.338	26.338 (1.108)	134	17539			0.00- 0.00	26.56
26.338	26.338 (1.108)	91	45811			0.00- 0.00	69.39
197 Pentachloroethane					CAS #: 76-01-7		
26.433	26.433 (1.112)	167	22986	1.00000	0.9783	0.00- 0.00	100.00(a)
26.414	26.414 (1.112)	117	23044			0.00- 0.00	100.25
26.433	26.433 (1.112)	169	11310			0.00- 0.00	49.20
203 sec-Butylbenzene					CAS #: 135-98-8		
26.585	26.585 (1.119)	105	98581	1.00000	1.009	0.00- 0.00	100.00(a)
26.585	26.585 (1.119)	134	18363			0.00- 0.00	18.63
26.585	26.585 (1.119)	91	15891			0.00- 0.00	16.12
207 p-Cymene					CAS #: 99-87-6		
26.748	26.748 (1.126)	119	93206	1.00000	0.9988	0.00- 0.00	100.00(a)
26.748	26.748 (1.126)	134	25066			0.00- 0.00	26.89
26.748	26.748 (1.126)	91	24536			0.00- 0.00	26.32
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
26.919	26.919 (1.133)	120	38370	1.00000	0.9712	0.00- 0.00	100.00(a)
26.919	26.919 (1.133)	105	88122			0.00- 0.00	229.66
26.919	26.919 (1.133)	77	12028			0.00- 0.00	31.35
213 Butylbenzene					CAS #: 104-51-8		
27.231	27.231 (1.146)	134	28309	1.00000	1.020	0.00- 0.00	100.00(a)
27.231	27.231 (1.146)	91	111165			0.00- 0.00	392.68
27.231	27.231 (1.146)	92	58814			0.00- 0.00	207.76
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
28.338	28.338 (1.193)	157	28072	1.00000	0.9240	0.00- 0.00	100.00(a)
28.338	28.338 (1.193)	75	29184			0.00- 0.00	103.96
28.353	28.353 (1.193)	155	23022			0.00- 0.00	82.01

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071806.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: jg
Method File: /chem/msd20.i/18Jul2016.b/2016l0624b.m
Misc Info: 1.0ppbv (5.0ppbv)

Calibration Date: 18-JUL-2016
Calibration Time: 07:40
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	123047	73828	172266	120962	-1.69
123 1,4-Difluorobenze	457254	274352	640156	420426	-8.05
163 Chlorobenzene-d5	403496	242098	564894	359406	-10.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/18Jul2016.b/20071806.d

Date : 18-JUL-2016 11:09

Client ID: Level 8

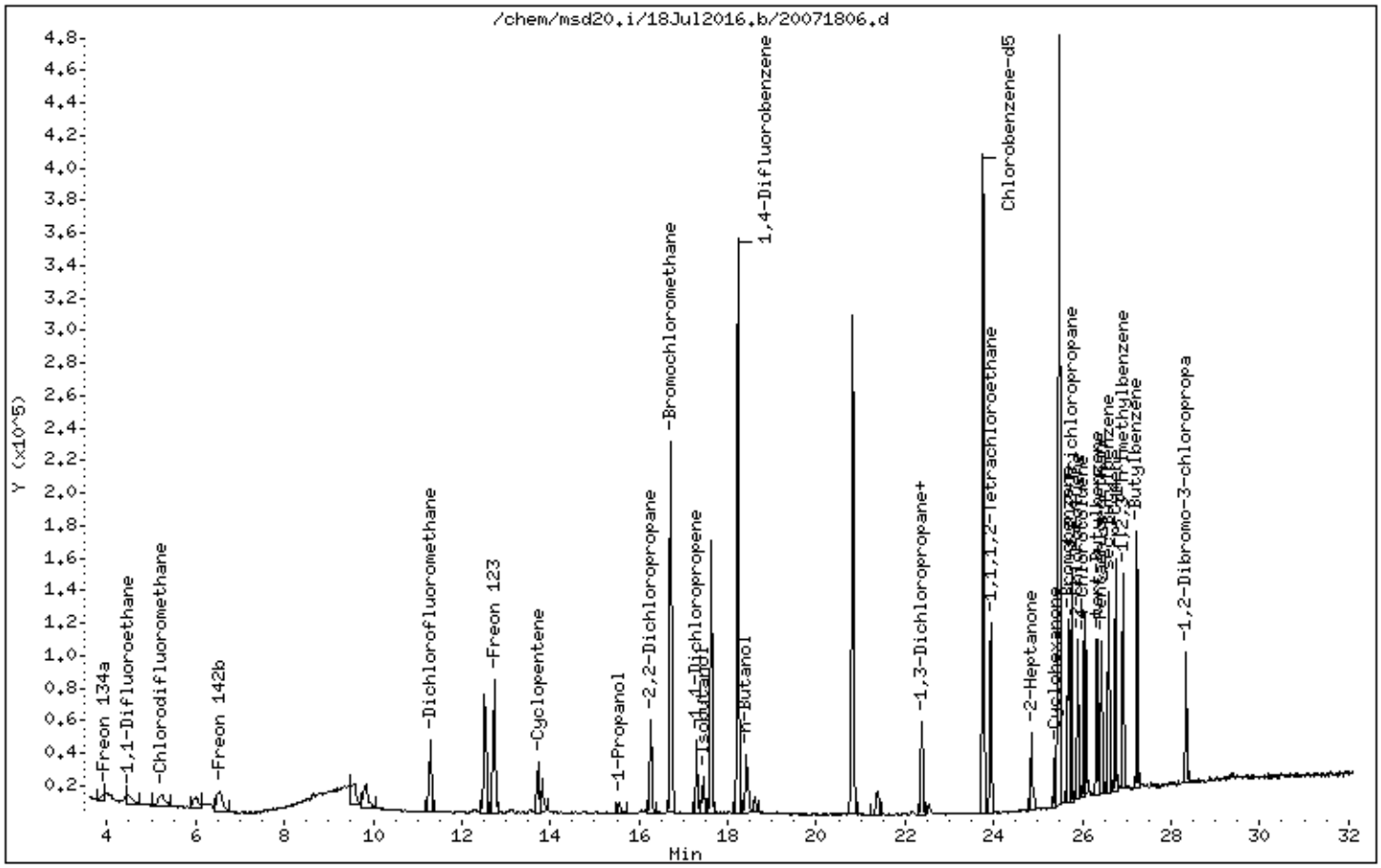
Instrument: msd20.i

Sample Info: 50mL# 2789-129

Operator: jg

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062409.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 24-JUN-2016 14:33
Operator : sab Inst ID: msd20.i
Smp Info : 250mL# 2789-200
Misc Info : 1.0ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 14:33 Cal File: 20062409.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		
4.214	4.214 (0.252)	41	35675	1.00000	1.048	80.00- 120.00	100.00(M)
4.190	4.190 (0.251)	42	24098			37.70- 97.70	67.55
4.214	4.214 (0.252)	39	24706			41.61- 101.61	69.25
11 Freon 12					CAS #: 75-71-8		
4.697	4.697 (0.281)	85	119062	1.00000	1.082	80.00- 120.00	100.00
4.721	4.721 (0.282)	87	24868			2.54- 62.54	20.89
15 Freon 114					CAS #: 76-14-2		
6.239	6.239 (0.373)	135	81987	1.00000	1.079	80.00- 120.00	100.00
6.239	6.239 (0.373)	137	26204			1.78- 61.78	31.96
6.239	6.239 (0.373)	85	121134			116.61- 176.61	147.75
17 Chloromethane					CAS #: 74-87-3		
6.625	6.625 (0.396)	50	40619	1.00000	1.103	80.00- 120.00	100.00
6.601	6.601 (0.395)	52	13840			3.03- 63.03	34.07
23 Butane					CAS #: 106-97-8		
7.434	7.434 (0.444)	58	9181	1.00000	1.017	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)							
7.434	7.434 (0.444)	43	65667			656.82- 716.82	715.25
25 Vinyl Chloride					CAS #: 75-01-4		
7.590	7.590 (0.454)	62	43504	1.00000	1.059	80.00- 120.00	100.00
7.590	7.590 (0.454)	64	14636			1.50- 61.50	33.64
26 1,3-Butadiene					CAS #: 106-99-0		
7.885	7.885 (0.471)	54	31601	1.00000	1.005	80.00- 120.00	100.00
7.868	7.868 (0.470)	39	31712			69.00- 129.00	100.35
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	25228	1.00000	0.9694	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	23589			63.60- 123.60	93.50
30 Chloroethane					CAS #: 75-00-3		
10.199	10.199 (0.610)	64	19717	1.00000	1.060	80.00- 120.00	100.00
10.199	10.199 (0.610)	49	4953			0.00- 55.63	25.12
10.199	10.199 (0.610)	66	6773			2.70- 62.70	34.35
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	35067	1.00000	1.093	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	49723			115.62- 175.62	141.79
10.367	10.367 (0.620)	42	41607			100.35- 160.35	118.65
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	113113	1.00000	1.064	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	73721			34.91- 94.91	65.17
42 Ethanol					CAS #: 64-17-5		
12.296	12.296 (0.735)	45	12499	1.00000	0.9083	80.00- 120.00	100.00
12.296	12.296 (0.735)	46	5423			11.72- 71.72	43.39
12.296	12.296 (0.735)	43	2791			0.00- 52.99	22.33
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	75815	1.00000	1.056	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	47264			34.49- 94.49	62.34
12.763	12.763 (0.763)	101	96746			96.39- 156.39	127.61
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	26532	1.00000	1.068	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	68275			227.70- 287.70	257.33
12.736	12.736 (0.761)	96	42118			125.12- 185.12	158.74
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	21871	1.00000	1.108	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)
 13.093  13.093 (0.783)    43     64435                   278.33- 338.33   294.61
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 13.121  13.121 (0.784)    76    109252 1.00000   0.9788  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 13.533  13.533 (0.809)    45     53710 1.00000   0.8795  80.00- 120.00   100.00
 13.533  13.533 (0.809)    43     13606                    0.00-  52.04    25.33
 13.560  13.560 (0.811)    59      2490                    0.00-  34.17     4.64
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.697  13.697 (0.819)    76     13317 1.00000   0.8404  80.00- 120.00   100.00
 13.697  13.697 (0.819)    41     35534                   236.04- 296.04   266.83
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 14.027  14.027 (0.839)    84     42689 1.00000    1.060  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49     54632                   97.79- 157.79   127.98
 14.027  14.027 (0.839)    51     17158                    9.84-  69.84    40.19
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 14.329  14.329 (0.857)    59     65654 1.00000   0.9073  80.00- 120.00   100.00
 14.329  14.329 (0.857)    41     20397                    0.00-  56.82    31.07
 14.329  14.329 (0.857)    57      7405                    0.00-  41.10    11.28
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 14.439  14.439 (0.863)    73    113611 1.00000    1.021  80.00- 120.00   100.00
 14.439  14.439 (0.863)    57     25706                    0.00-  52.45    22.63
 14.439  14.439 (0.863)    41     32745                    0.00-  53.55    28.82
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 14.494  14.494 (0.866)    98     28514 1.00000    1.065  80.00- 120.00   100.00
 14.494  14.494 (0.866)    61     62949                   194.43- 254.43   220.77
 14.494  14.494 (0.866)    96     43009                   127.78- 187.78   150.83
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.878  14.878 (0.889)    57     62704 1.00000    1.000  80.00- 120.00   100.00
 14.878  14.878 (0.889)    43     40334                   33.20-  93.20    64.32
 14.878  14.878 (0.889)    86     11846                    0.00-  48.21    18.89
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 15.317  15.317 (0.916)    45    133784 1.00000    1.014  80.00- 120.00   100.00
 15.317  15.317 (0.916)    87     35781                    0.00-  57.99    26.75
 15.317  15.317 (0.916)    59     16453                    0.00-  41.78    12.30
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 15.345  15.345 (0.917)    63     80783 1.00000    1.049  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)
 15.345  15.345 (0.917)    65     25455                     1.84-  61.84    31.51
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 15.400  15.400 (0.921)    86      8998 1.00000   0.9380  80.00- 120.00   100.00
 15.400  15.400 (0.921)    42      7929                   55.70- 115.70    88.12
 15.400  15.400 (0.921)    43     78463                  963.84-1023.84   872.00
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 15.930  15.930 (0.952)    59    125326 1.00000   0.9590  80.00- 120.00   100.00
 15.930  15.930 (0.952)    87     52374                   12.28-  72.28    41.79
 15.930  15.930 (0.952)    41     28600                    0.00-  49.55    22.82
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 16.324  16.324 (0.976)    98     29386 1.00000    1.043  80.00- 120.00   100.00
 16.324  16.324 (0.976)    61     61956                  172.98- 232.98   210.84
 16.324  16.324 (0.976)    96     46757                  124.81- 184.81   159.11
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 16.344  16.344 (0.977)    72     19454 1.00000   0.9712  80.00- 120.00   100.00
 16.344  16.344 (0.977)    43     73615                  345.54- 405.54   378.41
 16.344  16.344 (0.977)    57      6120                    0.00-  59.64    31.46
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 16.696  16.696 (0.998)    42     45348 1.00000   0.9735  80.00- 120.00   100.00
 16.696  16.696 (0.998)    71     19546                   10.37-  70.37    43.10
 16.696  16.696 (0.998)    72     19555                   13.30-  73.30    43.12
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 16.726  16.726 (1.000)   130    129529 5.00000           80.00- 120.00   100.00
 16.726  16.726 (1.000)   128     99208                   47.94- 107.94    76.59
 16.726  16.726 (1.000)    49    175639                  102.10- 162.10   135.60
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83     90494 1.00000    1.037  80.00- 120.00   100.00
 16.819  16.819 (1.006)    85     60048                   35.08-  95.08    66.36
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84     58808 1.00000   0.9794  80.00- 120.00   100.00
 17.035  17.035 (1.018)    56     67741                   82.51- 142.51   115.19
 17.035  17.035 (1.018)    41     38980                   30.91-  90.91    66.28
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 17.066  17.066 (1.020)    97     91505 1.00000    1.008  80.00- 120.00   100.00
 17.066  17.066 (1.020)    99     58630                   34.55-  94.55    64.07
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	68843	1.00000	0.9121	80.00- 120.00	100.00
17.250	17.250 (1.031)	117	73112			75.13- 135.13	106.20
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
17.579	17.579 (1.051)	56	62884	1.00000	1.032	80.00- 120.00	100.00
17.579	17.579 (1.051)	57	173778			266.38- 326.38	276.35
17.579	17.579 (1.051)	41	47495			47.04- 107.04	75.53
116 Benzene					CAS #: 71-43-2		
17.621	17.621 (0.966)	78	134324	1.00000	0.9783	80.00- 120.00	100.00
17.621	17.621 (0.966)	77	31181			0.00- 54.04	23.21
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	193364	5.00000	5.147	80.00- 120.00	100.00
17.621	17.621 (1.053)	67	106464			32.47- 92.47	55.06
119 tert-Amyl methyl ether					CAS #: 994-05-8		
17.703	17.703 (0.971)	87	24454	1.00000	0.8472	80.00- 120.00	100.00
17.703	17.703 (0.971)	73	107418			391.47- 451.47	439.27
17.703	17.703 (0.971)	55	35206			85.87- 145.87	143.97
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	58754	1.00000	0.9731	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	18848			2.26- 62.26	32.08
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	34220	1.00000	0.9140	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	12154			9.17- 69.17	35.52
17.847	17.847 (0.979)	43	64224			158.08- 218.08	187.68
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	566111	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	89806			0.00- 45.77	15.86
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	60830	1.00000	0.9706	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	55975			67.33- 127.33	92.02
18.610	18.610 (1.021)	97	36430			32.56- 92.56	59.89
127 Methylcyclohexane					CAS #: 108-87-2		
18.834	18.834 (1.033)	83	75586	1.00000	0.9442	80.00- 120.00	100.00
18.834	18.834 (1.033)	55	58876			48.63- 108.63	77.89
18.834	18.834 (1.033)	56	19880			0.00- 55.66	26.30
132 1,2-Dichloropropane					CAS #: 78-87-5		
19.057	19.057 (1.045)	63	48801	1.00000	0.9278	80.00- 120.00	100.00

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

  132 1,2-Dichloropropane (continued)
 19.079  19.079 (1.046)    62     33872                    41.89- 101.89    69.41
 19.057  19.057 (1.045)    41     30345                    27.78-  87.78    62.18
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 19.213  19.213 (1.054)    88     33009 1.00000   0.9544  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58     23131                    39.29-  99.29    70.07
 19.213  19.213 (1.054)    57      7527                     0.00-  52.49    22.80
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 19.503  19.503 (0.821)    83     82965 1.00000   0.9388  80.00- 120.00   100.00
 19.503  19.503 (0.821)    85     53171                    34.81-  94.81    64.09
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 20.339  20.339 (1.116)    75     70708 1.00000   0.8618  80.00- 120.00   100.00
 20.339  20.339 (1.116)    77     22285                     1.96-  61.96    31.52
 20.339  20.339 (1.116)    39     34808                    18.92-  78.92    49.23
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.572  20.572 (1.128)    43     82341 1.00000   0.8771  80.00- 120.00   100.00
 20.572  20.572 (1.128)    58     32481                     9.48-  69.48    39.45
 20.557  20.557 (1.128)    85     14289                     0.00-  47.76    17.35
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 20.806  20.806 (1.141)    98    547989 5.00000    5.012  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     61840                     0.00-  41.37    11.28
 20.806  20.806 (1.141)   100    367210                    36.07-  96.07    67.01
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91    139257 1.00000   0.9460  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92     82974                    30.04-  90.04    59.58
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 21.535  21.535 (0.906)    75     56578 1.00000   0.8495  80.00- 120.00   100.00
 21.564  21.564 (0.908)    77     17607                     1.00-  61.00    31.12
 21.535  21.535 (0.906)    39     27355                    15.93-  75.93    48.35
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 22.000  22.000 (0.926)    97     53586 1.00000   0.9224  80.00- 120.00   100.00
 22.000  22.000 (0.926)    99     33122                    32.15-  92.15    61.81
 22.000  22.000 (0.926)    83     44348                    55.54- 115.54    82.76
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 22.145  22.145 (0.932)   166     76081 1.00000   0.9255  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129     56549                    40.48- 100.48    74.33
 22.145  22.145 (0.932)   131     53360                    38.27-  98.27    70.14
-------------------------------------------------------------------------------
```

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		
22.406	22.406 (0.943)	58	36163	1.00000	0.7602	80.00- 120.00	100.00
22.406	22.406 (0.943)	43	66878			153.17- 213.17	184.93
22.406	22.406 (0.943)	100	7983			0.00- 52.35	22.08
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	74092	1.00000	0.8484	80.00- 120.00	100.00
22.784	22.784 (0.959)	127	59039			46.57- 106.57	79.68
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	79173	1.00000	0.9318	80.00- 120.00	100.00
23.045	23.045 (0.970)	109	72787			64.70- 124.70	91.93
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	475474	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	261787			26.51- 86.51	55.06
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	113249	1.00000	0.9323	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	35576			2.37- 62.37	31.41
23.823	23.823 (1.003)	77	75065			28.30- 88.30	66.28
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	49019	1.00000	0.8802	80.00- 120.00	100.00
23.906	23.906 (1.006)	91	157537			282.65- 342.65	321.38
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	52256	1.00000	0.8758	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	101826			170.44- 230.44	194.86
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	49690	1.00000	0.8804	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	102062			177.28- 237.28	205.40
172 Styrene					CAS #: 100-42-5		
24.731	24.731 (1.041)	104	62841	1.00000	0.7812	80.00- 120.00	100.00
24.731	24.731 (1.041)	78	33992			22.29- 82.29	54.09
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	63397	1.00000	0.7399	80.00- 120.00	100.00
25.068	25.068 (1.055)	171	33571			20.98- 80.98	52.95
175 Cumene					CAS #: 98-82-8		
25.182	25.182 (1.060)	105	152766	1.00000	0.8365	80.00- 120.00	100.00
25.182	25.182 (1.060)	120	41419			0.00- 56.93	27.11

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		
25.466	25.466 (1.072)	174	243538	5.00000	4.770	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	298834			89.67- 149.67	122.71
25.466	25.466 (1.072)	176	232643			67.40- 127.40	95.53
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	106299	1.00000	0.9322	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	67732			33.69- 93.69	63.72
182 Propylbenzene					CAS #: 103-65-1		
25.732	25.732 (1.083)	91	149997	1.00000	0.8321	80.00- 120.00	100.00
25.732	25.732 (1.083)	120	34987			0.00- 53.87	23.33
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	131215	1.00000	0.8618	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	39787			0.21- 60.21	30.32
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	116699	1.00000	0.9071	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	58240			20.26- 80.26	49.91
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	122950	1.00000	0.9523	80.00- 120.00	100.00
26.395	26.395 (1.111)	120	57659			17.68- 77.68	46.90
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	82393	1.00000	0.8608	80.00- 120.00	100.00
26.794	26.794 (1.128)	148	51903			34.18- 94.18	62.99
26.794	26.794 (1.128)	111	34382			9.70- 69.70	41.73
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	74566	1.00000	0.8292	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	47306			34.47- 94.47	63.44
26.919	26.919 (1.133)	111	28443			8.85- 68.85	38.14
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	69737	1.00000	0.7045	80.00- 120.00	100.00
27.075	27.075 (1.139)	126	14178			0.00- 51.19	20.33
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	73455	1.00000	0.8549	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	49790			33.68- 93.68	67.78
27.371	27.371 (1.152)	111	32597			11.24- 71.24	44.38
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	82898	1.00000	1.045	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)							
29.382	29.382 (1.237)	182	78628			63.91- 123.91	94.85
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	64839	1.00000	1.062	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	42240			31.90- 91.90	65.15
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	11500	0.10000	0.1065	80.00- 120.00	100.00
29.756	29.756 (1.252)	127	2216			0.00- 42.99	19.27

QC Flag Legend

M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062409.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	129529	-9.36
123 1,4-Difluorobenze	579240	347544	810936	566111	-2.27
163 Chlorobenzene-d5	477544	286526	668562	475474	-0.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062409.d

Date : 24-JUN-2016 14:33

Client ID: Level 8

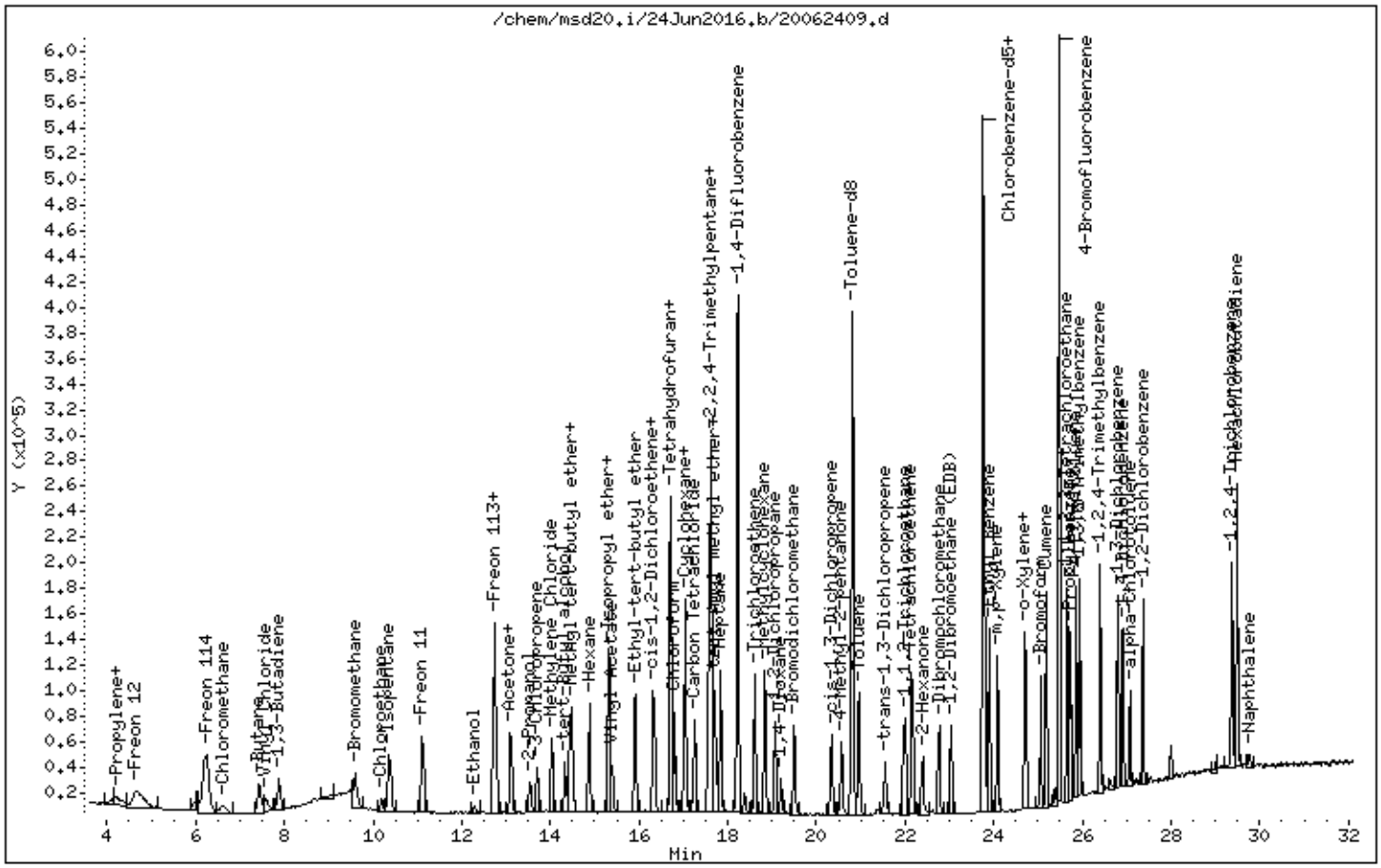
Instrument: msd20.i

Sample Info: 250mL# 2789-200

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/18Jul2016.b/20071807.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 18-JUL-2016 11:53
Operator : jg Inst ID: msd20.i
Smp Info : 250mL# 2789-129
Misc Info : 5.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/18Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 11:01 jscarbro Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.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
7 Freon 134a					CAS #: 811-97-2		
4.070	4.070 (0.243)	83	151155	5.00000	4.886	0.00- 0.00	100.00(T)
4.046	4.046 (0.242)	69	129458			0.00- 0.00	85.65
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
4.528	4.528 (0.271)	65	79892	5.00000	4.818	0.00- 0.00	100.00
4.528	4.528 (0.271)	51	144350			0.00- 0.00	180.68
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.251	5.251 (0.314)	51	231860	5.00000	4.855	0.00- 0.00	100.00
5.251	5.251 (0.314)	67	42210			0.00- 0.00	18.20
5.251	5.251 (0.314)	85	2458			0.00- 0.00	1.06
16 Freon 142b					CAS #: 75-68-3		
6.504	6.504 (0.389)	65	339275	5.00000	4.887	0.00- 0.00	100.00
6.504	6.504 (0.389)	45	83259			0.00- 0.00	24.54
6.528	6.528 (0.390)	81	14462			0.00- 0.00	4.26
37 Dichlorofluoromethane					CAS #: 75-43-4		
11.283	11.283 (0.675)	67	392827	5.00000	4.944	0.00- 0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
37 Dichlorofluoromethane (continued)							
11.283	11.283 (0.675)	69	127565			0.00- 0.00	32.47
11.283	11.283 (0.675)	47	39578			0.00- 0.00	10.08
48 Freon 123					CAS #: 306-83-2		
12.736	12.736 (0.761)	83	418602	5.00000	5.006	0.00- 0.00	100.00
12.736	12.736 (0.761)	133	83227			0.00- 0.00	19.88
12.736	12.736 (0.761)	85	273274			0.00- 0.00	65.28
59 Cyclopentene					CAS #: 142-29-0		
13.725	13.725 (0.821)	67	210331	5.00000	5.645	0.00- 0.00	100.00
13.725	13.725 (0.821)	68	80365			0.00- 0.00	38.21
13.725	13.725 (0.821)	53	40587			0.00- 0.00	19.30
84 1-Propanol					CAS #: 71-23-8		
15.537	15.537 (0.929)	59	24339	5.00000	6.022	0.00- 0.00	100.00
15.537	15.537 (0.929)	42	24734			0.00- 0.00	101.62
15.537	15.537 (0.929)	41	20558			0.00- 0.00	84.47
90 2,2-Dichloropropane					CAS #: 594-20-7		
16.282	16.282 (0.973)	77	277753	5.00000	5.225	0.00- 0.00	100.00
16.282	16.282 (0.973)	79	90860			0.00- 0.00	32.71
16.282	16.282 (0.973)	97	53283			0.00- 0.00	19.18
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	111835	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	86211			47.94- 107.94	77.09
16.726	16.726 (1.000)	49	156631			102.10- 162.10	140.06
107 1,1-Dichloropropene					CAS #: 563-58-6		
17.312	17.312 (1.035)	110	70269	5.00000	5.546	0.00- 0.00	100.00
17.312	17.312 (1.035)	75	205758			0.00- 0.00	292.81
115 Isobutanol					CAS #: 78-83-1		
17.456	17.456 (1.044)	43	102396	5.00000	5.357	0.00- 0.00	100.00
17.456	17.456 (1.044)	41	107822			0.00- 0.00	105.30
17.456	17.456 (1.044)	55	13044			0.00- 0.00	12.74
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	431488	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	68898			0.00- 45.77	15.97
124 n-Butanol					CAS #: 71-36-3		
18.432	18.432 (1.011)	56	203264	5.00000	6.110	0.00- 0.00	100.00
18.432	18.432 (1.011)	41	170156			0.00- 0.00	83.71
18.432	18.432 (1.011)	43	117360			0.00- 0.00	57.74

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
157 1,3-Dichloropropane					CAS #: 142-28-9		
22.377	22.377 (1.227)	76	310194	5.00000	4.920	0.00- 0.00	100.00
22.377	22.377 (1.227)	41	202499			0.00- 0.00	65.28
22.377	22.377 (1.227)	78	102621			0.00- 0.00	33.08
159 Butyl Acetate					CAS #: 123-86-4		
22.522	22.522 (0.948)	56	30640	5.00000	5.708	0.00- 0.00	100.00
22.551	22.551 (0.949)	73	10722			0.00- 0.00	34.99
22.522	22.522 (0.948)	43	65165			0.00- 0.00	212.68
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	371728	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	214912			26.51- 86.51	57.81
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
23.947	23.947 (1.008)	131	254199	5.00000	4.884	0.00- 0.00	100.00
23.947	23.947 (1.008)	117	175809			0.00- 0.00	69.16
23.947	23.947 (1.008)	95	106101			0.00- 0.00	41.74
173 2-Heptanone					CAS #: 110-43-0		
24.854	24.854 (1.046)	58	210961	5.00000	6.062	0.00- 0.00	100.00
24.854	24.854 (1.046)	43	344362			0.00- 0.00	163.23
176 Cyclohexanone					CAS #: 108-94-1		
25.428	25.428 (1.070)	55	196326	5.00000	6.108	0.00- 0.00	100.00
25.428	25.428 (1.070)	98	82646			0.00- 0.00	42.10
25.428	25.428 (1.070)	42	134118			0.00- 0.00	68.31
180 Bromobenzene					CAS #: 108-86-1		
25.694	25.694 (1.081)	156	249431	5.00000	5.237	0.00- 0.00	100.00
25.694	25.694 (1.081)	158	242352			0.00- 0.00	97.16
25.675	25.675 (1.081)	77	410216			0.00- 0.00	164.46
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
25.750	25.750 (1.084)	110	146317	5.00000	4.925	0.00- 0.00	100.00
25.750	25.750 (1.084)	75	388039			0.00- 0.00	265.20
25.750	25.750 (1.084)	61	100853			0.00- 0.00	68.93
189 2-Chlorotoluene					CAS #: 95-49-8		
25.902	25.902 (1.090)	126	158176	5.00000	5.502	0.00- 0.00	100.00
25.902	25.902 (1.090)	91	466172			0.00- 0.00	294.72
25.902	25.902 (1.090)	65	44458			0.00- 0.00	28.11
191 4-Chlorotoluene					CAS #: 106-43-4		
26.035	26.035 (1.096)	126	138772	5.00000	5.382	0.00- 0.00	100.00
26.035	26.035 (1.096)	91	405624			0.00- 0.00	292.30

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
191 4-Chlorotoluene (continued)							
26.035	26.035 (1.096)	63	56564			0.00- 0.00	40.76
195 tert-Butylbenzene					CAS #: 98-06-6		
26.338	26.338 (1.108)	119	375847	5.00000	4.954	0.00- 0.00	100.00
26.338	26.338 (1.108)	134	97404			0.00- 0.00	25.92
26.319	26.319 (1.108)	91	261001			0.00- 0.00	69.44
197 Pentachloroethane					CAS #: 76-01-7		
26.433	26.433 (1.112)	167	130216	5.00000	5.358	0.00- 0.00	100.00
26.414	26.414 (1.112)	117	127056			0.00- 0.00	97.57
26.433	26.433 (1.112)	169	60664			0.00- 0.00	46.59
203 sec-Butylbenzene					CAS #: 135-98-8		
26.585	26.585 (1.119)	105	466869	5.00000	4.622	0.00- 0.00	100.00
26.585	26.585 (1.119)	134	92960			0.00- 0.00	19.91
26.585	26.585 (1.119)	91	77818			0.00- 0.00	16.67
207 p-Cymene					CAS #: 99-87-6		
26.748	26.748 (1.126)	119	416817	5.00000	4.319	0.00- 0.00	100.00
26.748	26.748 (1.126)	134	113253			0.00- 0.00	27.17
26.748	26.748 (1.126)	91	104643			0.00- 0.00	25.11
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
26.919	26.919 (1.133)	120	200068	5.00000	4.896	0.00- 0.00	100.00
26.919	26.919 (1.133)	105	462201			0.00- 0.00	231.02
26.919	26.919 (1.133)	77	59988			0.00- 0.00	29.98
213 Butylbenzene					CAS #: 104-51-8		
27.231	27.231 (1.146)	134	133246	5.00000	4.643	0.00- 0.00	100.00
27.231	27.231 (1.146)	91	512357			0.00- 0.00	384.52
27.231	27.231 (1.146)	92	278083			0.00- 0.00	208.70
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
28.338	28.338 (1.193)	157	183732	5.00000	5.847	0.00- 0.00	100.00
28.338	28.338 (1.193)	75	182058			0.00- 0.00	99.09
28.338	28.338 (1.193)	155	142489			0.00- 0.00	77.55

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071807.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: jg
Method File: /chem/msd20.i/18Jul2016.b/2016l0624b.m
Misc Info: 5.0ppbv (5.0ppbv)

Calibration Date: 18-JUL-2016
Calibration Time: 07:40
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	123047	73828	172266	111835	-9.11
123 1,4-Difluorobenze	457254	274352	640156	431488	-5.63
163 Chlorobenzene-d5	403496	242098	564894	371728	-7.87

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/18Jul2016.b/20071807.d

Date : 18-JUL-2016 11:53

Client ID: Level 12

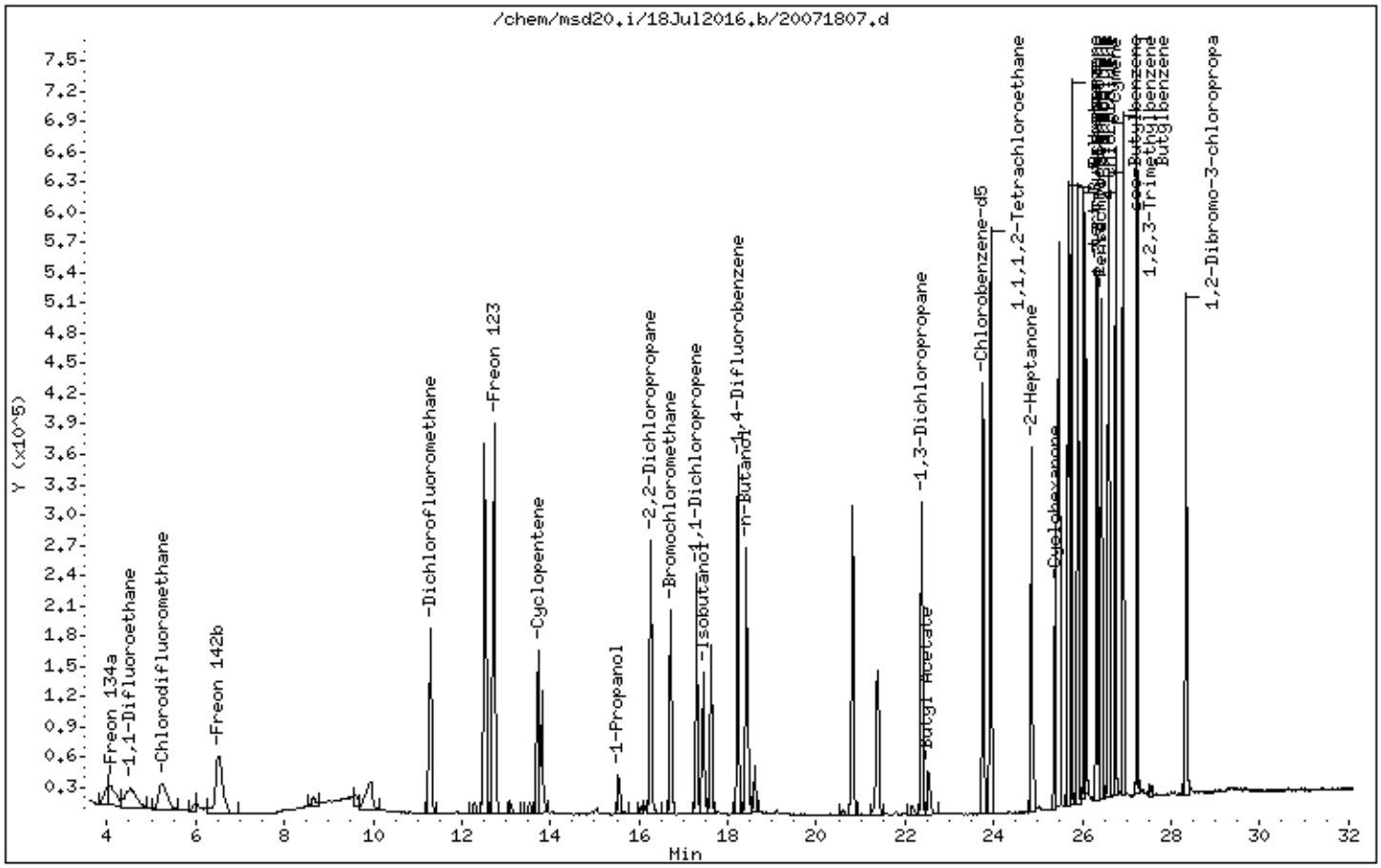
Instrument: msd20.i

Sample Info: 250mL# 2789-129

Operator: jg

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062410.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 24-JUN-2016 15:36
Operator : sab Inst ID: msd20.i
Smp Info : 25mL# 2789-173
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 15:36 Cal File: 20062410.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		
4.190	4.190 (0.251)	41	194083	5.00000	5.311	80.00- 120.00	100.00(M)
4.166	4.166 (0.249)	42	127393			37.70- 97.70	65.64
4.190	4.190 (0.251)	39	136102			41.61- 101.61	70.13
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	643874	5.00000	5.451	80.00- 120.00	100.00
4.672	4.672 (0.279)	87	208620			2.54- 62.54	32.40
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	422293	5.00000	5.177	80.00- 120.00	100.00
6.191	6.191 (0.370)	137	134200			1.78- 61.78	31.78
6.191	6.191 (0.370)	85	632404			116.61- 176.61	149.75
17 Chloromethane					CAS #: 74-87-3		
6.553	6.553 (0.392)	50	208776	5.00000	5.279	80.00- 120.00	100.00
6.553	6.553 (0.392)	52	67841			3.03- 63.03	32.49
23 Butane					CAS #: 106-97-8		
7.417	7.417 (0.443)	58	51650	5.00000	5.328	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)							
7.417	7.417 (0.443)	43	359101			656.82- 716.82	695.26
25 Vinyl Chloride					CAS #: 75-01-4		
7.573	7.573 (0.453)	62	232113	5.00000	5.262	80.00- 120.00	100.00
7.573	7.573 (0.453)	64	74420			1.50- 61.50	32.06
26 1,3-Butadiene					CAS #: 106-99-0		
7.850	7.850 (0.469)	54	171254	5.00000	5.074	80.00- 120.00	100.00
7.850	7.850 (0.469)	39	170422			69.00- 129.00	99.51
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	139418	5.00000	4.990	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	133663			63.60- 123.60	95.87
30 Chloroethane					CAS #: 75-00-3		
10.174	10.174 (0.608)	64	109029	5.00000	5.461	80.00- 120.00	100.00
10.174	10.174 (0.608)	49	26936			0.00- 55.63	24.71
10.174	10.174 (0.608)	66	34812			2.70- 62.70	31.93
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	182888	5.00000	5.308	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	265019			115.62- 175.62	144.91
10.367	10.367 (0.620)	42	237507			100.35- 160.35	129.86
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	600710	5.00000	5.262	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	390232			34.91- 94.91	64.96
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	76758	5.00000	5.195	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	32050			11.72- 71.72	41.75
12.269	12.269 (0.734)	43	18969			0.00- 52.99	24.71
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	391601	5.00000	5.081	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	248248			34.49- 94.49	63.39
12.763	12.763 (0.763)	101	489358			96.39- 156.39	124.96
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	138194	5.00000	5.184	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	368047			227.70- 287.70	266.33
12.736	12.736 (0.761)	96	221680			125.12- 185.12	160.41
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	106552	5.00000	5.026	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)
 13.093  13.093 (0.783)    43    333011                   278.33- 338.33   312.53
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 13.121  13.121 (0.784)    76    645358 5.00000    5.385  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 13.533  13.533 (0.809)    45    344583 5.00000    5.255  80.00- 120.00   100.00
 13.533  13.533 (0.809)    43     79825                    0.00-  52.04    23.17
 13.533  13.533 (0.809)    59     14101                    0.00-  34.17     4.09
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.697  13.697 (0.819)    76     88786 5.00000    5.218  80.00- 120.00   100.00
 13.697  13.697 (0.819)    41    238839                   236.04- 296.04   269.01
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 14.027  14.027 (0.839)    84    222338 5.00000    5.144  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49    285071                   97.79- 157.79   128.22
 14.027  14.027 (0.839)    51     88155                    9.84-  69.84    39.65
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 14.329  14.329 (0.857)    59    414427 5.00000    5.334  80.00- 120.00   100.00
 14.329  14.329 (0.857)    41    120423                    0.00-  56.82    29.06
 14.329  14.329 (0.857)    57     46417                    0.00-  41.10    11.20
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 14.439  14.439 (0.863)    73    649531 5.00000    5.438  80.00- 120.00   100.00
 14.439  14.439 (0.863)    57    143064                    0.00-  52.45    22.03
 14.439  14.439 (0.863)    41    155821                    0.00-  53.55    23.99
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 14.494  14.494 (0.866)    98    147744 5.00000    5.141  80.00- 120.00   100.00
 14.494  14.494 (0.866)    61    335771                   194.43- 254.43   227.27
 14.494  14.494 (0.866)    96    234428                   127.78- 187.78   158.67
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.878  14.878 (0.889)    57    365124 5.00000    5.424  80.00- 120.00   100.00
 14.878  14.878 (0.889)    43    226383                   33.20-  93.20    62.00
 14.878  14.878 (0.889)    86     66229                    0.00-  48.21    18.14
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 15.317  15.317 (0.916)    45    774141 5.00000    5.468  80.00- 120.00   100.00
 15.317  15.317 (0.916)    87    215089                    0.00-  57.99    27.78
 15.317  15.317 (0.916)    59     91112                    0.00-  41.78    11.77
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 15.345  15.345 (0.917)    63    434632 5.00000    5.258  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)
 15.345  15.345 (0.917)    65    140532                     1.84-  61.84    32.33
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 15.400  15.400 (0.921)    86     52842 5.00000    5.130  80.00- 120.00   100.00
 15.400  15.400 (0.921)    42     46272                    55.70- 115.70    87.57
 15.400  15.400 (0.921)    43    537898                   963.84-1023.84  1017.94
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 15.930  15.930 (0.952)    59    762264 5.00000    5.433  80.00- 120.00   100.00
 15.930  15.930 (0.952)    87    318046                    12.28-  72.28    41.72
 15.909  15.909 (0.951)    41    157356                     0.00-  49.55    20.64
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 16.324  16.324 (0.976)    98    163120 5.00000    5.395  80.00- 120.00   100.00
 16.324  16.324 (0.976)    61    331841                   172.98- 232.98   203.43
 16.324  16.324 (0.976)    96    256769                   124.81- 184.81   157.41
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 16.344  16.344 (0.977)    72    116948 5.00000    5.438  80.00- 120.00   100.00
 16.344  16.344 (0.977)    43    444809                   345.54- 405.54   380.35
 16.344  16.344 (0.977)    57     34929                     0.00-  59.64    29.87
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 16.696  16.696 (0.998)    42    272784 5.00000    5.454  80.00- 120.00   100.00
 16.696  16.696 (0.998)    71    108990                    10.37-  70.37    39.95
 16.696  16.696 (0.998)    72    116580                    13.30-  73.30    42.74
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 16.726  16.726 (1.000)   130    139071 5.00000           80.00- 120.00   100.00
 16.726  16.726 (1.000)   128    108439                    47.94- 107.94    77.97
 16.726  16.726 (1.000)    49    183440                   102.10- 162.10   131.90
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83    500510 5.00000    5.342  80.00- 120.00   100.00
 16.819  16.819 (1.006)    85    321094                    35.08-  95.08    64.15
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84    342107 5.00000    5.307  80.00- 120.00   100.00
 17.035  17.035 (1.018)    56    396647                    82.51- 142.51   115.94
 17.035  17.035 (1.018)    41    215000                    30.91-  90.91    62.85
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 17.035  17.035 (1.018)    97    509716 5.00000    5.230  80.00- 120.00   100.00
 17.066  17.066 (1.020)    99    328033                    34.55-  94.55    64.36
-------------------------------------------------------------------------------
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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
 17.250  17.250 (1.031)   119    484905 5.00000    5.984  80.00- 120.00   100.00
 17.250  17.250 (1.031)   117    505736                   75.13- 135.13   104.30
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 17.579  17.579 (1.051)    56    344852 5.00000    5.269  80.00- 120.00   100.00
 17.579  17.579 (1.051)    57   1040535                  266.38- 326.38   301.73
 17.579  17.579 (1.051)    41    272318                   47.04- 107.04    78.97
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 17.621  17.621 (0.966)    78    710562 5.00000    5.238  80.00- 120.00   100.00
 17.621  17.621 (0.966)    77    170041                    0.00-  54.04    23.93
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 17.621  17.621 (1.053)    65    195252 5.00000    4.840  80.00- 120.00   100.00
 17.621  17.621 (1.053)    67    115081                   32.47-  92.47    58.94
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 17.703  17.703 (0.971)    87    153953 5.00000    5.398  80.00- 120.00   100.00
 17.703  17.703 (0.971)    73    644533                  391.47- 451.47   418.66
 17.703  17.703 (0.971)    55    195247                   85.87- 145.87   126.82
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 17.744  17.744 (0.973)    62    319475 5.00000    5.355  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64    100820                    2.26-  62.26    31.56
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 17.847  17.847 (0.979)    57    208050 5.00000    5.624  80.00- 120.00   100.00
 17.847  17.847 (0.979)   100     77763                    9.17-  69.17    37.38
 17.847  17.847 (0.979)    43    373048                  158.08- 218.08   179.31
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 18.231  18.231 (1.000)   114    559350 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     89530                    0.00-  45.77    16.01
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 18.610  18.610 (1.021)   130    327770 5.00000    5.293  80.00- 120.00   100.00
 18.610  18.610 (1.021)    95    322433                   67.33- 127.33    98.37
 18.610  18.610 (1.021)    97    207341                   32.56-  92.56    63.26
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 18.834  18.834 (1.033)    83    433385 5.00000    5.479  80.00- 120.00   100.00
 18.834  18.834 (1.033)    55    342388                   48.63- 108.63    79.00
 18.834  18.834 (1.033)    56    113782                    0.00-  55.66    26.25
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 19.057  19.057 (1.045)    63    278907 5.00000    5.367  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)
 19.057  19.057 (1.045)    62    197147                    41.89- 101.89    70.69
 19.057  19.057 (1.045)    41    163166                    27.78-  87.78    58.50
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 19.213  19.213 (1.054)    88    189083 5.00000    5.533  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58    128643                    39.29-  99.29    68.04
 19.213  19.213 (1.054)    57     43051                     0.00-  52.49    22.77
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 19.503  19.503 (0.821)    83    494650 5.00000    5.710  80.00- 120.00   100.00
 19.503  19.503 (0.821)    85    318942                    34.81-  94.81    64.48
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 20.339  20.339 (1.116)    75    451702 5.00000    5.572  80.00- 120.00   100.00
 20.339  20.339 (1.116)    77    145402                     1.96-  61.96    32.19
 20.339  20.339 (1.116)    39    223252                    18.92-  78.92    49.42
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.557  20.557 (1.128)    43    520415 5.00000    5.610  80.00- 120.00   100.00
 20.557  20.557 (1.128)    58    207687                     9.48-  69.48    39.91
 20.557  20.557 (1.128)    85     91953                     0.00-  47.76    17.67
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 20.822  20.822 (1.142)    98    551679 5.00000    5.106  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     61740                     0.00-  41.37    11.19
 20.806  20.806 (1.141)   100    365653                    36.07-  96.07    66.28
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91    779063 5.00000    5.356  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92    466016                    30.04-  90.04    59.82
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 21.535  21.535 (0.906)    75    370905 5.00000    5.682  80.00- 120.00   100.00
 21.535  21.535 (0.906)    77    115416                     1.00-  61.00    31.12
 21.535  21.535 (0.906)    39    178248                    15.93-  75.93    48.06
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 22.000  22.000 (0.926)    97    309865 5.00000    5.442  80.00- 120.00   100.00
 22.000  22.000 (0.926)    99    194662                    32.15-  92.15    62.82
 22.000  22.000 (0.926)    83    263177                    55.54- 115.54    84.93
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 22.145  22.145 (0.932)   166    416552 5.00000    5.170  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129    299248                    40.48- 100.48    71.84
 22.145  22.145 (0.932)   131    286737                    38.27-  98.27    68.84
-------------------------------------------------------------------------------
```

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		
22.406	22.406 (0.943)	58	247494	5.00000	5.308	80.00- 120.00	100.00
22.377	22.377 (0.942)	43	457892			153.17- 213.17	185.01
22.406	22.406 (0.943)	100	56422			0.00- 52.35	22.80
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	508163	5.00000	5.937	80.00- 120.00	100.00
22.784	22.784 (0.959)	127	391584			46.57- 106.57	77.06
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	464049	5.00000	5.572	80.00- 120.00	100.00
23.045	23.045 (0.970)	109	441417			64.70- 124.70	95.12
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	466033	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	255815			26.51- 86.51	54.89
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	635431	5.00000	5.337	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	202224			2.37- 62.37	31.82
23.823	23.823 (1.003)	77	371895			28.30- 88.30	58.53
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	292410	5.00000	5.357	80.00- 120.00	100.00
23.906	23.906 (1.006)	91	910993			282.65- 342.65	311.55
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	306357	5.00000	5.238	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	602836			170.44- 230.44	196.78
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	289949	5.00000	5.241	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	610000			177.28- 237.28	210.38
172 Styrene					CAS #: 100-42-5		
24.731	24.731 (1.041)	104	419290	5.00000	5.318	80.00- 120.00	100.00
24.731	24.731 (1.041)	78	217899			22.29- 82.29	51.97
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	490609	5.00000	5.842	80.00- 120.00	100.00
25.068	25.068 (1.055)	171	252828			20.98- 80.98	51.53
175 Cumene					CAS #: 98-82-8		
25.182	25.182 (1.060)	105	957000	5.00000	5.346	80.00- 120.00	100.00
25.182	25.182 (1.060)	120	258398			0.00- 56.93	27.00

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		
25.485	25.485 (1.073)	174	250562	5.00000	5.008	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	304454			89.67- 149.67	121.51
25.485	25.485 (1.073)	176	243837			67.40- 127.40	97.32
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	617265	5.00000	5.523	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	400281			33.69- 93.69	64.85
182 Propylbenzene					CAS #: 103-65-1		
25.732	25.732 (1.083)	91	860575	5.00000	4.870	80.00- 120.00	100.00
25.732	25.732 (1.083)	120	201254			0.00- 53.87	23.39
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	676714	5.00000	4.535	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	208008			0.21- 60.21	30.74
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	585835	5.00000	4.646	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	293022			20.26- 80.26	50.02
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	585362	5.00000	4.626	80.00- 120.00	100.00
26.395	26.395 (1.111)	120	274862			17.68- 77.68	46.96
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	437268	5.00000	4.661	80.00- 120.00	100.00
26.794	26.794 (1.128)	148	283615			34.18- 94.18	64.86
26.794	26.794 (1.128)	111	177485			9.70- 69.70	40.59
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	388670	5.00000	4.409	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	248495			34.47- 94.47	63.93
26.919	26.919 (1.133)	111	148869			8.85- 68.85	38.30
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	498538	5.00000	5.138	80.00- 120.00	100.00
27.075	27.075 (1.139)	126	105305			0.00- 51.19	21.12
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	398024	5.00000	4.726	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	253783			33.68- 93.68	63.76
27.371	27.371 (1.152)	111	166727			11.24- 71.24	41.89
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	323638	5.00000	4.164	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)							
29.382	29.382 (1.237)	182	307907			63.91- 123.91	95.14
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	235503	5.00000	3.936	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	149189			31.90- 91.90	63.35
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	45888	0.50000	0.4334	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	6339			0.00- 42.99	13.81

QC Flag Legend

M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062410.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	139071	-2.68
123 1,4-Difluorobenze	579240	347544	810936	559350	-3.43
163 Chlorobenzene-d5	477544	286526	668562	466033	-2.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062410.d

Date : 24-JUN-2016 15:36

Client ID: Level 12

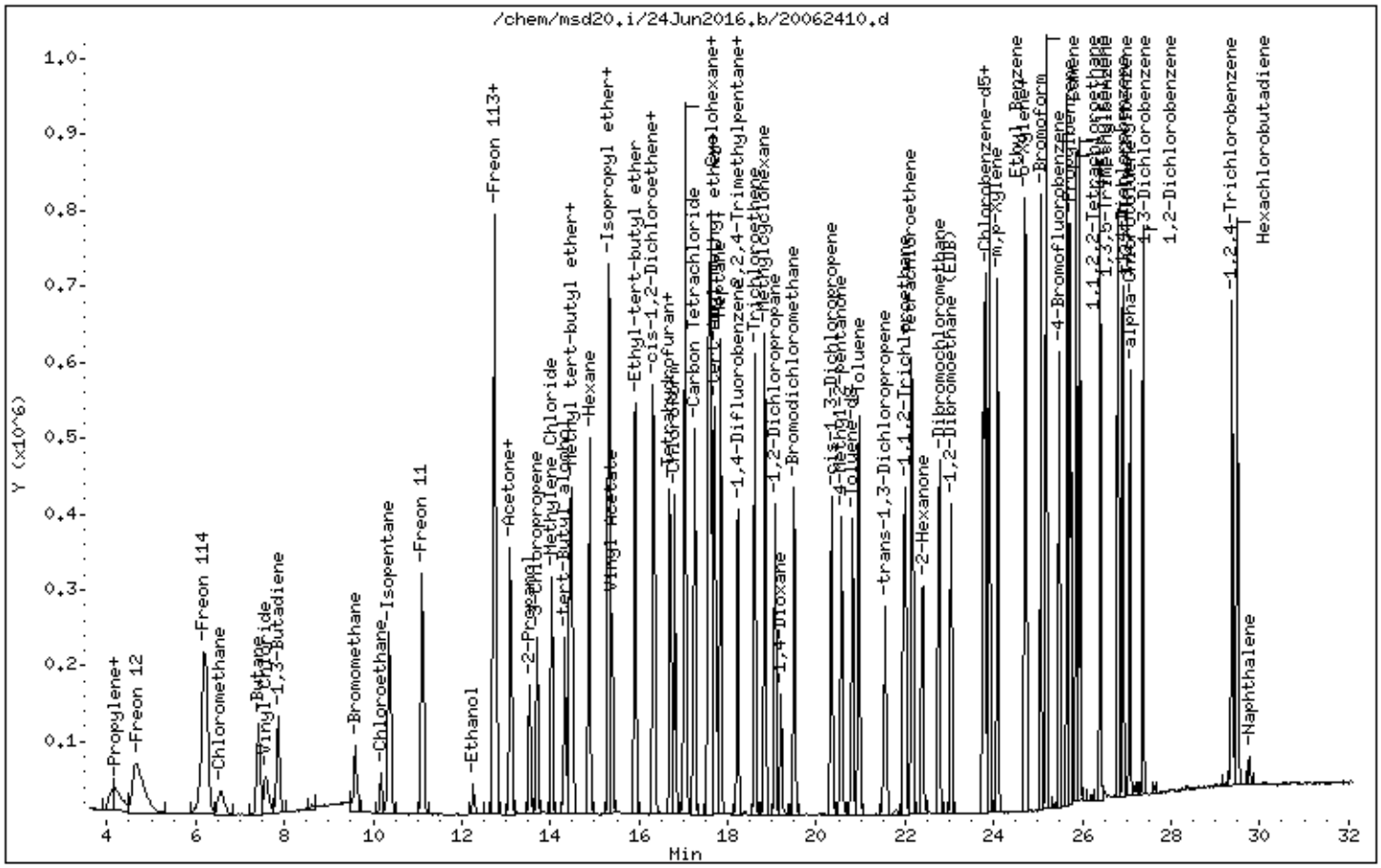
Instrument: msd20.i

Sample Info: 25mL# 2789-173

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062411.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 24-JUN-2016 16:15
Operator : sab Inst ID: msd20.i
Smp Info : 50mL# 2789-173
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 16:15 Cal File: 20062411.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		
4.166	4.166 (0.249)	41	375916	10.0000	10.012	80.00- 120.00	100.00
4.190	4.190 (0.250)	42	254498			37.70- 97.70	67.70
4.190	4.190 (0.250)	39	269178			41.61- 101.61	71.61
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	1203575	10.0000	9.917	80.00- 120.00	100.00
4.672	4.672 (0.279)	87	391633			2.54- 62.54	32.54
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	809635	10.0000	9.660	80.00- 120.00	100.00
6.215	6.215 (0.372)	137	257282			1.78- 61.78	31.78
6.215	6.215 (0.372)	85	1186969			116.61- 176.61	146.61
17 Chloromethane					CAS #: 74-87-3		
6.576	6.576 (0.393)	50	390863	10.0000	9.618	80.00- 120.00	100.00
6.576	6.576 (0.393)	52	129099			3.03- 63.03	33.03
23 Butane					CAS #: 106-97-8		
7.434	7.434 (0.444)	58	101583	10.0000	10.198	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)							
7.434	7.434 (0.444)	43	697697			656.82- 716.82	686.82
25 Vinyl Chloride					CAS #: 75-01-4		
7.590	7.590 (0.454)	62	449933	10.0000	9.926	80.00- 120.00	100.00
7.590	7.590 (0.454)	64	141743			1.50- 61.50	31.50
26 1,3-Butadiene					CAS #: 106-99-0		
7.868	7.868 (0.470)	54	339143	10.0000	9.778	80.00- 120.00	100.00
7.868	7.868 (0.470)	39	335736			69.00- 129.00	99.00
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	304608	10.0000	10.609	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	285111			63.60- 123.60	93.60
30 Chloroethane					CAS #: 75-00-3		
10.198	10.198 (0.610)	64	208388	10.0000	10.158	80.00- 120.00	100.00
10.198	10.198 (0.610)	49	53409			0.00- 55.63	25.63
10.198	10.198 (0.610)	66	68135			2.70- 62.70	32.70
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	350328	10.0000	9.895	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	510154			115.62- 175.62	145.62
10.367	10.367 (0.620)	42	456650			100.35- 160.35	130.35
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	1133236	10.0000	9.661	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	735628			34.91- 94.91	64.91
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	159198	10.0000	10.486	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	66424			11.72- 71.72	41.72
12.269	12.269 (0.734)	43	36602			0.00- 52.99	22.99
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	739615	10.0000	9.339	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	476992			34.49- 94.49	64.49
12.763	12.763 (0.763)	101	934778			96.39- 156.39	126.39
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	273862	10.0000	9.997	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	705751			227.70- 287.70	257.70
12.736	12.736 (0.761)	96	424821			125.12- 185.12	155.12
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	212187	10.0000	9.740	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)
 13.093  13.093 (0.783)    43    654233                   278.33- 338.33   308.33
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 13.120  13.120 (0.784)    76   1276821 10.0000   10.369  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 13.532  13.532 (0.809)    45    727221 10.0000   10.794  80.00- 120.00   100.00
 13.532  13.532 (0.809)    43    160300                    0.00-  52.04    22.04
 13.532  13.532 (0.809)    59     30352                    0.00-  34.17     4.17
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.697  13.697 (0.819)    76    188849 10.0000   10.802  80.00- 120.00   100.00
 13.697  13.697 (0.819)    41    502417                  236.04- 296.04   266.04
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 14.027  14.027 (0.839)    84    434819 10.0000    9.789  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49    555658                   97.79- 157.79   127.79
 14.027  14.027 (0.839)    51    173217                    9.84-  69.84    39.84
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 14.329  14.329 (0.857)    59    857252 10.0000   10.738  80.00- 120.00   100.00
 14.329  14.329 (0.857)    41    229957                    0.00-  56.82    26.82
 14.329  14.329 (0.857)    57     95127                    0.00-  41.10    11.10
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 14.439  14.439 (0.863)    73   1253803 10.0000   10.216  80.00- 120.00   100.00
 14.439  14.439 (0.863)    57    281497                    0.00-  52.45    22.45
 14.439  14.439 (0.863)    41    295255                    0.00-  53.55    23.55
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 14.493  14.493 (0.866)    98    288026 10.0000    9.753  80.00- 120.00   100.00
 14.493  14.493 (0.866)    61    646405                  194.43- 254.43   224.43
 14.493  14.493 (0.866)    96    454458                  127.78- 187.78   157.78
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.878  14.878 (0.889)    57    703262 10.0000   10.166  80.00- 120.00   100.00
 14.878  14.878 (0.889)    43    444464                   33.20-  93.20    63.20
 14.878  14.878 (0.889)    86    128044                    0.00-  48.21    18.21
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 15.317  15.317 (0.916)    45   1500664 10.0000   10.315  80.00- 120.00   100.00
 15.317  15.317 (0.916)    87    419966                    0.00-  57.99    27.99
 15.317  15.317 (0.916)    59    176714                    0.00-  41.78    11.78
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 15.345  15.345 (0.917)    63    847048 10.0000    9.972  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
82 1,1-Dichloroethane (continued)							
15.345	15.345 (0.917)	65	269722			1.84- 61.84	31.84
86 Vinyl Acetate					CAS #: 108-05-4		
15.399	15.399 (0.921)	86	114590	10.0000	10.827	80.00- 120.00	100.00
15.399	15.399 (0.921)	42	98208			55.70- 115.70	85.70
15.399	15.399 (0.921)	43	1138841			963.84-1023.84	993.84
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
15.930	15.930 (0.952)	59	1505295	10.0000	10.441	80.00- 120.00	100.00
15.930	15.930 (0.952)	87	636412			12.28- 72.28	42.28
15.930	15.930 (0.952)	41	294253			0.00- 49.55	19.55
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.323	16.323 (0.976)	98	318521	10.0000	10.252	80.00- 120.00	100.00
16.323	16.323 (0.976)	61	646521			172.98- 232.98	202.98
16.323	16.323 (0.976)	96	493087			124.81- 184.81	154.81
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	234528	10.0000	10.613	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	880737			345.54- 405.54	375.54
16.344	16.344 (0.977)	57	69508			0.00- 59.64	29.64
99 Tetrahydrofuran					CAS #: 109-99-9		
16.695	16.695 (0.998)	42	543379	10.0000	10.573	80.00- 120.00	100.00
16.695	16.695 (0.998)	71	219388			10.37- 70.37	40.37
16.695	16.695 (0.998)	72	235307			13.30- 73.30	43.30
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	142903	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	111373			47.94- 107.94	77.94
16.726	16.726 (1.000)	49	188774			102.10- 162.10	132.10
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	969788	10.0000	10.073	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	631129			35.08- 95.08	65.08
102 Cyclohexane					CAS #: 110-82-7		
17.034	17.034 (1.018)	84	678918	10.0000	10.249	80.00- 120.00	100.00
17.034	17.034 (1.018)	56	763860			82.51- 142.51	112.51
17.034	17.034 (1.018)	41	413544			30.91- 90.91	60.91
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.065 (1.020)	97	987794	10.0000	9.864	80.00- 120.00	100.00
17.065	17.065 (1.020)	99	637621			34.55- 94.55	64.55

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

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 17.250  17.250 (1.031)   119    962354 10.0000   11.557  80.00- 120.00   100.00
 17.250  17.250 (1.031)   117   1011757                   75.13- 135.13   105.13
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 17.579  17.579 (1.051)    56    692562 10.0000   10.298  80.00- 120.00   100.00
 17.579  17.579 (1.051)    57   2052608                  266.38- 326.38   296.38
 17.579  17.579 (1.051)    41    533581                   47.04- 107.04    77.04
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 17.620  17.620 (0.966)    78   1366355 10.0000    9.726  80.00- 120.00   100.00
 17.620  17.620 (0.966)    77    328520                    0.00-  54.04    24.04
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 17.641  17.641 (1.055)    65    199751 5.00000    4.819  80.00- 120.00   100.00
 17.641  17.641 (1.055)    67    124776                   32.47-  92.47    62.47
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 17.703  17.703 (0.971)    87    310160 10.0000   10.501  80.00- 120.00   100.00
 17.703  17.703 (0.971)    73   1307226                  391.47- 451.47   421.47
 17.703  17.703 (0.971)    55    359392                   85.87- 145.87   115.87
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 17.744  17.744 (0.973)    62    601796 10.0000    9.742  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64    194134                    2.26-  62.26    32.26
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 17.847  17.847 (0.979)    57    396064 10.0000   10.339  80.00- 120.00   100.00
 17.847  17.847 (0.979)   100    155131                    9.17-  69.17    39.17
 17.847  17.847 (0.979)    43    744919                  158.08- 218.08   188.08
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 18.231  18.231 (1.000)   114    579240 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     91324                    0.00-  45.77    15.77
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 18.610  18.610 (1.021)   130    637421 10.0000    9.940  80.00- 120.00   100.00
 18.610  18.610 (1.021)    95    620393                   67.33- 127.33    97.33
 18.610  18.610 (1.021)    97    398783                   32.56-  92.56    62.56
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 18.833  18.833 (1.033)    83    850230 10.0000   10.380  80.00- 120.00   100.00
 18.833  18.833 (1.033)    55    668499                   48.63- 108.63    78.63
 18.833  18.833 (1.033)    56    218154                    0.00-  55.66    25.66
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 19.079  19.079 (1.046)    63    542505 10.0000   10.080  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)
 19.079  19.079 (1.046)    62    389992                    41.89- 101.89    71.89
 19.056  19.056 (1.045)    41    313442                    27.78-  87.78    57.78
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 19.213  19.213 (1.054)    88    370119 10.0000   10.459  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58    256455                    39.29-  99.29    69.29
 19.213  19.213 (1.054)    57     83230                     0.00-  52.49    22.49
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 19.503  19.503 (0.821)    83    972440 10.0000   10.955  80.00- 120.00   100.00
 19.503  19.503 (0.821)    85    630246                    34.81-  94.81    64.81
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 20.338  20.338 (1.116)    75    919547 10.0000   10.954  80.00- 120.00   100.00
 20.338  20.338 (1.116)    77    293860                     1.96-  61.96    31.96
 20.338  20.338 (1.116)    39    449874                    18.92-  78.92    48.92
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.556  20.556 (1.128)    43   1093873 10.0000   11.388  80.00- 120.00   100.00
 20.556  20.556 (1.128)    58    431858                     9.48-  69.48    39.48
 20.556  20.556 (1.128)    85    194312                     0.00-  47.76    17.76
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 20.821  20.821 (1.142)    98    564533 5.00000    5.046  80.00- 120.00   100.00
 20.821  20.821 (1.142)    70     64197                     0.00-  41.37    11.37
 20.821  20.821 (1.142)   100    372962                    36.07-  96.07    66.07
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91   1529488 10.0000   10.155  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92    918322                    30.04-  90.04    60.04
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 21.564  21.564 (0.908)    75    775689 10.0000   11.596  80.00- 120.00   100.00
 21.564  21.564 (0.908)    77    240452                     1.00-  61.00    31.00
 21.535  21.535 (0.906)    39    356283                    15.93-  75.93    45.93
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 21.999  21.999 (0.926)    97    595989 10.0000   10.214  80.00- 120.00   100.00
 21.999  21.999 (0.926)    99    370395                    32.15-  92.15    62.15
 21.999  21.999 (0.926)    83    509818                    55.54- 115.54    85.54
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 22.174  22.174 (0.933)   166    826072 10.0000   10.006  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129    582240                    40.48- 100.48    70.48
 22.145  22.145 (0.932)   131    563949                    38.27-  98.27    68.27
-------------------------------------------------------------------------------
```

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

  158 2-Hexanone                                     CAS #: 591-78-6
 22.377  22.377 (0.942)    58    544724 10.0000   11.401  80.00- 120.00   100.00
 22.377  22.377 (0.942)    43    997772                  153.17- 213.17   183.17
 22.406  22.406 (0.943)   100    121735                    0.00-  52.35    22.35
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 22.784  22.784 (0.959)   129   1054905 10.0000   12.027  80.00- 120.00   100.00
 22.784  22.784 (0.959)   127    807766                   46.57- 106.57    76.57
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 23.045  23.045 (0.970)   107    915180 10.0000   10.724  80.00- 120.00   100.00
 23.045  23.045 (0.970)   109    866684                   64.70- 124.70    94.70
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    477544 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    269869                   26.51-  86.51    56.51
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 23.823  23.823 (1.003)   112   1238927 10.0000   10.155  80.00- 120.00   100.00
 23.823  23.823 (1.003)   114    401035                    2.37-  62.37    32.37
 23.823  23.823 (1.003)    77    722282                   28.30-  88.30    58.30
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 23.905  23.905 (1.006)   106    591992 10.0000   10.584  80.00- 120.00   100.00
 23.905  23.905 (1.006)    91   1850878                  282.65- 342.65   312.65
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 24.091  24.091 (1.014)   106    626302 10.0000   10.451  80.00- 120.00   100.00
 24.091  24.091 (1.014)    91   1255349                  170.44- 230.44   200.44
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 24.710  24.710 (1.040)   106    606376 10.0000   10.697  80.00- 120.00   100.00
 24.710  24.710 (1.040)    91   1256886                  177.28- 237.28   207.28
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 24.730  24.730 (1.041)   104    912357 10.0000   11.293  80.00- 120.00   100.00
 24.730  24.730 (1.041)    78    477051                   22.29-  82.29    52.29
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 25.068  25.068 (1.055)   173   1080203 10.0000   12.552  80.00- 120.00   100.00
 25.068  25.068 (1.055)   171    550720                   20.98-  80.98    50.98
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 25.181  25.181 (1.060)   105   2004072 10.0000   10.926  80.00- 120.00   100.00
 25.181  25.181 (1.060)   120    539699                    0.00-  56.93    26.93
-------------------------------------------------------------------------------
```

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

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    268912 5.00000    5.245  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    321802                   89.67- 149.67   119.67
 25.485  25.485 (1.073)   176    261915                   67.40- 127.40    97.40
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 25.656  25.656 (1.080)    83   1241971 10.0000   10.845  80.00- 120.00   100.00
 25.656  25.656 (1.080)    85    790960                   33.69-  93.69    63.69
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 25.731  25.731 (1.083)    91   1767389 10.0000    9.762  80.00- 120.00   100.00
 25.731  25.731 (1.083)   120    421838                    0.00-  53.87    23.87
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 25.864  25.864 (1.089)   105   1381715 10.0000    9.036  80.00- 120.00   100.00
 25.864  25.864 (1.089)   120    417386                    0.21-  60.21    30.21
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 25.940  25.940 (1.092)   105   1229428 10.0000    9.515  80.00- 120.00   100.00
 25.940  25.940 (1.092)   120    617900                   20.26-  80.26    50.26
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 26.395  26.395 (1.111)   105   1155642 10.0000    8.912  80.00- 120.00   100.00
 26.395  26.395 (1.111)   120    551028                   17.68-  77.68    47.68
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 26.794  26.794 (1.128)   146    922267 10.0000    9.594  80.00- 120.00   100.00
 26.794  26.794 (1.128)   148    591892                   34.18-  94.18    64.18
 26.794  26.794 (1.128)   111    366106                    9.70-  69.70    39.70
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 26.919  26.919 (1.133)   146    807729 10.0000    8.943  80.00- 120.00   100.00
 26.919  26.919 (1.133)   148    520748                   34.47-  94.47    64.47
 26.919  26.919 (1.133)   111    313787                    8.85-  68.85    38.85
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 27.075  27.075 (1.139)    91   1184987 10.0000   11.919  80.00- 120.00   100.00
 27.075  27.075 (1.139)   126    251048                    0.00-  51.19    21.19
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 27.371  27.371 (1.152)   146    840999 10.0000    9.746  80.00- 120.00   100.00
 27.371  27.371 (1.152)   148    535518                   33.68-  93.68    63.68
 27.371  27.371 (1.152)   111    346820                   11.24-  71.24    41.24
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 29.382  29.382 (1.237)   180    793603 10.0000    9.965  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)							
29.382	29.382 (1.237)	182	745262			63.91- 123.91	93.91
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	556291	10.0000	9.074	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	344327			31.90- 91.90	61.90
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	115361	1.00000	1.063	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	14987			0.00- 42.99	12.99

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062411.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	142903	0.00
123 1,4-Difluorobenze	579240	347544	810936	579240	0.00
163 Chlorobenzene-d5	477544	286526	668562	477544	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062411.d

Date : 24-JUN-2016 16:15

Client ID: Level 13

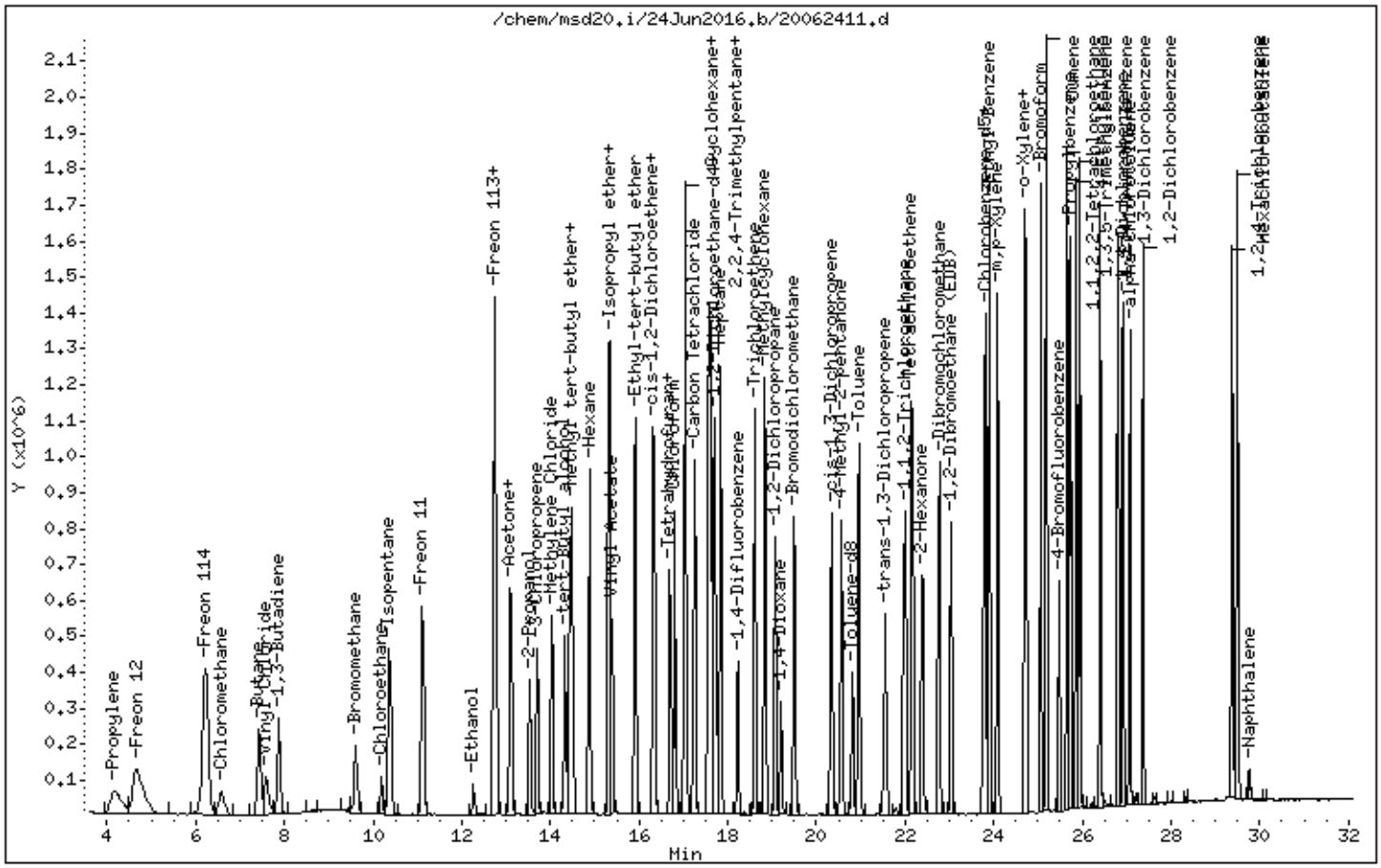
Instrument: msd20.i

Sample Info: 50mL# 2789-173

Operator: sab

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062412.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 24-JUN-2016 17:00
Operator : ef Inst ID: msd20.i
Smp Info : 100mL# 2789-173
Misc Info : 20ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 17:00 Cal File: 20062412.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		
4.166	4.166 (0.249)	41	759350	20.0000	19.718	80.00- 120.00	100.00
4.166	4.166 (0.249)	42	509428			37.70- 97.70	67.09
4.166	4.166 (0.249)	39	538120			41.61- 101.61	70.87
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	2333416	20.0000	18.745	80.00- 120.00	100.00
4.672	4.672 (0.279)	87	751690			2.54- 62.54	32.21
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	1584121	20.0000	18.427	80.00- 120.00	100.00
6.239	6.239 (0.373)	137	505990			1.78- 61.78	31.94
6.215	6.215 (0.372)	85	2308215			116.61- 176.61	145.71
17 Chloromethane					CAS #: 74-87-3		
6.576	6.576 (0.393)	50	758773	20.0000	18.204	80.00- 120.00	100.00
6.576	6.576 (0.393)	52	246852			3.03- 63.03	32.53
23 Butane					CAS #: 106-97-8		
7.434	7.434 (0.444)	58	202034	20.0000	19.775	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)
  7.434   7.434 (0.444)    43   1387714                  656.82- 716.82   686.87
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.590   7.590 (0.454)    62    876393 20.0000   18.850  80.00- 120.00   100.00
  7.590   7.590 (0.454)    64    277765                    1.50-  61.50    31.69
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  7.868   7.868 (0.470)    54    678888 20.0000   19.084  80.00- 120.00   100.00
  7.868   7.868 (0.470)    39    661501                   69.00- 129.00    97.44
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.596   9.596 (0.574)    94    626297 20.0000   21.268  80.00- 120.00   100.00
  9.596   9.596 (0.574)    96    589059                   63.60- 123.60    94.05
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.198  10.198 (0.610)    64    415441 20.0000   19.744  80.00- 120.00   100.00
 10.198  10.198 (0.610)    49    106333                    0.00-  55.63    25.60
 10.198  10.198 (0.610)    66    133264                    2.70-  62.70    32.08
-------------------------------------------------------------------------------
   31 Isopentane                                    CAS #: 78-78-4
 10.367  10.367 (0.620)    57    696631 20.0000   19.185  80.00- 120.00   100.00
 10.367  10.367 (0.620)    43   1006603                  115.62- 175.62   144.50
 10.367  10.367 (0.620)    42    894028                  100.35- 160.35   128.34
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 11.114  11.114 (0.664)   101   2201080 20.0000   18.295  80.00- 120.00   100.00
 11.114  11.114 (0.664)   103   1421041                   34.91-  94.91    64.56
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 12.269  12.269 (0.734)    45    329242 20.0000   21.144  80.00- 120.00   100.00
 12.269  12.269 (0.734)    46    135521                   11.72-  71.72    41.16
 12.269  12.269 (0.734)    43     72089                    0.00-  52.99    21.90
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.763  12.763 (0.763)   151   1486722 20.0000   18.303  80.00- 120.00   100.00
 12.763  12.763 (0.763)   153    951231                   34.49-  94.49    63.98
 12.763  12.763 (0.763)   101   1856410                   96.39- 156.39   124.87
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.736  12.736 (0.761)    98    545756 20.0000   19.424  80.00- 120.00   100.00
 12.736  12.736 (0.761)    61   1401937                  227.70- 287.70   256.88
 12.736  12.736 (0.761)    96    853896                  125.12- 185.12   156.46
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 13.093  13.093 (0.783)    58    429596 20.0000   19.227  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)
 13.093  13.093 (0.783)    43   1331740                  278.33- 338.33   310.00
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 13.120  13.120 (0.784)    76   2590168 20.0000   20.509  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 13.532  13.532 (0.809)    45   1530565 20.0000   22.150  80.00- 120.00   100.00
 13.532  13.532 (0.809)    43    316969                    0.00-  52.04    20.71
 13.532  13.532 (0.809)    59     62000                    0.00-  34.17     4.05
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.697  13.697 (0.819)    76    394053 20.0000   21.976  80.00- 120.00   100.00
 13.697  13.697 (0.819)    41   1046521                  236.04- 296.04   265.58
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 14.027  14.027 (0.839)    84    853679 20.0000   18.739  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49   1081652                   97.79- 157.79   126.70
 14.027  14.027 (0.839)    51    334252                    9.84-  69.84    39.15
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 14.329  14.329 (0.857)    59   1775706 20.0000   21.687  80.00- 120.00   100.00
 14.329  14.329 (0.857)    41    445139                    0.00-  56.82    25.07
 14.329  14.329 (0.857)    57    200381                    0.00-  41.10    11.28
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 14.439  14.439 (0.863)    73   2523651 20.0000   20.049  80.00- 120.00   100.00
 14.439  14.439 (0.863)    57    563850                    0.00-  52.45    22.34
 14.439  14.439 (0.863)    41    559001                    0.00-  53.55    22.15
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 14.493  14.493 (0.866)    98    577657 20.0000   19.071  80.00- 120.00   100.00
 14.493  14.493 (0.866)    61   1276782                  194.43- 254.43   221.03
 14.493  14.493 (0.866)    96    904414                  127.78- 187.78   156.57
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.878  14.878 (0.889)    57   1399719 20.0000   19.728  80.00- 120.00   100.00
 14.878  14.878 (0.889)    43    883339                   33.20-  93.20    63.11
 14.878  14.878 (0.889)    86    255033                    0.00-  48.21    18.22
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 15.317  15.317 (0.916)    45   3002635 20.0000   20.124  80.00- 120.00   100.00
 15.317  15.317 (0.916)    87    837262                    0.00-  57.99    27.88
 15.317  15.317 (0.916)    59    349193                    0.00-  41.78    11.63
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 15.345  15.345 (0.917)    63   1666727 20.0000   19.132  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
82 1,1-Dichloroethane (continued)							
15.345	15.345 (0.917)	65	530149			1.84- 61.84	31.81
86 Vinyl Acetate					CAS #: 108-05-4		
15.399	15.399 (0.921)	86	243568	20.0000	22.439	80.00- 120.00	100.00
15.399	15.399 (0.921)	42	200639			55.70- 115.70	82.37
15.399	15.399 (0.921)	43	2366281			963.84-1023.84	971.51
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
15.929	15.929 (0.952)	59	3059360	20.0000	20.690	80.00- 120.00	100.00
15.929	15.929 (0.952)	87	1300529			12.28- 72.28	42.51
15.929	15.929 (0.952)	41	574759			0.00- 49.55	18.79
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.323	16.323 (0.976)	98	630295	20.0000	19.780	80.00- 120.00	100.00
16.323	16.323 (0.976)	61	1269482			172.98- 232.98	201.41
16.323	16.323 (0.976)	96	978219			124.81- 184.81	155.20
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	471611	20.0000	20.808	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	1769929			345.54- 405.54	375.29
16.344	16.344 (0.977)	57	140104			0.00- 59.64	29.71
99 Tetrahydrofuran					CAS #: 109-99-9		
16.695	16.695 (0.998)	42	1090525	20.0000	20.690	80.00- 120.00	100.00
16.695	16.695 (0.998)	71	449013			10.37- 70.37	41.17
16.695	16.695 (0.998)	72	483370			13.30- 73.30	44.32
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	146568	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	116649			47.94- 107.94	79.59
16.726	16.726 (1.000)	49	192381			102.10- 162.10	131.26
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	1916032	20.0000	19.404	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	1238053			35.08- 95.08	64.62
102 Cyclohexane					CAS #: 110-82-7		
17.034	17.034 (1.018)	84	1354871	20.0000	19.942	80.00- 120.00	100.00
17.034	17.034 (1.018)	56	1519096			82.51- 142.51	112.12
17.034	17.034 (1.018)	41	812404			30.91- 90.91	59.96
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.065 (1.020)	97	2001587	20.0000	19.487	80.00- 120.00	100.00
17.065	17.065 (1.020)	99	1284436			34.55- 94.55	64.17

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

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 17.250  17.250 (1.031)   119   1959986 20.0000   22.948  80.00- 120.00   100.00
 17.250  17.250 (1.031)   117   2056382                   75.13- 135.13   104.92
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 17.579  17.579 (1.051)    56   1416606 20.0000   20.538  80.00- 120.00   100.00
 17.579  17.579 (1.051)    57   4198951                  266.38- 326.38   296.41
 17.579  17.579 (1.051)    41   1087588                   47.04- 107.04    76.77
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 17.620  17.620 (0.966)    78   2746114 20.0000   18.973  80.00- 120.00   100.00
 17.620  17.620 (0.966)    77    636277                    0.00-  54.04    23.17
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 17.641  17.641 (1.055)    65    212124 5.00000    4.990  80.00- 120.00   100.00
 17.620  17.620 (1.053)    67    149705                   32.47-  92.47    70.57
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 17.703  17.703 (0.971)    87    633441 20.0000   20.817  80.00- 120.00   100.00
 17.703  17.703 (0.971)    73   2691693                  391.47- 451.47   424.93
 17.703  17.703 (0.971)    55    722904                   85.87- 145.87   114.12
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 17.744  17.744 (0.973)    62   1193636 20.0000   18.754  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64    390773                    2.26-  62.26    32.74
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 17.847  17.847 (0.979)    57    823477 20.0000   20.865  80.00- 120.00   100.00
 17.847  17.847 (0.979)   100    305732                    9.17-  69.17    37.13
 17.847  17.847 (0.979)    43   1485649                  158.08- 218.08   180.41
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 18.231  18.231 (1.000)   114    596773 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88     97945                    0.00-  45.77    16.41
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 18.610  18.610 (1.021)   130   1297643 20.0000   19.642  80.00- 120.00   100.00
 18.610  18.610 (1.021)    95   1245492                   67.33- 127.33    95.98
 18.610  18.610 (1.021)    97    802142                   32.56-  92.56    61.82
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 18.833  18.833 (1.033)    83   1709895 20.0000   20.262  80.00- 120.00   100.00
 18.833  18.833 (1.033)    55   1326644                   48.63- 108.63    77.59
 18.833  18.833 (1.033)    56    431477                    0.00-  55.66    25.23
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 19.056  19.056 (1.045)    63   1086614 20.0000   19.597  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)
 19.056  19.056 (1.045)    62    779965                    41.89- 101.89    71.78
 19.056  19.056 (1.045)    41    612573                    27.78-  87.78    56.37
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 19.213  19.213 (1.054)    88    745382 20.0000   20.445  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58    512633                    39.29-  99.29    68.77
 19.213  19.213 (1.054)    57    160529                     0.00-  52.49    21.54
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 19.503  19.503 (0.821)    83   1971779 20.0000   20.788  80.00- 120.00   100.00
 19.503  19.503 (0.821)    85   1259012                    34.81-  94.81    63.85
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 20.338  20.338 (1.116)    75   1934122 20.0000   22.363  80.00- 120.00   100.00
 20.338  20.338 (1.116)    77    611537                     1.96-  61.96    31.62
 20.338  20.338 (1.116)    39    926967                    18.92-  78.92    47.93
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.556  20.556 (1.128)    43   2251031 20.0000   22.746  80.00- 120.00   100.00
 20.556  20.556 (1.128)    58    907063                     9.48-  69.48    40.30
 20.556  20.556 (1.128)    85    402497                     0.00-  47.76    17.88
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 20.806  20.806 (1.141)    98    581449 5.00000    5.044  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     65605                     0.00-  41.37    11.28
 20.806  20.806 (1.141)   100    395456                    36.07-  96.07    68.01
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91   3133172 20.0000   20.191  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92   1869493                    30.04-  90.04    59.67
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 21.535  21.535 (0.906)    75   1581969 20.0000   22.131  80.00- 120.00   100.00
 21.535  21.535 (0.906)    77    502136                     1.00-  61.00    31.74
 21.535  21.535 (0.906)    39    732014                    15.93-  75.93    46.27
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 21.999  21.999 (0.926)    97   1181152 20.0000   18.943  80.00- 120.00   100.00
 21.999  21.999 (0.926)    99    741068                    32.15-  92.15    62.74
 21.999  21.999 (0.926)    83   1010959                    55.54- 115.54    85.59
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 22.145  22.145 (0.932)   166   1680785 20.0000   19.051  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129   1204463                    40.48- 100.48    71.66
 22.145  22.145 (0.932)   131   1160429                    38.27-  98.27    69.04
-------------------------------------------------------------------------------
```

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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
 22.377  22.377 (0.942)    58   1195808 20.0000   23.421  80.00- 120.00   100.00
 22.377  22.377 (0.942)    43   2141500                  153.17- 213.17   179.08
 22.377  22.377 (0.942)   100    264851                    0.00-  52.35    22.15
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 22.784  22.784 (0.959)   129   2179400 20.0000   23.252  80.00- 120.00   100.00
 22.784  22.784 (0.959)   127   1691754                   46.57- 106.57    77.62
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 23.045  23.045 (0.970)   107   1887790 20.0000   20.700  80.00- 120.00   100.00
 23.045  23.045 (0.970)   109   1775158                   64.70- 124.70    94.03
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 23.761  23.761 (1.000)   117    510305 5.00000           80.00- 120.00   100.00
 23.761  23.761 (1.000)    82    281858                   26.51-  86.51    55.23
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 23.823  23.823 (1.003)   112   2538461 20.0000   19.471  80.00- 120.00   100.00
 23.823  23.823 (1.003)   114    815442                    2.37-  62.37    32.12
 23.823  23.823 (1.003)    77   1465764                   28.30-  88.30    57.74
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 23.905  23.905 (1.006)   106   1244449 20.0000   20.822  80.00- 120.00   100.00
 23.905  23.905 (1.006)    91   3854780                  282.65- 342.65   309.76
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 24.091  24.091 (1.014)   106   1330806 20.0000   20.782  80.00- 120.00   100.00
 24.091  24.091 (1.014)    91   2620787                  170.44- 230.44   196.93
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 24.710  24.710 (1.040)   106   1278087 20.0000   21.100  80.00- 120.00   100.00
 24.710  24.710 (1.040)    91   2643870                  177.28- 237.28   206.86
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 24.730  24.730 (1.041)   104   1995046 20.0000   23.109  80.00- 120.00   100.00
 24.730  24.730 (1.041)    78   1010124                   22.29-  82.29    50.63
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 25.068  25.068 (1.055)   173   2349221 20.0000   25.546  80.00- 120.00   100.00
 25.068  25.068 (1.055)   171   1217958                   20.98-  80.98    51.85
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 25.181  25.181 (1.060)   105   4211618 20.0000   21.487  80.00- 120.00   100.00
 25.181  25.181 (1.060)   120   1155030                    0.00-  56.93    27.42
-------------------------------------------------------------------------------
```

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		
25.466	25.466 (1.072)	174	293287	5.00000	5.353	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	348499			89.67- 149.67	118.83
25.466	25.466 (1.072)	176	285473			67.40- 127.40	97.34
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	2551249	20.0000	20.847	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	1649874			33.69- 93.69	64.67
182 Propylbenzene					CAS #: 103-65-1		
25.731	25.731 (1.083)	91	3864240	20.0000	19.973	80.00- 120.00	100.00
25.731	25.731 (1.083)	120	919709			0.00- 53.87	23.80
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	3024207	20.0000	18.508	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	931419			0.21- 60.21	30.80
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	2647916	20.0000	19.178	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	1337702			20.26- 80.26	50.52
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	2449014	20.0000	17.674	80.00- 120.00	100.00
26.395	26.395 (1.111)	120	1162845			17.68- 77.68	47.48
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	1955099	20.0000	19.032	80.00- 120.00	100.00
26.794	26.794 (1.128)	148	1250650			34.18- 94.18	63.97
26.794	26.794 (1.128)	111	777120			9.70- 69.70	39.75
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	1748121	20.0000	18.112	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	1121435			34.47- 94.47	64.15
26.919	26.919 (1.133)	111	671693			8.85- 68.85	38.42
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	2767717	20.0000	26.051	80.00- 120.00	100.00
27.075	27.075 (1.139)	126	590133			0.00- 51.19	21.32
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	1793814	20.0000	19.453	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	1145445			33.68- 93.68	63.86
27.371	27.371 (1.152)	111	732357			11.24- 71.24	40.83
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	1628741	20.0000	19.139	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)							
29.382	29.382 (1.237)	182	1549101			63.91- 123.91	95.11
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	1233318	20.0000	18.826	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	772968			31.90- 91.90	62.67
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	238987	2.00000	2.061	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	31806			0.00- 42.99	13.31

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20062412.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	146568	2.56
123 1,4-Difluorobenze	579240	347544	810936	596773	3.03
163 Chlorobenzene-d5	477544	286526	668562	510305	6.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062412.d

Date : 24-JUN-2016 17:00

Client ID: Level 15

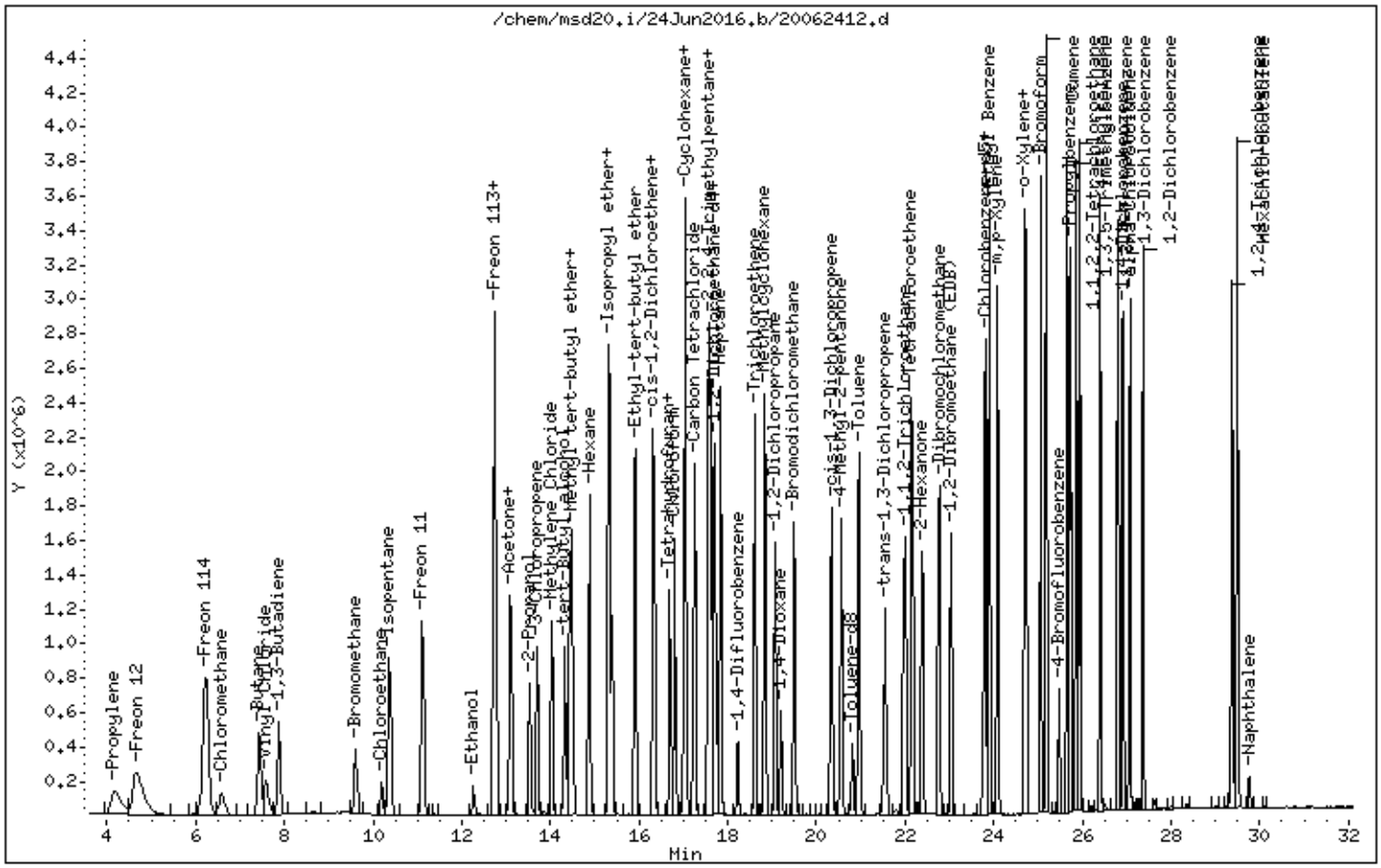
Instrument: msd20.i

Sample Info: 100mL# 2789-173

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/24Jun2016.b/20062413.d
Lab Smp Id: ICAL Client Smp ID: Level 16
Inj Date : 24-JUN-2016 18:55
Operator : ea Inst ID: msd20.i
Smp Info : 100mL# 2789-173
Misc Info : 40ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/24Jun2016.b/2016l0624a.m
Meth Date : 28-Jun-2016 15:03 sblack Quant Type: ISTD
Cal Date : 24-JUN-2016 18:55 Cal File: 20062413.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		
4.190	4.190 (0.251)	41	1553777	40.0000	36.098	80.00- 120.00	100.00
4.190	4.190 (0.251)	42	1041982			37.70- 97.70	67.06
4.190	4.190 (0.251)	39	1101303			41.61- 101.61	70.88
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	4592794	40.0000	33.010	80.00- 120.00	100.00
4.672	4.672 (0.279)	87	1480958			2.54- 62.54	32.25
15 Freon 114					CAS #: 76-14-2		
6.239	6.239 (0.373)	135	3208956	40.0000	33.397	80.00- 120.00	100.00
6.239	6.239 (0.373)	137	1025448			1.78- 61.78	31.96
6.239	6.239 (0.373)	85	4664743			116.61- 176.61	145.37
17 Chloromethane					CAS #: 74-87-3		
6.601	6.601 (0.395)	50	1554140	40.0000	33.360	80.00- 120.00	100.00
6.625	6.625 (0.396)	52	501744			3.03- 63.03	32.28
23 Butane					CAS #: 106-97-8		
7.451	7.451 (0.445)	58	411605	40.0000	36.046	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)							
7.434	7.434 (0.444)	43	2793198			656.82- 716.82	678.61
25 Vinyl Chloride					CAS #: 75-01-4		
7.590	7.590 (0.454)	62	1758788	40.0000	33.846	80.00- 120.00	100.00
7.590	7.590 (0.454)	64	561331			1.50- 61.50	31.92
26 1,3-Butadiene					CAS #: 106-99-0		
7.885	7.885 (0.471)	54	1388095	40.0000	34.911	80.00- 120.00	100.00
7.885	7.885 (0.471)	39	1326616			69.00- 129.00	95.57
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	1276156	40.0000	38.772	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	1198803			63.60- 123.60	93.94
30 Chloroethane					CAS #: 75-00-3		
10.198	10.198 (0.610)	64	849694	40.0000	36.131	80.00- 120.00	100.00
10.198	10.198 (0.610)	49	210043			0.00- 55.63	24.72
10.198	10.198 (0.610)	66	269205			2.70- 62.70	31.68
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	1405360	40.0000	34.627	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	2027692			115.62- 175.62	144.28
10.367	10.367 (0.620)	42	1788736			100.35- 160.35	127.28
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	4439633	40.0000	33.016	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	2882057			34.91- 94.91	64.92
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	683603	40.0000	39.279	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	275499			11.72- 71.72	40.30
12.269	12.269 (0.734)	43	144844			0.00- 52.99	21.19
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	3086628	40.0000	33.999	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	1984200			34.49- 94.49	64.28
12.763	12.763 (0.763)	101	3812430			96.39- 156.39	123.51
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	1119415	40.0000	35.647	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	2839812			227.70- 287.70	253.69
12.736	12.736 (0.761)	96	1772549			125.12- 185.12	158.35
52 Acetone					CAS #: 67-64-1		
13.066	13.066 (0.781)	58	898242	40.0000	35.969	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)
 13.066  13.066 (0.781)    43   2718283                  278.33- 338.33   302.62
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 13.120  13.120 (0.784)    76   5354216 40.0000   37.930  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 13.533  13.533 (0.809)    45   3236990 40.0000   41.912  80.00- 120.00   100.00(A)
 13.533  13.533 (0.809)    43    642516                    0.00-  52.04    19.85
 13.533  13.533 (0.809)    59    133964                    0.00-  34.17     4.14
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.697  13.697 (0.819)    76    795504 40.0000   39.693  80.00- 120.00   100.00
 13.697  13.697 (0.819)    41   2096353                  236.04- 296.04   263.53
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 14.027  14.027 (0.839)    84   1714544 40.0000   33.672  80.00- 120.00   100.00
 14.027  14.027 (0.839)    49   2145160                   97.79- 157.79   125.12
 14.027  14.027 (0.839)    51    662900                    9.84-  69.84    38.66
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 14.329  14.329 (0.857)    59   3701758 40.0000   40.450  80.00- 120.00   100.00(A)
 14.329  14.329 (0.857)    41    870119                    0.00-  56.82    23.51
 14.329  14.329 (0.857)    57    415794                    0.00-  41.10    11.23
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 14.439  14.439 (0.863)    73   5159438 40.0000   36.673  80.00- 120.00   100.00
 14.439  14.439 (0.863)    57   1144113                    0.00-  52.45    22.18
 14.439  14.439 (0.863)    41   1085513                    0.00-  53.55    21.04
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 14.494  14.494 (0.866)    98   1179571 40.0000   34.843  80.00- 120.00   100.00
 14.494  14.494 (0.866)    61   2589495                  194.43- 254.43   219.53
 14.494  14.494 (0.866)    96   1861333                  127.78- 187.78   157.80
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.878  14.878 (0.889)    57   2823578 40.0000   35.606  80.00- 120.00   100.00
 14.878  14.878 (0.889)    43   1750627                   33.20-  93.20    62.00
 14.878  14.878 (0.889)    86    523723                    0.00-  48.21    18.55
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 15.317  15.317 (0.916)    45   6010180 40.0000   36.039  80.00- 120.00   100.00
 15.317  15.317 (0.916)    87   1731996                    0.00-  57.99    28.82
 15.317  15.317 (0.916)    59    710944                    0.00-  41.78    11.83
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 15.345  15.345 (0.917)    63   3347819 40.0000   34.383  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)
 15.345  15.345 (0.917)    65   1068974                     1.84-  61.84    31.93
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 15.400  15.400 (0.921)    86    521942 40.0000   43.021  80.00- 120.00   100.00(A)
 15.400  15.400 (0.921)    42    472530                   55.70- 115.70    90.53
 15.400  15.400 (0.921)    43   5706353                  963.84-1023.84  1093.29
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 15.930  15.930 (0.952)    59   6337789 40.0000   38.348  80.00- 120.00   100.00
 15.930  15.930 (0.952)    87   2721791                   12.28-  72.28    42.95
 15.909  15.909 (0.951)    41   1127531                    0.00-  49.55    17.79
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 16.324  16.324 (0.976)    98   1283498 40.0000   36.037  80.00- 120.00   100.00
 16.324  16.324 (0.976)    61   2558271                  172.98- 232.98   199.32
 16.324  16.324 (0.976)    96   1997425                  124.81- 184.81   155.62
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 16.344  16.344 (0.977)    72    981455 40.0000   38.743  80.00- 120.00   100.00
 16.344  16.344 (0.977)    43   3582409                  345.54- 405.54   365.01
 16.344  16.344 (0.977)    57    292007                    0.00-  59.64    29.75
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 16.696  16.696 (0.998)    42   2245839 40.0000   38.122  80.00- 120.00   100.00
 16.696  16.696 (0.998)    71    941541                   10.37-  70.37    41.92
 16.696  16.696 (0.998)    72   1008247                   13.30-  73.30    44.89
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 16.726  16.726 (1.000)   130    163818 5.00000           80.00- 120.00   100.00
 16.726  16.726 (1.000)   128    126069                   47.94- 107.94    76.96
 16.726  16.726 (1.000)    49    212477                  102.10- 162.10   129.70
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 16.819  16.819 (1.006)    83   3899117 40.0000   35.328  80.00- 120.00   100.00
 16.819  16.819 (1.006)    85   2518324                   35.08-  95.08    64.59
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 17.035  17.035 (1.018)    84   2773604 40.0000   36.525  80.00- 120.00   100.00
 17.035  17.035 (1.018)    56   3072265                   82.51- 142.51   110.77
 17.035  17.035 (1.018)    41   1606656                   30.91-  90.91    57.93
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 17.065  17.065 (1.020)    97   4131788 40.0000   35.991  80.00- 120.00   100.00
 17.065  17.065 (1.020)    99   2665235                   34.55-  94.55    64.51
-------------------------------------------------------------------------------
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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
 17.250  17.250 (1.031)   119   4090483 40.0000   42.850  80.00- 120.00   100.00(A)
 17.250  17.250 (1.031)   117   4255981                   75.13- 135.13   104.05
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 17.579  17.579 (1.051)    56   2855040 40.0000   37.035  80.00- 120.00   100.00
 17.579  17.579 (1.051)    57   8639329                  266.38- 326.38   302.60
 17.579  17.579 (1.051)    41   2183816                   47.04- 107.04    76.49
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 17.621  17.621 (0.966)    78   5512684 40.0000   36.269  80.00- 120.00   100.00
 17.621  17.621 (0.966)    77   1304480                    0.00-  54.04    23.66
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 17.621  17.621 (1.053)    65    238318 5.00000    5.015  80.00- 120.00   100.00
 17.621  17.621 (1.053)    67    137724                   32.47-  92.47    57.79
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 17.703  17.703 (0.971)    87   1344965 40.0000   42.090  80.00- 120.00   100.00(A)
 17.703  17.703 (0.971)    73   5667973                  391.47- 451.47   421.42
 17.703  17.703 (0.971)    55   1393632                   85.87- 145.87   103.62
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 17.744  17.744 (0.973)    62   2377256 40.0000   35.568  80.00- 120.00   100.00
 17.744  17.744 (0.973)    64    771528                    2.26-  62.26    32.45
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 17.847  17.847 (0.979)    57   1671922 40.0000   40.340  80.00- 120.00   100.00(A)
 17.847  17.847 (0.979)   100    656476                    9.17-  69.17    39.26
 17.847  17.847 (0.979)    43   3012834                  158.08- 218.08   180.20
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 18.231  18.231 (1.000)   114    626694 5.00000           80.00- 120.00   100.00
 18.231  18.231 (1.000)    88    102691                    0.00-  45.77    16.39
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 18.610  18.610 (1.021)   130   2694787 40.0000   38.843  80.00- 120.00   100.00
 18.610  18.610 (1.021)    95   2536951                   67.33- 127.33    94.14
 18.610  18.610 (1.021)    97   1655957                   32.56-  92.56    61.45
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 18.833  18.833 (1.033)    83   3478152 40.0000   39.248  80.00- 120.00   100.00
 18.833  18.833 (1.033)    55   2666330                   48.63- 108.63    76.66
 18.833  18.833 (1.033)    56    869546                    0.00-  55.66    25.00
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 19.057  19.057 (1.045)    63   2245707 40.0000   38.568  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)
 19.057  19.057 (1.045)    62   1599973                    41.89- 101.89    71.25
 19.057  19.057 (1.045)    41   1208008                    27.78-  87.78    53.79
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 19.213  19.213 (1.054)    88   1514265 40.0000   39.551  80.00- 120.00   100.00
 19.213  19.213 (1.054)    58   1018917                    39.29-  99.29    67.29
 19.213  19.213 (1.054)    57    323953                     0.00-  52.49    21.39
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 19.503  19.503 (0.821)    83   4090985 40.0000   41.268  80.00- 120.00   100.00(A)
 19.503  19.503 (0.821)    85   2633223                    34.81-  94.81    64.37
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 20.338  20.338 (1.116)    75   4044610 40.0000   44.533  80.00- 120.00   100.00(A)
 20.338  20.338 (1.116)    77   1283793                     1.96-  61.96    31.74
 20.338  20.338 (1.116)    39   1906538                    18.92-  78.92    47.14
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 20.557  20.557 (1.128)    43   4586962 40.0000   44.137  80.00- 120.00   100.00(A)
 20.557  20.557 (1.128)    58   1877798                     9.48-  69.48    40.94
 20.557  20.557 (1.128)    85    848670                     0.00-  47.76    18.50
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 20.806  20.806 (1.141)    98    606252 5.00000    5.008  80.00- 120.00   100.00
 20.806  20.806 (1.141)    70     70496                     0.00-  41.37    11.63
 20.806  20.806 (1.141)   100    407015                    36.07-  96.07    67.14
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 20.962  20.962 (1.150)    91   6413726 40.0000   39.359  80.00- 120.00   100.00
 20.962  20.962 (1.150)    92   3861874                    30.04-  90.04    60.21
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 21.535  21.535 (0.906)    75   3276219 40.0000   43.853  80.00- 120.00   100.00(A)
 21.535  21.535 (0.906)    77   1030984                     1.00-  61.00    31.47
 21.535  21.535 (0.906)    39   1478123                    15.93-  75.93    45.12
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 21.999  21.999 (0.926)    97   2414035 40.0000   37.044  80.00- 120.00   100.00
 21.999  21.999 (0.926)    99   1507834                    32.15-  92.15    62.46
 21.999  21.999 (0.926)    83   2047964                    55.54- 115.54    84.84
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 22.145  22.145 (0.932)   166   3505368 40.0000   38.016  80.00- 120.00   100.00
 22.145  22.145 (0.932)   129   2478054                    40.48- 100.48    70.69
 22.145  22.145 (0.932)   131   2385967                    38.27-  98.27    68.07
-------------------------------------------------------------------------------
```

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		
22.377	22.377 (0.942)	58	2542751	40.0000	47.652	80.00- 120.00	100.00(A)
22.377	22.377 (0.942)	43	4475518			153.17- 213.17	176.01
22.377	22.377 (0.942)	100	582163			0.00- 52.35	22.90
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	4665735	40.0000	47.630	80.00- 120.00	100.00(A)
22.784	22.784 (0.959)	127	3614578			46.57- 106.57	77.47
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	3905399	40.0000	40.975	80.00- 120.00	100.00(A)
23.045	23.045 (0.970)	109	3688686			64.70- 124.70	94.45
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	533332	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	295966			26.51- 86.51	55.49
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	5296757	40.0000	38.875	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	1695222			2.37- 62.37	32.00
23.823	23.823 (1.003)	77	3024886			28.30- 88.30	57.11
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	2612397	40.0000	41.823	80.00- 120.00	100.00(A)
23.906	23.906 (1.006)	91	8085004			282.65- 342.65	309.49
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	2842183	40.0000	42.467	80.00- 120.00	100.00(A)
24.091	24.091 (1.014)	91	5562171			170.44- 230.44	195.70
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	2726729	40.0000	43.071	80.00- 120.00	100.00(A)
24.710	24.710 (1.040)	91	5592602			177.28- 237.28	205.10
172 Styrene					CAS #: 100-42-5		
24.731	24.731 (1.041)	104	4421026	40.0000	48.999	80.00- 120.00	100.00(A)
24.731	24.731 (1.041)	78	2195179			22.29- 82.29	49.65
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	5187274	40.0000	53.972	80.00- 120.00	100.00(A)
25.068	25.068 (1.055)	171	2677873			20.98- 80.98	51.62
175 Cumene					CAS #: 98-82-8		
25.182	25.182 (1.060)	105	9084009	40.0000	44.344	80.00- 120.00	100.00(A)
25.182	25.182 (1.060)	120	2520159			0.00- 56.93	27.74

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

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.466  25.466 (1.072)   174    313769 5.00000    5.480  80.00- 120.00   100.00
 25.466  25.466 (1.072)    95    368048                   89.67- 149.67   117.30
 25.466  25.466 (1.072)   176    305747                   67.40- 127.40    97.44
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 25.656  25.656 (1.080)    83   5210581 40.0000   40.738  80.00- 120.00   100.00(A)
 25.656  25.656 (1.080)    85   3393230                   33.69-  93.69    65.12
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 25.732  25.732 (1.083)    91   8525179 40.0000   42.161  80.00- 120.00   100.00(A)
 25.732  25.732 (1.083)   120   2044569                    0.00-  53.87    23.98
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 25.864  25.864 (1.089)   105   6702863 40.0000   39.249  80.00- 120.00   100.00
 25.864  25.864 (1.089)   120   2073443                    0.21-  60.21    30.93
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 25.940  25.940 (1.092)   105   5466727 40.0000   37.884  80.00- 120.00   100.00
 25.940  25.940 (1.092)   120   2788985                   20.26-  80.26    51.02
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 26.395  26.395 (1.111)   105   4929354 40.0000   34.039  80.00- 120.00   100.00
 26.395  26.395 (1.111)   120   2340234                   17.68-  77.68    47.48
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 26.794  26.794 (1.128)   146   4302076 40.0000   40.071  80.00- 120.00   100.00(A)
 26.794  26.794 (1.128)   148   2752100                   34.18-  94.18    63.97
 26.794  26.794 (1.128)   111   1686023                    9.70-  69.70    39.19
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 26.919  26.919 (1.133)   146   3942746 40.0000   39.086  80.00- 120.00   100.00
 26.919  26.919 (1.133)   148   2528357                   34.47-  94.47    64.13
 26.919  26.919 (1.133)   111   1484681                    8.85-  68.85    37.66
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 27.075  27.075 (1.139)    91   6291860 40.0000   56.665  80.00- 120.00   100.00(A)
 27.075  27.075 (1.139)   126   1377038                    0.00-  51.19    21.89
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 27.371  27.371 (1.152)   146   3928028 40.0000   40.758  80.00- 120.00   100.00(A)
 27.371  27.371 (1.152)   148   2522509                   33.68-  93.68    64.22
 27.371  27.371 (1.152)   111   1594245                   11.24-  71.24    40.59
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 29.382  29.382 (1.237)   180   3275812 40.0000   36.832  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)								
29.382	29.382	(1.237)	182	3151173			63.91- 123.91	96.20
227 Hexachlorobutadiene						CAS #: 87-68-3		
29.491	29.491	(1.241)	225	3049593	40.0000	44.541	80.00- 120.00	100.00(A)
29.491	29.491	(1.241)	223	1897611			31.90- 91.90	62.23
228 Naphthalene						CAS #: 91-20-3		
29.772	29.772	(1.253)	128	472279	4.00000	3.898	80.00- 120.00	100.00
29.772	29.772	(1.253)	127	58529			0.00- 42.99	12.39

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: msd20.i
Lab File ID: 20062413.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msd20.i/24Jun2016.b/2016l0624a.m
Misc Info: 40ppbv (50ppbv)

Calibration Date: 24-JUN-2016
Calibration Time: 16:15
Client Smp ID: Level 16
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	142903	85742	200064	163818	14.64
123 1,4-Difluorobenze	579240	347544	810936	626694	8.19
163 Chlorobenzene-d5	477544	286526	668562	533332	11.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/24Jun2016.b/20062413.d

Date : 24-JUN-2016 18:55

Client ID: Level 16

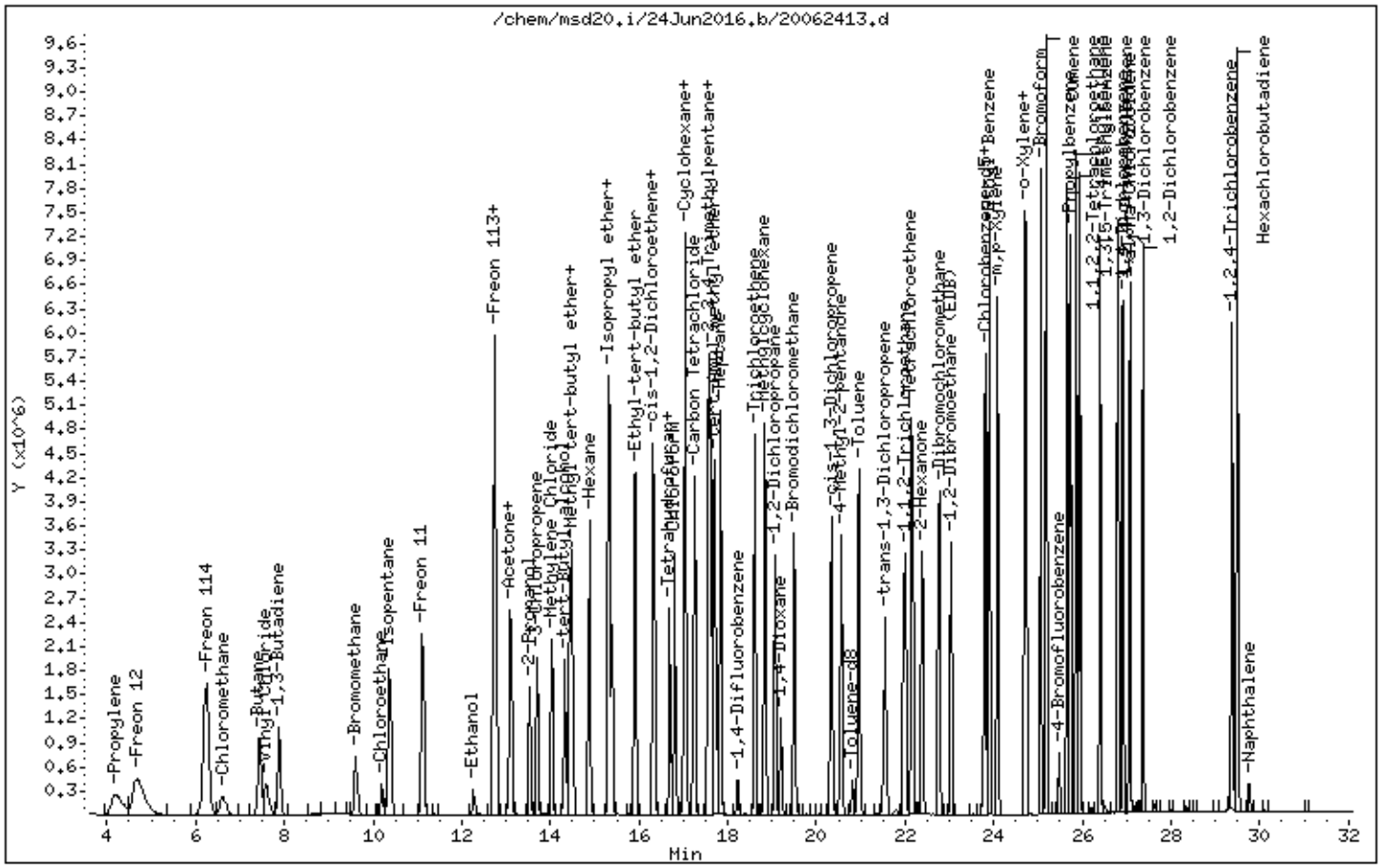
Instrument: msd20.i

Sample Info: 100mL# 2789-173

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Report Date : 12-Feb-2016 08:50

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT 0.1 ppbv LL MDL

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Spike for 1,2,4-TCB, Hexachlorobutadiene
2759-243 (1.0 ppbv) = 25 mL LOAD.

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	20021106	20021107	20021108	20021109	20021110	20021111	20021112	20021113
INJ.DATE:	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016
INJ.TIME:	14:19	15:03	15:42	16:22	17:07	17:54	18:34	19:18

Petr (RES)

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	111.01	107.23	106.24	101.96	98.83	112.28	106.19	113.44	107.15	5.05	15.14	100
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	108.58	121.58	107.97	104.59	105.84	116.86	116.24	115.37	112.13	6.16	18.47	100
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

MDL VERIFICATION:
2759-243 (0.08 ppbv)
20 mL LOAD, File 20021124

Reviewer 1 [signature] Date: 2/15/16
Reviewer 2 [signature] Date: 2/16/16

$\bar{X}$ = ~~0.0~~ 0.021
$2\bar{x}$ = 0.042
$3\bar{x}$ = 0.063
$4\bar{x}$ = 0.084

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

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	103.90	109.95	111.90	110.22	113.99	127.37	110.41	103.52	111.41	7.41	22.23	100
26 1,3-Butadiene	114.10	110.22	119.21	110.53	122.77	108.93	112.94	117.14	114.48	4.86	14.56	100
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
31 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	109.50	105.03	104.01	109.11	107.49	112.61	117.22	111.56	109.57	4.27	12.81	100
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	128.84	124.16	110.13	104.31	113.03	109.97	128.47	121.48	117.55	9.37	28.08	100
50 1,1-Dichloroethene	102.89	96.62	107.84	118.61	109.35	113.37	111.55	106.83	108.38	6.68	20.02	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	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	

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METHOD DETECTION LIMIT SUMMARY REPORT

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Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	116.19	125.61	120.84	109.85	111.95	120.60	117.89	118.53	117.66	5.03	15.09	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	107.99	103.76	95.41	99.20	96.16	105.54	101.83	99.83	101.21	4.42	13.26	100
73 trans-1,2-Dichloroethe	106.44	104.20	86.74	98.47	114.90	118.39	104.84	98.74	104.09	9.92	29.74	100
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	109.38	91.58	112.13	101.46	96.92	106.90	104.95	99.35	102.83	6.82	20.46	100
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	109.17	108.82	104.47	107.02	114.78	109.10	117.84	109.88	110.14	4.25	12.75	100
83 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	105.39	97.62	96.68	102.22	115.26	121.52	115.14	98.17	106.50	9.57	28.70	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	103.34	102.64	94.51	99.27	105.94	115.22	112.50	103.48	104.61	6.70	20.08	100
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	105.26	91.17	93.47	92.54	87.30	100.23	92.36	95.80	94.77	5.63	16.89	100
103 1,1,1-Trichloroethane	105.93	93.98	99.04	95.06	103.28	119.04	99.38	101.17	102.11	7.89	23.67	100
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	97.59	95.93	96.04	95.89	93.50	98.50	103.90	95.78	97.14	3.10	9.29	100
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

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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	112.76	109.42	119.18	126.14	138.97	115.60	128.97	108.48	119.94	10.66	31.96	100
$ 117 1,2-Dichloroethane-d4	4728.49	4675.54	4814.38	4679.41	4638.74	4844.78	4834.94	4759.16	4746.93	79.03	236.94	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
120 1,2-Dichloroethane	127.97	118.06	111.61	114.51	104.90	123.96	130.55	138.79	121.29	11.10	33.28	100
121 Heptane	106.06	97.82	111.00	114.26	95.21	96.16	97.31	96.30	101.77	7.55	22.65	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	123.68	105.13	120.84	107.89	108.57	100.50	118.55	96.11	110.16	9.93	29.78	100
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
127 Methylcyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
132 1,2-Dichloropropene	99.24	108.17	114.44	116.94	113.84	111.83	106.18	123.37	111.74	7.30	21.88	100
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	93.45	75.95	95.17	83.10	82.87	106.83	97.63	95.87	91.36	9.97	29.89	100
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	103.06	105.04	100.90	101.79	94.78	111.84	104.75	97.83	102.50	5.12	15.35	100
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	97.73	97.19	95.50	98.16	80.85	84.77	99.49	97.80	93.94	7.03	21.09	100
145 4-Methyl-2-pentanone	80.17	79.46	84.98	80.40	69.40	68.24	71.29	73.94	75.98	6.09	18.26	100
$ 146 Toluene-d8	4859.37	4871.03	4922.01	4805.76	4896.52	4721.80	4926.35	4964.93	4870.97	77.27	231.64	
147 Toluene	106.64	108.90	113.27	109.30	109.50	114.78	115.71	103.98	110.26	4.05	12.16	100
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	107.54	89.01	83.31	94.38	88.18	92.37	92.36	96.16	92.91	7.14	21.42	100
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	96.16	94.38	112.51	105.70	126.14	121.35	113.90	118.47	108.58	16.67	49.97	100
156 Tetrachloroethene	109.23	104.05	112.34	101.41	112.00	127.65	124.36	109.90	112.62	9.12	27.34	100
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
160 Dibromochloromethane	99.26	87.06	93.66	94.23	81.79	94.02	97.01	89.34	91.92	5.50	16.49	100
161 1,2-Dibromoethane (EDB	101.26	91.94	97.00	97.87	103.19	100.76	95.11	110.69	99.75	5.71	17.13	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	113.62	100.67	108.76	99.89	99.57	123.38	106.20	113.31	108.18	8.37	25.09	100
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
167 Ethyl Benzene	121.85	98.56	91.01	93.09	103.78	100.91	104.16	98.55	101.49	9.45	28.33	100
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
169 m,p-Xylene	93.44	95.21	83.15	96.86	93.71	100.60	101.21	99.45	95.45	5.81	17.41	100
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
171 o-Xylene	104.77	108.45	99.61	97.43	81.93	103.92	103.24	103.25	100.32	8.13	24.38	100
172 Styrene	91.67	98.83	90.89	93.62	89.29	94.81	90.53	88.38	92.25	3.39	10.17	100
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
174 Bromoform	88.70	85.62	75.97	76.26	71.14	79.46	86.90	78.03	80.26	6.18	18.53	100
175 Cumene	99.13	97.33	92.79	92.12	92.86	100.17	90.09	83.91	93.55	5.31	15.91	100
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 177 4-Bromofluorobenzene	4636.83	4760.03	4887.01	4937.95	4720.67	4706.05	4723.13	4825.24	4774.61	100.95	302.64	
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
181 1,1,2,2-Tetrachloroeth	101.69	99.11	93.02	95.55	101.07	93.70	94.35	98.33	97.10	3.39	10.17	100
182 Propylbenzene	122.57	128.88	112.85	125.64	114.04	122.41	122.63	113.51	120.32	6.07	18.20	100

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	114.67	118.55	110.37	108.15	107.18	127.28	122.10	118.08	115.80	7.05	21.13	100
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
190 1,3,5-Trimethylbenzene	123.80	127.61	117.24	115.64	117.20	114.39	108.64	119.99	118.06	5.82	17.46	100
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
196 1,2,4-Trimethylbenzene	129.73	132.28	120.12	116.55	113.01	122.84	119.94	117.77	121.53	6.55	19.64	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/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	115.36	120.46	109.73	105.54	113.00	113.53	112.22	110.78	112.58	4.34	13.02	100
209 1,4-Dichlorobenzene	136.32	132.41	125.01	131.10	137.41	124.67	131.84	127.11	130.86	4.66	13.97	100
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	82.56	93.39	82.28	84.05	85.63	85.28	101.54	80.90	86.95	7.02	21.05	100
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	119.38	136.88	114.68	104.17	121.55	120.98	133.03	116.16	120.85	10.33	30.99	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	118.79	106.23	120.38	105.87	103.37	103.39	107.28	112.30	109.70	6.72	20.14	500
227 Hexachlorobutadiene	128.18	132.89	136.75	119.47	124.32	113.68	131.44	137.42	128.02	8.39	25.15	500
228 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	211.83	201.82	183.42	200.69	230.17	239.91	219.98	196.92	210.59	18.64	55.89	N/A
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
M 239 Total Xylene	198.22	203.66	182.76	194.29	175.64	204.51	204.45	202.70	195.78	10.98	32.93	N/A
M 240 2 and 4-Ethyltoluene	114.67	118.55	110.37	108.15	107.18	127.28	122.10	118.08	115.80	7.05	21.13	
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/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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 : 12-Feb-2016 16:06

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

0.5 ppbv LL MDL

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

* 2759-243 (1.0 ppbv) = 125 mL LOAD

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	20021114	20021115	20021116	20021117	20021118	20021119	20021120	20021121
INJ.DATE:	11-FEB-2016	11-FEB-2016	11-FEB-2016	11-FEB-2016	12-FEB-2016	12-FEB-2016	12-FEB-2016	12-FEB-2016
INJ.TIME:	19:58	21:31	22:11	22:50	05:50	06:30	07:10	07:49

RL (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	444.09	435.06	349.89	420.81	440.65	368.73	485.61	392.20	417.13	44.39	133.07	500
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	595.27	650.20	612.19	561.59	618.02	566.36	564.73	520.68	586.13	40.74	122.14	500

MDL VERIFICATION:
2759-243 (0.3 ppbv)
75 mL LOAD, FILE 20021060

Reviewer 1 [signature] Date: 2/12/16
Reviewer 2 [signature] Date: 2/16/16

$\bar{x}$ = 0.075
2$\bar{x}$ = 0.15
3$\bar{x}$ = 0.23
4$\bar{x}$ = 0.30

ETHYL TERT BUTYL ETHER: THE RATIO OF THE MEAN RECOVERED CONCENTRATION AND THE MDL IS GREATER THAN 20. ALL OTHER COMPOUNDS — THE RATIOS BETWEEN 1 AND 20.

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	520.92	536.05	303.94	489.96	551.65	475.09	538.89	515.83	491.54	79.96	239.72	500
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
26 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	436.36	503.99	497.46	587.69	514.13	561.89	588.81	527.98	527.29	51.42	154.14	500
30 Chloroethane	450.31	514.10	471.14	482.20	437.12	473.98	437.40	447.61	464.23	26.40	79.14	500
31 Isopentane	487.57	500.04	462.29	487.56	530.32	486.12	504.22	482.75	492.61	19.72	59.11	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/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	487.00	488.50	589.46	545.04	561.46	507.58	541.70	537.30	532.25	35.81	107.39	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	498.60	514.82	499.84	499.34	525.38	462.08	524.07	473.00	499.64	22.71	68.09	500
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	474.24	490.22	493.49	500.93	508.62	515.62	482.40	496.39	495.24	13.43	40.26	500
57 2-Propanol	428.31	424.69	422.25	422.47	441.27	428.25	446.26	456.50	433.75	12.72	38.13	500
58 3-Chloropropene	419.36	425.22	418.43	431.76	437.81	411.14	401.14	427.69	421.57	11.70	35.09	500
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Inst ID: msd20.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	404.45	419.08	404.34	416.44	410.26	437.99	430.63	417.34	417.57	11.90	35.69	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	448.49	449.87	455.87	454.31	431.63	445.98	437.22	433.20	444.57	9.40	28.19	500
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	326.12	330.98	361.56	267.09	337.68	314.86	333.68	323.84	324.48	26.90	80.65	500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	426.90	420.08	421.49	432.49	423.78	427.55	427.58	414.50	424.29	5.57	16.70	500
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
92 2-Butanone	453.26	435.68	430.80	430.51	423.37	455.50	426.29	439.22	436.83	11.92	35.73	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	471.00	464.84	480.61	435.99	416.22	449.73	417.17	402.95	442.31	28.67	85.96	500
100 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
103 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
107 1,3-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
111 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
113 2,2,4-Trimethylpentane	457.74	466.60	488.45	444.05	440.76	419.00	434.83	444.38	449.47	21.23	63.65	500
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
116 Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 117 1,2-Dichloroethane-d4	4977.05	4973.12	4813.91	4938.89	5001.58	5118.96	4990.34	5001.47	4976.93	84.18	252.37	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	423.29	420.44	426.35	540.00	470.20	439.50	432.44	449.39	450.20	39.77	119.24	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	415.46	463.53	468.95	451.43	442.73	457.33	467.94	440.78	451.02	17.90	53.65	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.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	4854.55	4956.89	4838.33	4970.56	5009.99	5037.26	4980.08	4931.05	4947.34	70.18	210.39
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	329.07	309.29	314.15	324.98	307.23	285.49	291.30	335.05	312.07	17.55	52.63

800

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Inst ID: msd20.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	4738.57	4505.93	4660.80	4603.63	4668.90	4505.76	4599.59	4709.37	4624.07	86.78	260.17
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

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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/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	54.46	49.85	47.97	57.59	51.24	52.99	58.34	50.51	52.87	3.70	11.10 600
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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/msd20.i/11Feb2016.b/201610210a.m
Batch File: /chem/msd20.i/11Feb2016.b
Inst ID: msd20.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Client Sample ID: CCV

Lab ID#: 1607235D-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 07:30 AM**	

Compound	%Recovery
Freon 12	115
Freon 114	102
Chloromethane	106
Vinyl Chloride	103
1,3-Butadiene	101
Bromomethane	96
Chloroethane	104
Freon 11	105
Ethanol	96
Freon 113	94
1,1-Dichloroethene	90
Acetone	98
2-Propanol	94
Carbon Disulfide	107
3-Chloropropene	104
Methylene Chloride	98
Methyl tert-butyl ether	100
trans-1,2-Dichloroethene	99
Hexane	99
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	99
Tetrahydrofuran	106
Chloroform	108
1,1,1-Trichloroethane	108
Cyclohexane	97
Carbon Tetrachloride	121
2,2,4-Trimethylpentane	103
Benzene	117
1,2-Dichloroethane	127
Heptane	128
Trichloroethene	110
1,2-Dichloropropane	119
1,4-Dioxane	113
Bromodichloromethane	124
cis-1,3-Dichloropropene	117
4-Methyl-2-pentanone	132 Q
Toluene	120
trans-1,3-Dichloropropene	119
1,1,2-Trichloroethane	110
Tetrachloroethene	105
2-Hexanone	118

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Client Sample ID: CCV

Lab ID#: 1607235D-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071902**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 07:30 AM**

Compound	%Recovery
Dibromochloromethane	128
1,2-Dibromoethane (EDB)	114
Chlorobenzene	111
Ethyl Benzene	116
m,p-Xylene	114
o-Xylene	115
Styrene	122
Bromoform	134 Q
Cumene	120
1,1,2,2-Tetrachloroethane	125
Propylbenzene	114
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	124
1,2,4-Trimethylbenzene	117
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	137 Q
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	81
Naphthalene	72

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	107	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd20.i Injection Date: 19-JUL-2016 07:30
Lab File ID: 20071902.d Init. Cal. Date(s): 24-JUN-2016 18-JUL-2016
Analysis Type: AIR Init. Cal. Times: 12:35 11:53
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd20.i/19Jul2016.b/2016l0624b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.45028	1.54147	0.010	-6.28767	30.00000		Averaged
$ 146 Toluene-d8	0.96572	1.07578	0.010	-11.39646	30.00000		Averaged
$ 177 4-Bromofluorobenzene	0.53684	0.57532	0.010	-7.16793	30.00000		Averaged
9 Propylene	1.31375	1.48971	0.010	-13.39333	40.00000		Averaged
11 Freon 12	4.24655	4.90141	0.010	-15.42105	30.00000		Averaged
15 Freon 114	2.93264	3.00381	0.010	-2.42657	30.00000		Averaged
17 Chloromethane	1.42193	1.50428	0.010	-5.79128	30.00000		Averaged
23 Butane	0.34852	0.35430	0.010	-1.65613	40.00000		Averaged
25 Vinyl Chloride	1.58605	1.63660	0.010	-3.18676	30.00000		Averaged
26 1,3-Butadiene	1.21356	1.22696	0.010	-1.10437	30.00000		Averaged
29 Bromomethane	1.00460	0.96872	0.010	3.57113	30.00000		Averaged
30 Chloroethane	0.71779	0.74361	0.010	-3.59830	30.00000		Averaged
31 Isopentane	1.23874	1.19769	0.010	3.31378	40.00000		Averaged
35 Freon 11	4.10416	4.32000	0.010	-5.25886	30.00000		Averaged
42 Ethanol	0.53120	0.51172	0.010	3.66588	30.00000		Averaged
49 Freon 113	2.77096	2.60842	0.010	5.86597	30.00000		Averaged
50 1,1-Dichloroethene	0.95847	0.86785	0.010	9.45478	30.00000		Averaged
52 Acetone	0.76220	0.74672	0.010	2.03176	30.00000		Averaged
56 Carbon Disulfide	4.30845	4.62328	0.010	-7.30725	30.00000		Averaged
57 2-Propanol	2.35730	2.21875	0.010	5.87735	30.00000		Averaged
58 3-Chloropropene	0.61170	0.63770	0.010	-4.24982	30.00000		Averaged
66 Methylene Chloride	1.55412	1.51868	0.010	2.28036	30.00000		Averaged
71 tert-Butyl alcohol	2.79314	2.80687	0.010	-0.49161	40.00000		Averaged
72 Methyl tert-butyl ether	4.29401	4.30329	0.010	-0.21616	30.00000		Averaged
73 trans-1,2-Dichloroethene	1.03328	1.02692	0.010	0.61567	30.00000		Averaged
78 Hexane	2.42041	2.39200	0.010	1.17390	30.00000		Averaged
83 Isopropyl ether	5.09008	5.25644	0.010	-3.26827	40.00000		Averaged
82 1,1-Dichloroethane	2.97188	3.16265	0.010	-6.41917	30.00000		Averaged
86 Vinyl Acetate	0.37030	0.37642	0.010	-1.65441	40.00000		Averaged
88 Ethyl-tert-butyl ether	5.04427	5.06566	0.010	-0.42398	40.00000		Averaged
91 cis-1,2-Dichloroethene	1.08707	1.07333	0.010	1.26417	30.00000		Averaged
92 2-Butanone	0.77319	0.79441	0.010	-2.74442	30.00000		Averaged
99 Tetrahydrofuran	1.79811	1.90413	0.010	-5.89617	30.00000		Averaged
100 Chloroform	3.36859	3.63825	0.010	-8.00507	30.00000		Averaged
102 Cyclohexane	2.31770	2.24471	0.010	3.14919	30.00000		Averaged
103 1,1,1-Trichloroethane	3.50390	3.77646	0.010	-7.77886	30.00000		Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd20.i Injection Date: 19-JUL-2016 07:30
Lab File ID: 20071902.d Init. Cal. Date(s): 24-JUN-2016 18-JUL-2016
Analysis Type: AIR Init. Cal. Times: 12:35 11:53
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd20.i/19Jul2016.b/2016l0624b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
106 Carbon Tetrachloride	2.91361	3.52022	0.010	-20.81994	30.00000	Averaged
113 2,2,4-Trimethylpentane	2.35294	2.42817	0.010	-3.19714	30.00000	Averaged
116 Benzene	1.21268	1.42306	0.010	-17.34828	30.00000	Averaged
119 tert-Amyl methyl ether	0.25495	0.30199	0.010	-18.45245	40.00000	Averaged
120 1,2-Dichloroethane	0.53325	0.67523	0.010	-26.62408	30.00000	Averaged
121 Heptane	0.33067	0.42229	0.010	-27.70742	30.00000	Averaged
125 Trichloroethene	0.55351	0.61162	0.010	-10.49880	30.00000	Averaged
127 Methylcyclohexane	0.70704	0.82873	0.010	-17.21230	40.00000	Averaged
132 1,2-Dichloropropane	0.46456	0.55236	0.010	-18.89923	30.00000	Averaged
136 1,4-Dioxane	0.30546	0.34627	0.010	-13.35982	30.00000	Averaged
138 Bromodichloromethane	0.92937	1.14891	0.010	-23.62308	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.72462	0.85051	0.010	-17.37236	30.00000	Averaged
145 4-Methyl-2-pentanone	0.82915	1.09745	0.010	-32.35835	30.00000	Averaged <-
147 Toluene	1.30010	1.55741	0.010	-19.79195	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.70039	0.83148	0.010	-18.71573	30.00000	Averaged
155 1,1,2-Trichloroethane	0.61094	0.66944	0.010	-9.57593	30.00000	Averaged
156 Tetrachloroethene	0.86444	0.91165	0.010	-5.46149	30.00000	Averaged
158 2-Hexanone	0.50026	0.58938	0.010	-17.81568	30.00000	Averaged
160 Dibromochloromethane	0.91835	1.18087	0.010	-28.58606	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.89355	1.02016	0.010	-14.17009	30.00000	Averaged
165 Chlorobenzene	1.27736	1.42191	0.010	-11.31658	30.00000	Averaged
167 Ethyl Benzene	0.58560	0.67998	0.010	-16.11753	30.00000	Averaged
169 m,p-Xylene	0.62744	0.71644	0.010	-14.18604	30.00000	Averaged
171 o-Xylene	0.59351	0.68028	0.010	-14.61934	30.00000	Averaged
172 Styrene	0.84588	1.03578	0.010	-22.44914	30.00000	Averaged
174 Bromoform	0.90103	1.20763	0.010	-34.02743	30.00000	Averaged <-
175 Cumene	1.92049	2.31450	0.010	-20.51584	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	1.19909	1.49732	0.010	-24.87062	30.00000	Averaged
182 Propylbenzene	1.89567	2.15160	0.010	-13.50083	30.00000	Averaged
188 4-Ethyltoluene	1.60103	1.70451	0.010	-6.46339	30.00000	Averaged
190 1,3,5-Trimethylbenzene	1.35285	1.68257	0.010	-24.37235	30.00000	Averaged
196 1,2,4-Trimethylbenzene	1.35763	1.58458	0.010	-16.71608	30.00000	Averaged
208 1,3-Dichlorobenzene	1.00651	1.10734	0.010	-10.01768	30.00000	Averaged
209 1,4-Dichlorobenzene	0.94569	0.98106	0.010	-3.74009	30.00000	Averaged
212 alpha-Chlorotoluene	1.04097	1.42311	0.010	-36.71023	30.00000	Averaged <-

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd20.i Injection Date: 19-JUL-2016 07:30
Lab File ID: 20071902.d Init. Cal. Date(s): 24-JUN-2016 18-JUL-2016
Analysis Type: AIR Init. Cal. Times: 12:35 11:53
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd20.i/19Jul2016.b/2016l0624b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	0.90350	0.99416	0.010	-10.03468	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.83381	0.69644	0.010	16.47498	30.00000	Averaged
227 Hexachlorobutadiene	0.64188	0.51985	0.010	19.01249	30.00000	Averaged
228 Naphthalene	1.13591	0.82192	0.010	27.64163	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071902.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 19-JUL-2016 07:30
Operator : su Inst ID: msd20.i
Smp Info : 50mL# 2789-175
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.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
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	115886	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	88031			47.94- 107.94	75.96
16.726	16.726 (1.000)	49	168091			102.10- 162.10	145.05
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	406395	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	67090			0.00- 45.77	16.51
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	363239	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	213122			26.51- 86.51	58.67
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	178635	5.00000	5.314	80.00- 120.00	100.00
17.621	17.621 (1.053)	67	112275			32.47- 92.47	62.85
$ 146 Toluene-d8					CAS #: 2037-26-5		
20.822	20.822 (1.142)	98	437193	5.00000	5.570	80.00- 120.00	100.00
20.822	20.822 (1.142)	70	51740			0.00- 41.37	11.83

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
20.822	20.822 (1.142)	100	288290			36.07- 96.07	65.94
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
25.485	25.485 (1.073)	174	208977	5.00000	5.358	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	258078			89.67- 149.67	123.50
25.485	25.485 (1.073)	176	199899			67.40- 127.40	95.66
9 Propylene					CAS #: 115-07-1		
4.166	4.166 (0.249)	41	345273	10.0000	11.339	80.00- 120.00	100.00
4.190	4.190 (0.251)	42	233879			37.70- 97.70	67.74
4.142	4.142 (0.248)	39	252234			41.61- 101.61	73.05
11 Freon 12					CAS #: 75-71-8		
4.672	4.672 (0.279)	85	1136009	10.0000	11.542	80.00- 120.00	100.00
4.672	4.672 (0.279)	87	366591			2.54- 62.54	32.27
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	696198	10.0000	10.243	80.00- 120.00	100.00
6.215	6.215 (0.372)	137	218525			1.78- 61.78	31.39
6.215	6.215 (0.372)	85	1060329			116.61- 176.61	152.30
17 Chloromethane					CAS #: 74-87-3		
6.577	6.577 (0.393)	50	348650	10.0000	10.579	80.00- 120.00	100.00
6.553	6.553 (0.392)	52	115669			3.03- 63.03	33.18
23 Butane					CAS #: 106-97-8		
7.434	7.434 (0.444)	58	82116	10.0000	10.166	80.00- 120.00	100.00
7.416	7.416 (0.443)	43	589547			656.82- 716.82	717.94
25 Vinyl Chloride					CAS #: 75-01-4		
7.573	7.573 (0.453)	62	379317	10.0000	10.319	80.00- 120.00	100.00
7.590	7.590 (0.454)	64	119817			1.50- 61.50	31.59
26 1,3-Butadiene					CAS #: 106-99-0		
7.868	7.868 (0.470)	54	284375	10.0000	10.110	80.00- 120.00	100.00
7.868	7.868 (0.470)	39	291465			69.00- 129.00	102.49
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	224523	10.0000	9.643	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	211029			63.60- 123.60	93.99
30 Chloroethane					CAS #: 75-00-3		
10.174	10.174 (0.608)	64	172349	10.0000	10.360	80.00- 120.00	100.00
10.174	10.174 (0.608)	49	46356			0.00- 55.63	26.90
10.174	10.174 (0.608)	66	55364			2.70- 62.70	32.12

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	277591	10.0000	9.669	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	421464			115.62- 175.62	151.83
10.367	10.367 (0.620)	42	383709			100.35- 160.35	138.23
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	1001254	10.0000	10.526	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	650074			34.91- 94.91	64.93
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	118603	10.0000	9.633	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	48627			11.72- 71.72	41.00
12.269	12.269 (0.734)	43	33460			0.00- 52.99	28.21
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	604558	10.0000	9.413	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	389311			34.49- 94.49	64.40
12.763	12.763 (0.763)	101	785750			96.39- 156.39	129.97
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	201143	10.0000	9.054	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	558477			227.70- 287.70	277.65
12.736	12.736 (0.761)	96	324891			125.12- 185.12	161.52
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	173068	10.0000	9.797	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	575135			278.33- 338.33	332.32
56 Carbon Disulfide					CAS #: 75-15-0		
13.121	13.121 (0.784)	76	1071547	10.0000	10.731	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
13.533	13.533 (0.809)	45	514245	10.0000	9.412	80.00- 120.00	100.00
13.533	13.533 (0.809)	43	144590			0.00- 52.04	28.12
13.533	13.533 (0.809)	59	20487			0.00- 34.17	3.98
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	147800	10.0000	10.425	80.00- 120.00	100.00
13.697	13.697 (0.819)	41	426801			236.04- 296.04	288.77
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	351987	10.0000	9.772	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	477054			97.79- 157.79	135.53
14.027	14.027 (0.839)	51	145599			9.84- 69.84	41.36
71 tert-Butyl alcohol					CAS #: 75-65-0		
14.329	14.329 (0.857)	59	650554	10.0000	10.049	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol (continued)							
14.329	14.329 (0.857)	41	213378			0.00- 56.82	32.80
14.329	14.329 (0.857)	57	73951			0.00- 41.10	11.37
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.439	14.439 (0.863)	73	997382	10.0000	10.022	80.00- 120.00	100.00
14.439	14.439 (0.863)	57	228638			0.00- 52.45	22.92
14.439	14.439 (0.863)	41	275999			0.00- 53.55	27.67
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.494	14.494 (0.866)	98	238012	10.0000	9.938	80.00- 120.00	100.00
14.494	14.494 (0.866)	61	563077			194.43- 254.43	236.58
14.494	14.494 (0.866)	96	373610			127.78- 187.78	156.97
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	554398	10.0000	9.883	80.00- 120.00	100.00
14.878	14.878 (0.889)	43	365425			33.20- 93.20	65.91
14.878	14.878 (0.889)	86	96726			0.00- 48.21	17.45
83 Isopropyl ether					CAS #: 108-20-3		
15.317	15.317 (0.916)	45	1218296	10.0000	10.327	80.00- 120.00	100.00
15.317	15.317 (0.916)	87	319697			0.00- 57.99	26.24
15.317	15.317 (0.916)	59	140969			0.00- 41.78	11.57
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	733013	10.0000	10.642	80.00- 120.00	100.00
15.345	15.345 (0.917)	65	232178			1.84- 61.84	31.67
86 Vinyl Acetate					CAS #: 108-05-4		
15.400	15.400 (0.921)	86	87244	10.0000	10.165	80.00- 120.00	100.00
15.400	15.400 (0.921)	42	83977			55.70- 115.70	96.26
15.400	15.400 (0.921)	43	927518			963.84-1023.84	1063.13
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
15.930	15.930 (0.952)	59	1174078	10.0000	10.042	80.00- 120.00	100.00
15.930	15.930 (0.952)	87	478674			12.28- 72.28	40.77
15.930	15.930 (0.952)	41	281714			0.00- 49.55	23.99
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.324	16.324 (0.976)	98	248768	10.0000	9.874	80.00- 120.00	100.00
16.324	16.324 (0.976)	61	534968			172.98- 232.98	215.05
16.324	16.324 (0.976)	96	389341			124.81- 184.81	156.51
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	184121	10.0000	10.274	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	737673			345.54- 405.54	400.65

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
16.344	16.344 (0.977)	57	58274			0.00- 59.64	31.65
99 Tetrahydrofuran					CAS #: 109-99-9		
16.696	16.696 (0.998)	42	441323	10.0000	10.590	80.00- 120.00	100.00
16.696	16.696 (0.998)	71	167592			10.37- 70.37	37.97
16.696	16.696 (0.998)	72	177374			13.30- 73.30	40.19
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	843245	10.0000	10.800	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	543078			35.08- 95.08	64.40
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	520261	10.0000	9.685	80.00- 120.00	100.00
17.035	17.035 (1.018)	56	615265			82.51- 142.51	118.26
17.035	17.035 (1.018)	41	359140			30.91- 90.91	69.03
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.066	17.066 (1.020)	97	875278	10.0000	10.778	80.00- 120.00	100.00
17.066	17.066 (1.020)	99	563018			34.55- 94.55	64.32
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	815888	10.0000	12.082	80.00- 120.00	100.00
17.250	17.250 (1.031)	117	851937			75.13- 135.13	104.42
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
17.579	17.579 (1.051)	56	562782	10.0000	10.320	80.00- 120.00	100.00
17.579	17.579 (1.051)	57	1666536			266.38- 326.38	296.12
17.579	17.579 (1.051)	41	485374			47.04- 107.04	86.25
116 Benzene					CAS #: 71-43-2		
17.621	17.621 (0.966)	78	1156646	10.0000	11.735	80.00- 120.00	100.00
17.621	17.621 (0.966)	77	268876			0.00- 54.04	23.25
119 tert-Amyl methyl ether					CAS #: 994-05-8		
17.703	17.703 (0.971)	87	245454	10.0000	11.845	80.00- 120.00	100.00
17.703	17.703 (0.971)	73	1043668			391.47- 451.47	425.20
17.703	17.703 (0.971)	55	346284			85.87- 145.87	141.08
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	548818	10.0000	12.662	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	172357			2.26- 62.26	31.41
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	343232	10.0000	12.771	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	120814			9.17- 69.17	35.20

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
17.847	17.847 (0.979)	43	633205			158.08- 218.08	184.48
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	497121	10.0000	11.050	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	492032			67.33- 127.33	98.98
18.610	18.610 (1.021)	97	323050			32.56- 92.56	64.98
127 Methylcyclohexane					CAS #: 108-87-2		
18.834	18.834 (1.033)	83	673586	10.0000	11.721	80.00- 120.00	100.00
18.834	18.834 (1.033)	55	561652			48.63- 108.63	83.38
18.834	18.834 (1.033)	56	174599			0.00- 55.66	25.92
132 1,2-Dichloropropane					CAS #: 78-87-5		
19.079	19.079 (1.046)	63	448955	10.0000	11.890	80.00- 120.00	100.00
19.079	19.079 (1.046)	62	322087			41.89- 101.89	71.74
19.057	19.057 (1.045)	41	288334			27.78- 87.78	64.22
136 1,4-Dioxane					CAS #: 123-91-1		
19.213	19.213 (1.054)	88	281448	10.0000	11.336	80.00- 120.00	100.00
19.213	19.213 (1.054)	58	200428			39.29- 99.29	71.21
19.213	19.213 (1.054)	57	65184			0.00- 52.49	23.16
138 Bromodichloromethane					CAS #: 75-27-4		
19.503	19.503 (0.821)	83	834660	10.0000	12.362	80.00- 120.00	100.00
19.503	19.503 (0.821)	85	530829			34.81- 94.81	63.60
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
20.339	20.339 (1.116)	75	691284	10.0000	11.737	80.00- 120.00	100.00
20.339	20.339 (1.116)	77	217456			1.96- 61.96	31.46
20.339	20.339 (1.116)	39	364699			18.92- 78.92	52.76
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.572	20.572 (1.128)	43	891995	10.0000	13.236	80.00- 120.00	100.00
20.572	20.572 (1.128)	58	338659			9.48- 69.48	37.97
20.572	20.572 (1.128)	85	144987			0.00- 47.76	16.25
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	1265851	10.0000	11.979	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	741553			30.04- 90.04	58.58
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
21.564	21.564 (0.908)	75	604051	10.0000	11.872	80.00- 120.00	100.00
21.564	21.564 (0.908)	77	188078			1.00- 61.00	31.14
21.564	21.564 (0.908)	39	302533			15.93- 75.93	50.08

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

  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 22.000  22.000 (0.926)    97    486335 10.0000   10.958  80.00- 120.00   100.00
 22.000  22.000 (0.926)    99    301716                   32.15-  92.15    62.04
 22.000  22.000 (0.926)    83    420393                   55.54- 115.54    86.44
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  156 Tetrachloroethene                            CAS #: 127-18-4
 22.174  22.174 (0.933)   166    662295 10.0000   10.546  80.00- 120.00   100.00
 22.174  22.174 (0.933)   129    493003                   40.48- 100.48    74.44
 22.174  22.174 (0.933)   131    461261                   38.27-  98.27    69.65
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 22.406  22.406 (0.943)    58    428174 10.0000   11.782  80.00- 120.00   100.00
 22.406  22.406 (0.943)    43    809526                  153.17- 213.17   189.06
 22.406  22.406 (0.943)   100     91054                    0.00-  52.35    21.27
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 22.784  22.784 (0.959)   129    857874 10.0000   12.859  80.00- 120.00   100.00
 22.784  22.784 (0.959)   127    663810                   46.57- 106.57    77.38
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 23.045  23.045 (0.970)   107    741125 10.0000   11.417  80.00- 120.00   100.00
 23.045  23.045 (0.970)   109    688509                   64.70- 124.70    92.90
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 23.823  23.823 (1.003)   112   1032985 10.0000   11.132  80.00- 120.00   100.00
 23.823  23.823 (1.003)   114    331440                    2.37-  62.37    32.09
 23.823  23.823 (1.003)    77    626187                   28.30-  88.30    60.62
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 23.906  23.906 (1.006)   106    493992 10.0000   11.612  80.00- 120.00   100.00
 23.906  23.906 (1.006)    91   1566225                  282.65- 342.65   317.05
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 24.091  24.091 (1.014)   106    520481 10.0000   11.419  80.00- 120.00   100.00
 24.091  24.091 (1.014)    91   1056659                  170.44- 230.44   203.02
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 24.710  24.710 (1.040)   106    494205 10.0000   11.462  80.00- 120.00   100.00
 24.710  24.710 (1.040)    91   1056503                  177.28- 237.28   213.78
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 24.751  24.751 (1.042)   104    752469 10.0000   12.245  80.00- 120.00   100.00
 24.731  24.731 (1.041)    78    402512                   22.29-  82.29    53.49
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 25.068  25.068 (1.055)   173    877318 10.0000   13.403  80.00- 120.00   100.00
```

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

  174 Bromoform (continued)
 25.068  25.068 (1.055)   171    452219                    20.98-  80.98    51.55
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 25.182  25.182 (1.060)   105   1681432 10.0000   12.052  80.00- 120.00   100.00
 25.182  25.182 (1.060)   120    450288                     0.00-  56.93    26.78
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 25.656  25.656 (1.080)    83   1087768 10.0000   12.487  80.00- 120.00   100.00
 25.656  25.656 (1.080)    85    704127                    33.69-  93.69    64.73
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 25.732  25.732 (1.083)    91   1563090 10.0000   11.350  80.00- 120.00   100.00
 25.732  25.732 (1.083)   120    353975                     0.00-  53.87    22.65
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 25.864  25.864 (1.089)   105   1238289 10.0000   10.646  80.00- 120.00   100.00
 25.864  25.864 (1.089)   120    369863                     0.21-  60.21    29.87
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 25.940  25.940 (1.092)   105   1222349 10.0000   12.437  80.00- 120.00   100.00
 25.940  25.940 (1.092)   120    593107                    20.26-  80.26    48.52
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 26.395  26.395 (1.111)   105   1151160 10.0000   11.672  80.00- 120.00   100.00
 26.395  26.395 (1.111)   120    537097                    17.68-  77.68    46.66
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 26.794  26.794 (1.128)   146    804458 10.0000   11.002  80.00- 120.00   100.00
 26.810  26.810 (1.128)   148    513429                    34.18-  94.18    63.82
 26.794  26.794 (1.128)   111    326237                     9.70-  69.70    40.55
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 26.919  26.919 (1.133)   146    712717 10.0000   10.374  80.00- 120.00   100.00
 26.919  26.919 (1.133)   148    455108                    34.47-  94.47    63.86
 26.919  26.919 (1.133)   111    273083                     8.85-  68.85    38.32
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 27.075  27.075 (1.139)    91   1033860 10.0000   13.671  80.00- 120.00   100.00
 27.075  27.075 (1.139)   126    209745                     0.00-  51.19    20.29
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 27.371  27.371 (1.152)   146    722239 10.0000   11.003  80.00- 120.00   100.00
 27.371  27.371 (1.152)   148    461193                    33.68-  93.68    63.86
 27.371  27.371 (1.152)   111    307201                    11.24-  71.24    42.53
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	505947	10.0000	8.352	80.00- 120.00	100.00
29.382	29.382 (1.237)	182	491076			63.91- 123.91	97.06
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	377656	10.0000	8.099	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	234829			31.90- 91.90	62.18
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	59711	1.00000	0.7236	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	7384			0.00- 42.99	12.37

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071902.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: su
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 19-JUL-2016
Calibration Time: 07:30
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	115886	0.00
123 1,4-Difluorobenze	406395	243837	568953	406395	0.00
163 Chlorobenzene-d5	363239	217943	508535	363239	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/19Jul2016.b/20071902.d

Date : 19-JUL-2016 07:30

Client ID: CCV

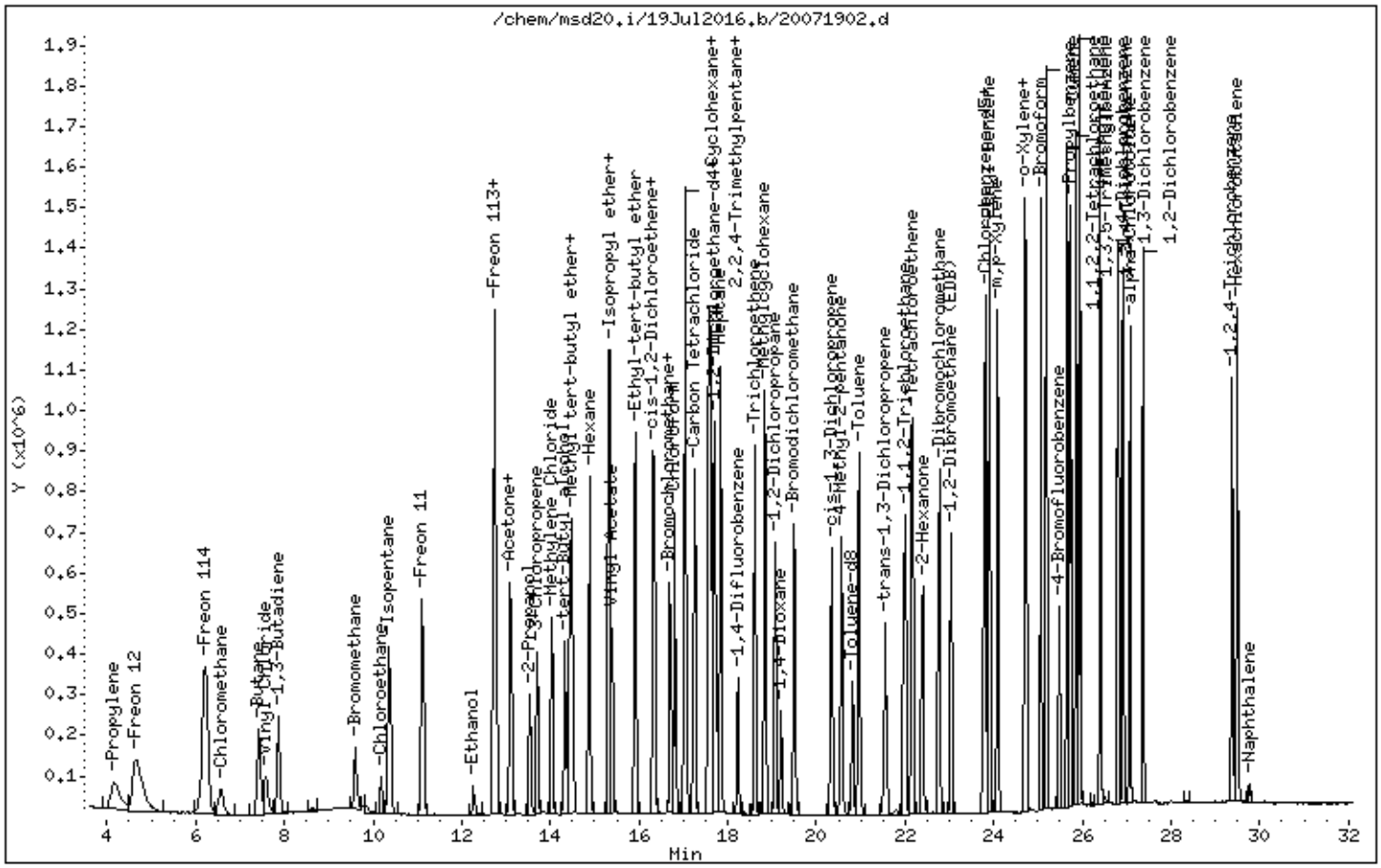
Instrument: msd20.i

Sample Info: 50mL# 2789-175

Operator: su

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCS

Lab ID#: 1607235D-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 08:40 AM**	

Compound	%Recovery	Method Limits
Freon 12	121	70-130
Freon 114	111	70-130
Chloromethane	110	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	104	70-130
Bromomethane	94	70-130
Chloroethane	111	70-130
Freon 11	110	70-130
Ethanol	107	70-130
Freon 113	95	70-130
1,1-Dichloroethene	96	70-130
Acetone	100	70-130
2-Propanol	104	70-130
Carbon Disulfide	95	70-130
3-Chloropropene	103	70-130
Methylene Chloride	98	70-130
Methyl tert-butyl ether	97	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	102	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	96	70-130
Tetrahydrofuran	106	70-130
Chloroform	109	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	120	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	115	70-130
1,2-Dichloroethane	122	70-130
Heptane	122	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	119	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	123	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	130	70-130
Toluene	119	70-130
trans-1,3-Dichloropropene	119	70-130
1,1,2-Trichloroethane	109	70-130
Tetrachloroethene	104	70-130
2-Hexanone	114	70-130

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Client Sample ID: LCS

Lab ID#: 1607235D-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 08:40 AM**	

Compound	**%Recovery**	**Method Limits**
Dibromochloromethane	128	70-130
1,2-Dibromoethane (EDB)	113	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	115	70-130
o-Xylene	114	70-130
Styrene	122	70-130
Bromoform	136 Q	70-130
Cumene	119	70-130
1,1,2,2-Tetrachloroethane	120	70-130
Propylbenzene	112	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	117	70-130
1,2,4-Trimethylbenzene	110	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	99	70-130
alpha-Chlorotoluene	135 Q	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	86	70-130
Hexachlorobutadiene	84	70-130
Naphthalene	80	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	106	70-130

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 19Jul2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: su
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AT12.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	11.290	112.91	60-140
11 Freon 12	10.000	12.136	121.37	70-130
15 Freon 114	10.000	11.121	111.21	70-130
17 Chloromethane	10.000	11.026	110.26	70-130
23 Butane	10.000	11.162	111.62	60-140
25 Vinyl Chloride	10.000	11.247	112.47	70-130
26 1,3-Butadiene	10.000	10.451	104.51	70-130
29 Bromomethane	10.000	9.404	94.04	70-130
30 Chloroethane	10.000	11.114	111.14	70-130
31 Isopentane	10.000	10.162	101.62	60-140
35 Freon 11	10.000	10.977	109.77	70-130
42 Ethanol	10.000	10.672	106.72	70-130
49 Freon 113	10.000	9.534	95.34	70-130
50 1,1-Dichloroethene	10.000	9.598	95.98	70-130
52 Acetone	10.000	10.035	100.35	70-130
56 Carbon Disulfide	10.000	9.536	95.37	70-130
57 2-Propanol	10.000	10.376	103.76	70-130
58 3-Chloropropene	10.000	10.344	103.44	70-130
66 Methylene Chloride	10.000	9.847	98.47	70-130
72 Methyl tert-butyl	10.000	9.712	97.12	70-130
73 trans-1,2-Dichloro	8.500	8.602	101.20	70-130
78 Hexane	10.000	10.201	102.01	70-130
82 1,1-Dichloroethane	10.000	10.313	103.13	70-130
86 Vinyl Acetate	10.000	9.830	98.30	60-140
91 cis-1,2-Dichloroet	11.300	10.884	96.32	70-130
92 2-Butanone	10.000	10.224	102.24	70-130
99 Tetrahydrofuran	10.000	10.630	106.30	70-130
100 Chloroform	10.000	10.878	108.78	70-130
103 1,1,1-Trichloroeth	10.000	10.805	108.05	70-130
106 Carbon Tetrachlori	10.000	11.966	119.66	70-130
102 Cyclohexane	10.000	10.084	100.84	70-130
113 2,2,4-Trimethylpen	10.000	10.707	107.07	70-130
116 Benzene	10.000	11.493	114.93	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	12.161	121.61	70-130
121 Heptane	10.000	12.226	122.27	70-130
125 Trichloroethene	10.000	11.016	110.16	70-130
127 Methylcyclohexane	10.000	11.872	118.72	60-140
132 1,2-Dichloropropan	10.000	11.902	119.02	70-130
136 1,4-Dioxane	10.000	10.916	109.16	70-130
138 Bromodichlorometha	10.000	12.337	123.37	70-130
144 cis-1,3-Dichloropr	10.000	11.093	110.93	70-130
145 4-Methyl-2-pentano	10.000	12.969	129.69	70-130
147 Toluene	10.000	11.900	119.00	70-130
150 trans-1,3-Dichloro	10.000	11.942	119.42	70-130
155 1,1,2-Trichloroeth	10.000	10.892	108.92	70-130
156 Tetrachloroethene	10.000	10.386	103.86	70-130
158 2-Hexanone	10.000	11.421	114.21	70-130
160 Dibromochlorometha	10.000	12.854	128.54	70-130
161 1,2-Dibromoethane	10.000	11.282	112.82	70-130
165 Chlorobenzene	10.000	10.825	108.25	70-130
167 Ethyl Benzene	10.000	11.250	112.50	70-130
169 m,p-Xylene	10.000	11.484	114.84	70-130
171 o-Xylene	10.000	11.427	114.27	70-130
172 Styrene	10.000	12.244	122.44	70-130
174 Bromoform	13.000	17.630	135.62*	70-130
175 Cumene	10.000	11.886	118.86	70-130
181 1,1,2,2-Tetrachlor	10.000	12.050	120.50	70-130
182 Propylbenzene	10.000	11.220	112.20	70-130
188 4-Ethyltoluene	10.000	10.075	100.75	70-130
190 1,3,5-Trimethylben	10.000	11.720	117.20	70-130
196 1,2,4-Trimethylben	10.000	11.004	110.04	70-130
208 1,3-Dichlorobenzen	10.000	10.479	104.79	70-130
209 1,4-Dichlorobenzen	10.000	9.896	98.96	70-130
212 alpha-Chlorotoluen	10.000	13.530	135.30*	70-130
214 1,2-Dichlorobenzen	10.000	10.563	105.63	70-130
226 1,2,4-Trichloroben	10.000	8.633	86.33	70-130
227 Hexachlorobutadien	10.000	8.381	83.81	70-130
228 Naphthalene	1.000	0.8042	80.43	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.376	107.53	70-130
$ 146 Toluene-d8	5.000	5.589	111.78	70-130
$ 177 4-Bromofluorobenze	5.000	5.321	106.41	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071903.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 19-JUL-2016 08:40
Operator : su Inst ID: msd20.i
Smp Info : 50mL# 2789-168
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	117658	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	92061			47.94- 107.94	78.24
16.726	16.726 (1.000)	49	165525			102.10- 162.10	140.68
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	418592	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	66917			0.00- 45.77	15.99
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	375006	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	224329			26.51- 86.51	59.82
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	183487	5.37649	5.376	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	106850			32.47- 92.47	58.23
$ 146 Toluene-d8					CAS #: 2037-26-5		
20.821	20.822 (1.142)	98	451856	5.58888	5.589	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	54868			0.00- 41.37	12.14

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

$ 146 Toluene-d8 (continued)
 20.821  20.822 (1.142)   100    299791                    36.07-  96.07    66.35
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 25.485  25.485 (1.073)   174    214230 5.32072    5.321  80.00- 120.00   100.00
 25.485  25.466 (1.073)    95    262017                   89.67- 149.67   122.31
 25.485  25.485 (1.073)   176    206103                   67.40- 127.40    96.21
-------------------------------------------------------------------------------
    9 Propylene                                     CAS #: 115-07-1
  4.166   4.166 (0.249)    41    349048 11.2906   11.290  80.00- 120.00   100.00
  4.142   4.190 (0.248)    42    235053                   37.70-  97.70    67.34
  4.166   4.142 (0.249)    39    260351                   41.61- 101.61    74.59
-------------------------------------------------------------------------------
   11 Freon 12                                      CAS #: 75-71-8
  4.648   4.672 (0.278)    85   1212792 12.1366   12.136  80.00- 120.00   100.00
  4.648   4.672 (0.278)    87    394972                    2.54-  62.54    32.57
-------------------------------------------------------------------------------
   15 Freon 114                                     CAS #: 76-14-2
  6.215   6.215 (0.372)   135    767472 11.1211   11.121  80.00- 120.00   100.00
  6.215   6.215 (0.372)   137    245863                    1.78-  61.78    32.04
  6.191   6.215 (0.370)    85   1078039                  116.61- 176.61   140.47
-------------------------------------------------------------------------------
   17 Chloromethane                                 CAS #: 74-87-3
  6.552   6.577 (0.392)    50    368920 11.0255   11.026  80.00- 120.00   100.00
  6.576   6.553 (0.393)    52    119857                    3.03-  63.03    32.49
-------------------------------------------------------------------------------
   23 Butane                                        CAS #: 106-97-8
  7.416   7.434 (0.443)    58     91543 11.1619   11.162  80.00- 120.00   100.00
  7.416   7.416 (0.443)    43    639621                  656.82- 716.82   698.71
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.572   7.573 (0.453)    62    419763 11.2469   11.247  80.00- 120.00   100.00
  7.572   7.590 (0.453)    64    131917                    1.50-  61.50    31.43
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  7.868   7.868 (0.470)    54    298455 10.4511   10.451  80.00- 120.00   100.00
  7.868   7.868 (0.470)    39    308361                   69.00- 129.00   103.32
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.596   9.596 (0.574)    94    222305 9.40377    9.404  80.00- 120.00   100.00
  9.596   9.596 (0.574)    96    215431                   63.60- 123.60    96.91
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.174  10.174 (0.608)    64    187718 11.1137   11.114  80.00- 120.00   100.00
 10.174  10.174 (0.608)    49     49792                    0.00-  55.63    26.52
 10.174  10.174 (0.608)    66     59371                    2.70-  62.70    31.63
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	296208	10.1616	10.162	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	442103			115.62- 175.62	149.25
10.367	10.367 (0.620)	42	407936			100.35- 160.35	137.72
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	1060110	10.9767	10.977	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	685849			34.91- 94.91	64.70
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	133398	10.6719	10.672	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	54982			11.72- 71.72	41.22
12.269	12.269 (0.734)	43	36081			0.00- 52.99	27.05
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	621651	9.53371	9.534	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	401015			34.49- 94.49	64.51
12.763	12.763 (0.763)	101	801664			96.39- 156.39	128.96
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	216485	9.59831	9.598	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	587716			227.70- 287.70	271.48
12.736	12.736 (0.761)	96	336844			125.12- 185.12	155.60
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	179989	10.0351	10.035	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	588180			278.33- 338.33	326.79
56 Carbon Disulfide					CAS #: 75-15-0		
13.120	13.121 (0.784)	76	966868	9.53656	9.536	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
13.532	13.533 (0.809)	45	575556	10.3757	10.376	80.00- 120.00	100.00
13.532	13.533 (0.809)	43	157588			0.00- 52.04	27.38
13.532	13.533 (0.809)	59	23057			0.00- 34.17	4.01
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	148891	10.3438	10.344	80.00- 120.00	100.00
13.697	13.697 (0.819)	41	421220			236.04- 296.04	282.90
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	360125	9.84726	9.847	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	483118			97.79- 157.79	134.15
14.027	14.027 (0.839)	51	148228			9.84- 69.84	41.16
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.439	14.439 (0.863)	73	981355	9.71201	9.712	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
14.439	14.439 (0.863)	57	218767			0.00- 52.45	22.29
14.439	14.439 (0.863)	41	265547			0.00- 53.55	27.06
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.493	14.494 (0.866)	98	209155	8.60190	8.602	80.00- 120.00	100.00
14.493	14.494 (0.866)	61	499346			194.43- 254.43	238.74
14.493	14.494 (0.866)	96	337087			127.78- 187.78	161.17
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	581009	10.2009	10.201	80.00- 120.00	100.00
14.878	14.878 (0.889)	43	383113			33.20- 93.20	65.94
14.878	14.878 (0.889)	86	102390			0.00- 48.21	17.62
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	721233	10.3131	10.313	80.00- 120.00	100.00
15.345	15.345 (0.917)	65	227495			1.84- 61.84	31.54
86 Vinyl Acetate					CAS #: 108-05-4		
15.399	15.400 (0.921)	86	85659	9.83042	9.830	80.00- 120.00	100.00
15.399	15.400 (0.921)	42	84883			55.70- 115.70	99.09
15.399	15.400 (0.921)	43	899860			963.84-1023.84	1050.51
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.323	16.324 (0.976)	98	278423	10.8841	10.884	80.00- 120.00	100.00
16.323	16.324 (0.976)	61	597489			172.98- 232.98	214.60
16.323	16.324 (0.976)	96	434545			124.81- 184.81	156.07
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	186027	10.2244	10.224	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	734792			345.54- 405.54	394.99
16.344	16.344 (0.977)	57	57897			0.00- 59.64	31.12
99 Tetrahydrofuran					CAS #: 109-99-9		
16.695	16.696 (0.998)	42	449801	10.6304	10.630	80.00- 120.00	100.00
16.695	16.696 (0.998)	71	171938			10.37- 70.37	38.23
16.695	16.696 (0.998)	72	183532			13.30- 73.30	40.80
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	862260	10.8777	10.878	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	558023			35.08- 95.08	64.72
102 Cyclohexane					CAS #: 110-82-7		
17.034	17.035 (1.018)	84	549956	10.0836	10.084	80.00- 120.00	100.00
17.034	17.035 (1.018)	56	643380			82.51- 142.51	116.99
17.034	17.035 (1.018)	41	365059			30.91- 90.91	66.38

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.066 (1.020)	97	890898	10.8049	10.805	80.00- 120.00	100.00
17.065	17.066 (1.020)	99	566206			34.55- 94.55	63.55
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	820425	11.9661	11.966	80.00- 120.00	100.00
17.250	17.250 (1.031)	117	841718			75.13- 135.13	102.60
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
17.579	17.579 (1.051)	56	592813	10.7066	10.707	80.00- 120.00	100.00
17.579	17.579 (1.051)	57	1750063			266.38- 326.38	295.21
17.579	17.579 (1.051)	41	493565			47.04- 107.04	83.26
116 Benzene					CAS #: 71-43-2		
17.620	17.621 (0.966)	78	1166782	11.4927	11.493	80.00- 120.00	100.00
17.620	17.621 (0.966)	77	276152			0.00- 54.04	23.67
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	542896	12.1608	12.161	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	175749			2.26- 62.26	32.37
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	338469	12.2266	12.226	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	121339			9.17- 69.17	35.85
17.847	17.847 (0.979)	43	644880			158.08- 218.08	190.53
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	510461	11.0158	11.016	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	508912			67.33- 127.33	99.70
18.610	18.610 (1.021)	97	329252			32.56- 92.56	64.50
127 Methylcyclohexane					CAS #: 108-87-2		
18.833	18.834 (1.033)	83	702733	11.8721	11.872	80.00- 120.00	100.00
18.833	18.834 (1.033)	55	568943			48.63- 108.63	80.96
18.833	18.834 (1.033)	56	182139			0.00- 55.66	25.92
132 1,2-Dichloropropane					CAS #: 78-87-5		
19.079	19.079 (1.046)	63	462899	11.9020	11.902	80.00- 120.00	100.00
19.079	19.079 (1.046)	62	327537			41.89- 101.89	70.76
19.056	19.057 (1.045)	41	288533			27.78- 87.78	62.33
136 1,4-Dioxane					CAS #: 123-91-1		
19.213	19.213 (1.054)	88	279160	10.9162	10.916	80.00- 120.00	100.00
19.213	19.213 (1.054)	58	202793			39.29- 99.29	72.64
19.213	19.213 (1.054)	57	64383			0.00- 52.49	23.06

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
19.503	19.503 (0.821)	83	859925	12.3369	12.337	80.00- 120.00	100.00
19.503	19.503 (0.821)	85	552510			34.81- 94.81	64.25
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
20.338	20.339 (1.116)	75	672959	11.0932	11.093	80.00- 120.00	100.00
20.338	20.339 (1.116)	77	211216			1.96- 61.96	31.39
20.338	20.339 (1.116)	39	353703			18.92- 78.92	52.56
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.556	20.572 (1.128)	43	900278	12.9695	12.969	80.00- 120.00	100.00
20.556	20.572 (1.128)	58	345007			9.48- 69.48	38.32
20.556	20.572 (1.128)	85	147663			0.00- 47.76	16.40
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	1295246	11.9002	11.900	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	763273			30.04- 90.04	58.93
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
21.564	21.564 (0.908)	75	627321	11.9420	11.942	80.00- 120.00	100.00
21.564	21.564 (0.908)	77	199434			1.00- 61.00	31.79
21.564	21.564 (0.908)	39	311733			15.93- 75.93	49.69
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
21.999	22.000 (0.926)	97	499092	10.8922	10.892	80.00- 120.00	100.00
21.999	22.000 (0.926)	99	307949			32.15- 92.15	61.70
21.999	22.000 (0.926)	83	432456			55.54- 115.54	86.65
156 Tetrachloroethene					CAS #: 127-18-4		
22.174	22.174 (0.933)	166	673365	10.3860	10.386	80.00- 120.00	100.00
22.145	22.174 (0.932)	129	492041			40.48- 100.48	73.07
22.174	22.174 (0.933)	131	478732			38.27- 98.27	71.10
158 2-Hexanone					CAS #: 591-78-6		
22.406	22.406 (0.943)	58	428528	11.4213	11.421	80.00- 120.00	100.00
22.406	22.406 (0.943)	43	828563			153.17- 213.17	193.35
22.406	22.406 (0.943)	100	92223			0.00- 52.35	21.52
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	885379	12.8544	12.854	80.00- 120.00	100.00
22.784	22.784 (0.959)	127	679573			46.57- 106.57	76.76
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	756056	11.2816	11.282	80.00- 120.00	100.00
23.045	23.045 (0.970)	109	716093			64.70- 124.70	94.71

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	1037109	10.8254	10.825	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	331660			2.37- 62.37	31.98
23.823	23.823 (1.003)	77	624591			28.30- 88.30	60.22
167 Ethyl Benzene					CAS #: 100-41-4		
23.905	23.906 (1.006)	106	494085	11.2495	11.250	80.00- 120.00	100.00
23.905	23.906 (1.006)	91	1587072			282.65- 342.65	321.21
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	540403	11.4837	11.484	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	1079694			170.44- 230.44	199.79
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	508671	11.4273	11.427	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	1079905			177.28- 237.28	212.30
172 Styrene					CAS #: 100-42-5		
24.751	24.751 (1.042)	104	776780	12.2439	12.244	80.00- 120.00	100.00
24.730	24.731 (1.041)	78	414515			22.29- 82.29	53.36
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	1191442	17.6305	17.630	80.00- 120.00	100.00(R)
25.068	25.068 (1.055)	171	607872			20.98- 80.98	51.02
175 Cumene					CAS #: 98-82-8		
25.181	25.182 (1.060)	105	1712097	11.8863	11.886	80.00- 120.00	100.00
25.181	25.182 (1.060)	120	459729			0.00- 56.93	26.85
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	1083699	12.0500	12.050	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	698462			33.69- 93.69	64.45
182 Propylbenzene					CAS #: 103-65-1		
25.731	25.732 (1.083)	91	1595233	11.2200	11.220	80.00- 120.00	100.00
25.731	25.732 (1.083)	120	367125			0.00- 53.87	23.01
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	1209788	10.0749	10.075	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	362645			0.21- 60.21	29.98
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	1189218	11.7204	11.720	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	583304			20.26- 80.26	49.05
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	1120509	11.0044	11.004	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
26.395	26.395 (1.111)	120	517425			17.68- 77.68	46.18
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.810	26.794 (1.128)	146	791030	10.4787	10.479	80.00- 120.00	100.00
26.810	26.810 (1.128)	148	510703			34.18- 94.18	64.56
26.810	26.794 (1.128)	111	327052			9.70- 69.70	41.35
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	701930	9.89641	9.896	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	448088			34.47- 94.47	63.84
26.919	26.919 (1.133)	111	274741			8.85- 68.85	39.14
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	1056366	13.5303	13.530	80.00- 120.00	100.00(R)
27.075	27.075 (1.139)	126	218758			0.00- 51.19	20.71
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	715814	10.5634	10.563	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	456155			33.68- 93.68	63.73
27.371	27.371 (1.152)	111	297283			11.24- 71.24	41.53
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	539881	8.63303	8.633	80.00- 120.00	100.00
29.382	29.382 (1.237)	182	521256			63.91- 123.91	96.55
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.507	29.491 (1.242)	225	403496	8.38137	8.381	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	248991			31.90- 91.90	61.71
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	68518	0.80425	0.8042	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	10059			0.00- 42.99	14.68

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071903.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: su
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 19-JUL-2016
Calibration Time: 07:30
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	117658	1.53
123 1,4-Difluorobenze	406395	243837	568953	418592	3.00
163 Chlorobenzene-d5	363239	217943	508535	375006	3.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

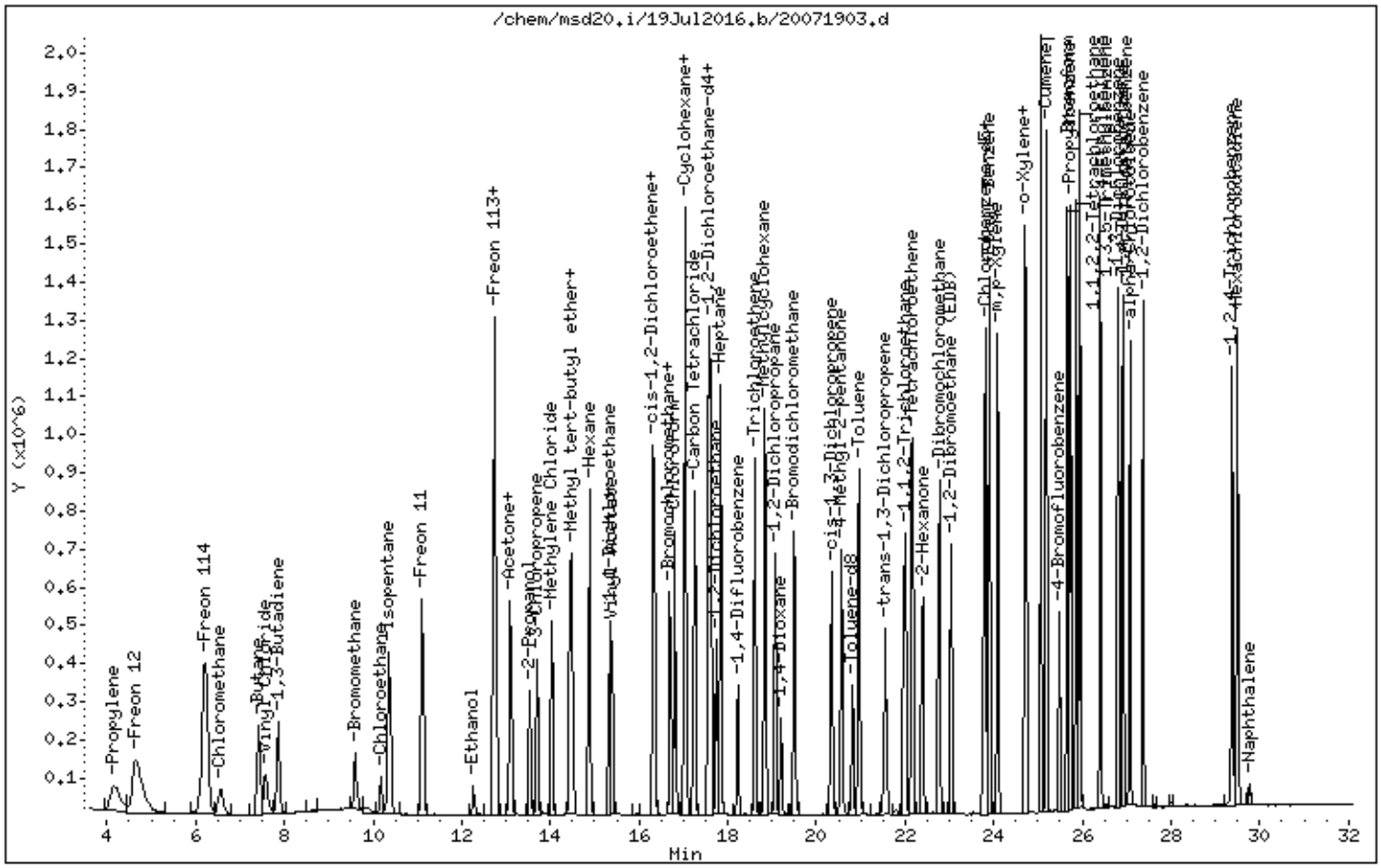
Instrument: msd20.i

Sample Info: 50mL# 2789-168

Operator: su

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

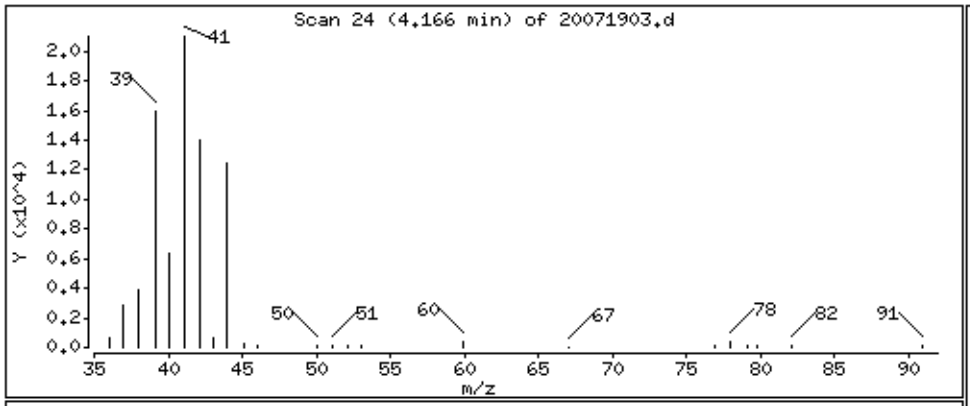
Operator: su

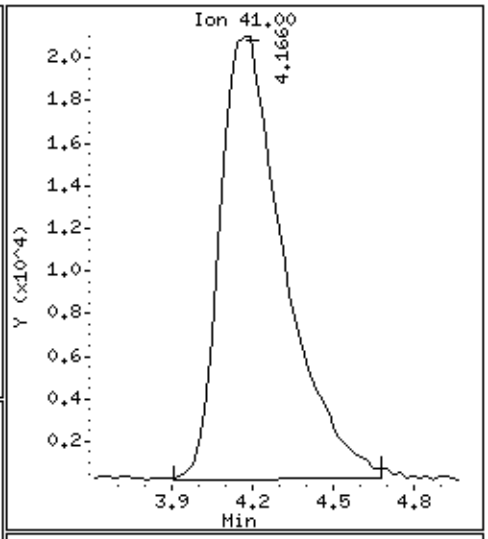
Column phase: RTX-624

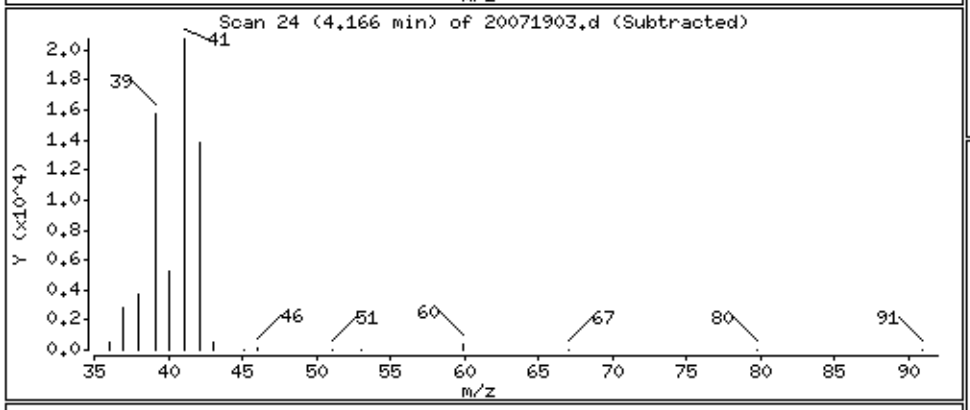
Column diameter: 0.32

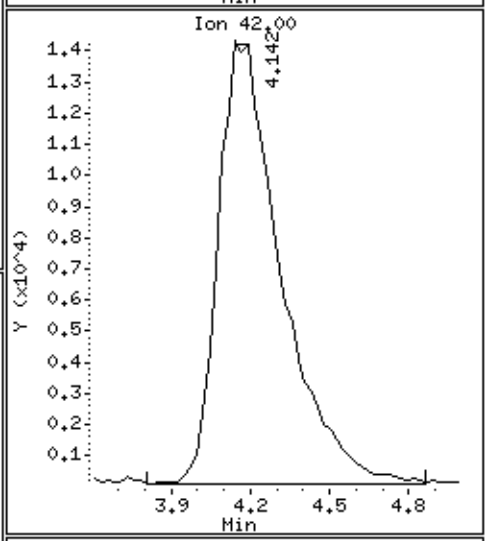
9 Propylene

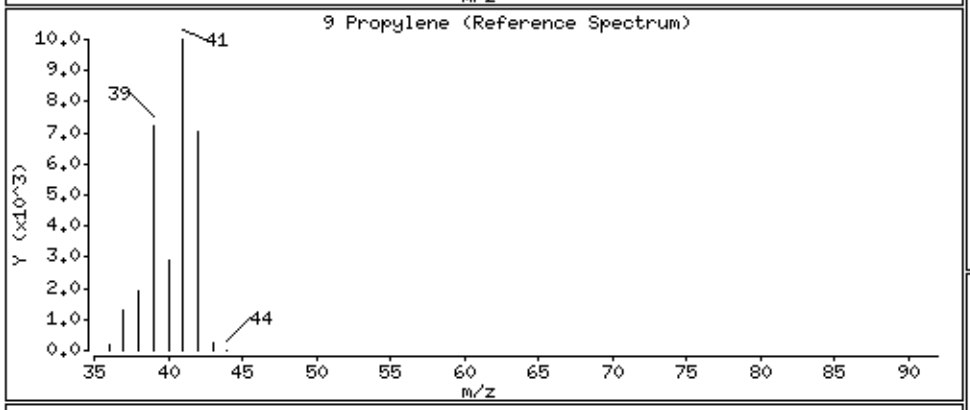
Concentration: 11.290 PPBV

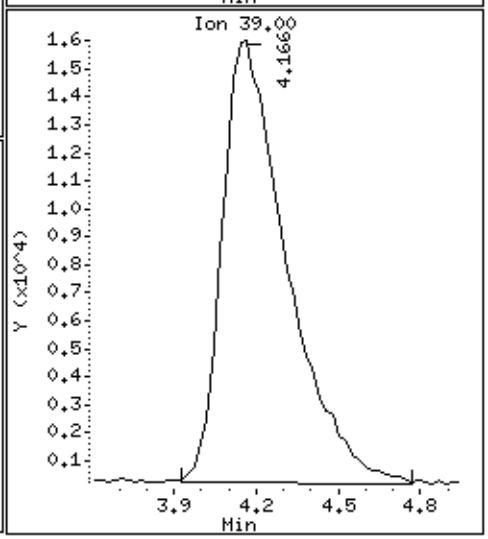


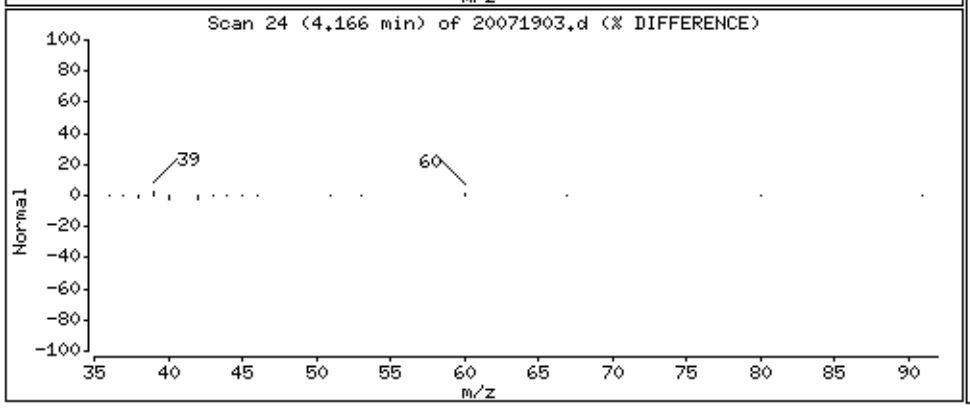












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

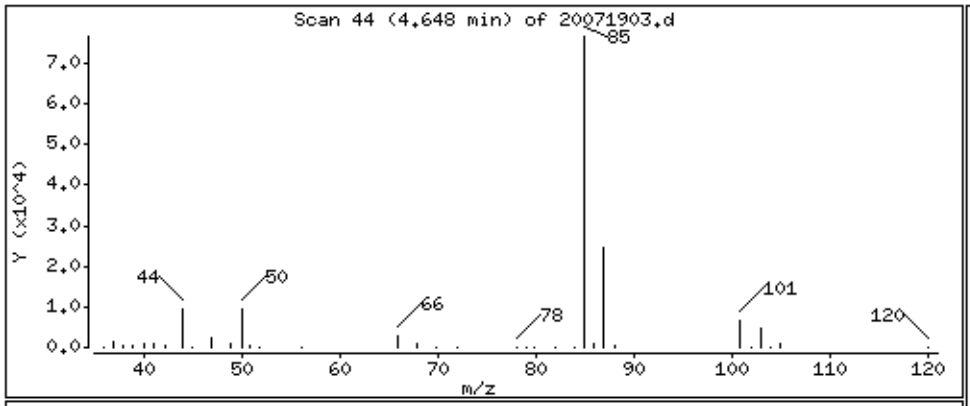
Operator: su

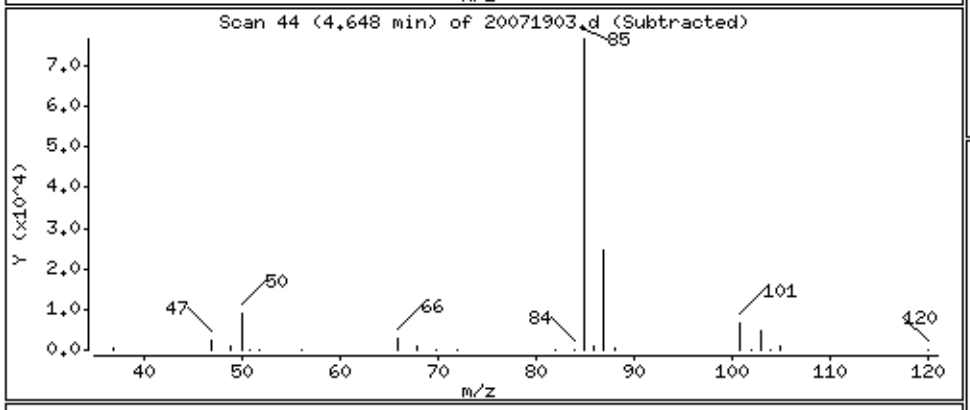
Column phase: RTX-624

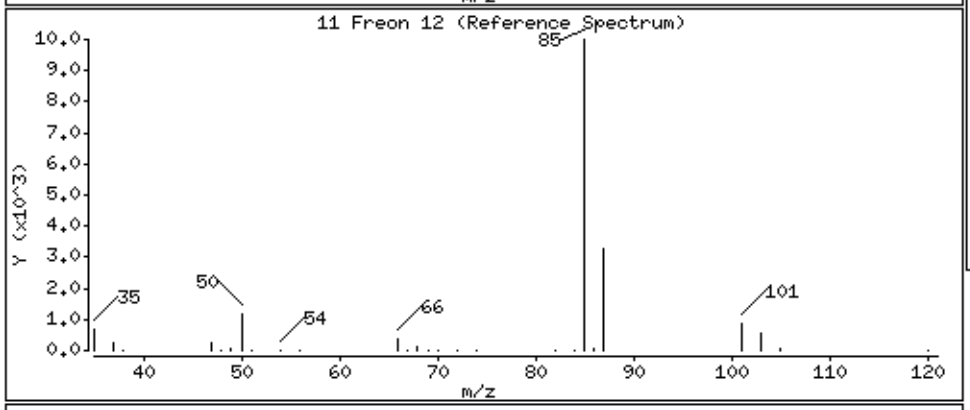
Column diameter: 0.32

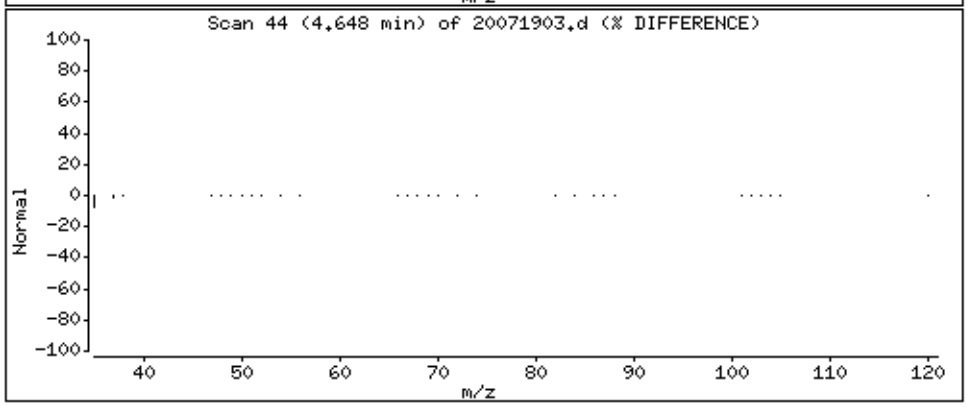
11 Freon 12

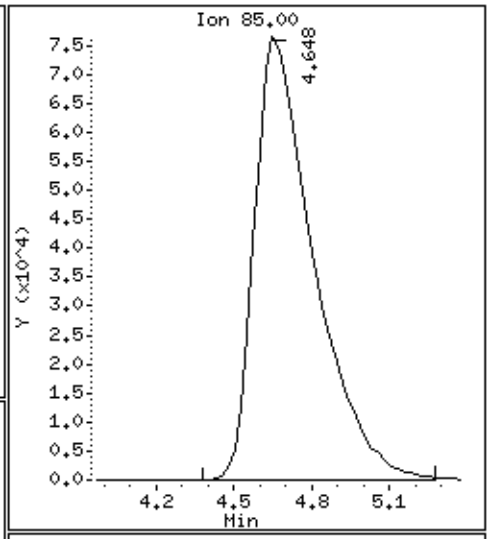
Concentration: 12.136 PPBV

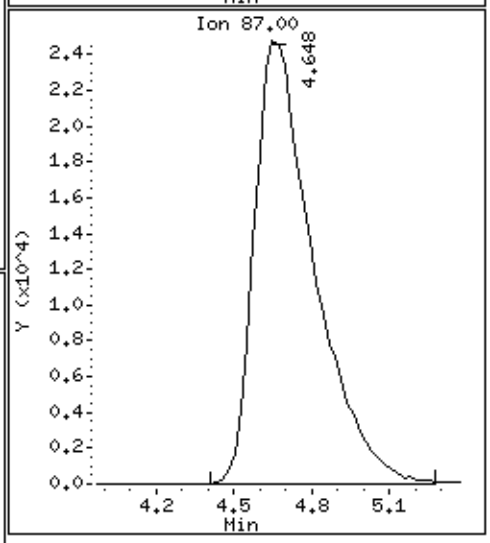












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

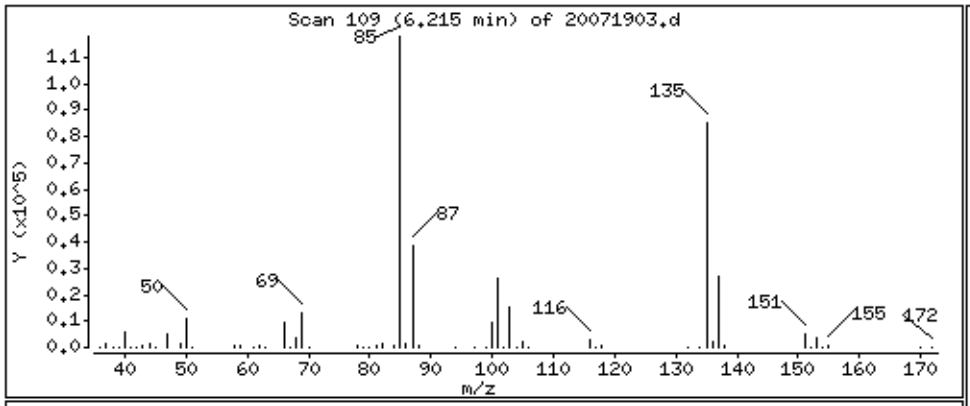
Operator: su

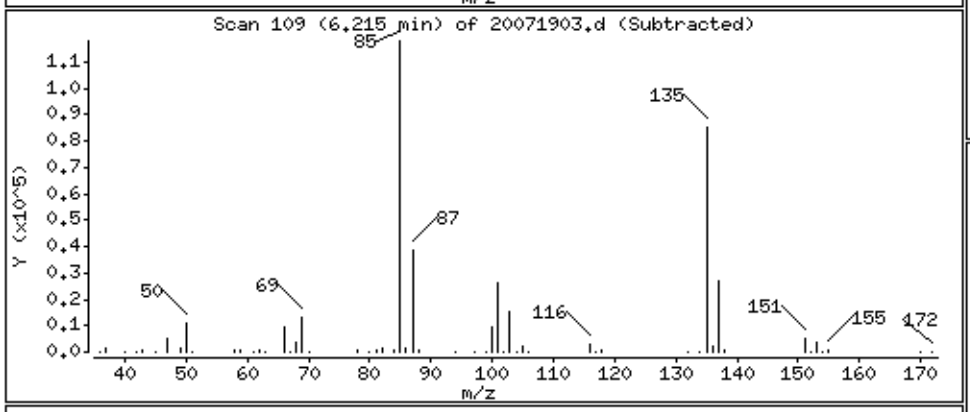
Column phase: RTX-624

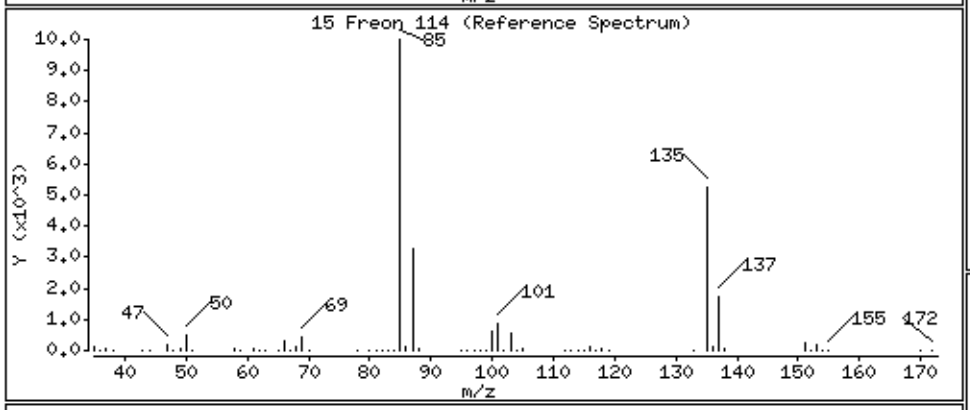
Column diameter: 0.32

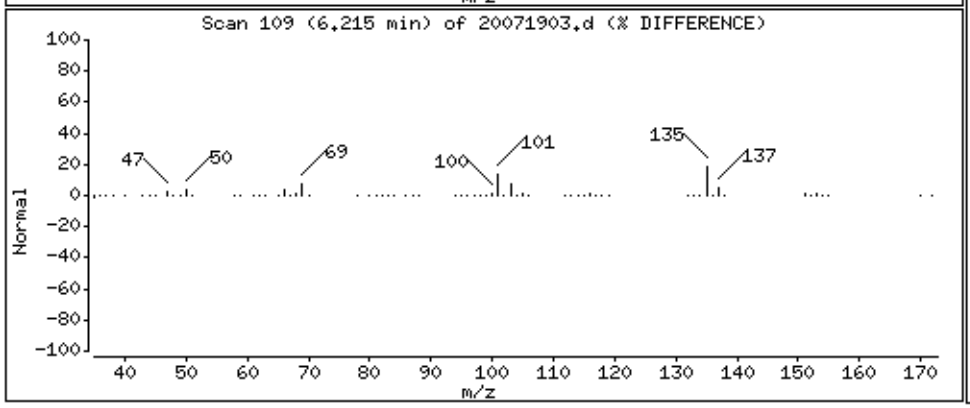
15 Freon 114

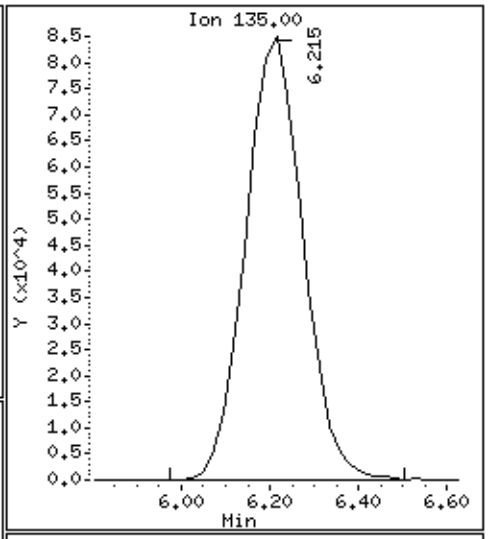
Concentration: 11.121 PPBV

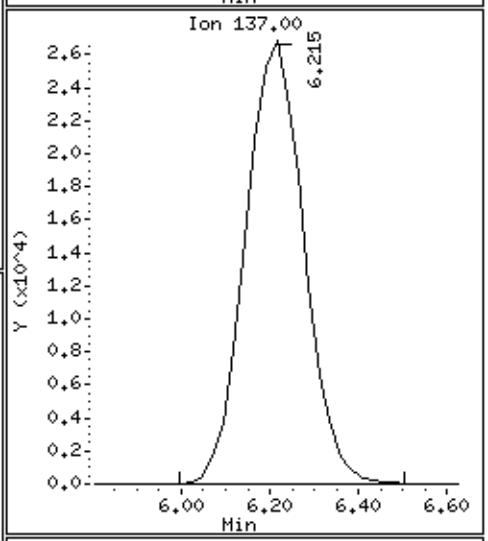


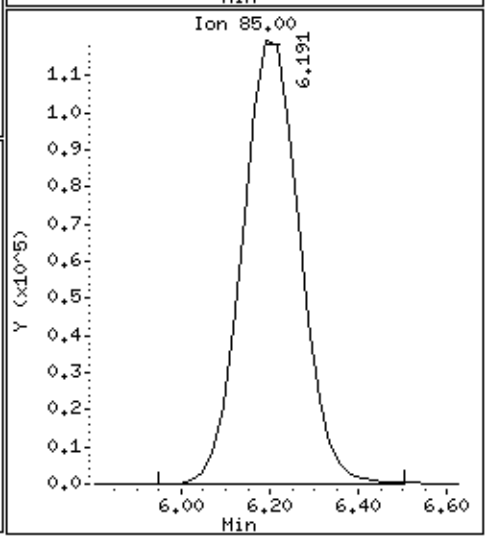












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

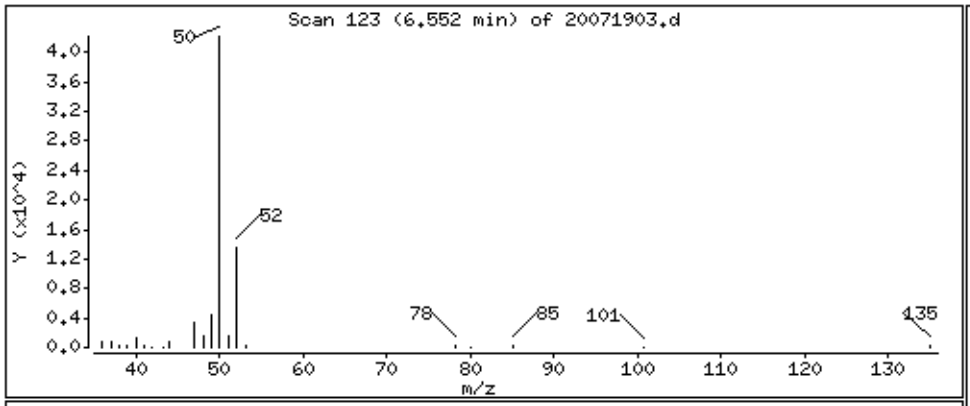
Operator: su

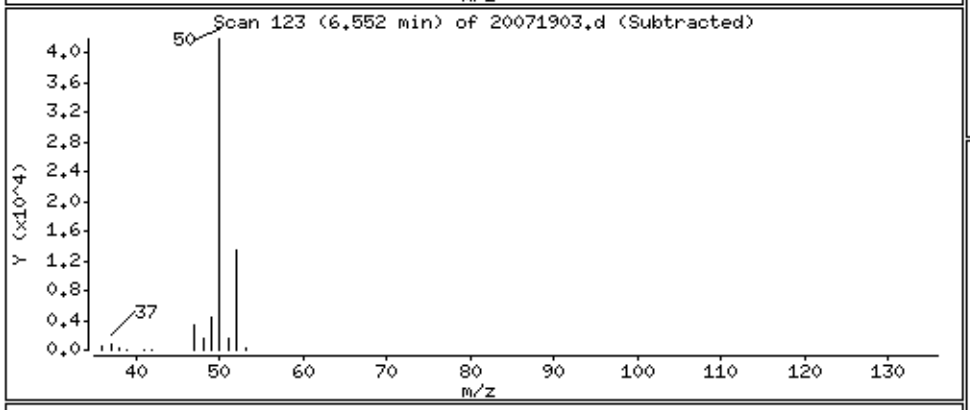
Column phase: RTX-624

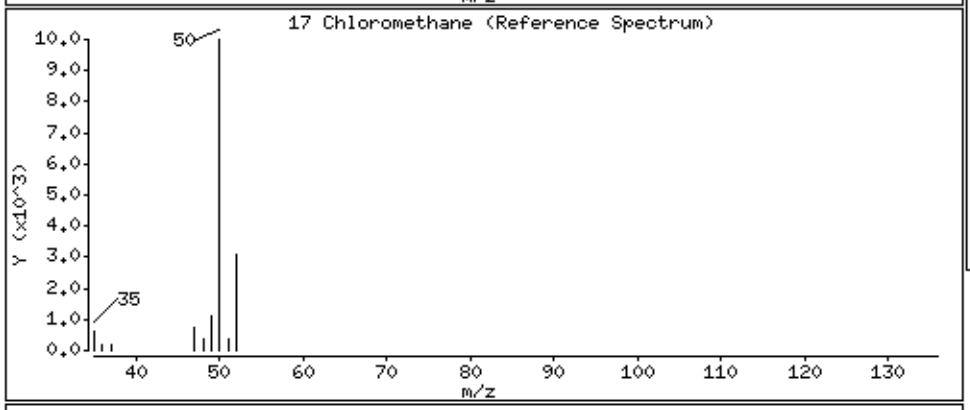
Column diameter: 0.32

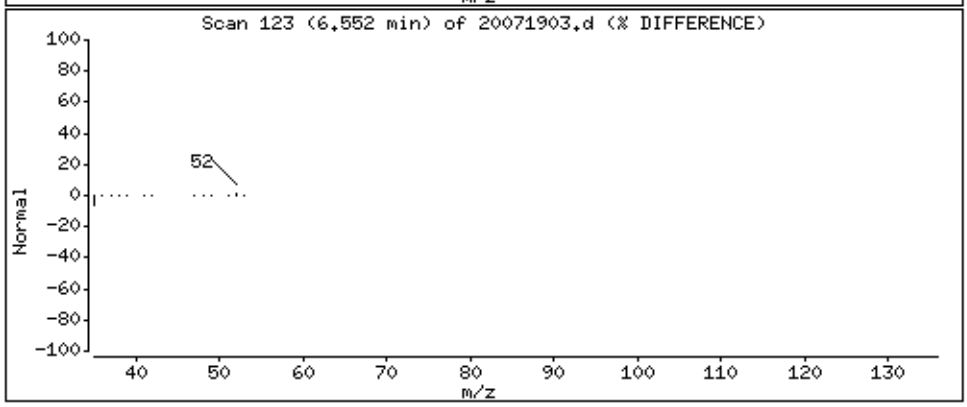
17 Chloromethane

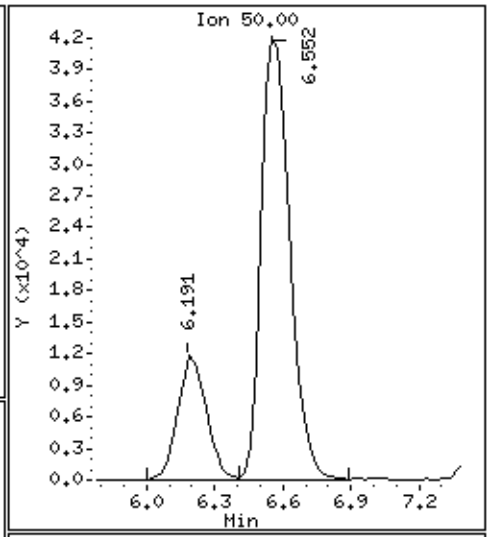
Concentration: 11.026 PPBV

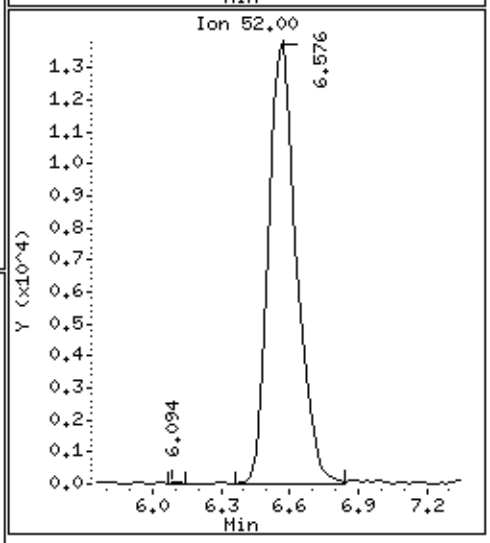












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

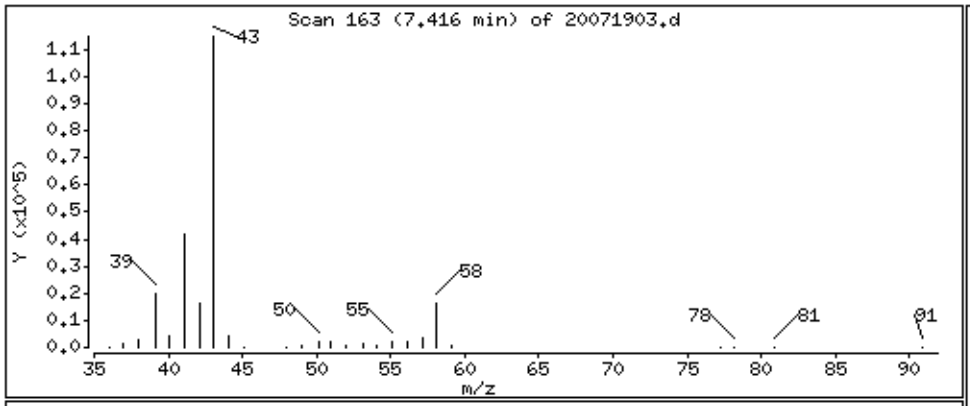
Operator: su

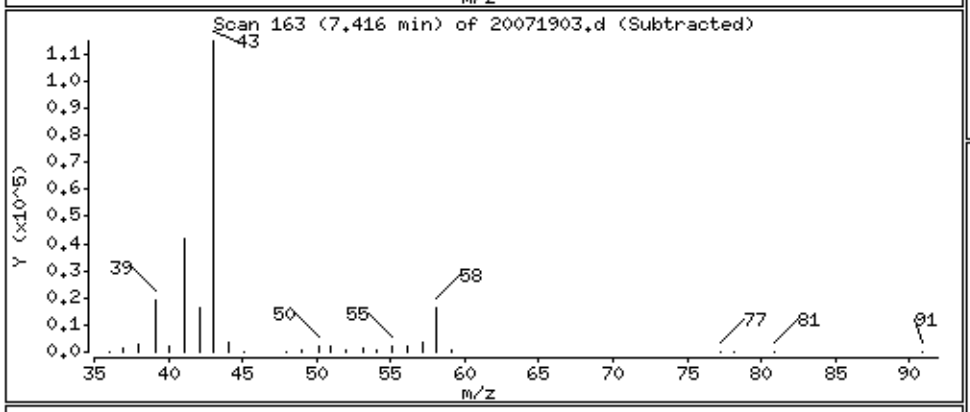
Column phase: RTX-624

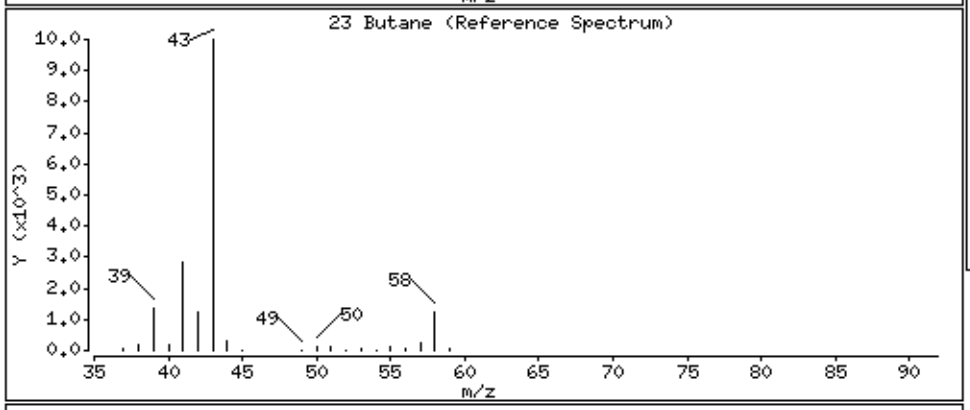
Column diameter: 0.32

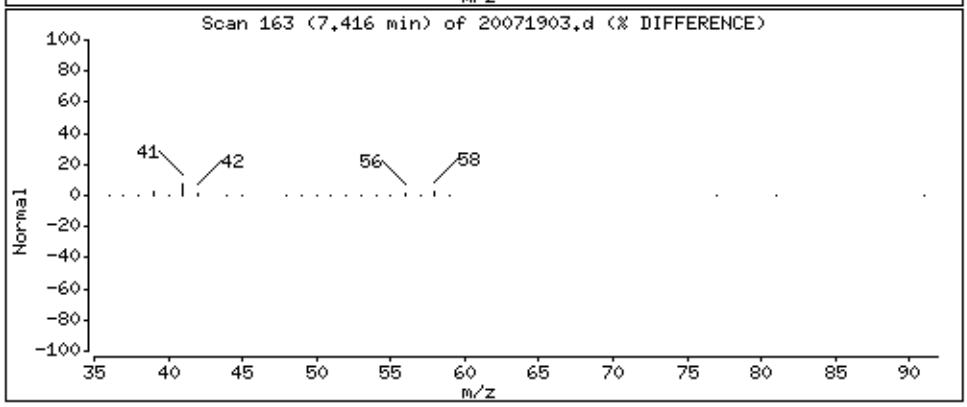
23 Butane

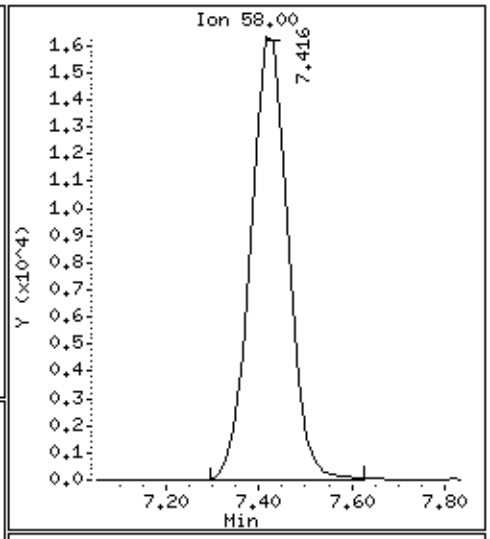
Concentration: 11.162 PPBV

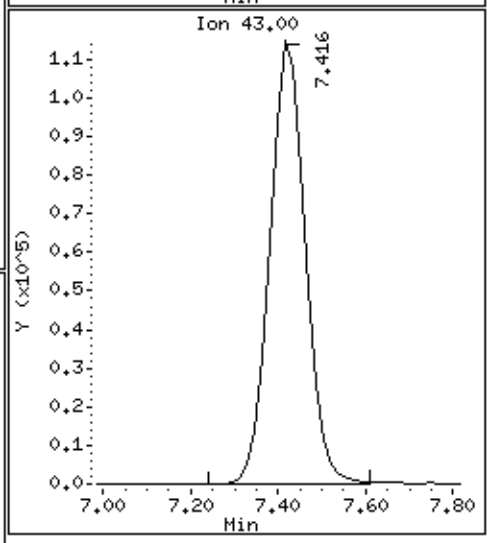












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

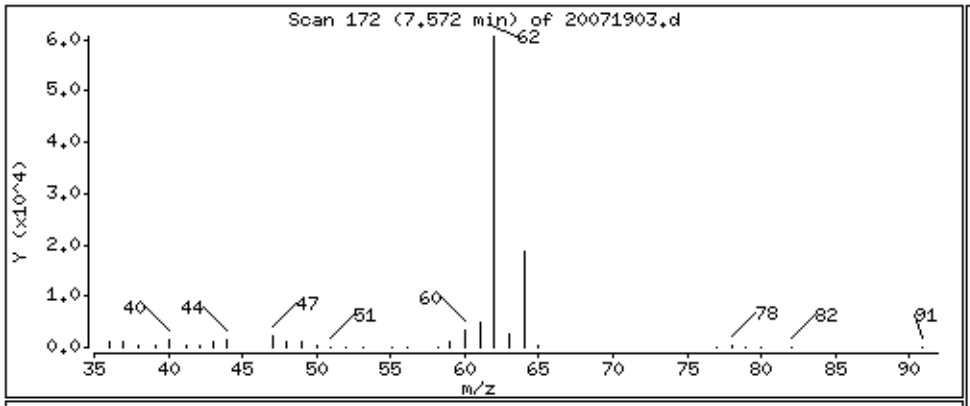
Operator: su

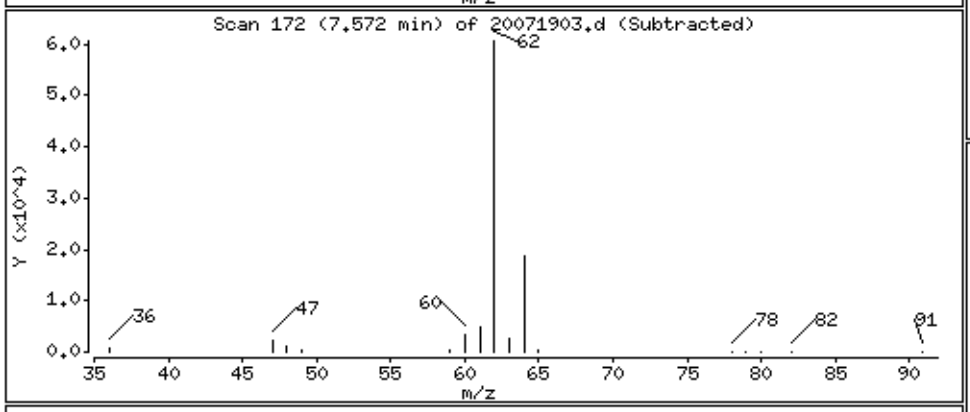
Column phase: RTX-624

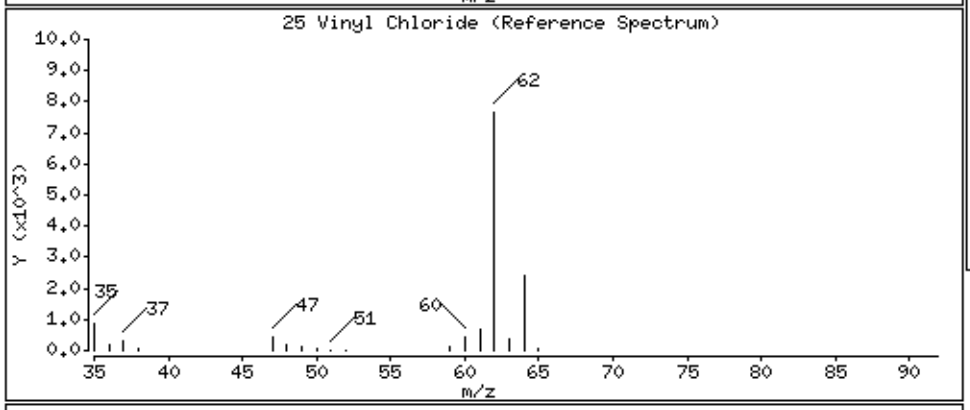
Column diameter: 0.32

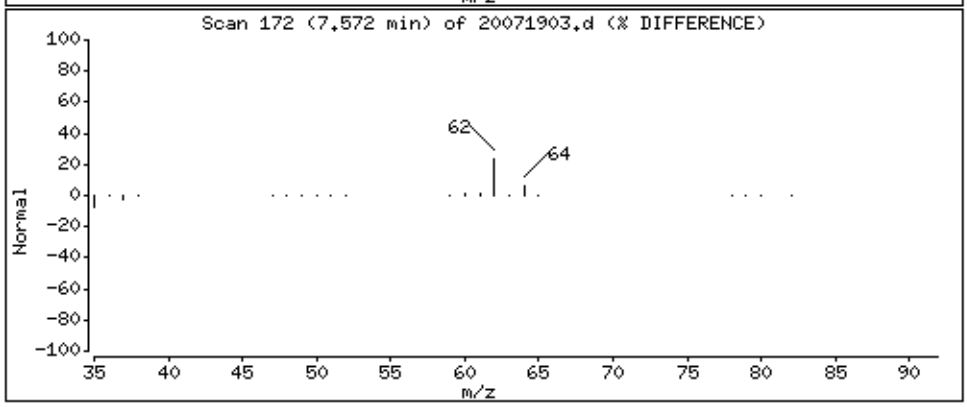
25 Vinyl Chloride

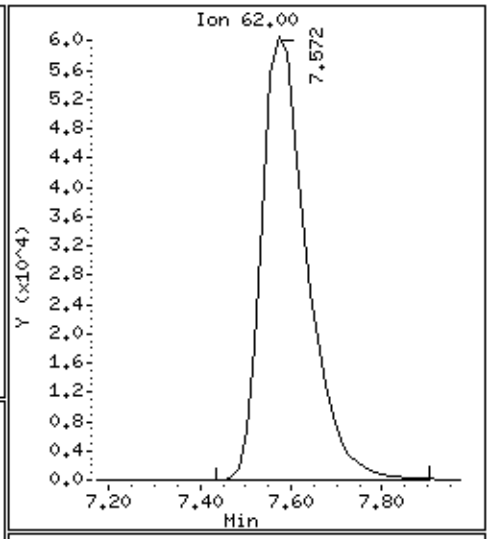
Concentration: 11.247 PPBV

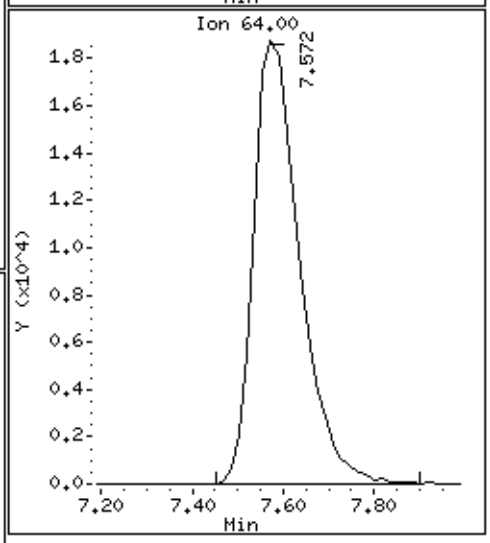












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

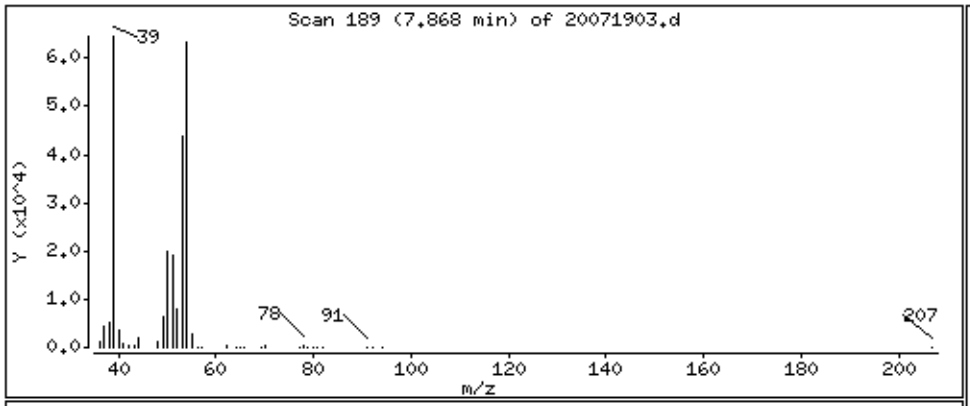
Operator: su

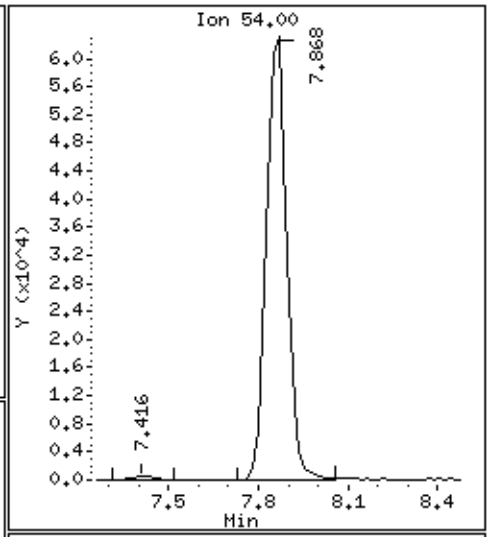
Column phase: RTX-624

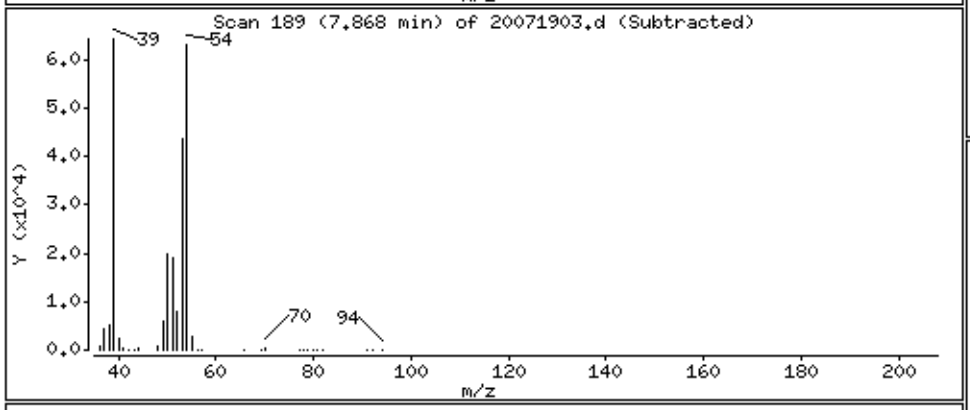
Column diameter: 0.32

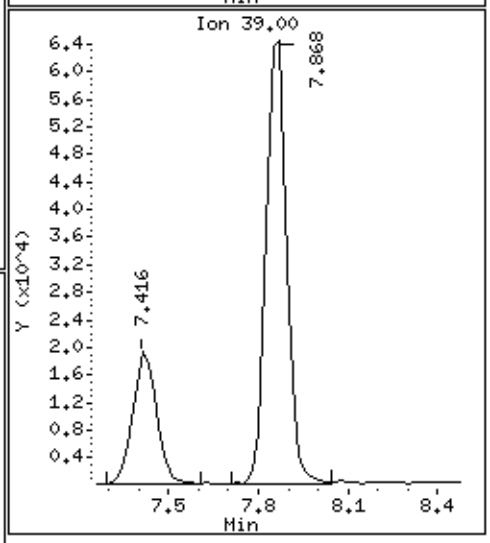
26 1,3-Butadiene

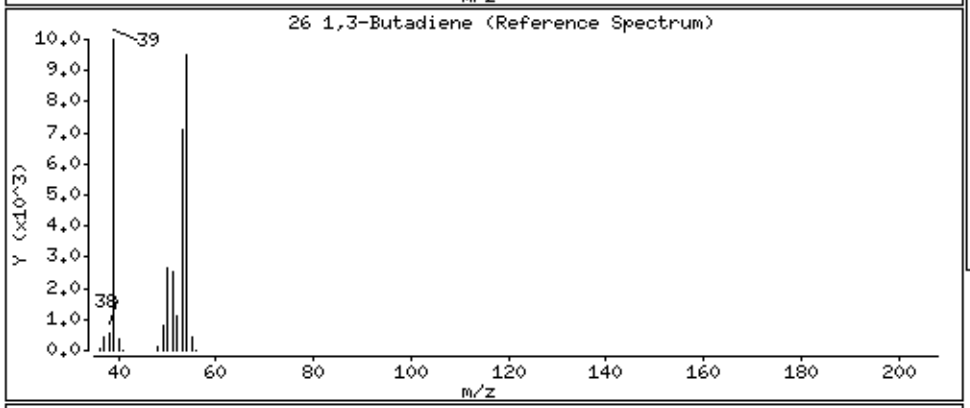
Concentration: 10.451 PPBV

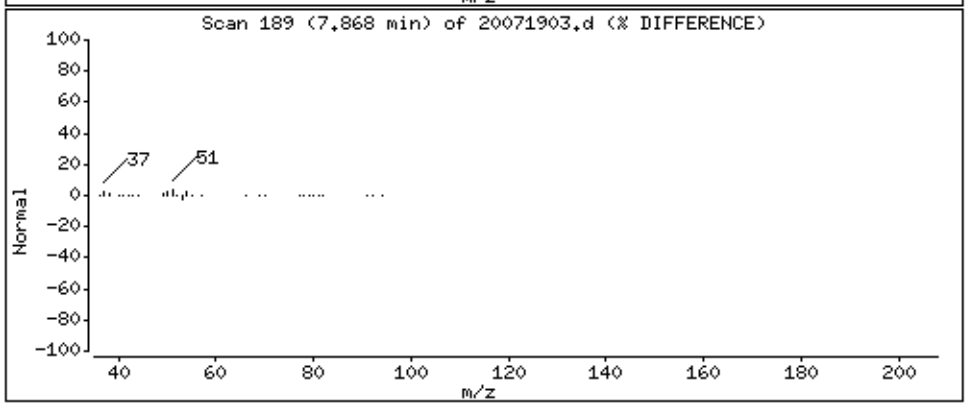












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

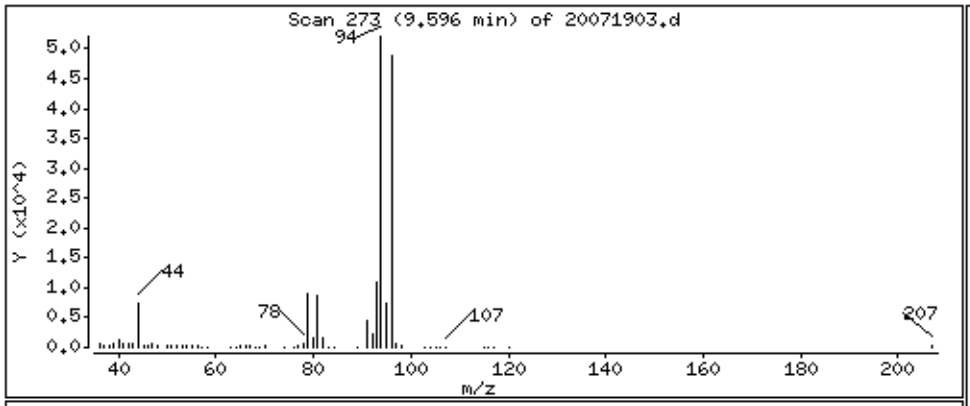
Operator: su

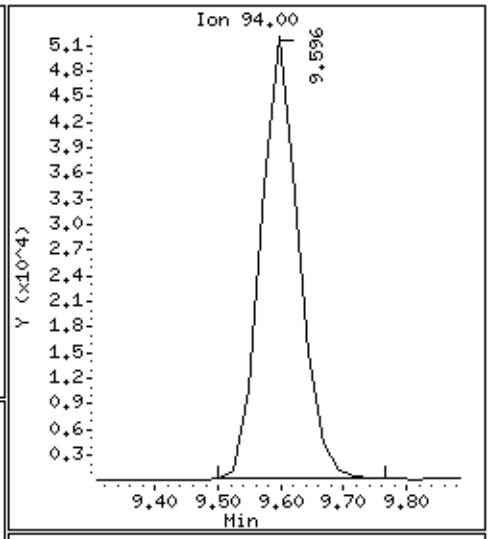
Column phase: RTX-624

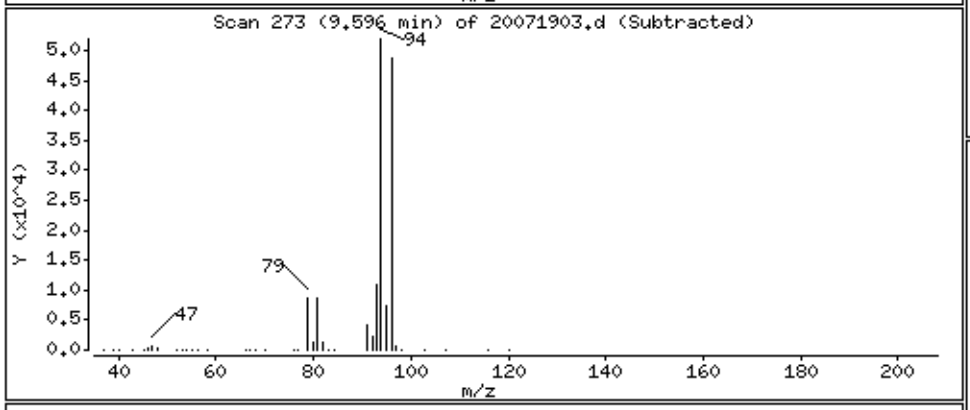
Column diameter: 0.32

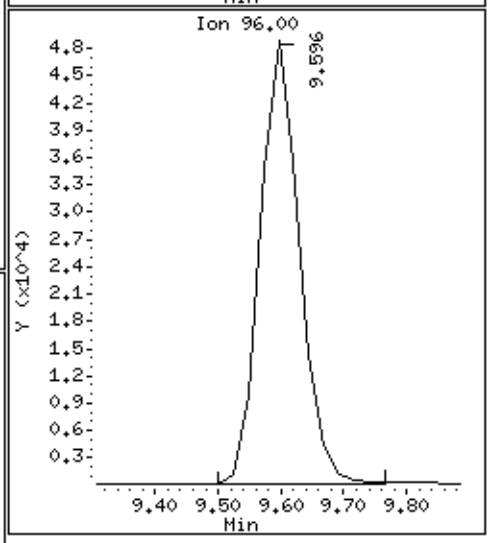
29 Bromomethane

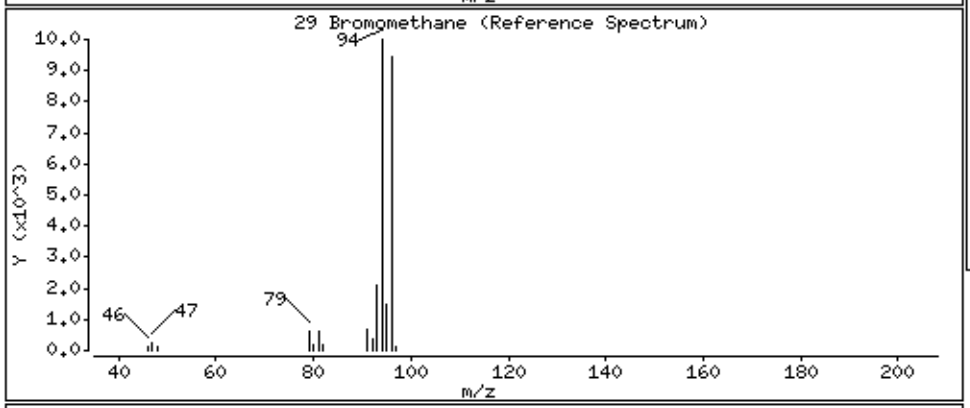
Concentration: 9.404 PPBV

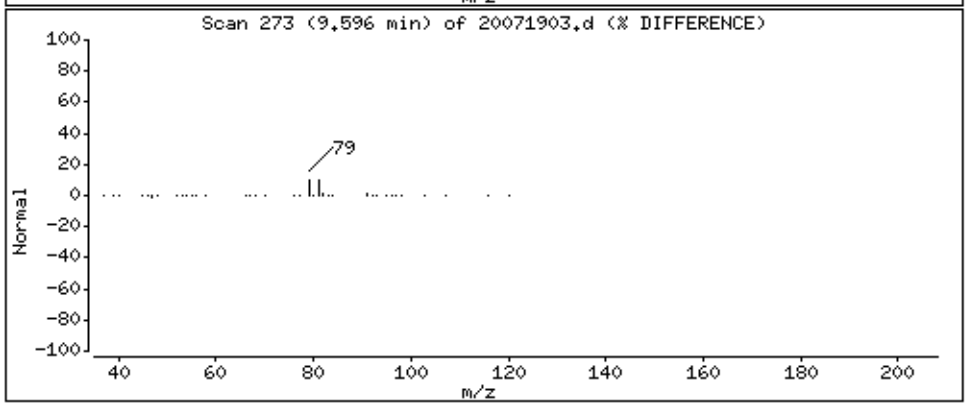












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

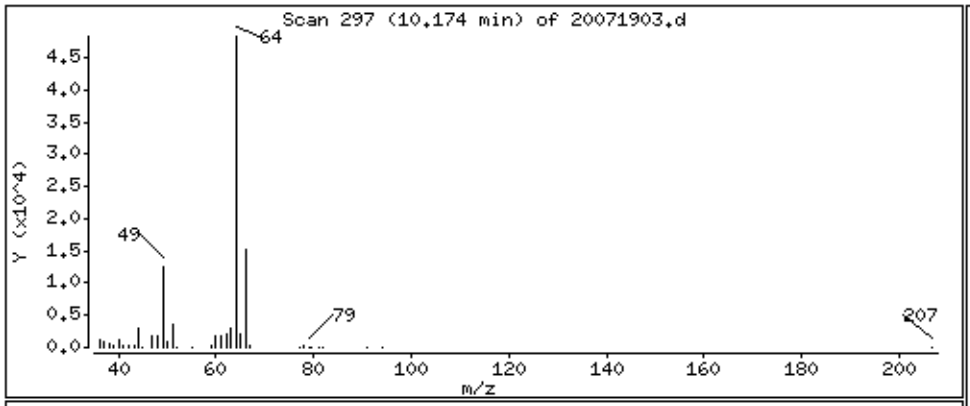
Operator: su

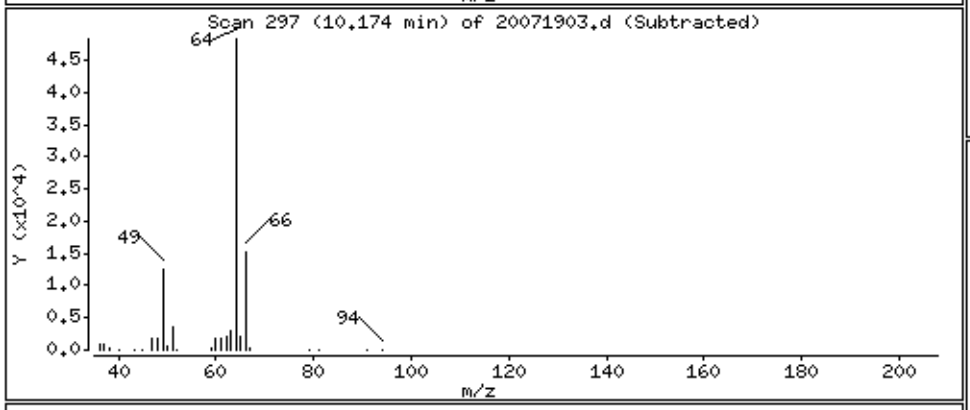
Column phase: RTX-624

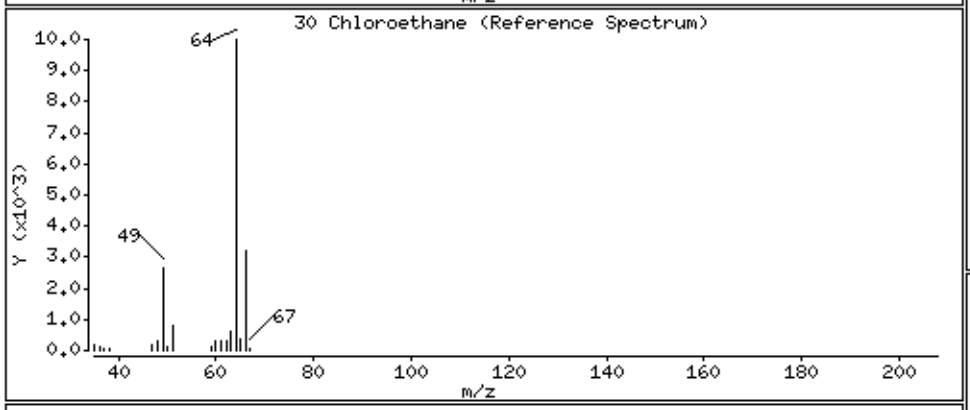
Column diameter: 0.32

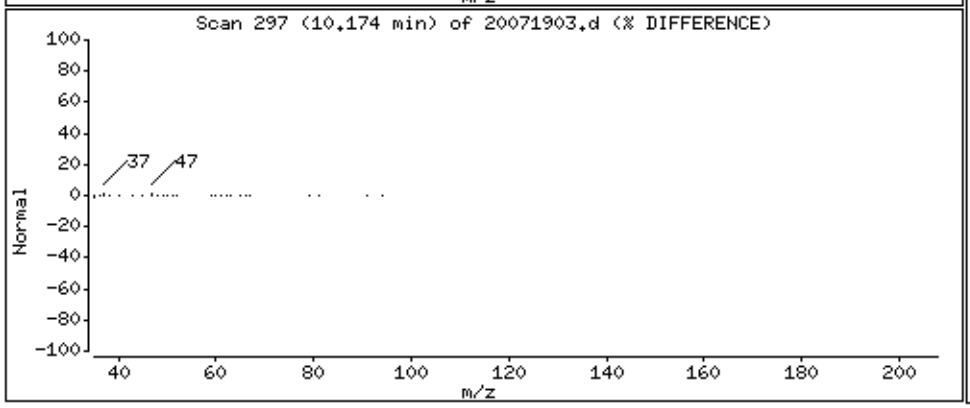
30 Chloroethane

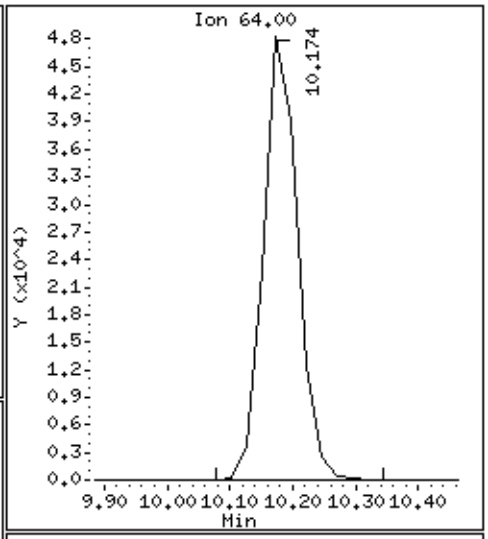
Concentration: 11.114 PPBV

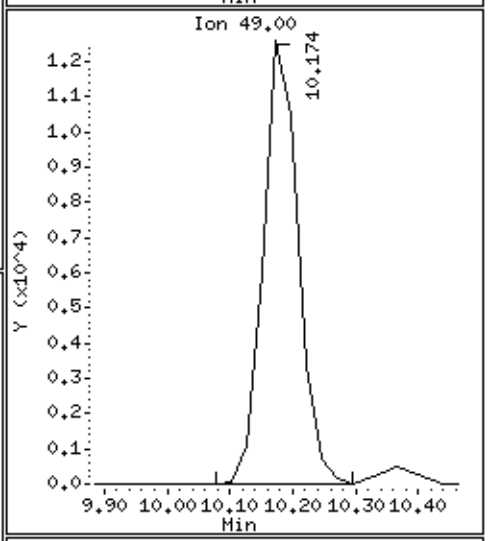


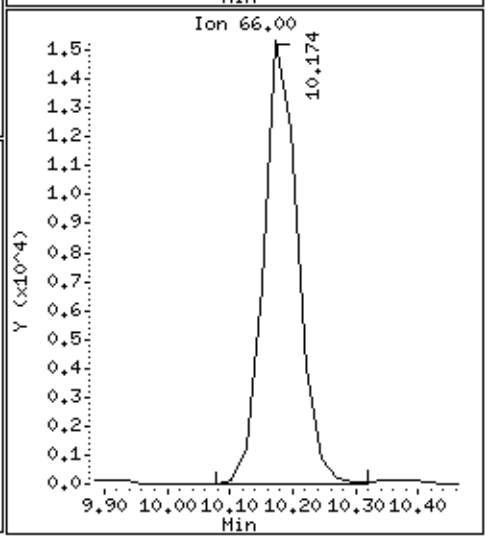












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

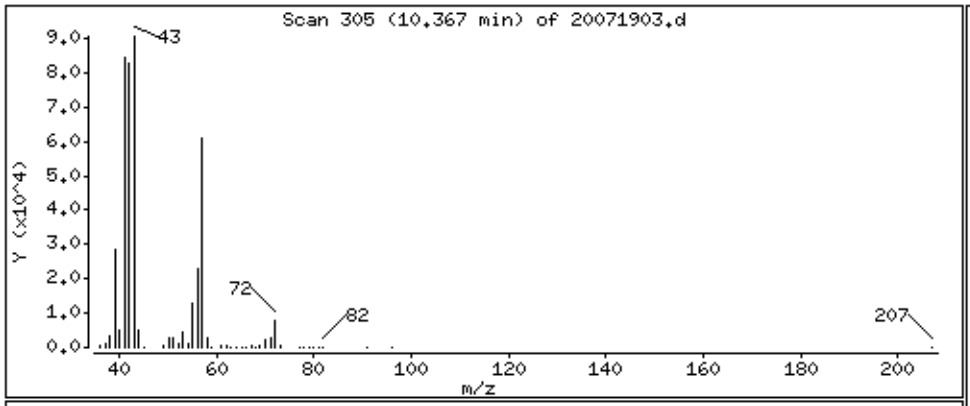
Operator: su

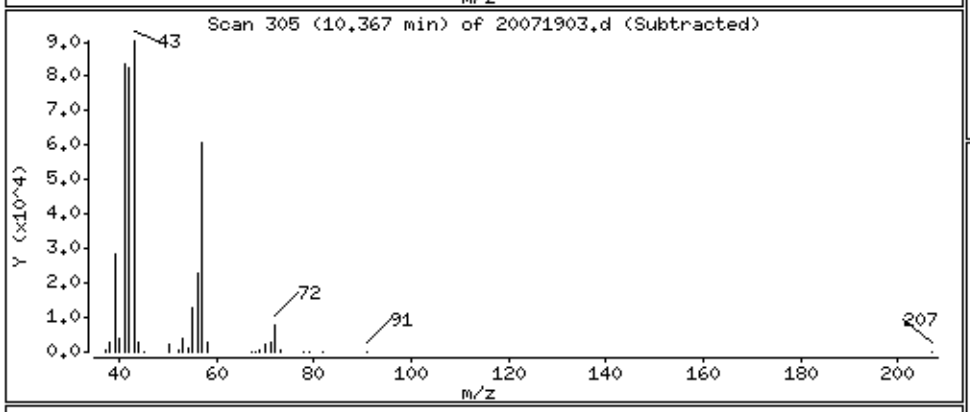
Column phase: RTX-624

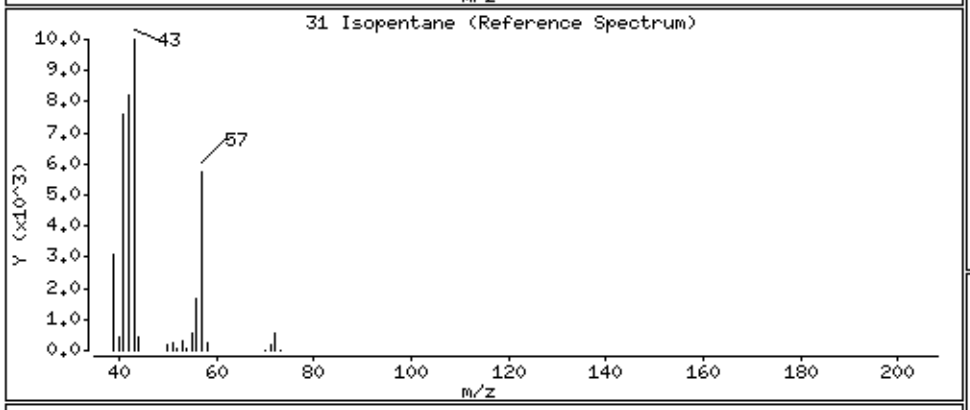
Column diameter: 0.32

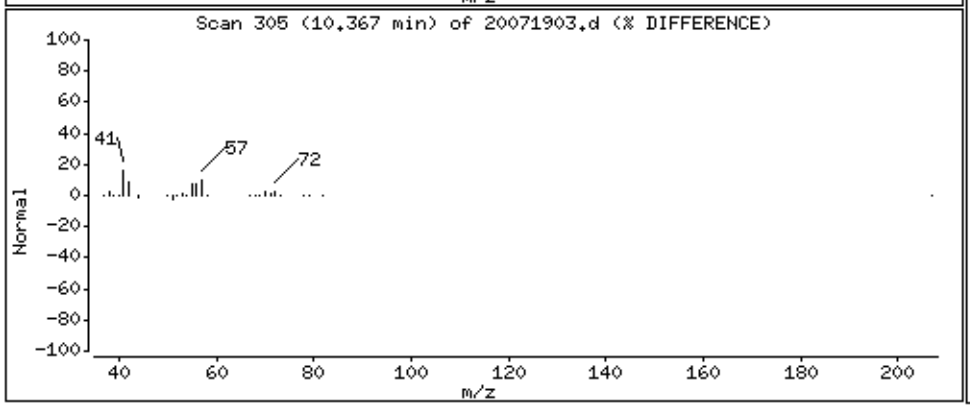
31 Isopentane

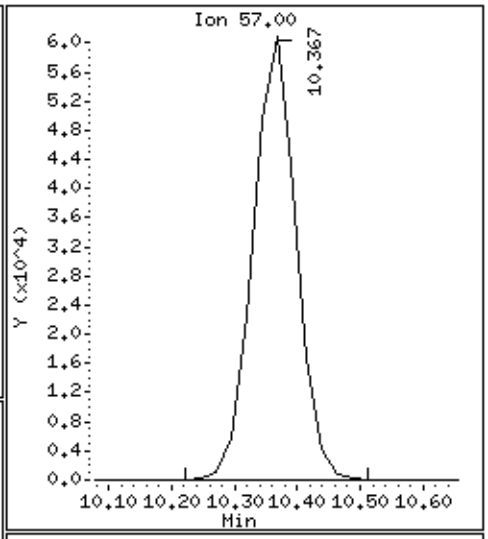
Concentration: 10.162 PPBV

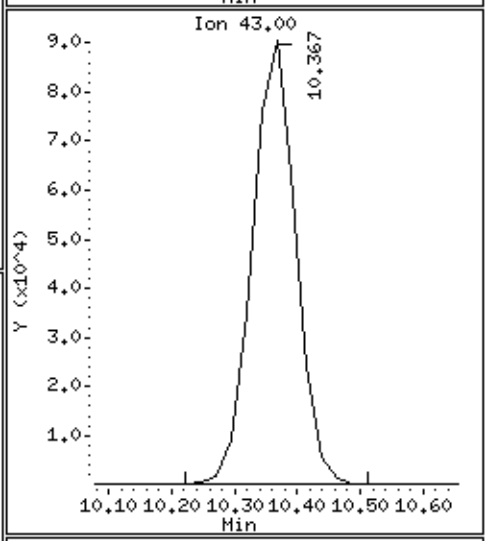


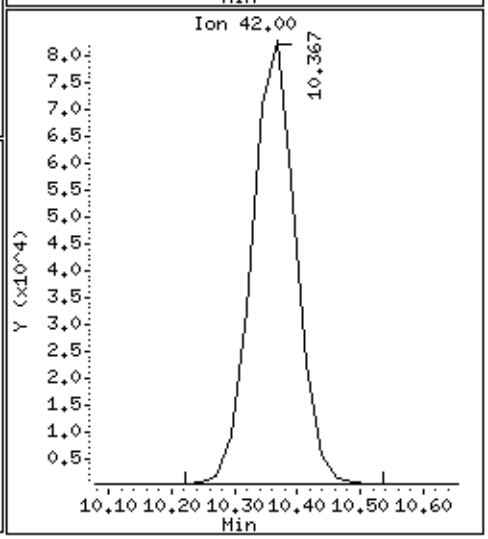












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

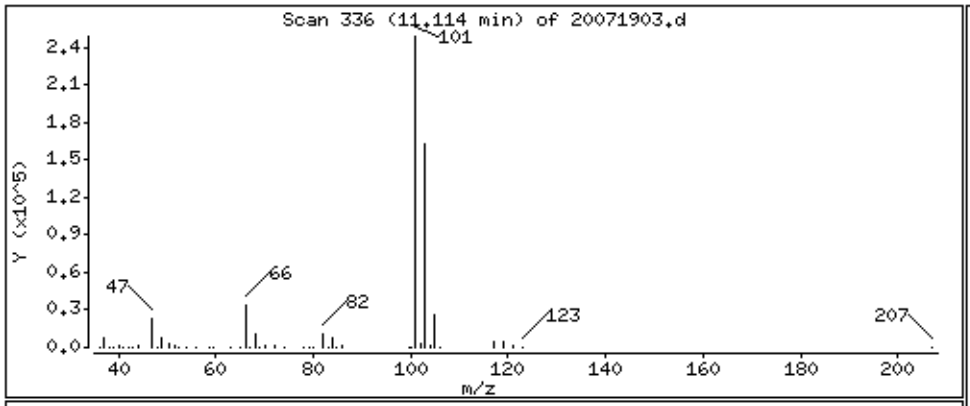
Operator: su

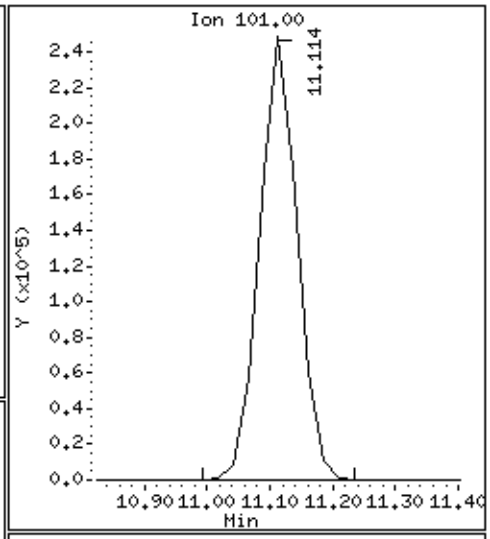
Column phase: RTX-624

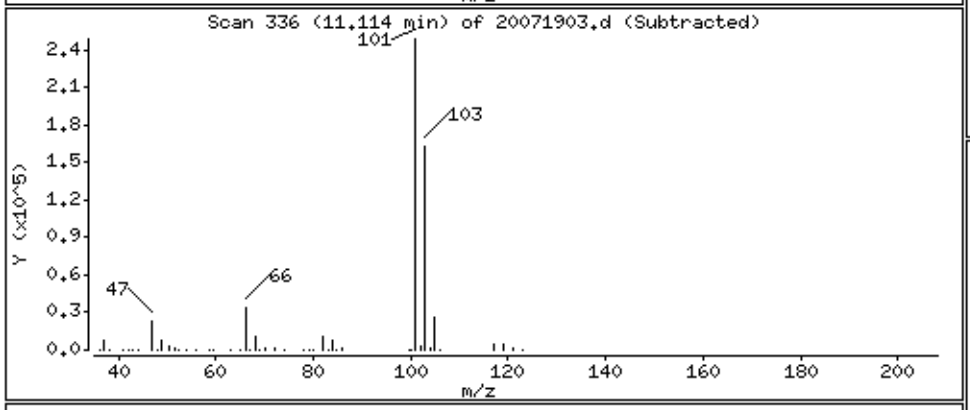
Column diameter: 0.32

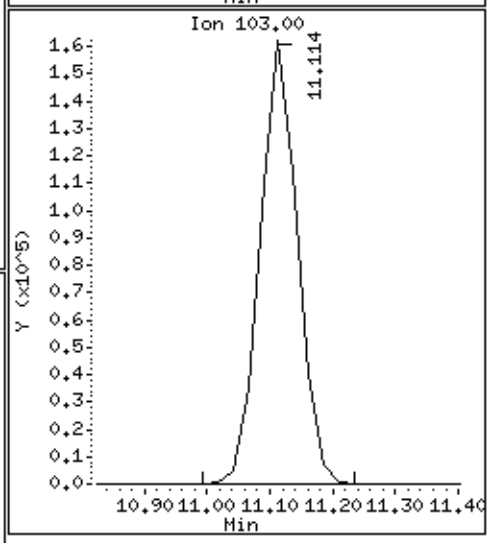
35 Freon 11

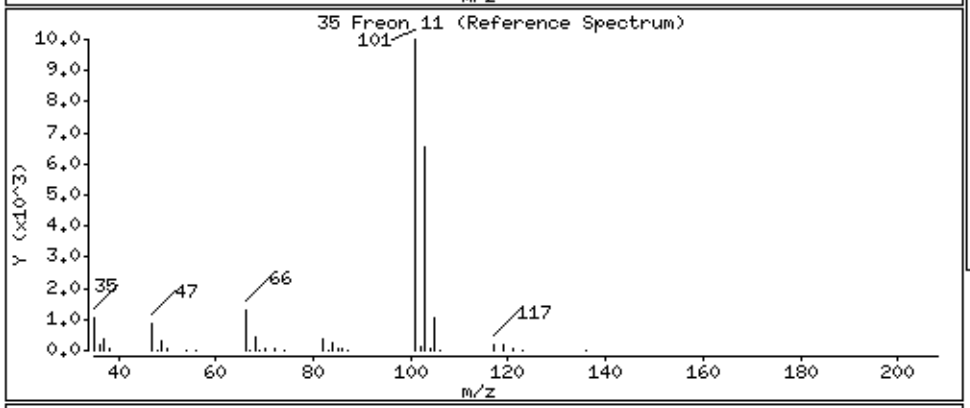
Concentration: 10.977 PPBV

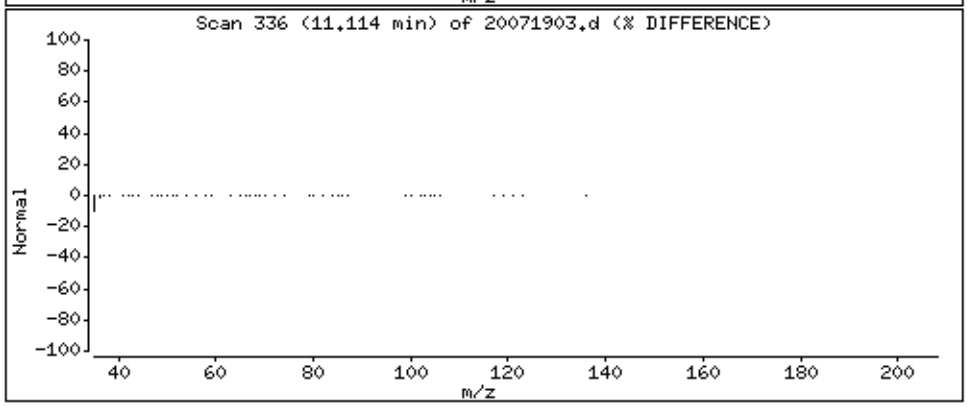












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

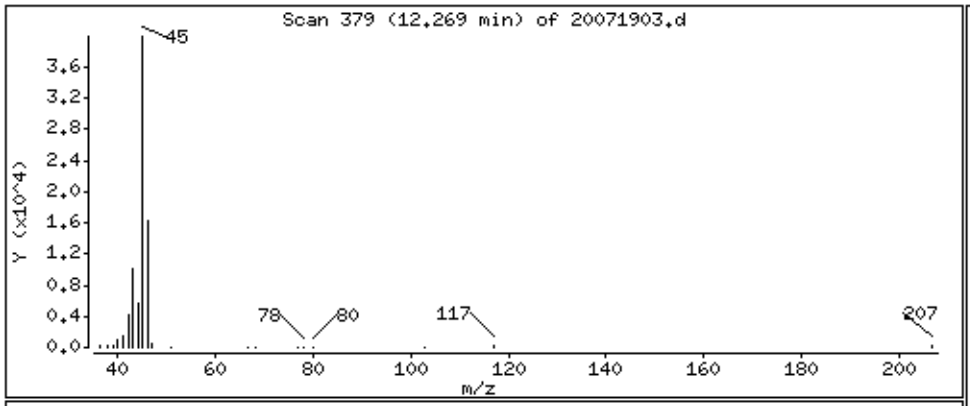
Operator: su

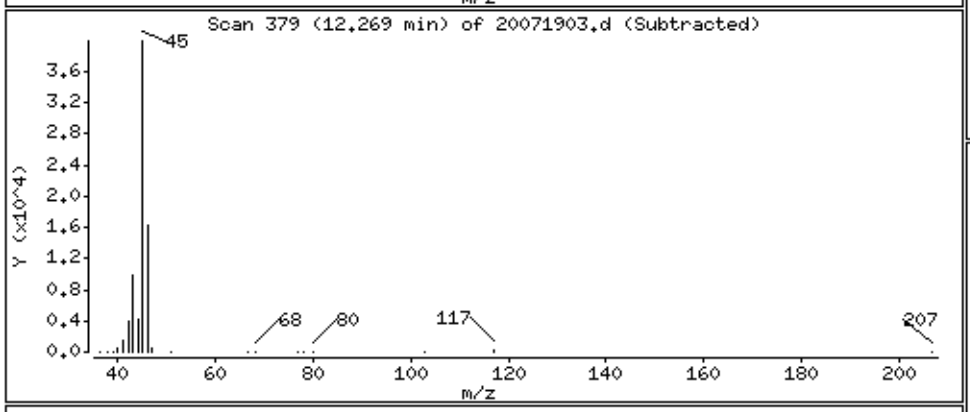
Column phase: RTX-624

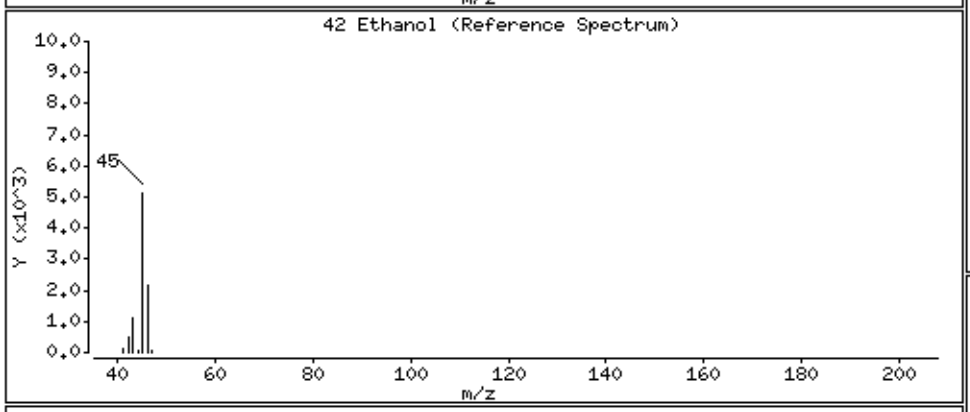
Column diameter: 0.32

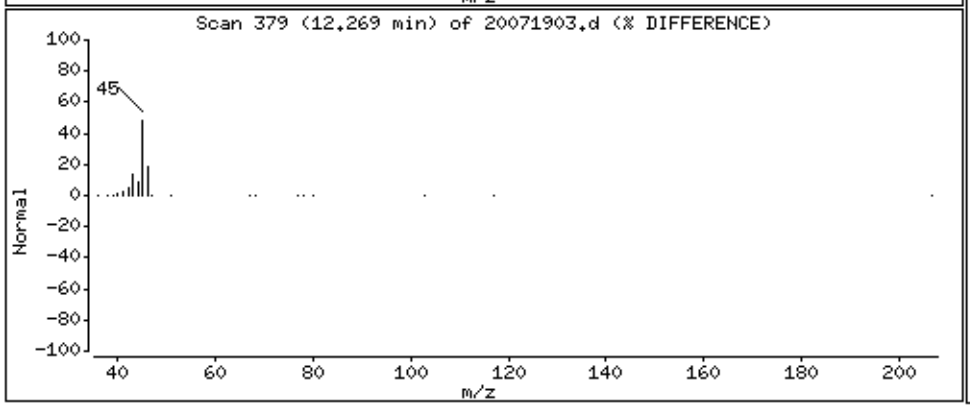
42 Ethanol

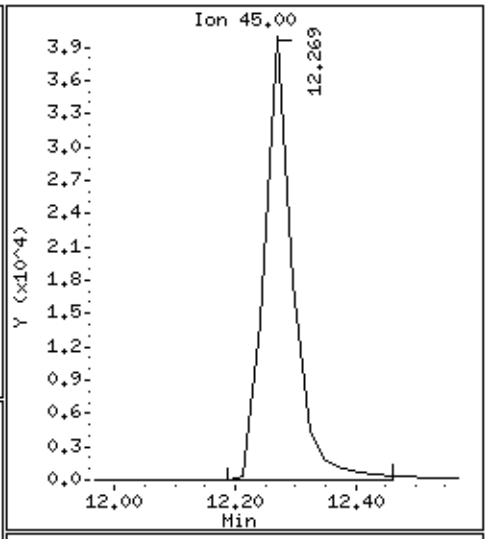
Concentration: 10.672 PPBV

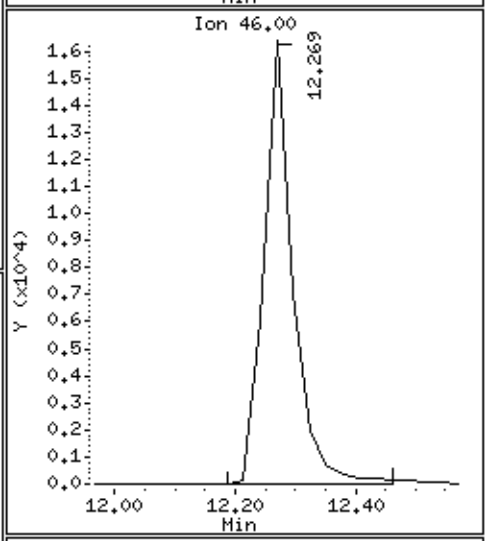


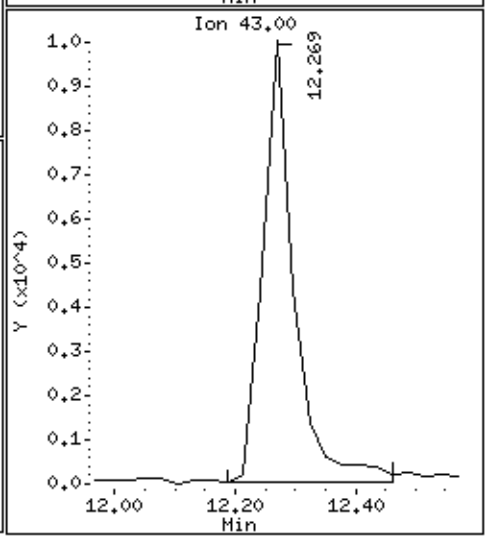












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

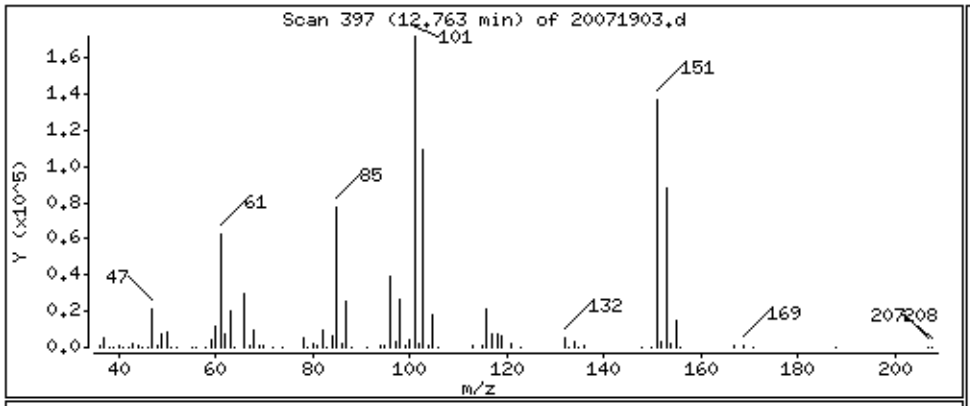
Operator: su

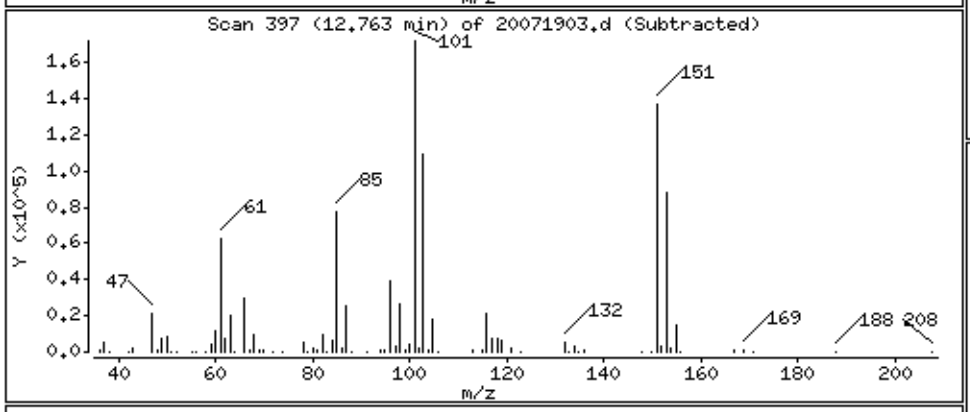
Column phase: RTX-624

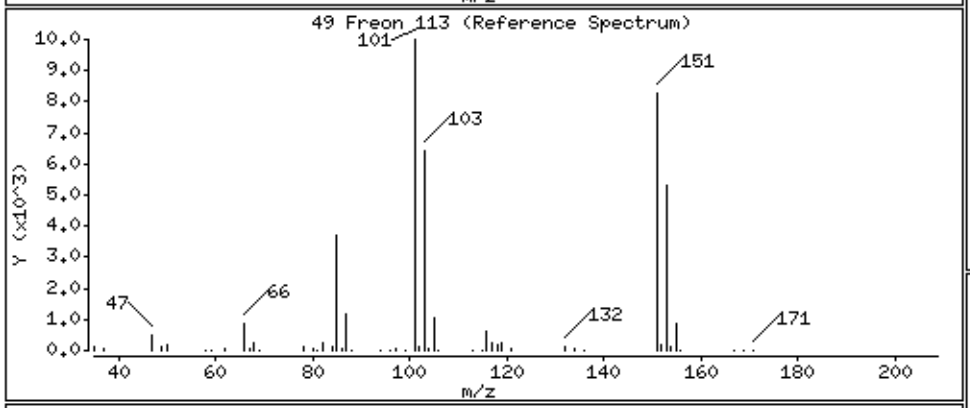
Column diameter: 0.32

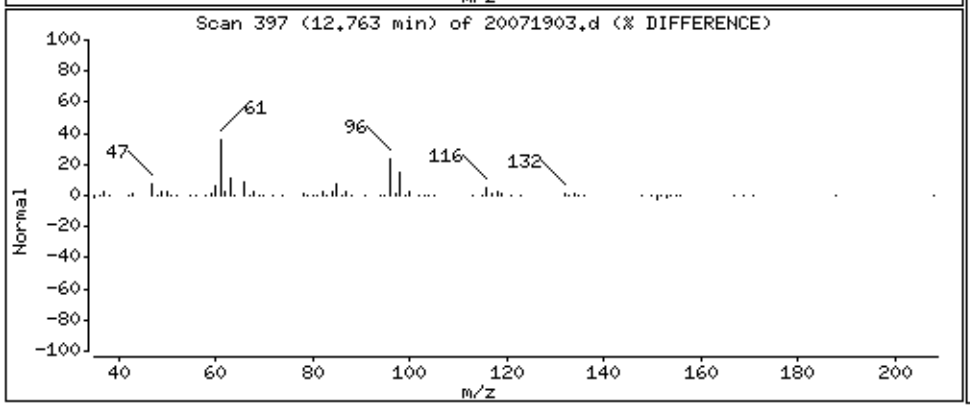
49 Freon 113

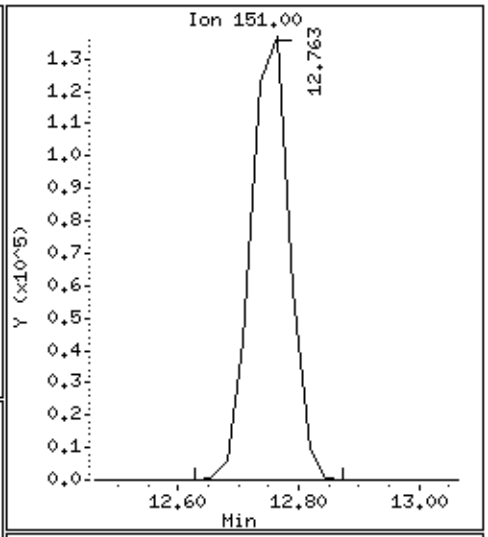
Concentration: 9.534 PPBV

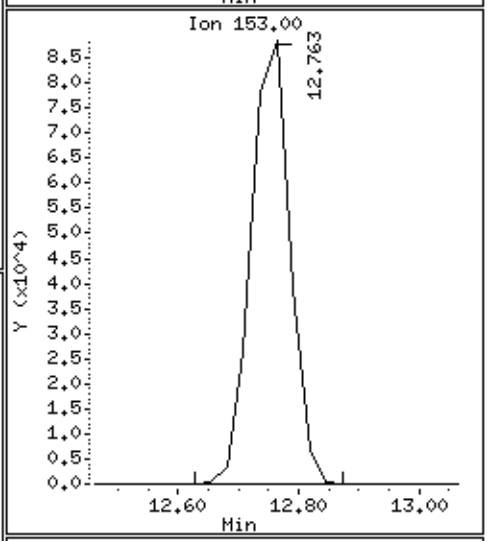


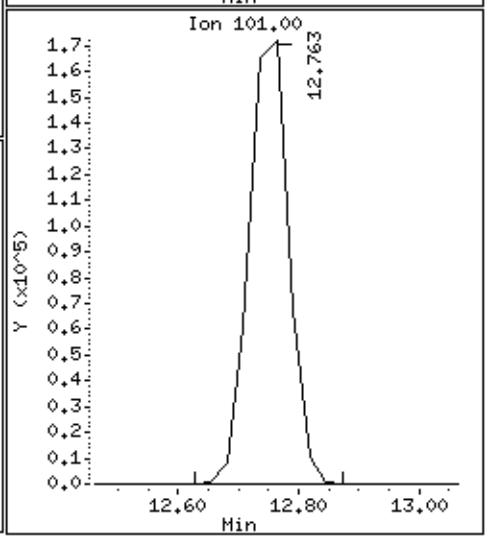












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

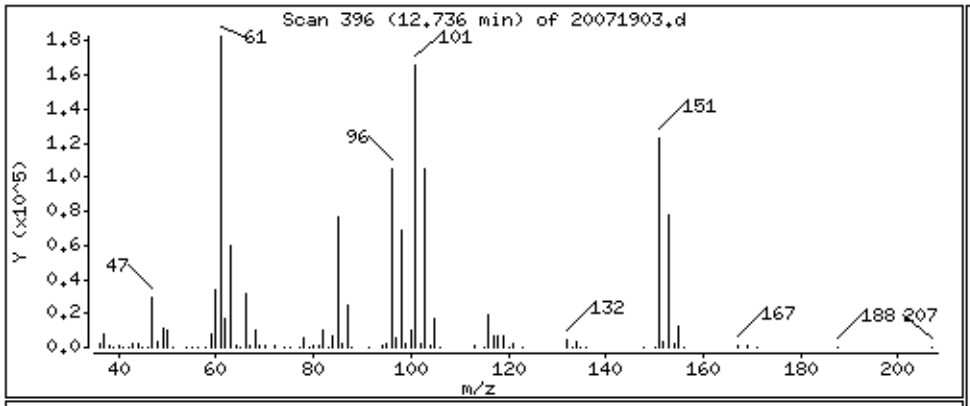
Operator: su

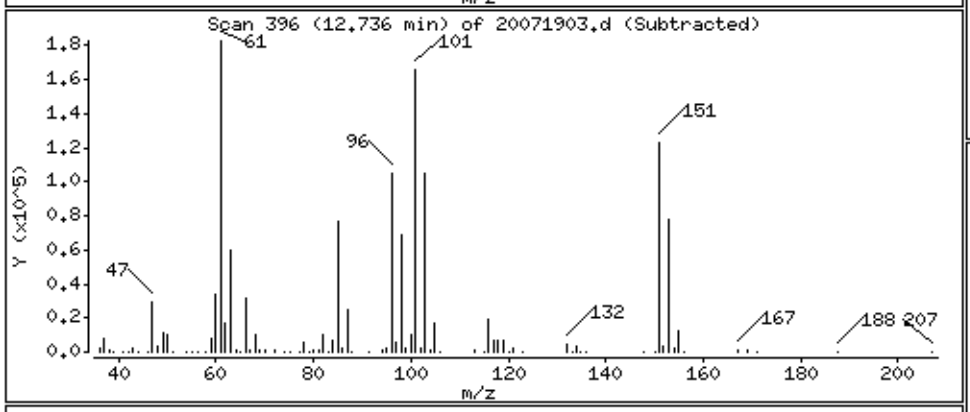
Column phase: RTX-624

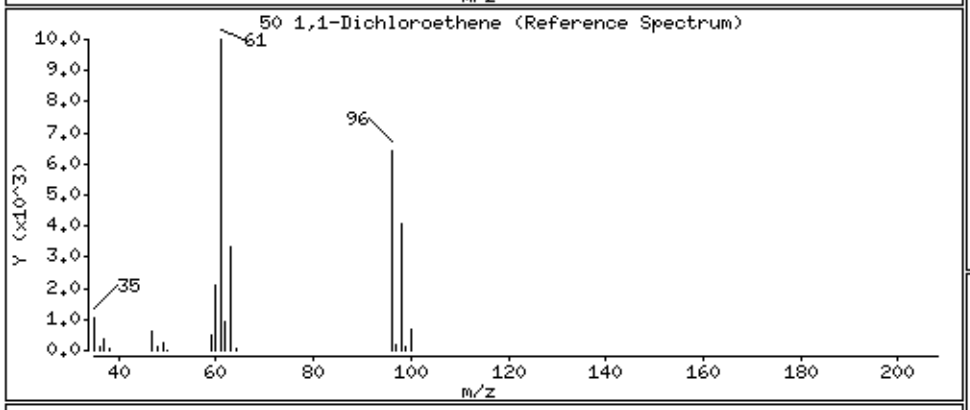
Column diameter: 0.32

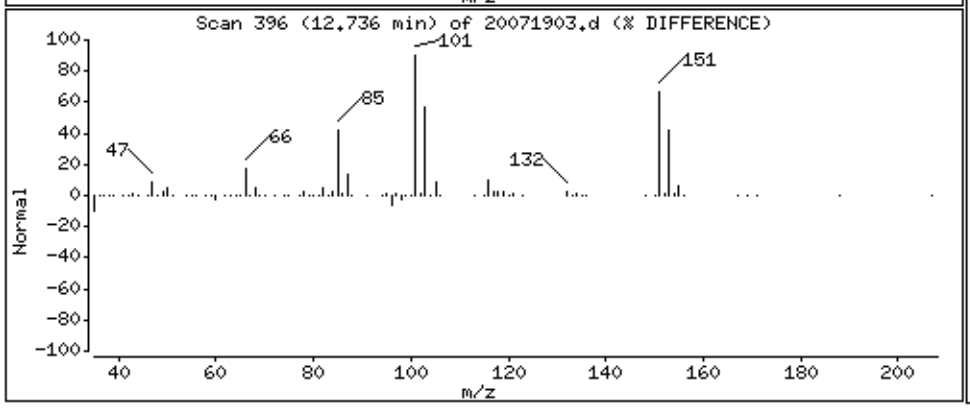
50 1,1-Dichloroethene

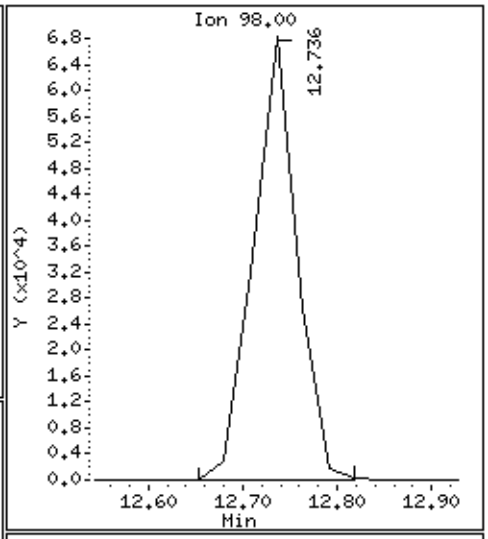
Concentration: 9.598 PPBV

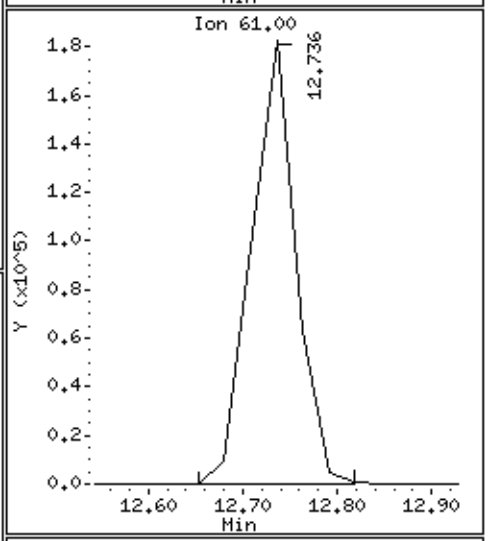


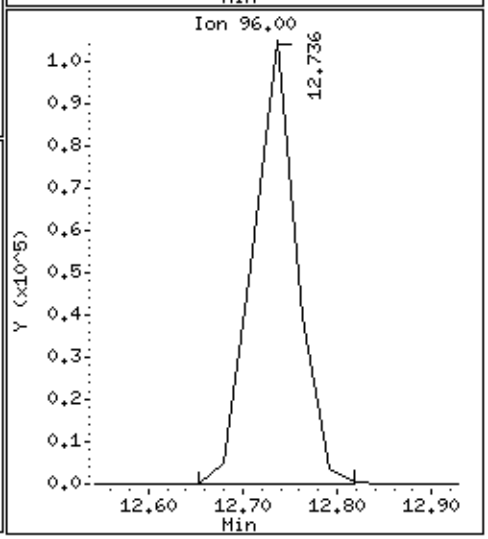












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

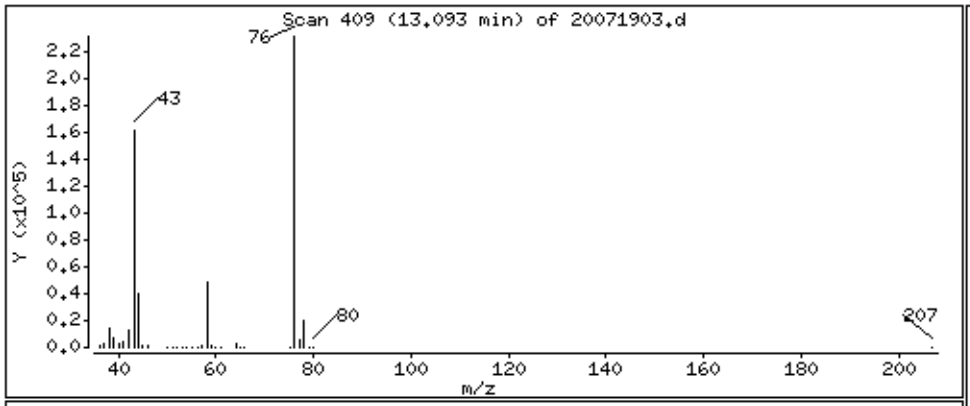
Operator: su

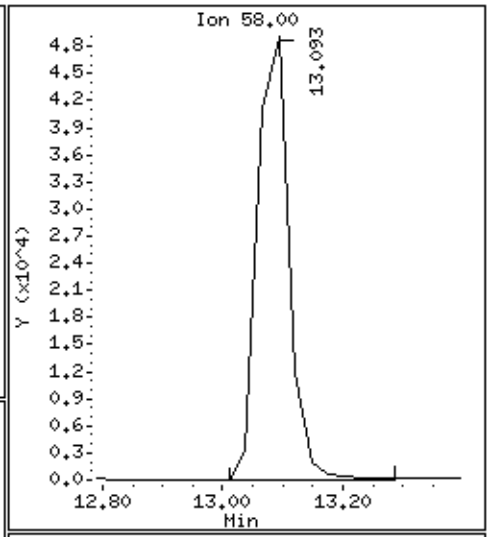
Column phase: RTX-624

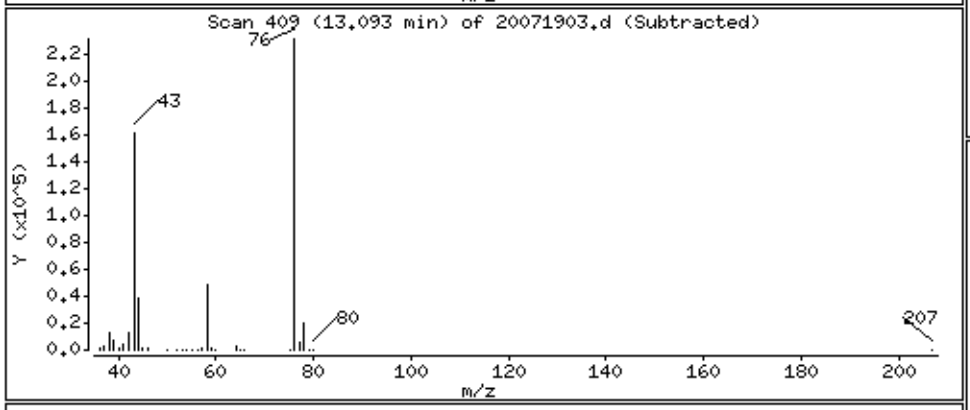
Column diameter: 0.32

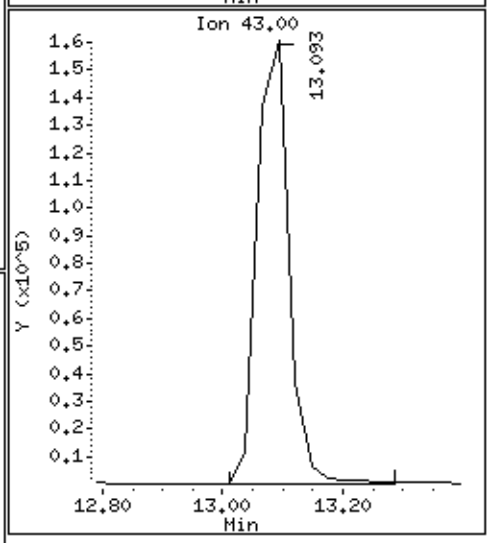
52 Acetone

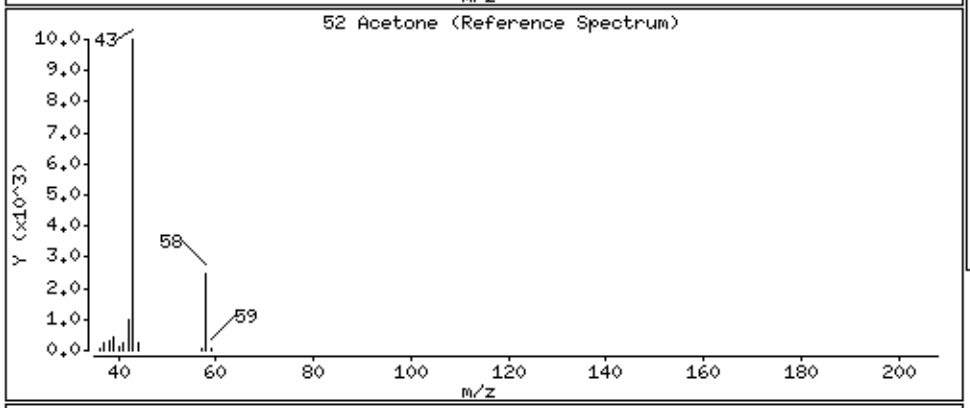
Concentration: 10.035 PPBV

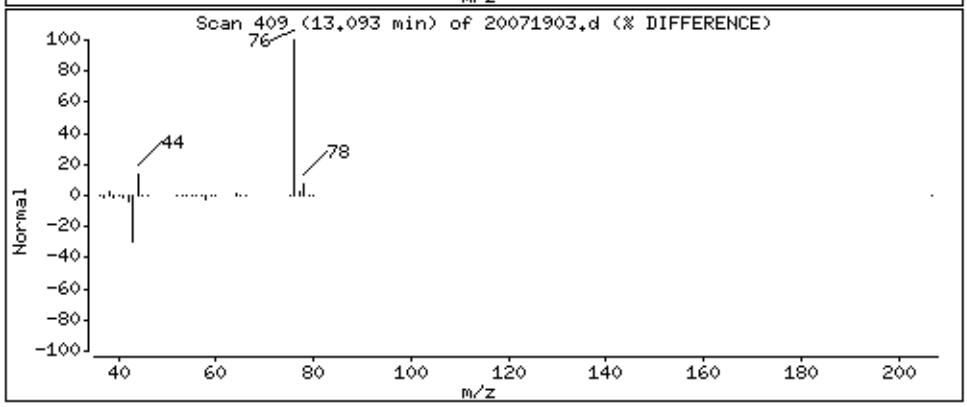












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

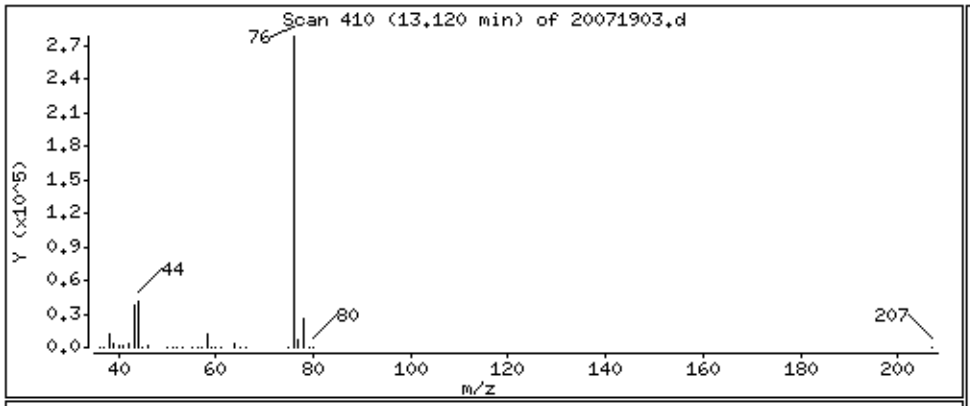
Operator: su

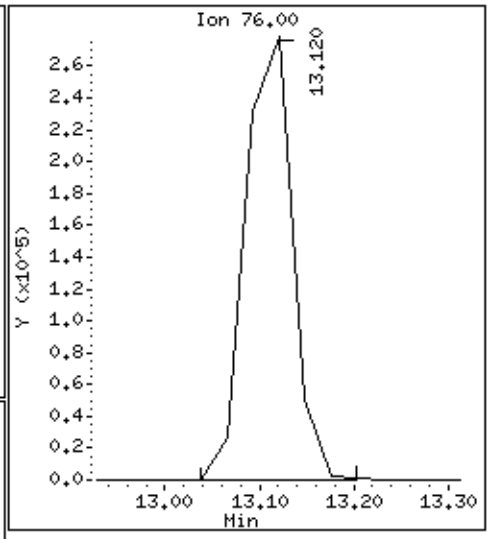
Column phase: RTX-624

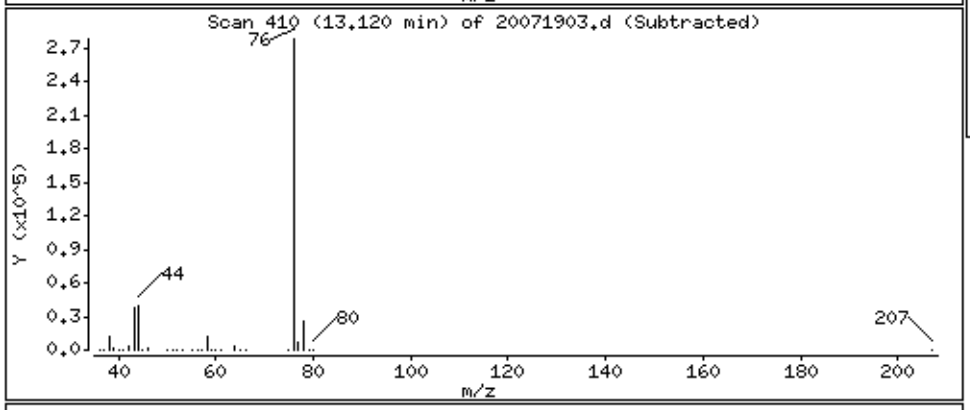
Column diameter: 0.32

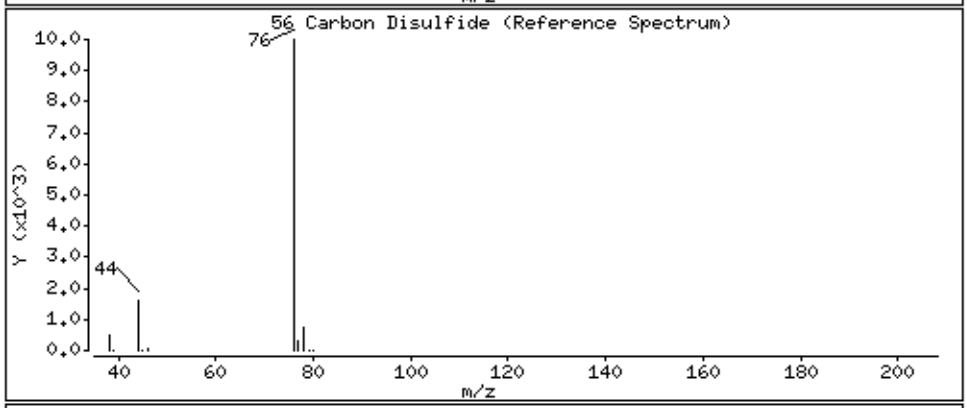
56 Carbon Disulfide

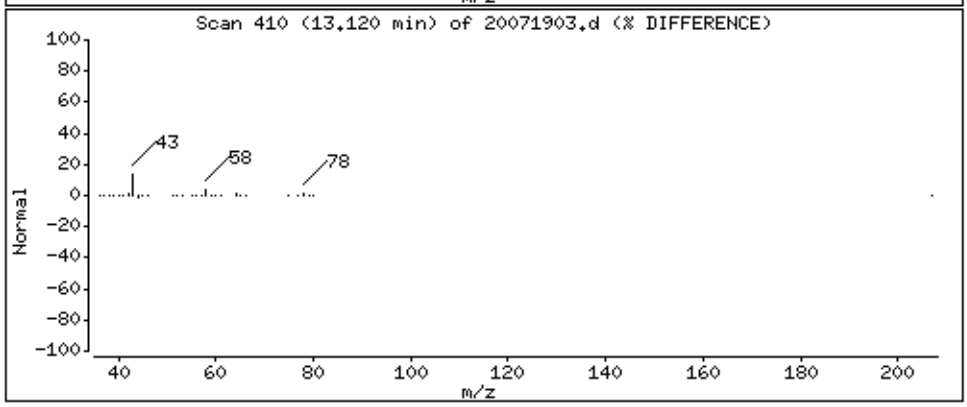
Concentration: 9.536 PPBV











Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

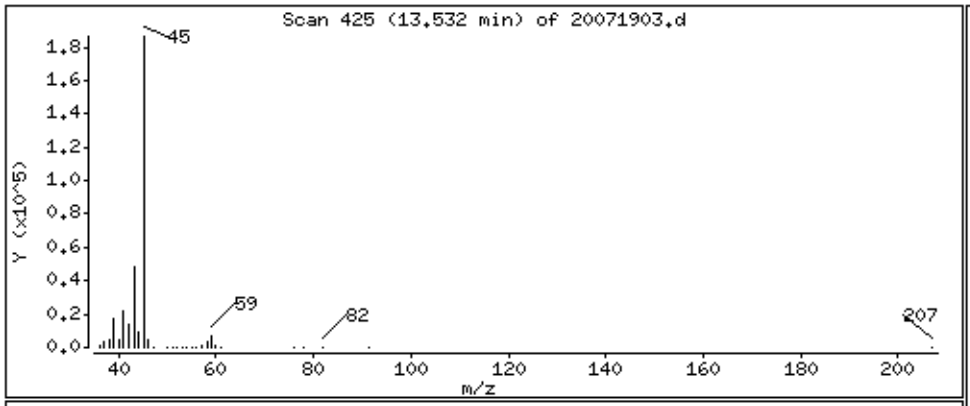
Operator: su

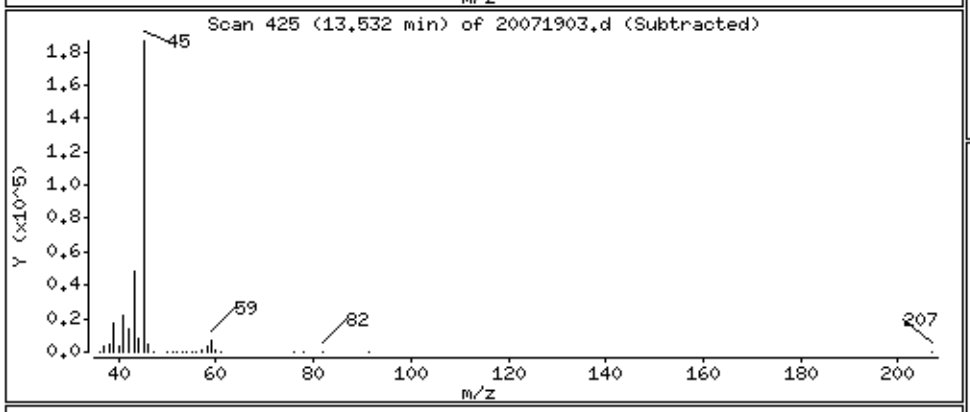
Column phase: RTX-624

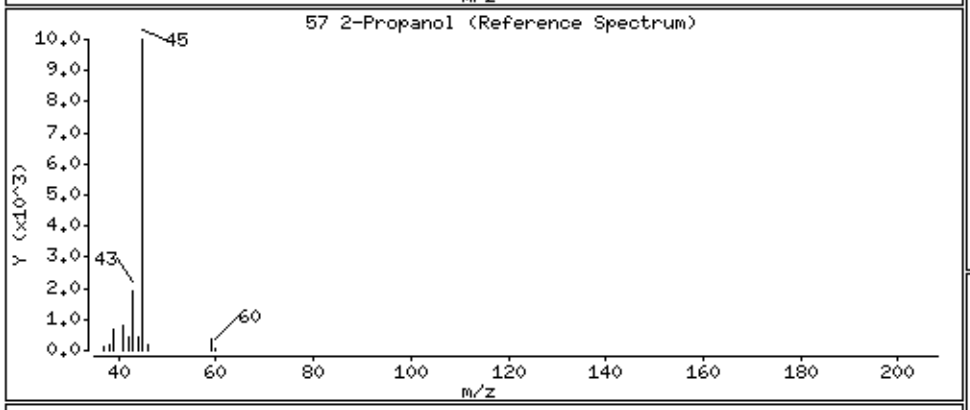
Column diameter: 0.32

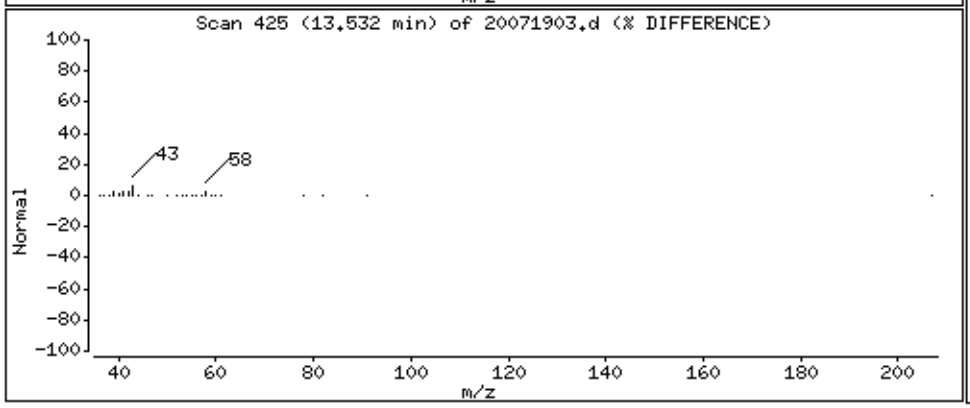
57 2-Propanol

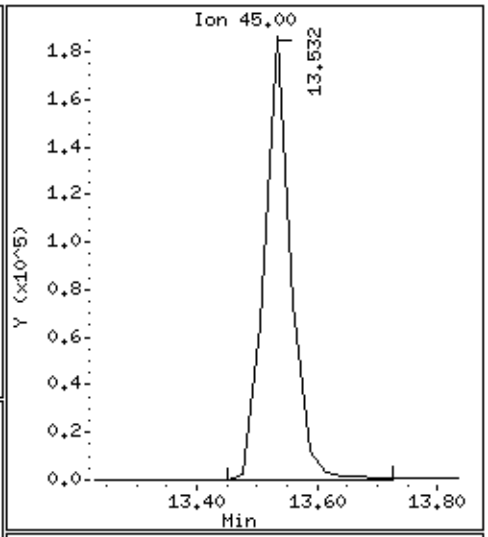
Concentration: 10.376 PPBV

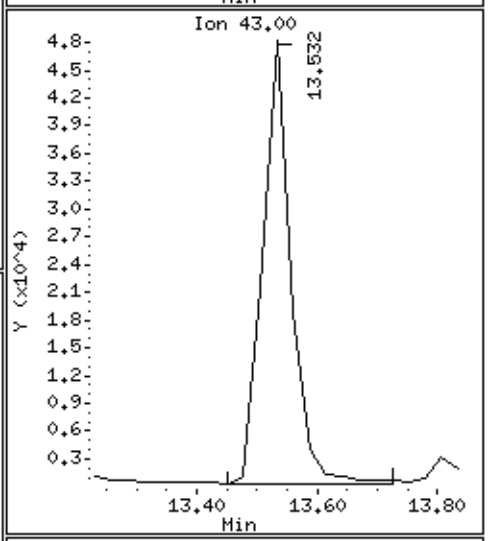


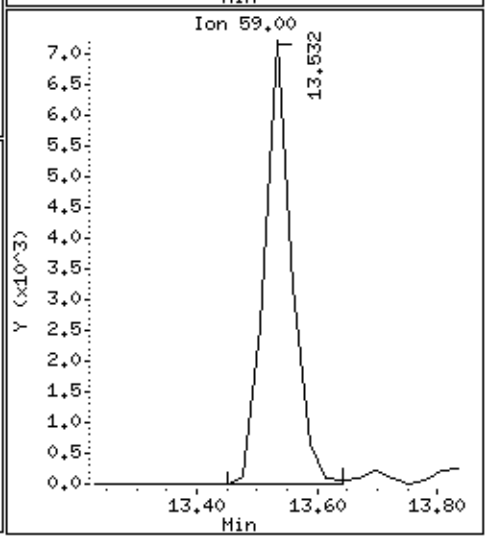












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

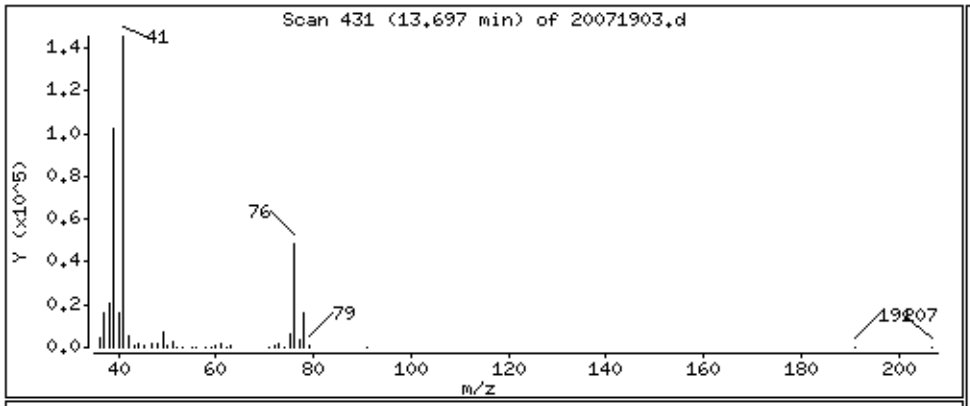
Operator: su

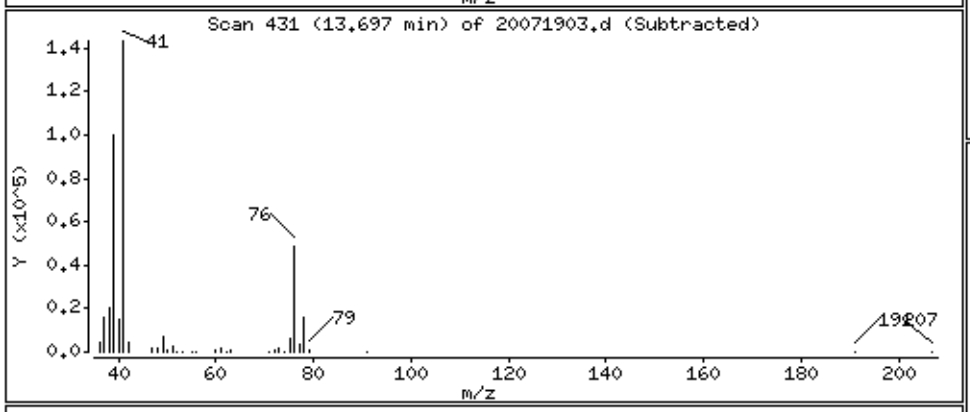
Column phase: RTX-624

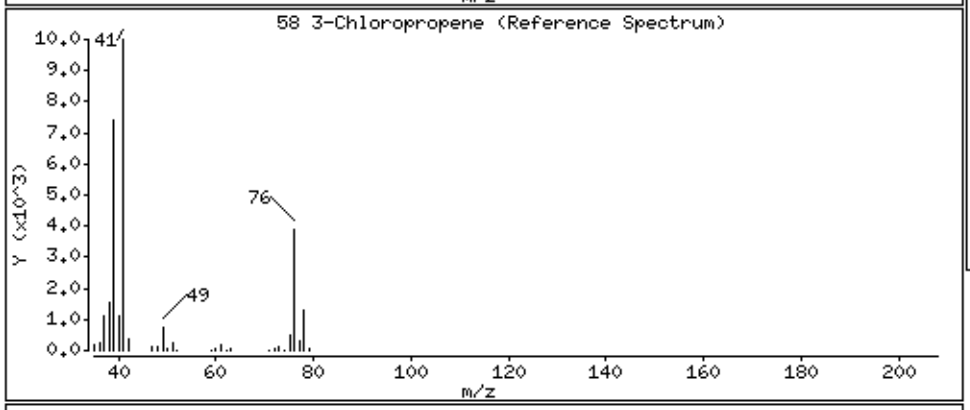
Column diameter: 0.32

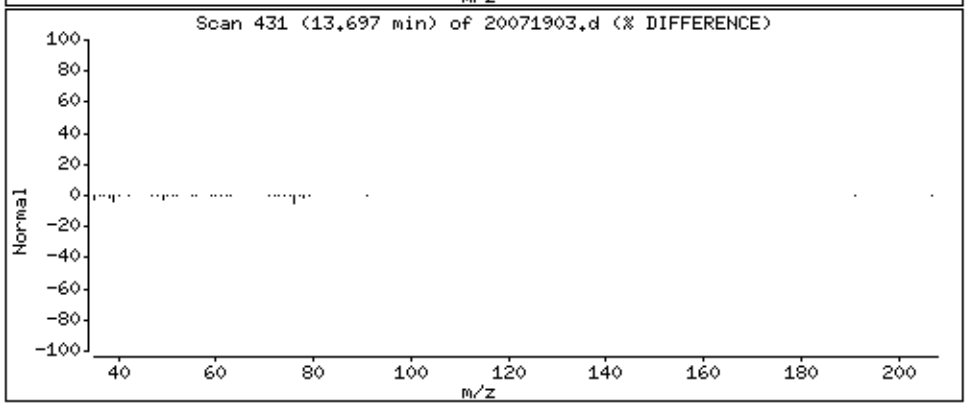
58 3-Chloropropene

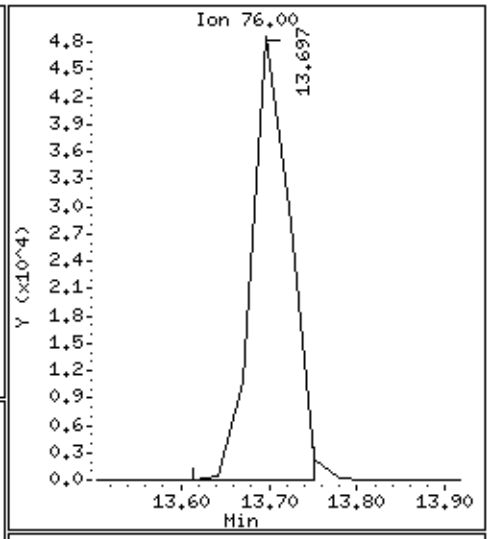
Concentration: 10.344 PPBV

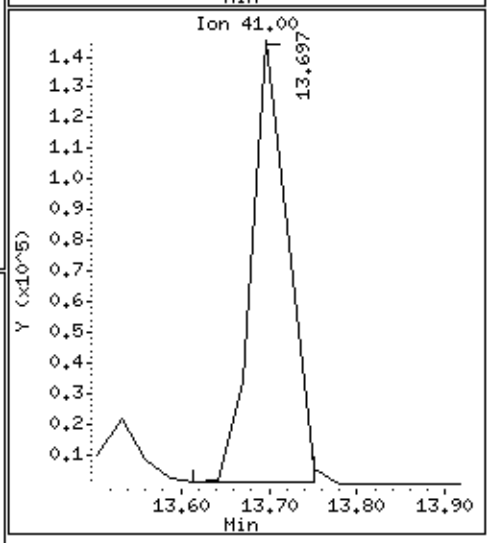












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

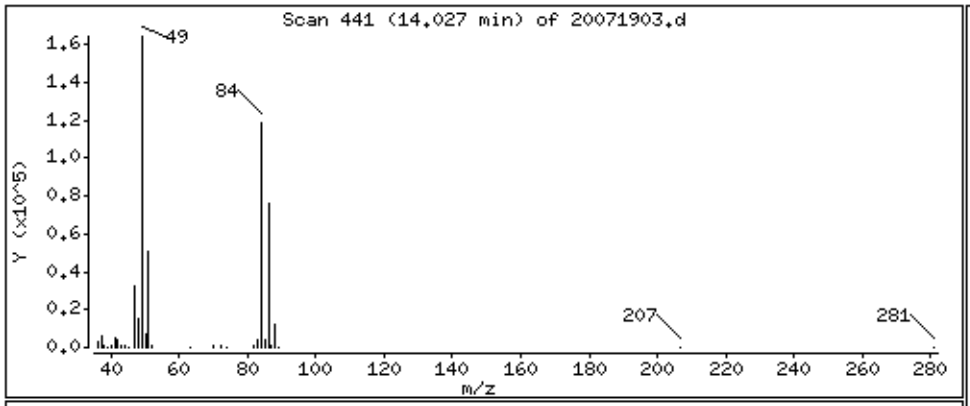
Operator: su

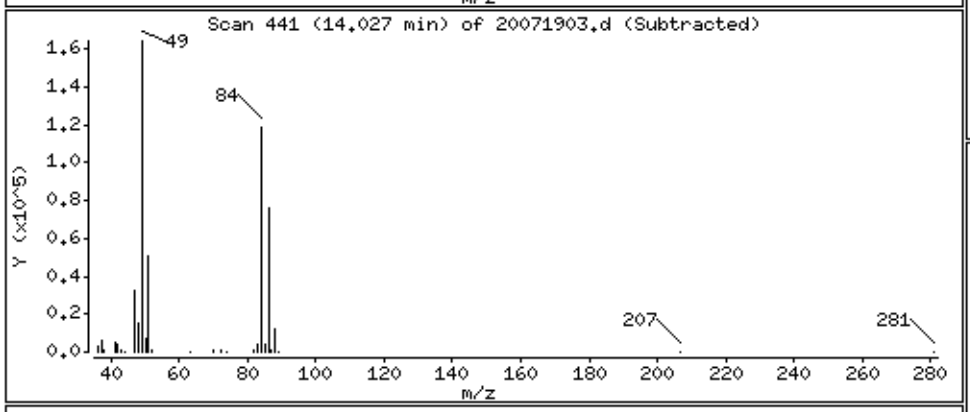
Column phase: RTX-624

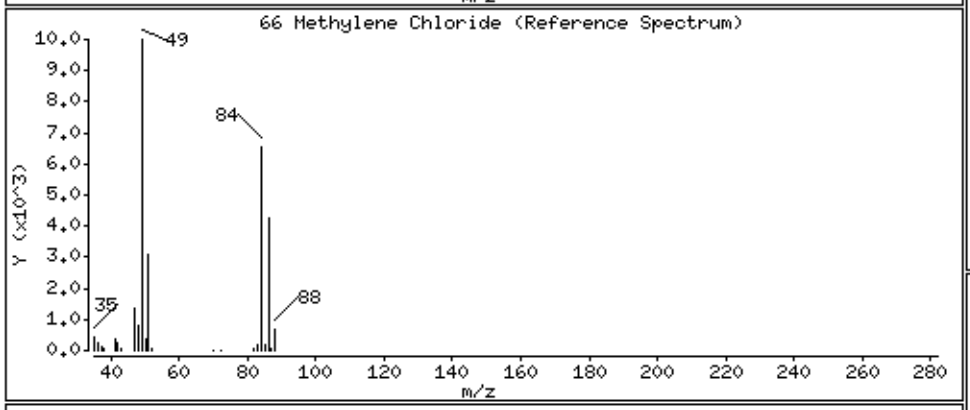
Column diameter: 0.32

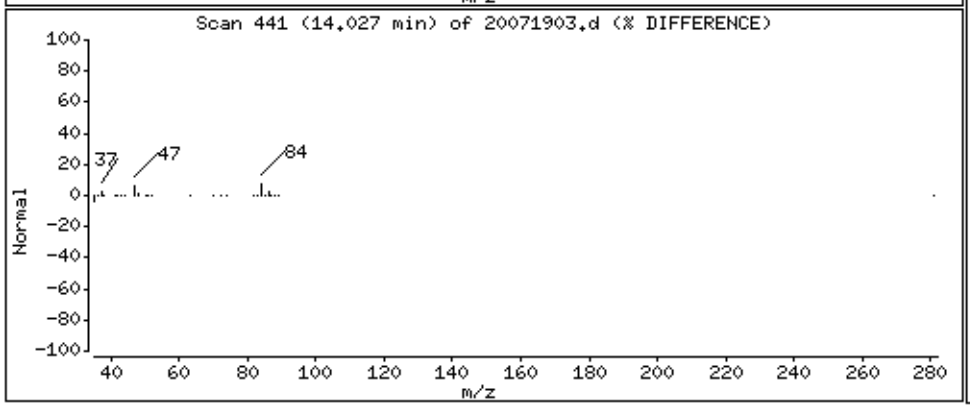
66 Methylene Chloride

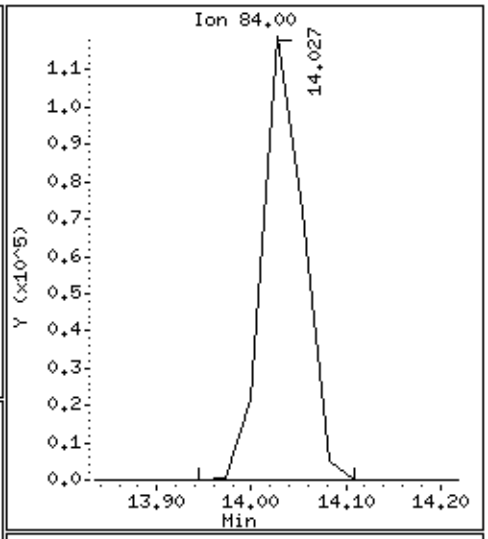
Concentration: 9.847 PPBV

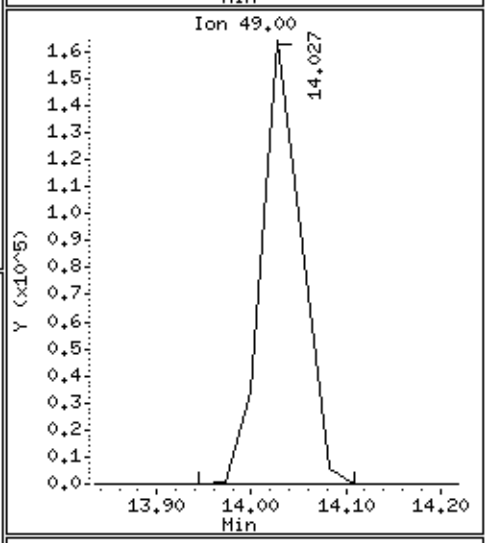


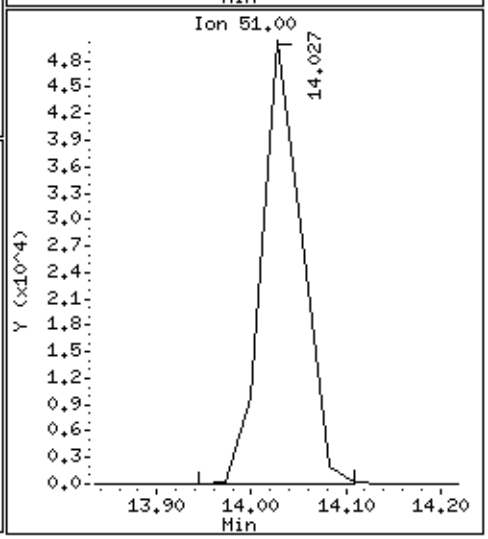












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

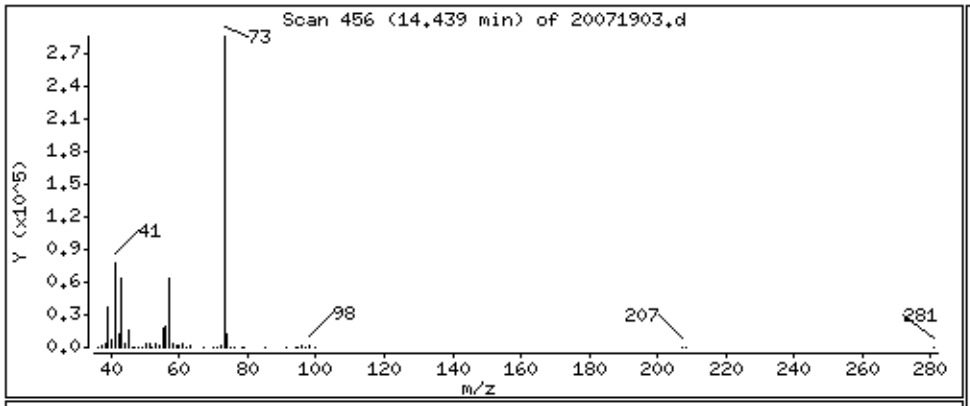
Operator: su

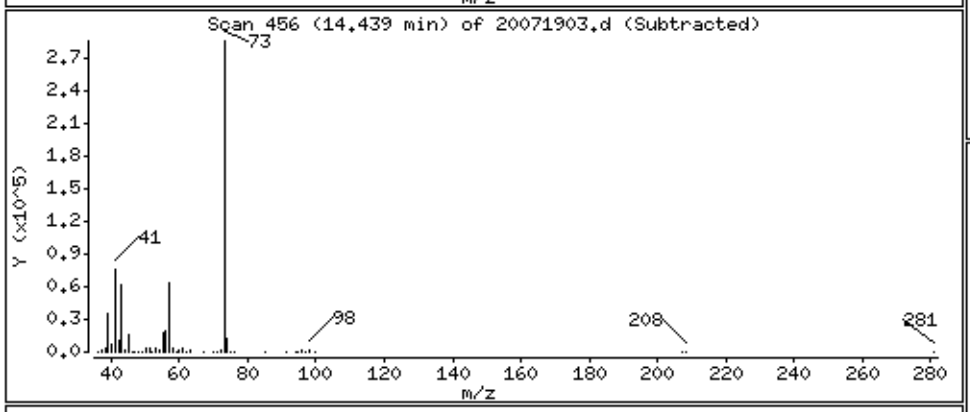
Column phase: RTX-624

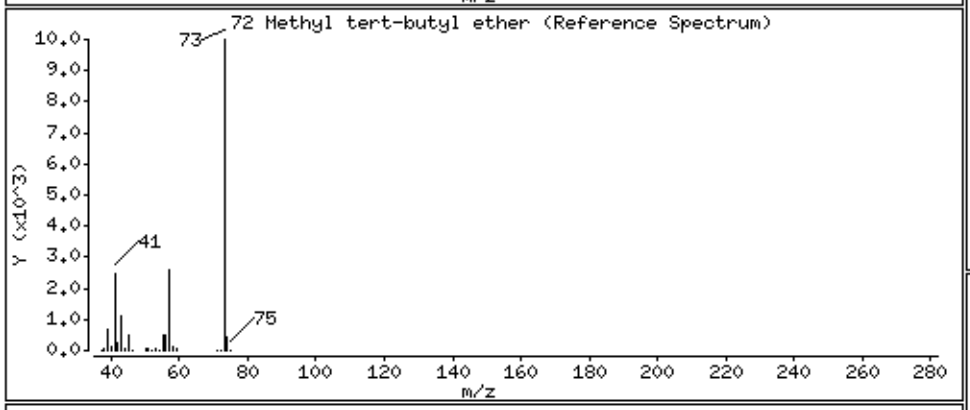
Column diameter: 0.32

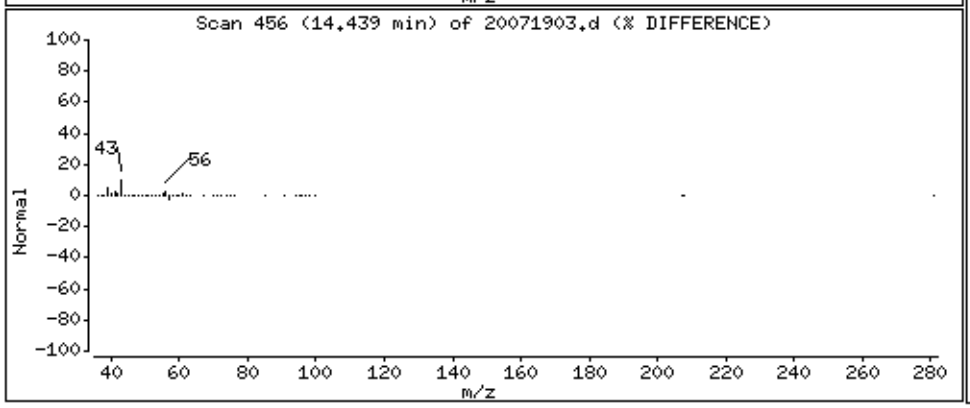
72 Methyl tert-butyl ether

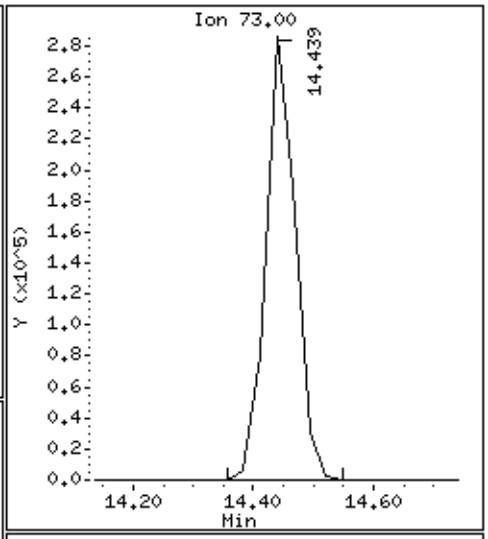
Concentration: 9.712 PPBV

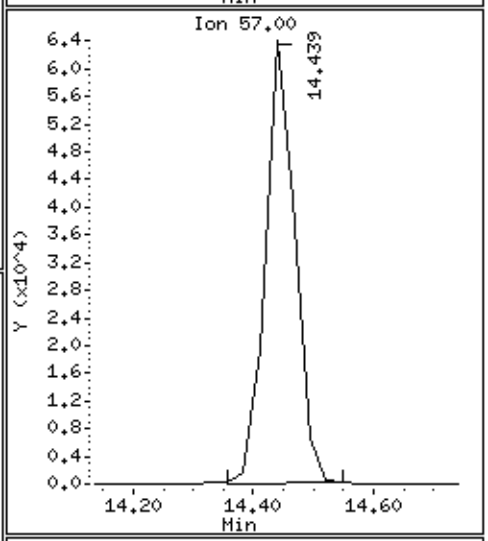


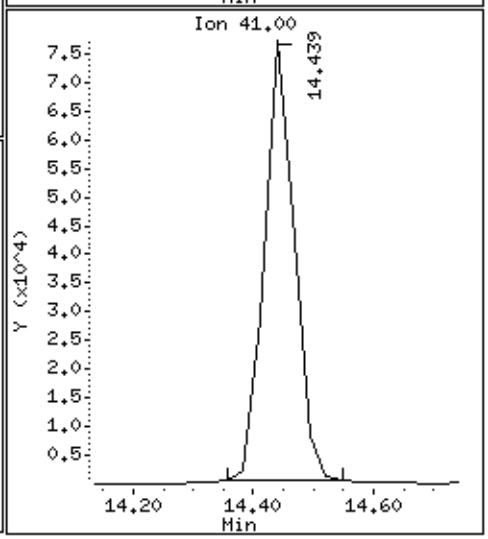












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

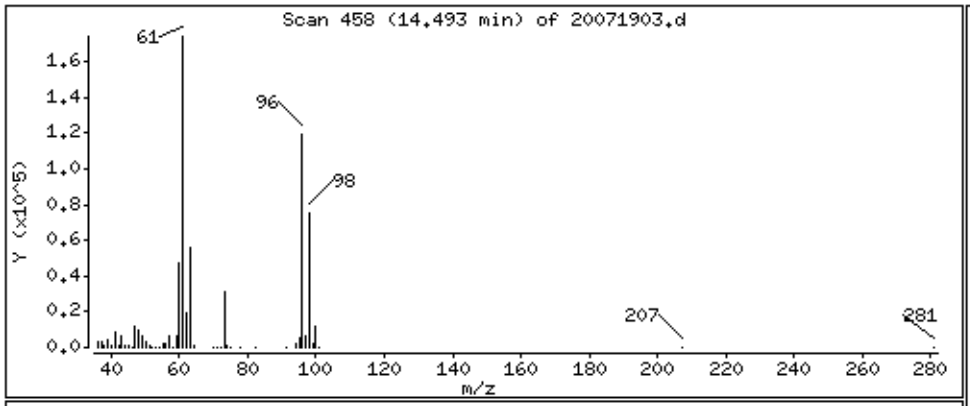
Operator: su

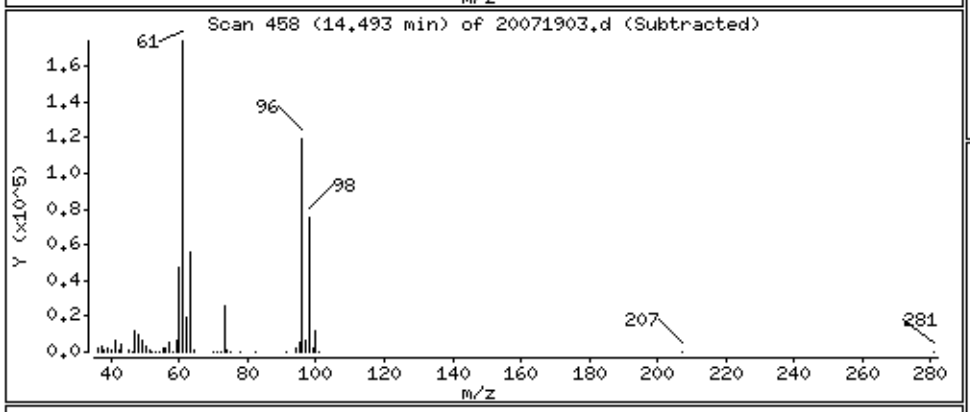
Column phase: RTX-624

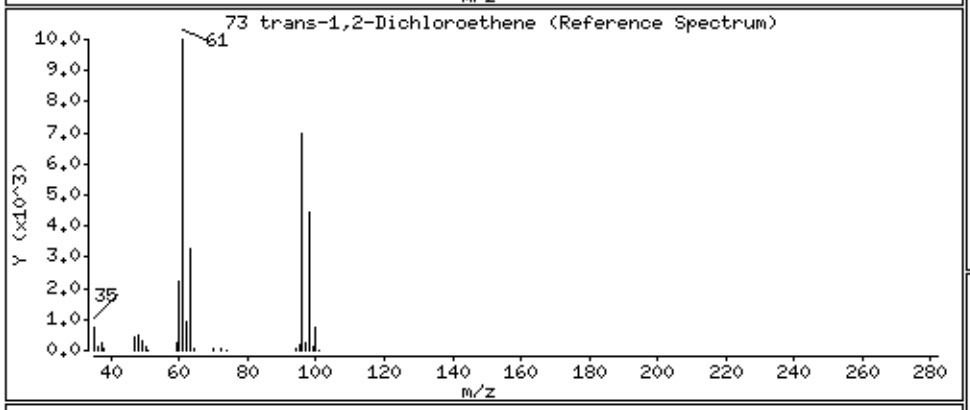
Column diameter: 0.32

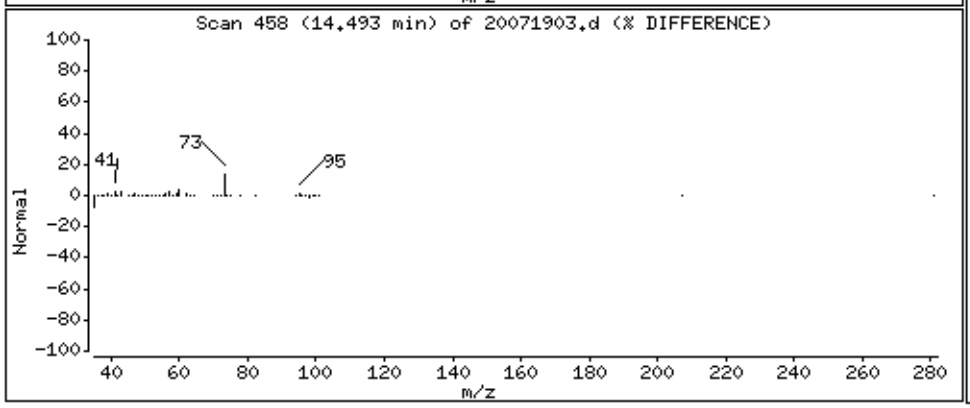
73 trans-1,2-Dichloroethene

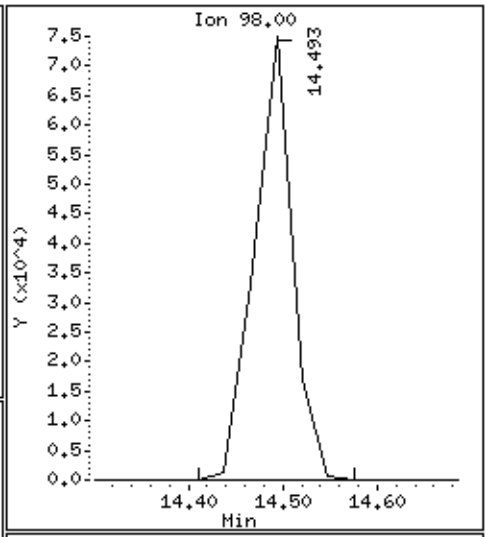
Concentration: 8.602 PPBV

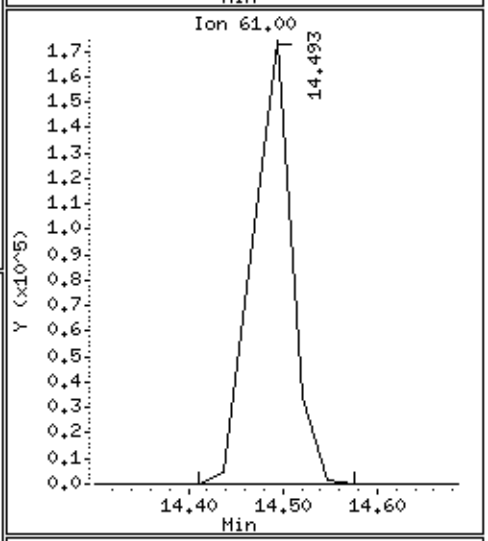


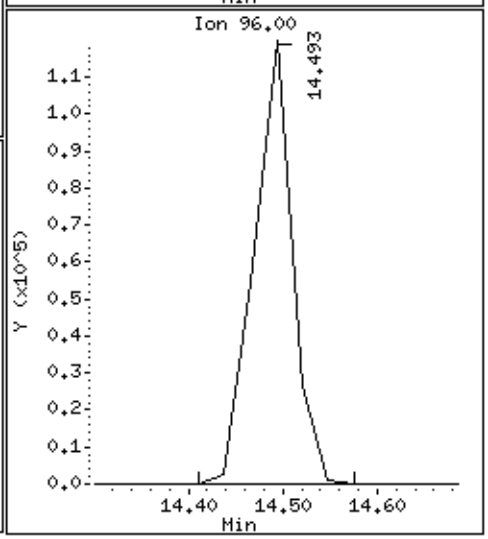












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

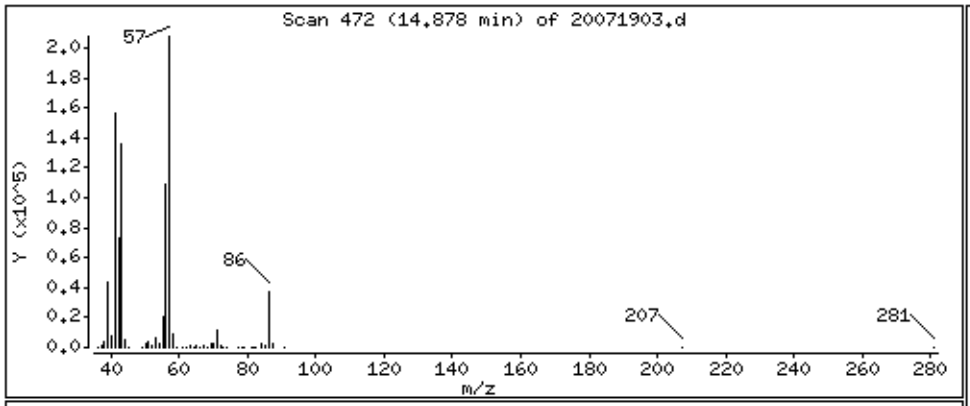
Operator: su

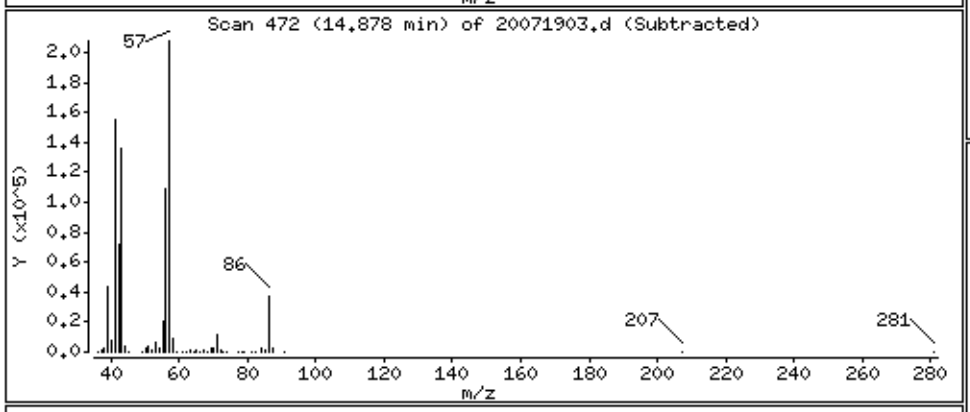
Column phase: RTX-624

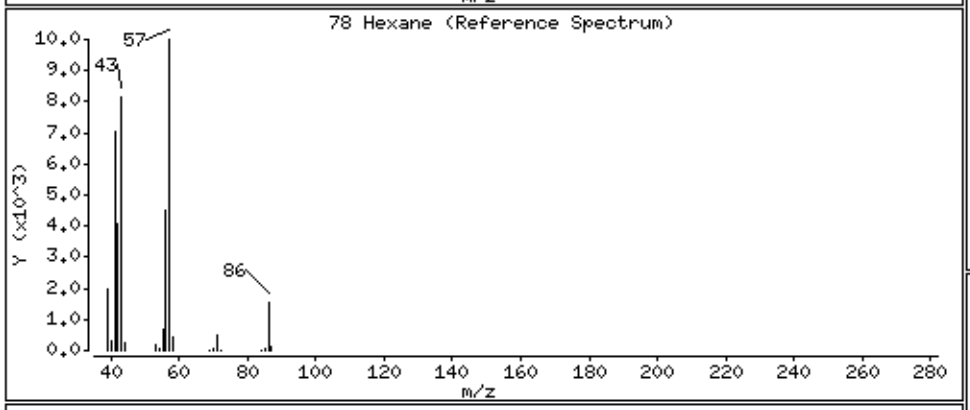
Column diameter: 0.32

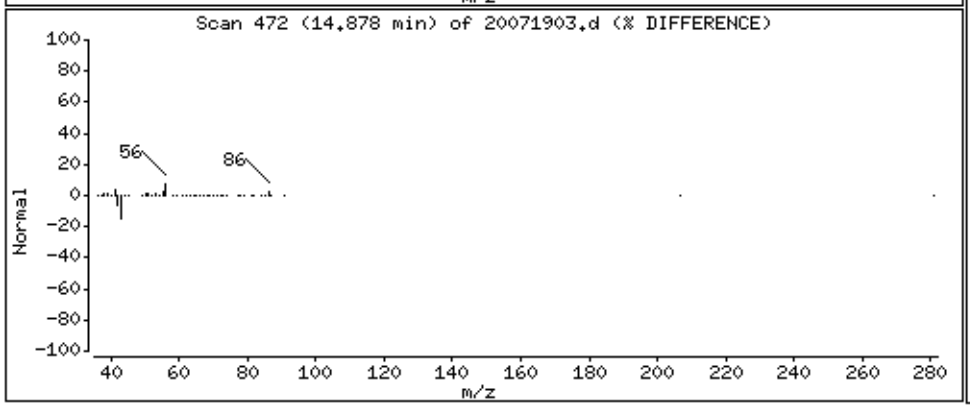
78 Hexane

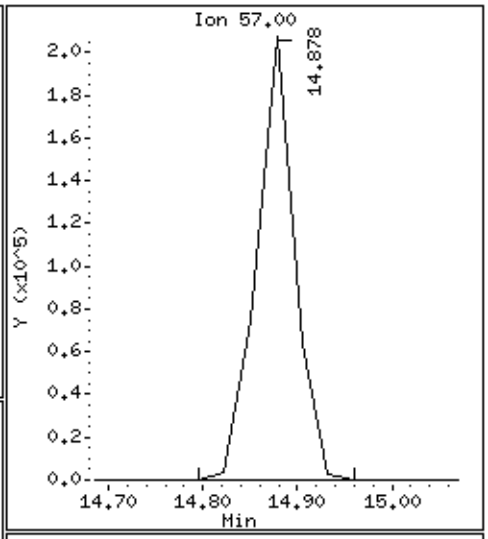
Concentration: 10.201 PPBV

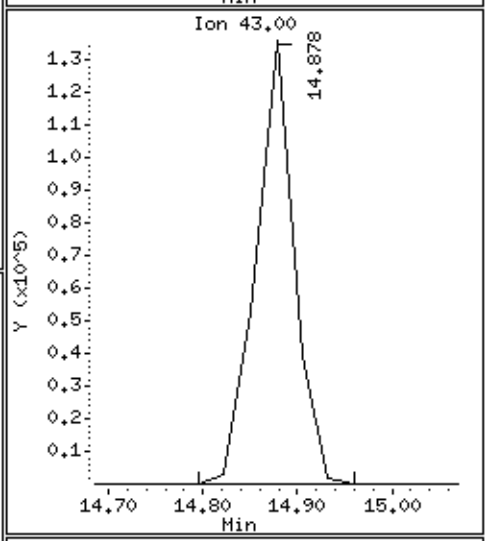


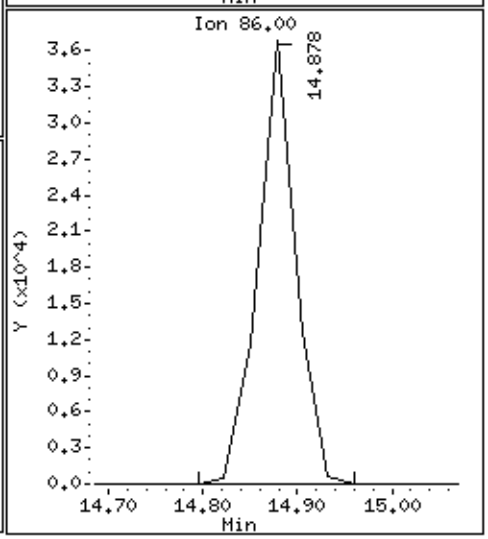












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

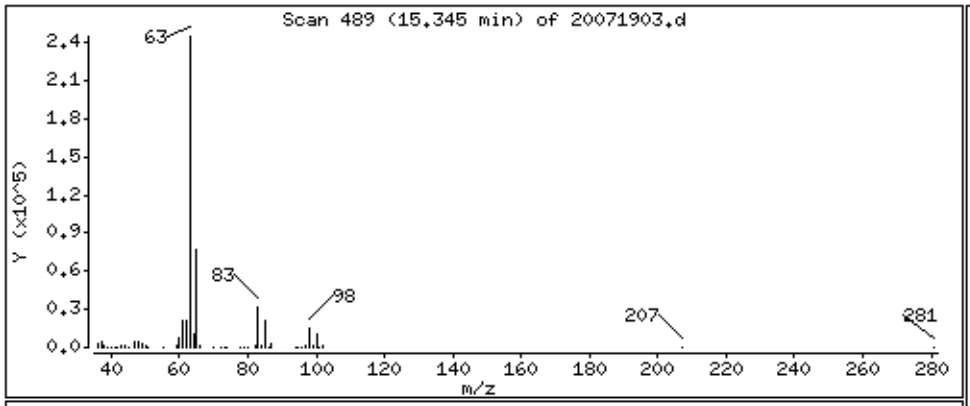
Operator: su

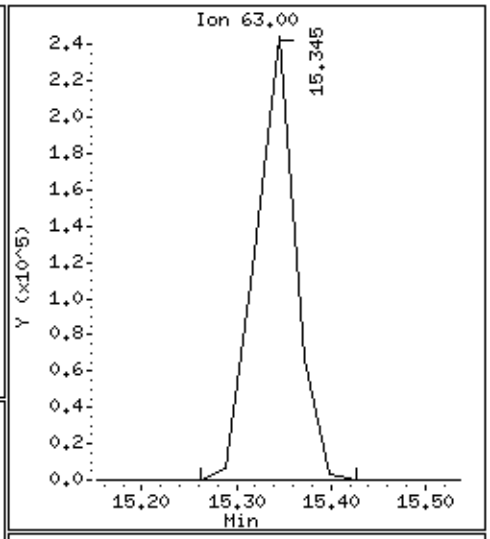
Column phase: RTX-624

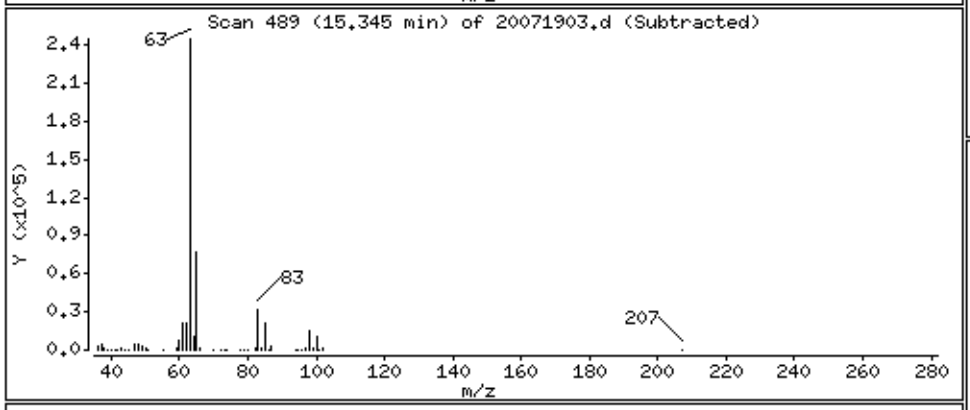
Column diameter: 0.32

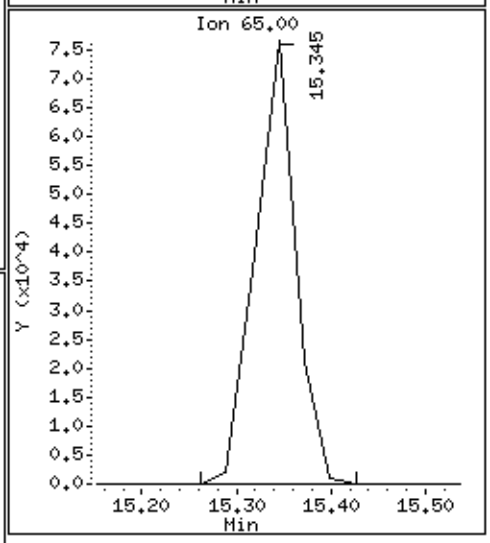
82 1,1-Dichloroethane

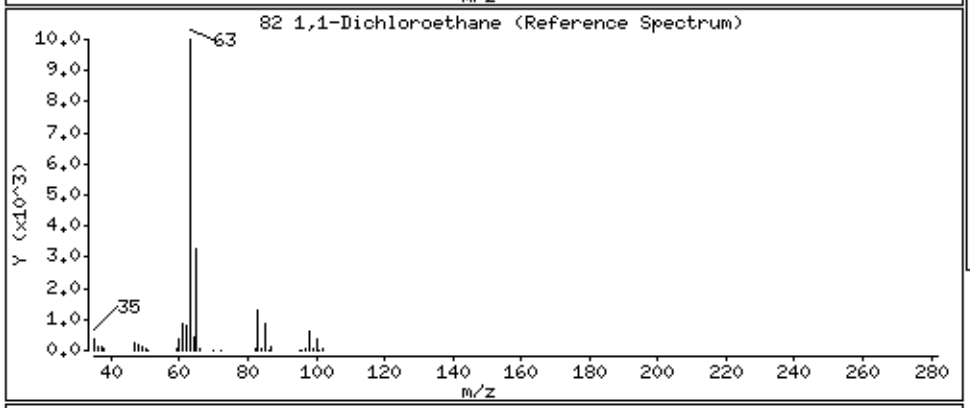
Concentration: 10.313 PPBV

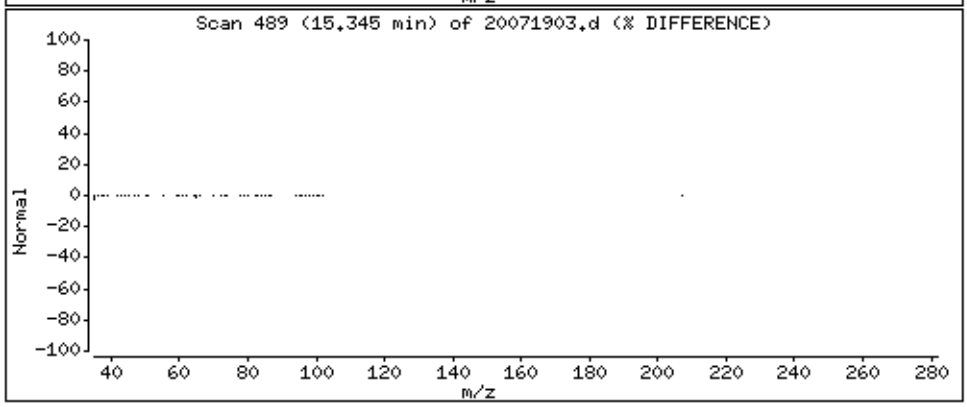












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

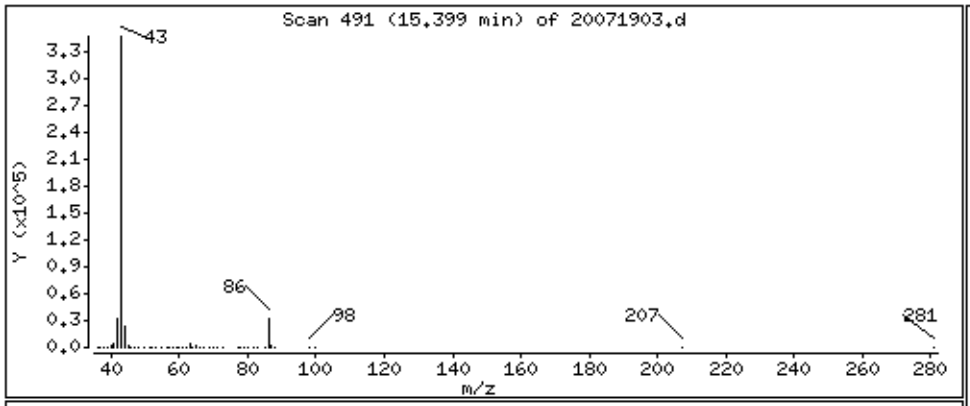
Operator: su

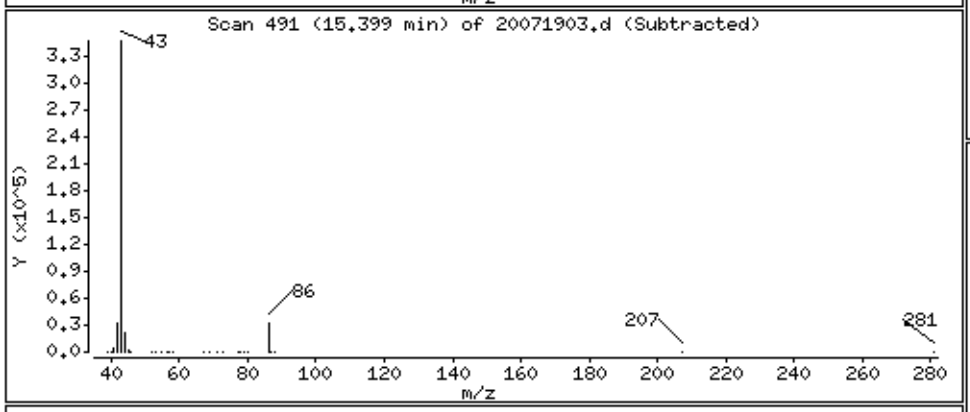
Column phase: RTX-624

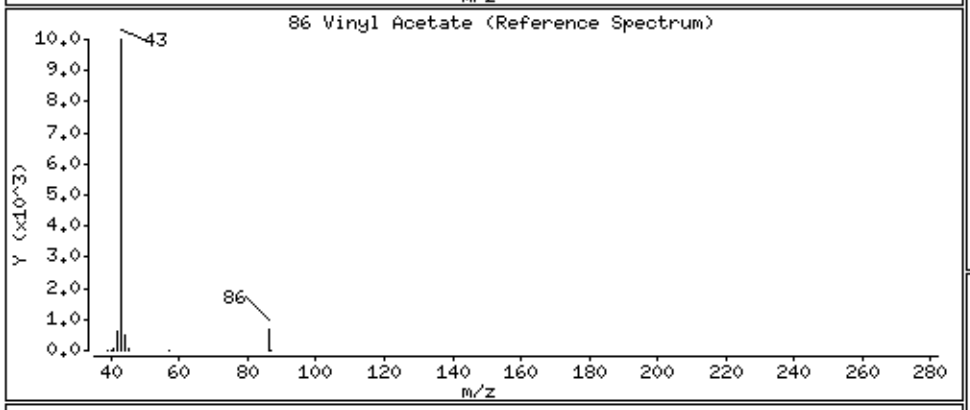
Column diameter: 0.32

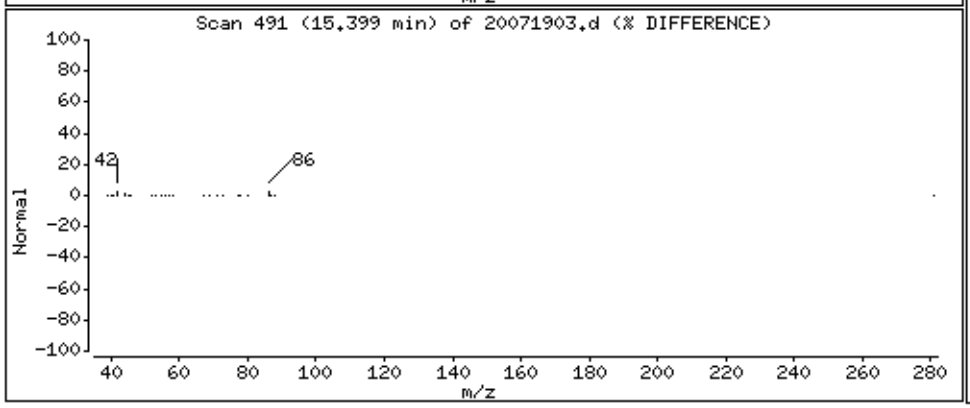
86 Vinyl Acetate

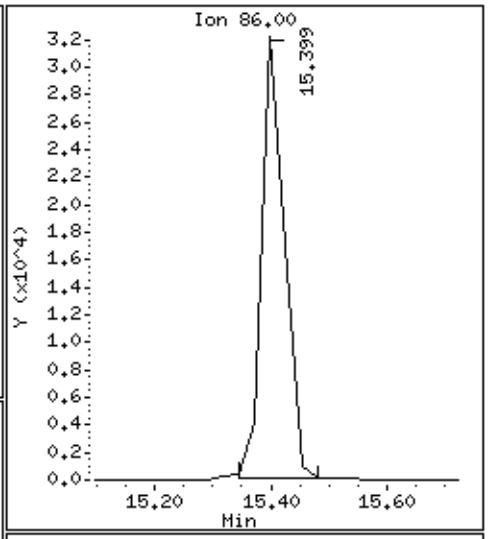
Concentration: 9.830 PPBV

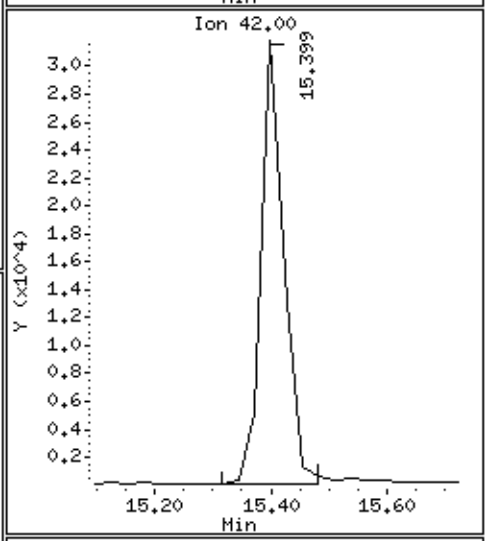


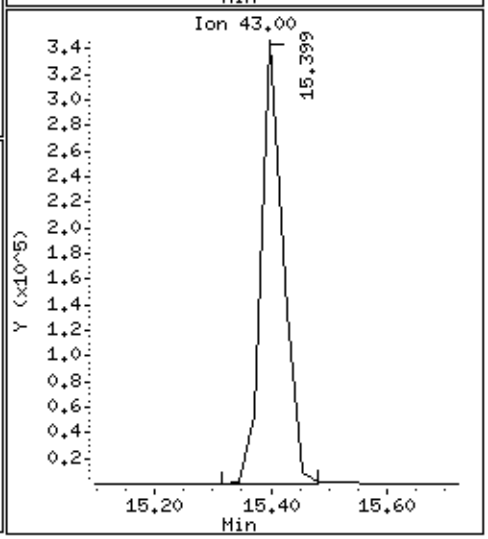












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

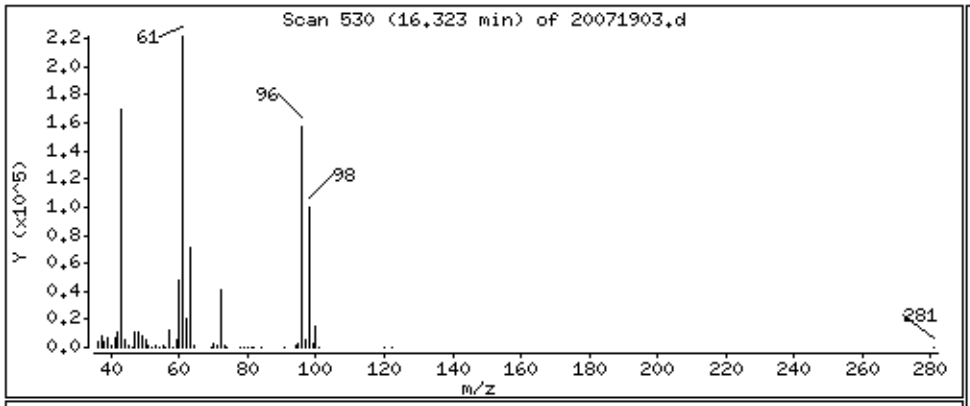
Operator: su

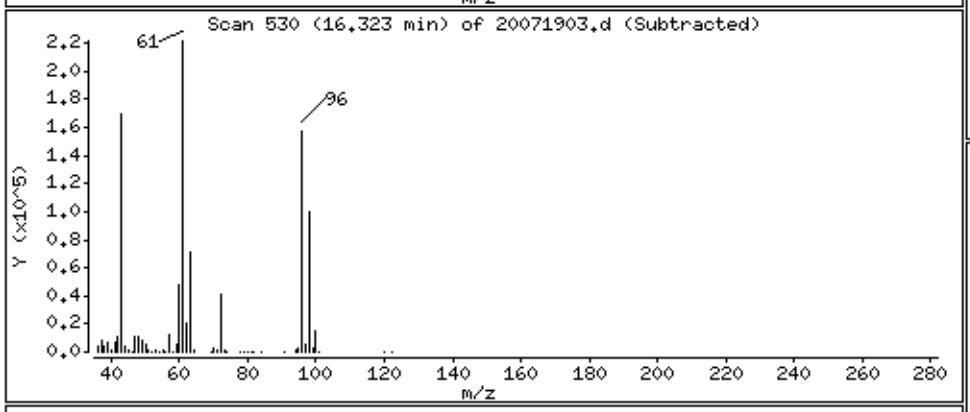
Column phase: RTX-624

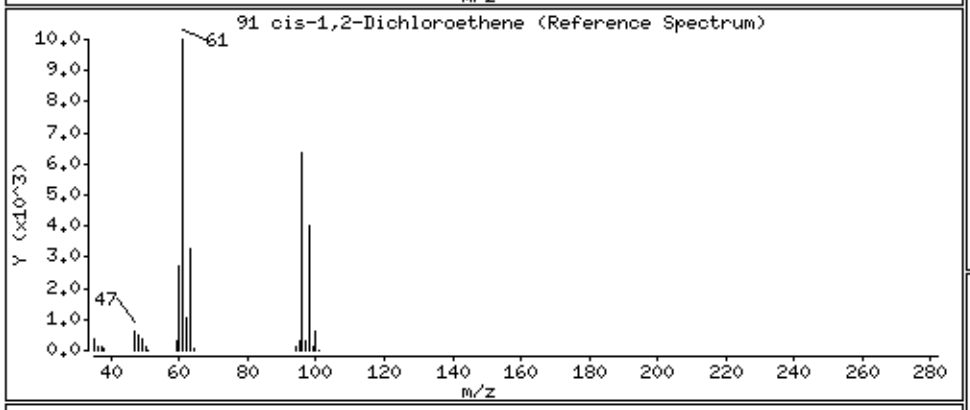
Column diameter: 0.32

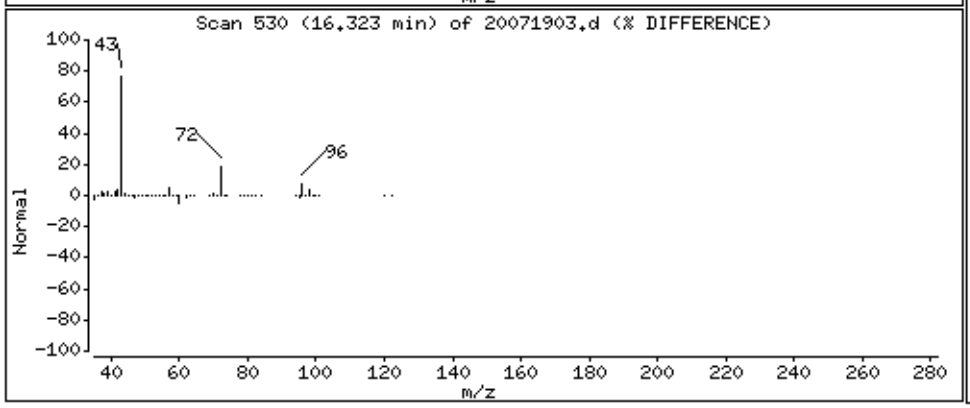
91 cis-1,2-Dichloroethene

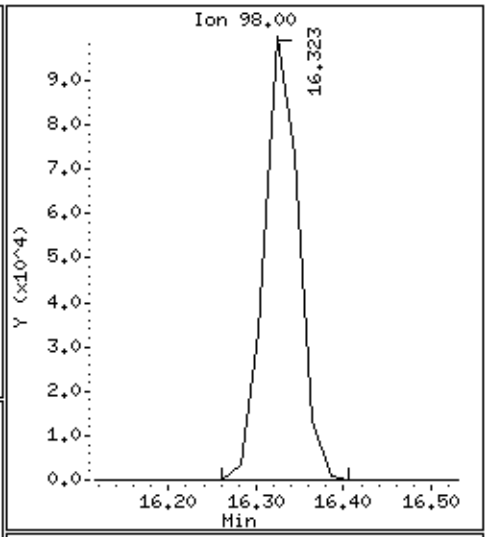
Concentration: 10.884 PPBV

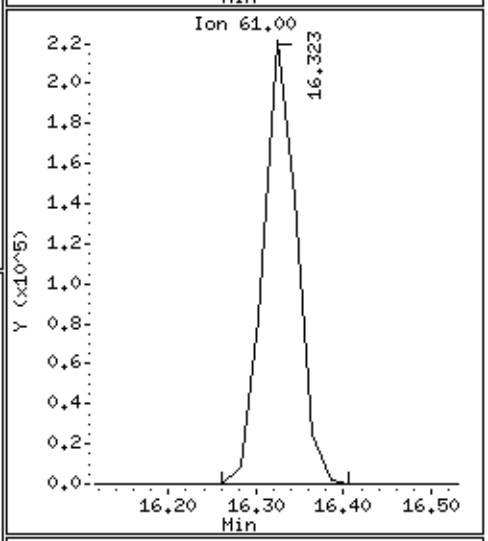


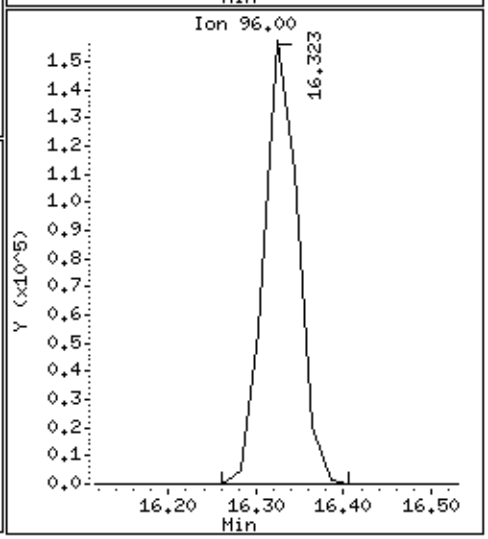












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

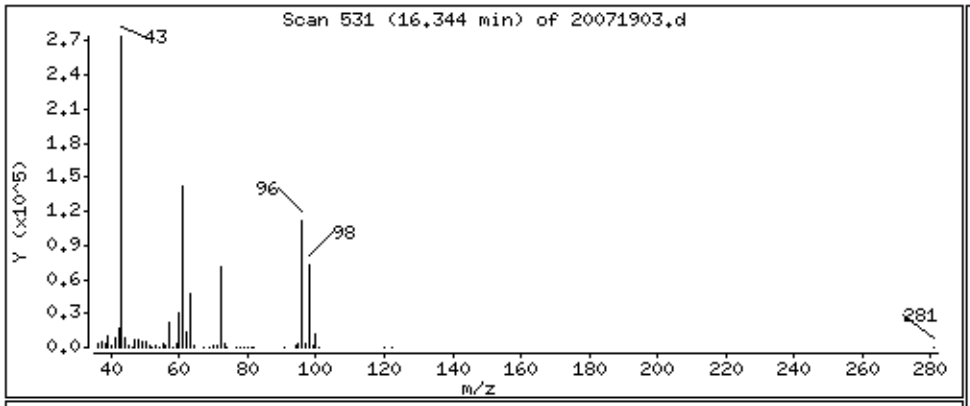
Operator: su

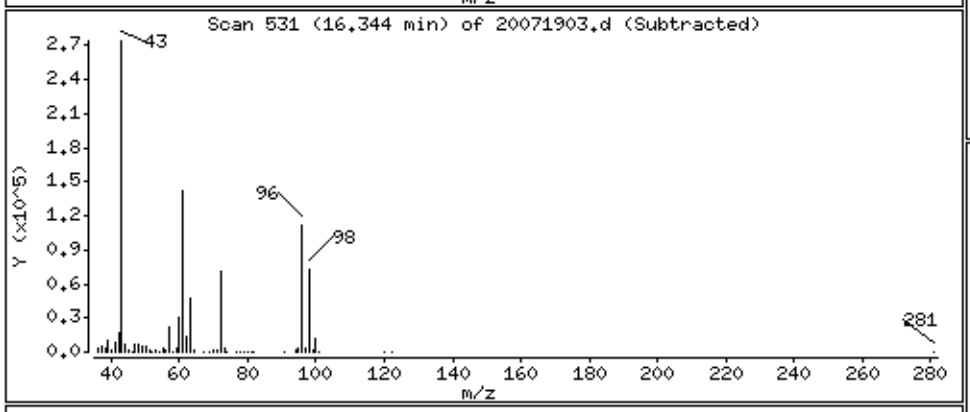
Column phase: RTX-624

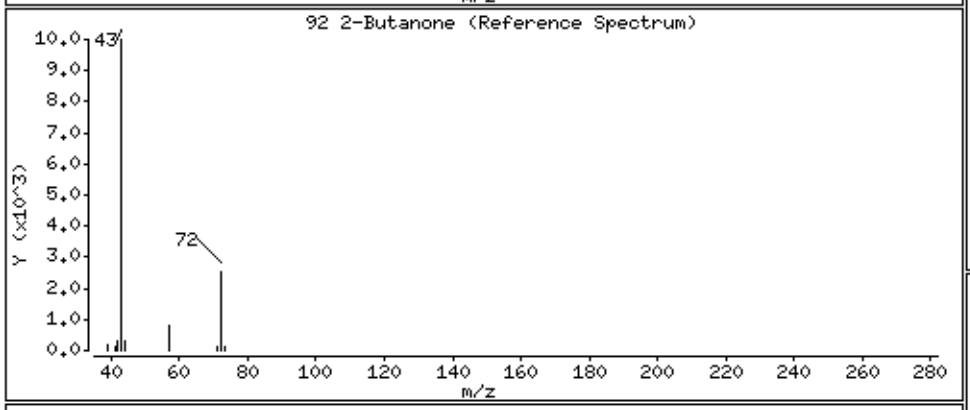
Column diameter: 0.32

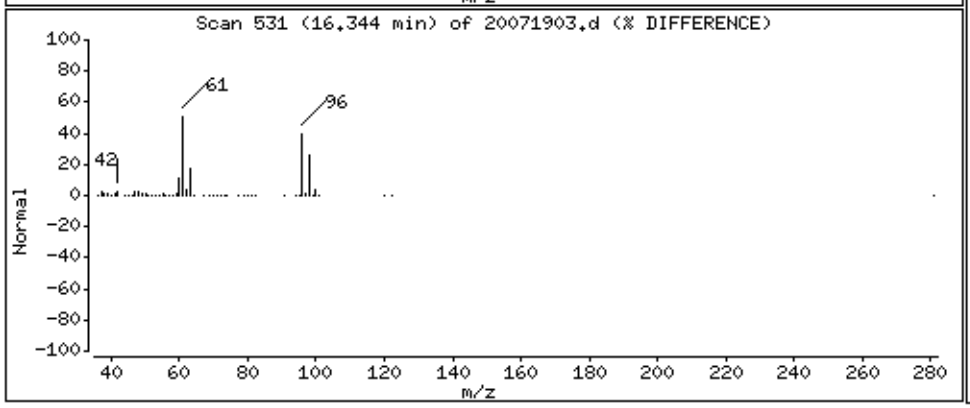
92 2-Butanone

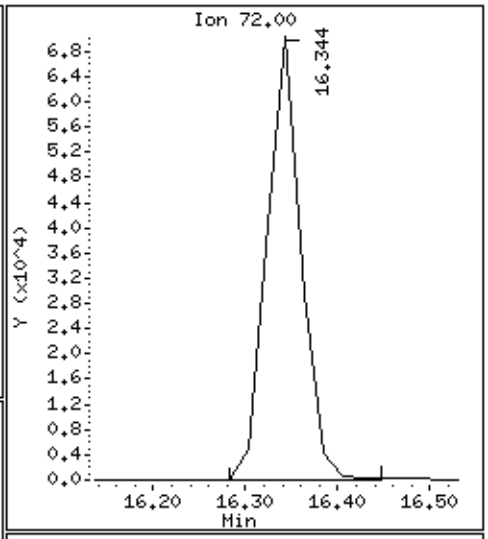
Concentration: 10.224 PPBV

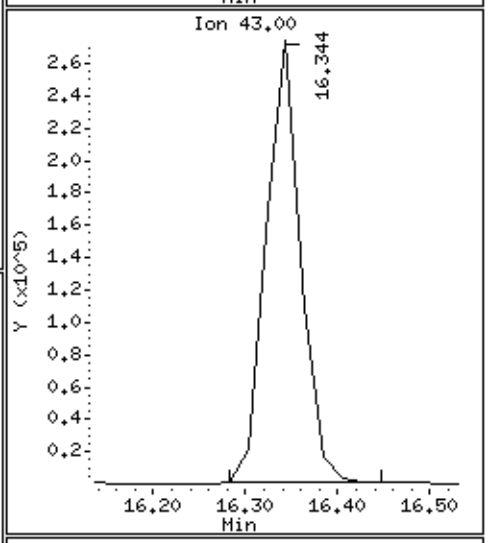


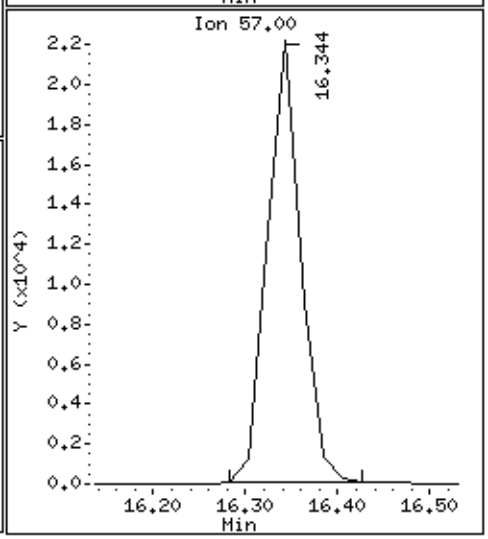












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

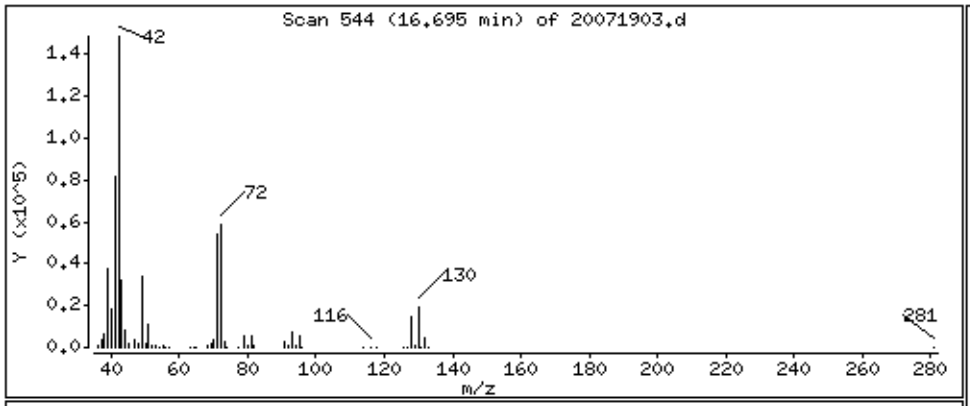
Operator: su

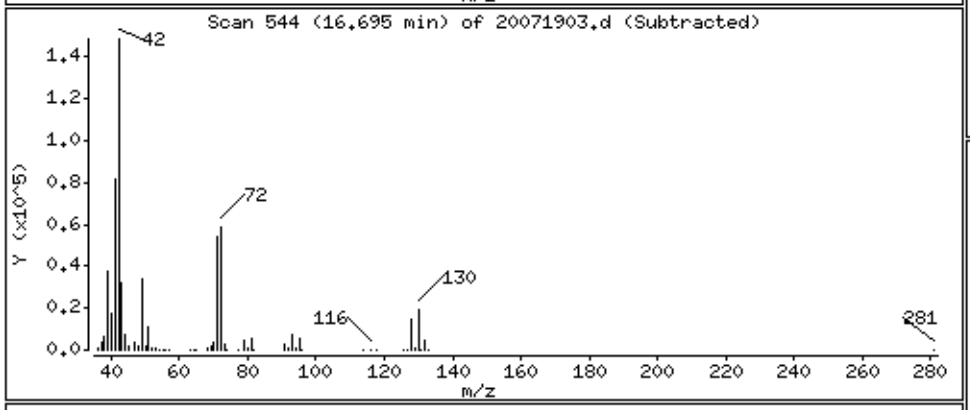
Column phase: RTX-624

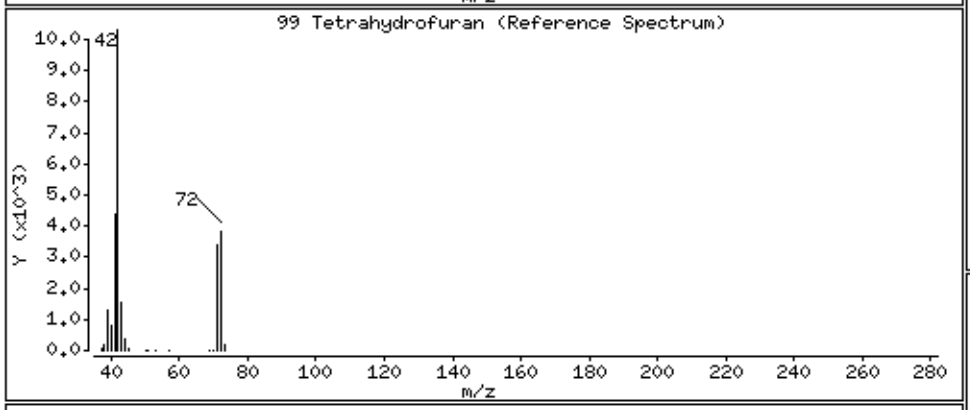
Column diameter: 0.32

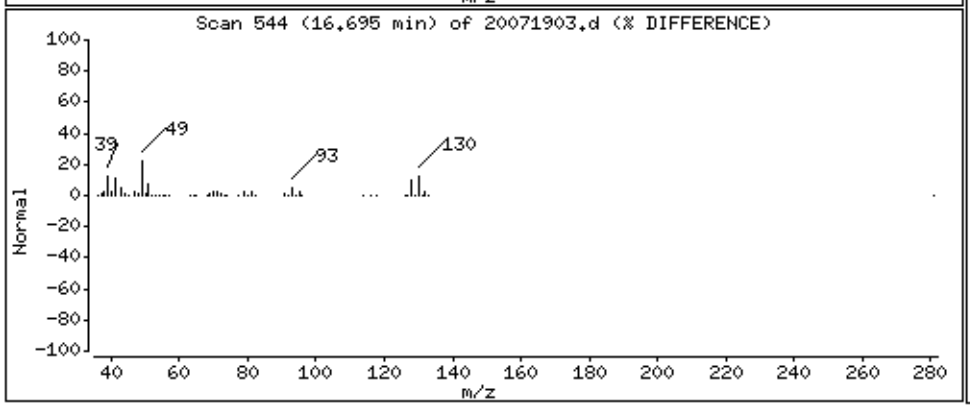
99 Tetrahydrofuran

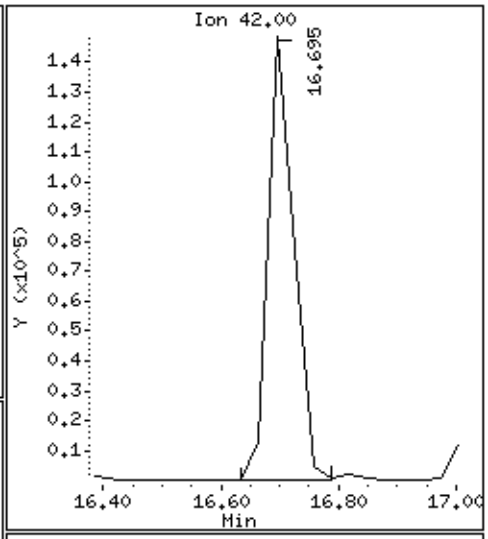
Concentration: 10.630 PPBV

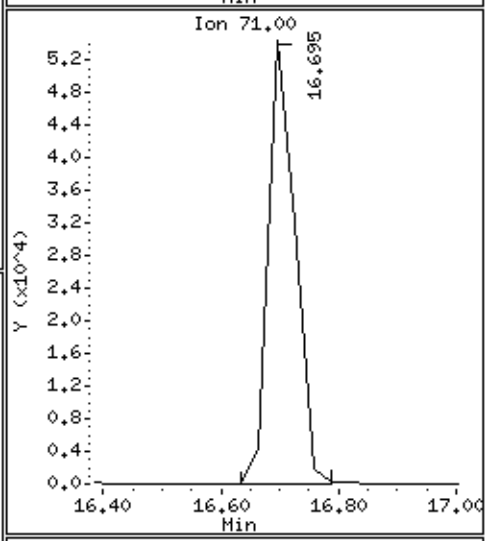


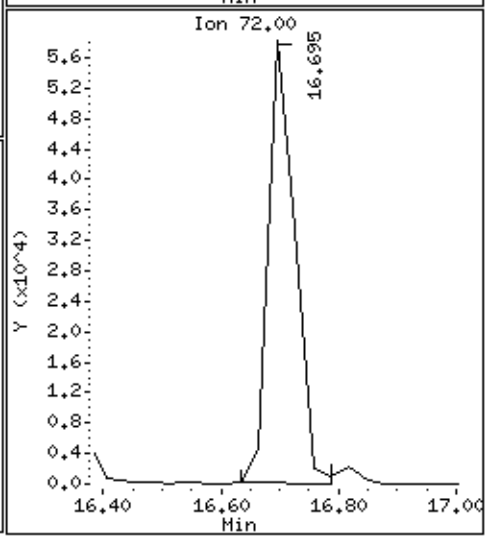












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

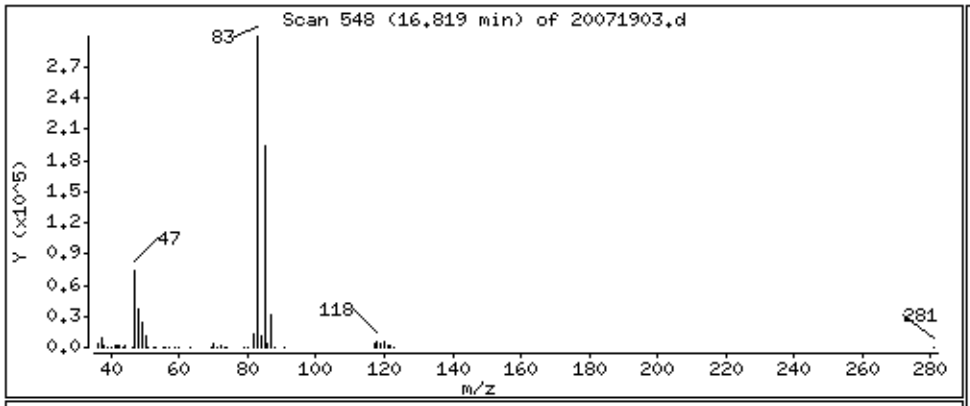
Operator: su

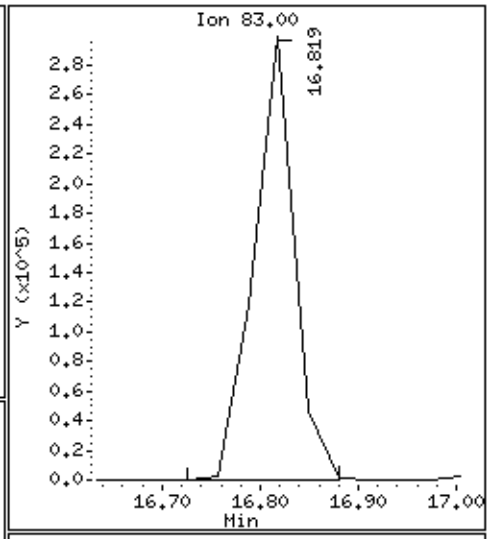
Column phase: RTX-624

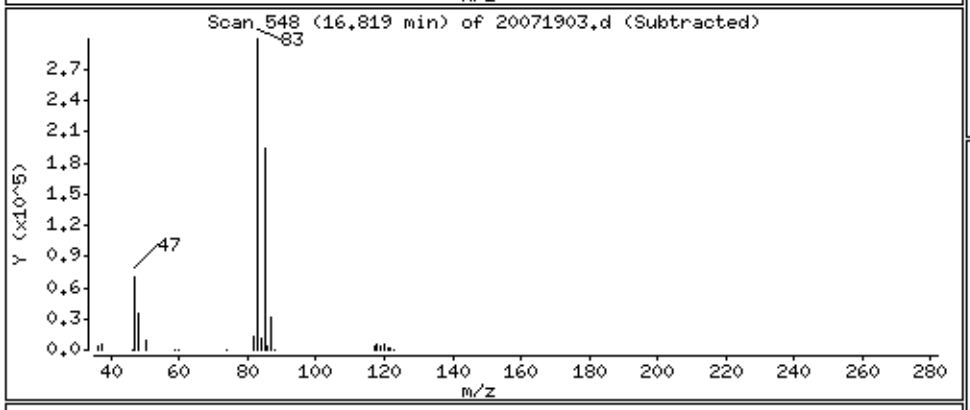
Column diameter: 0.32

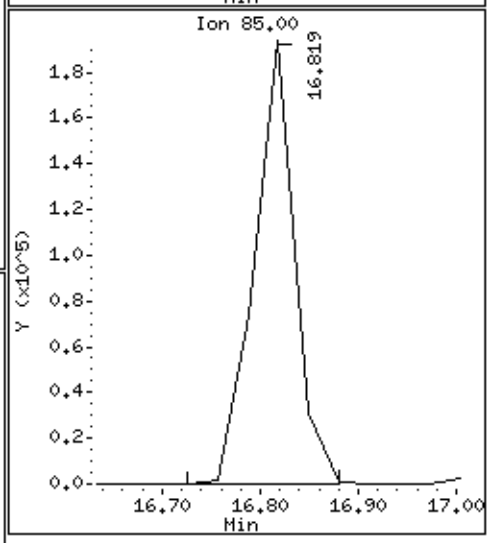
100 Chloroform

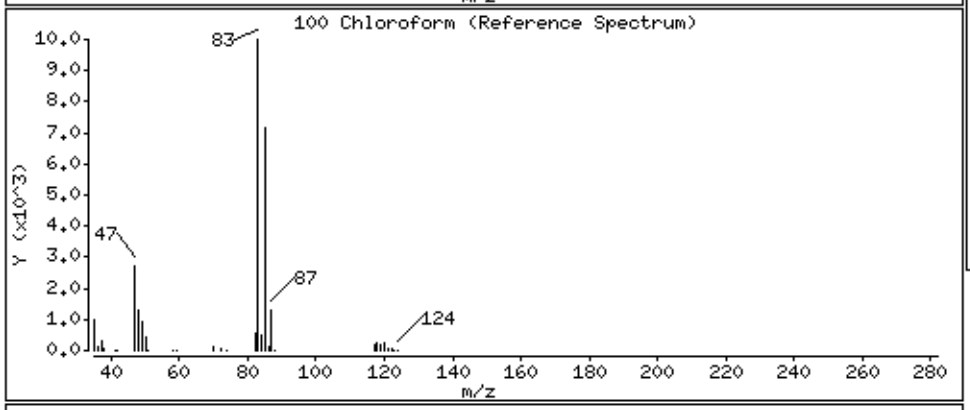
Concentration: 10.878 PPBV

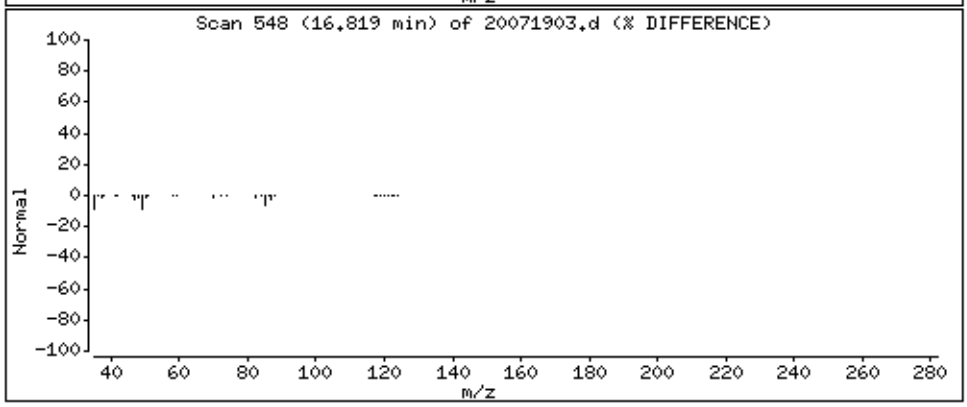












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

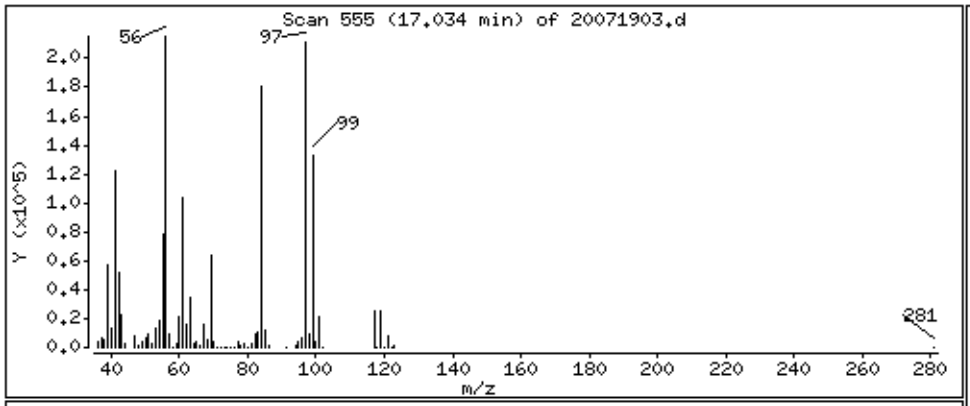
Operator: su

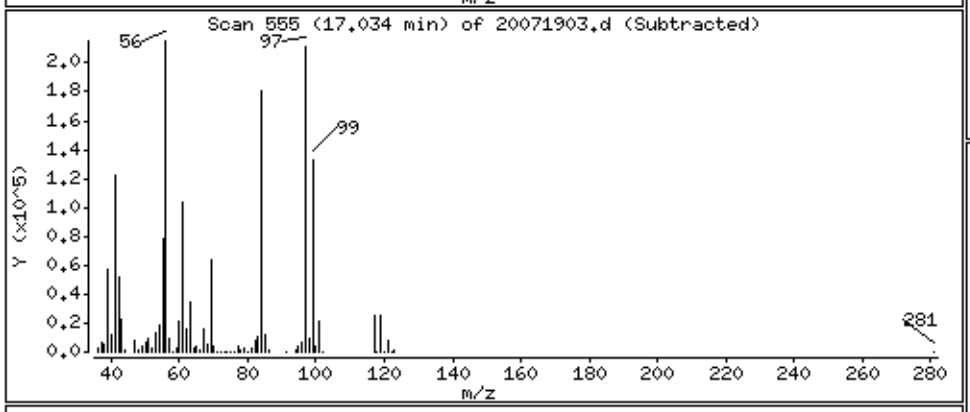
Column phase: RTX-624

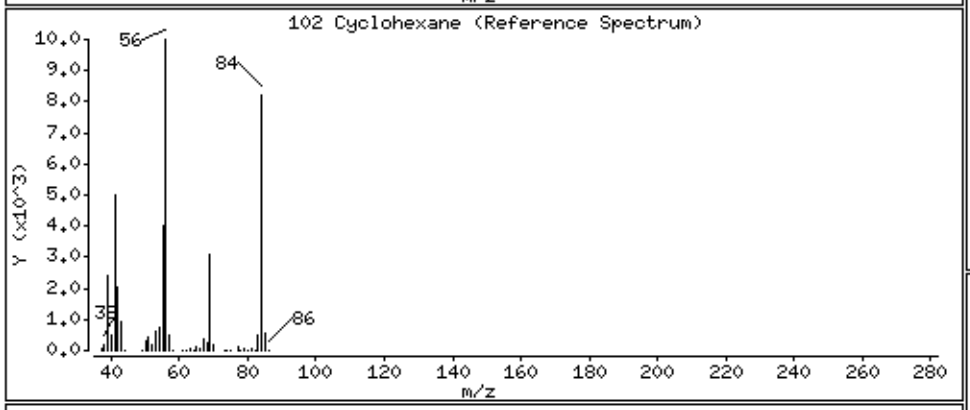
Column diameter: 0.32

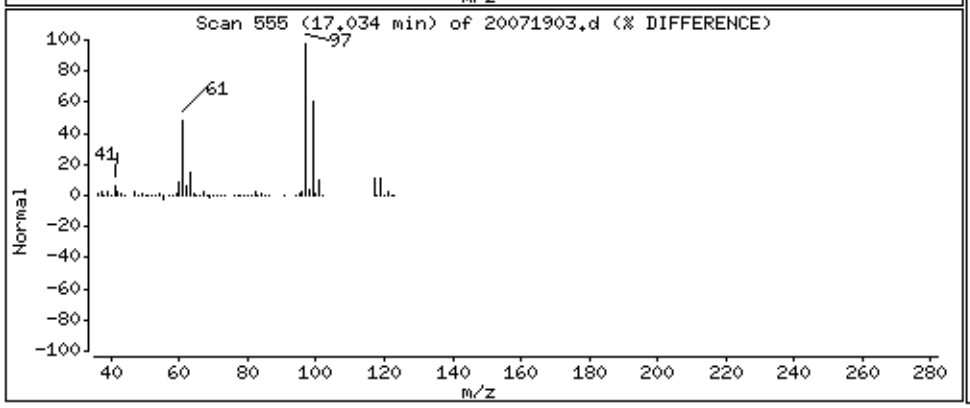
102 Cyclohexane

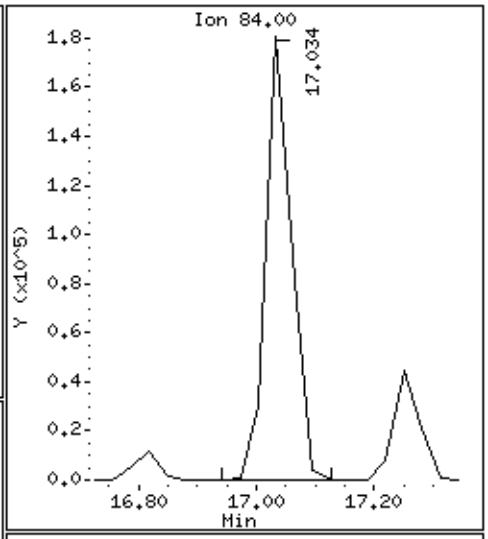
Concentration: 10.084 PPBV

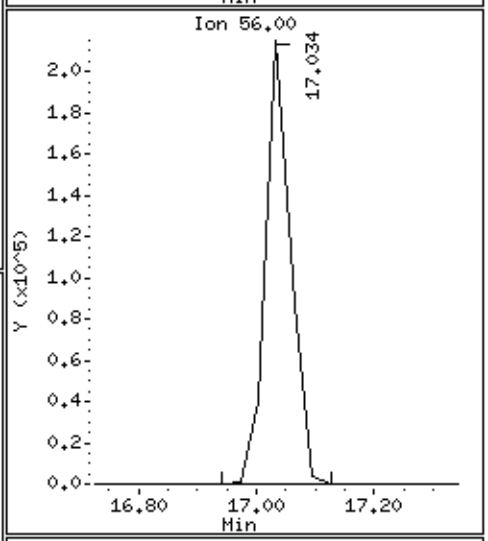


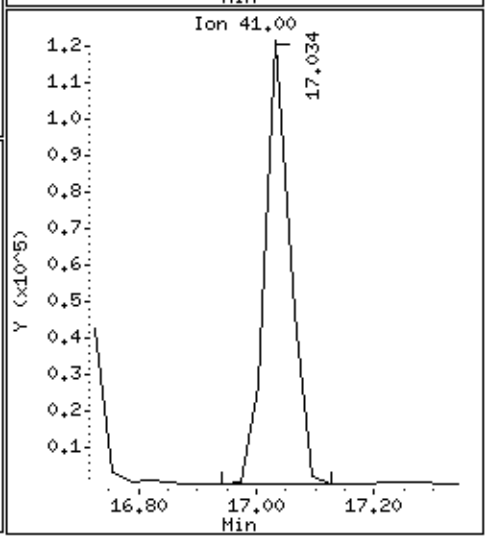












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

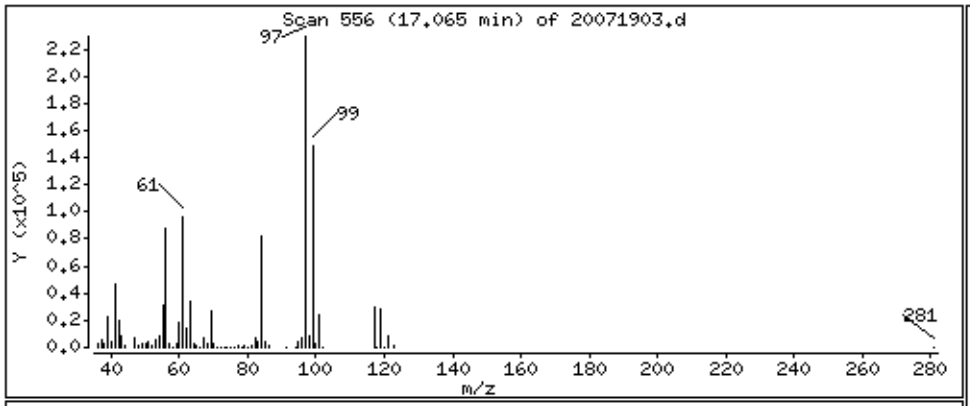
Operator: su

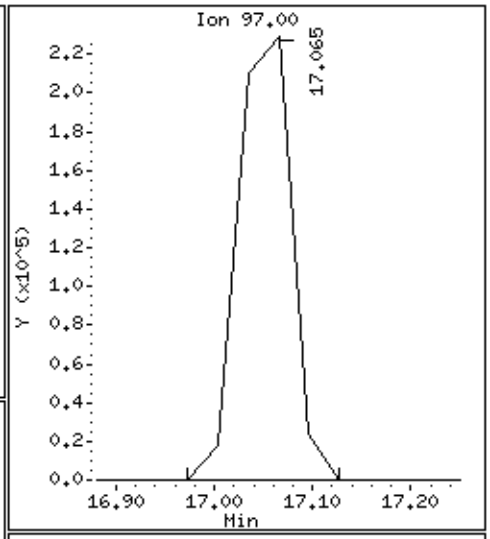
Column phase: RTX-624

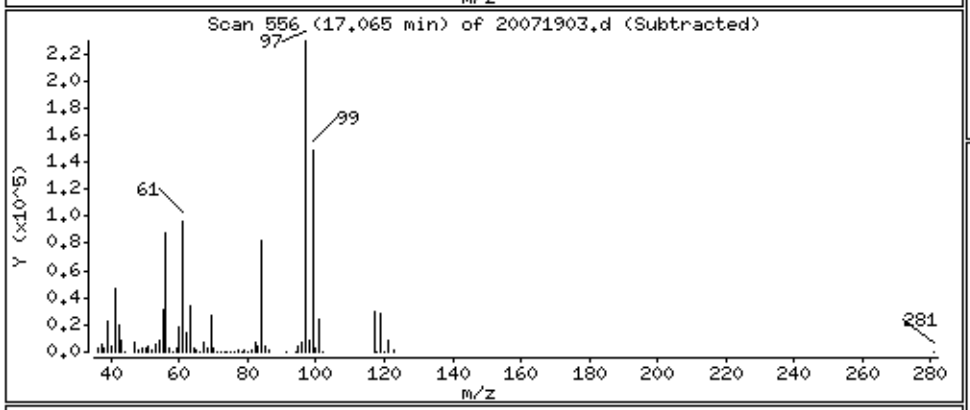
Column diameter: 0.32

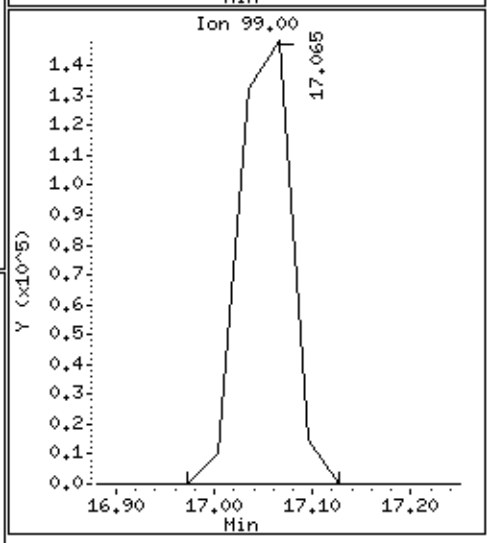
103 1,1,1-Trichloroethane

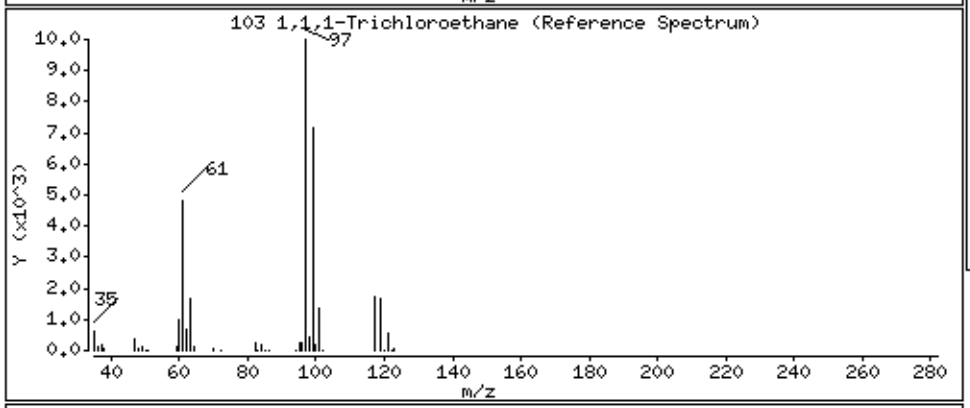
Concentration: 10.805 PPBV

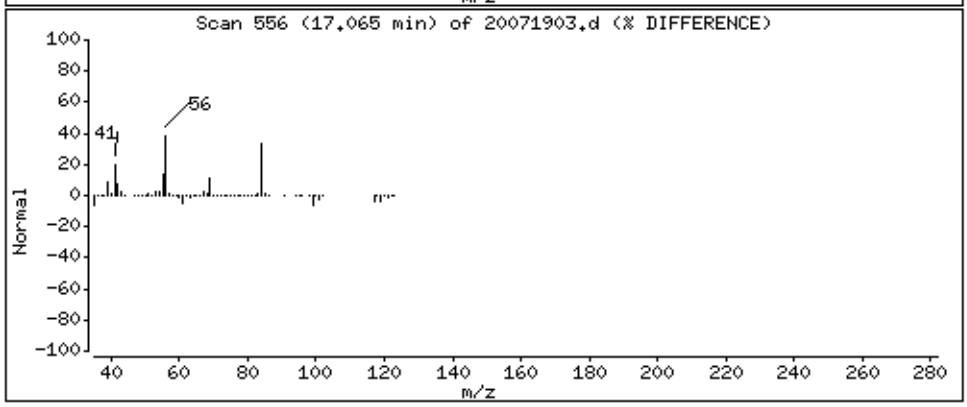












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

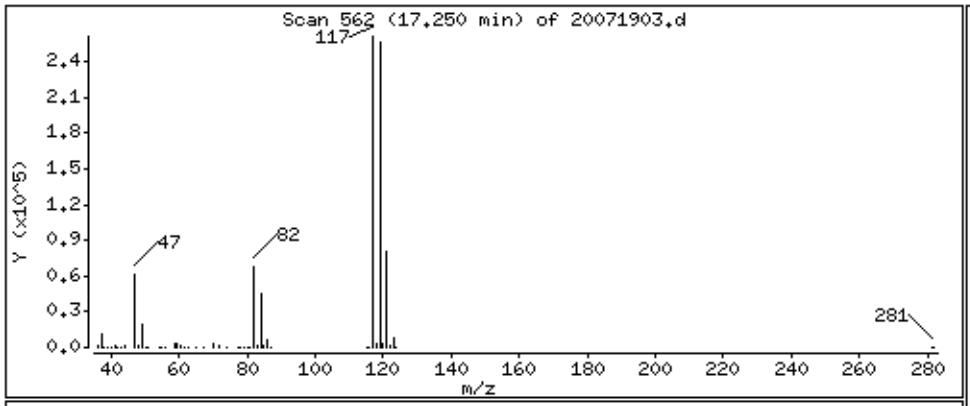
Operator: su

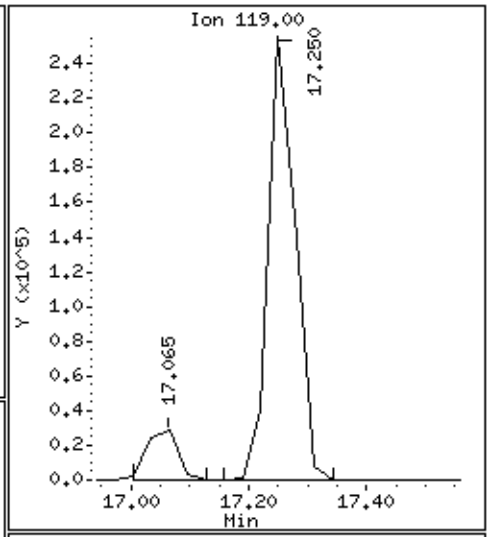
Column phase: RTX-624

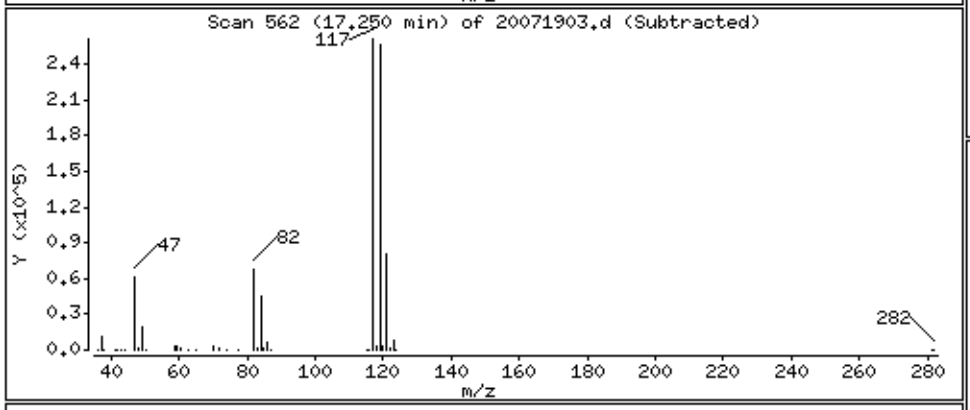
Column diameter: 0.32

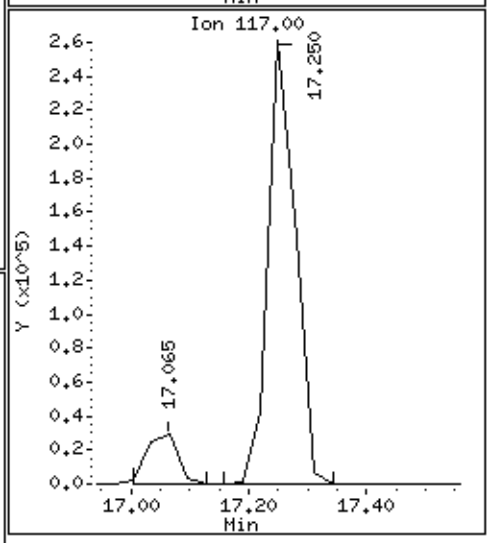
106 Carbon Tetrachloride

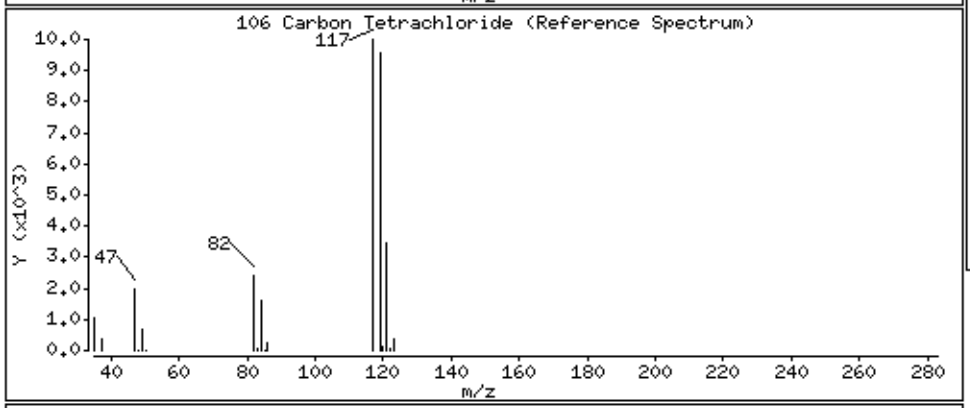
Concentration: 11.966 PPBV

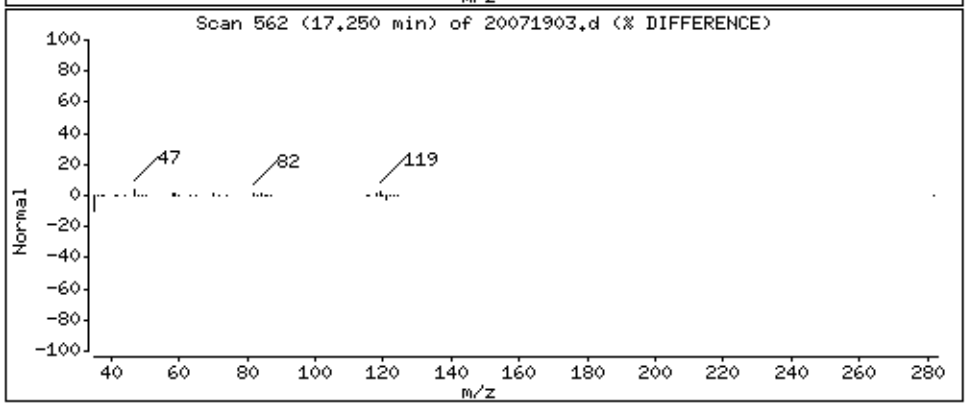












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

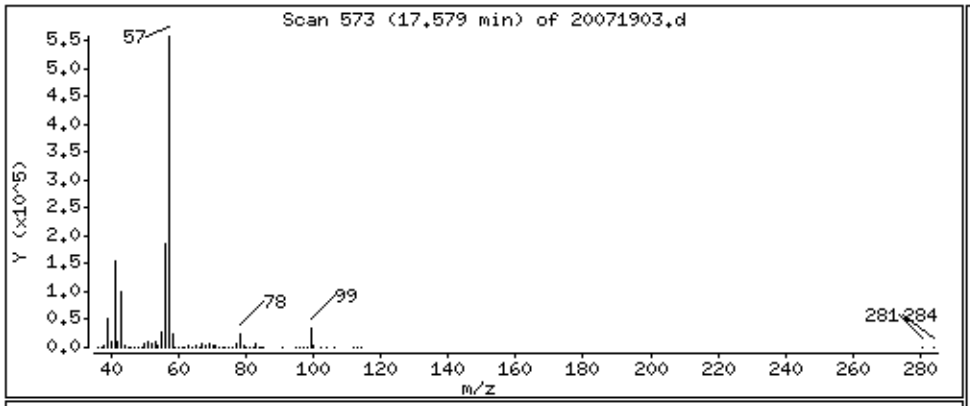
Operator: su

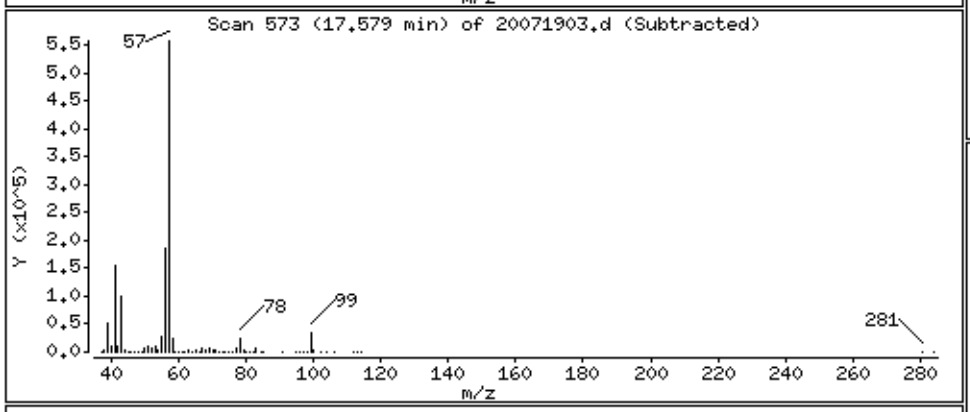
Column phase: RTX-624

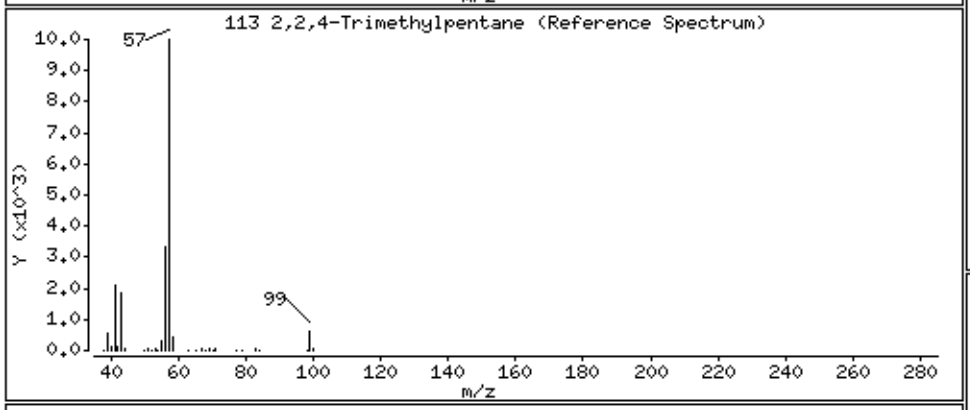
Column diameter: 0.32

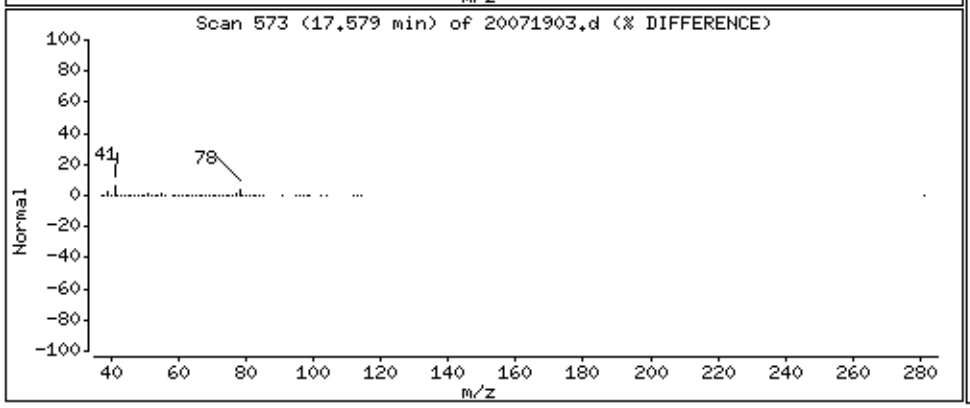
113 2,2,4-Trimethylpentane

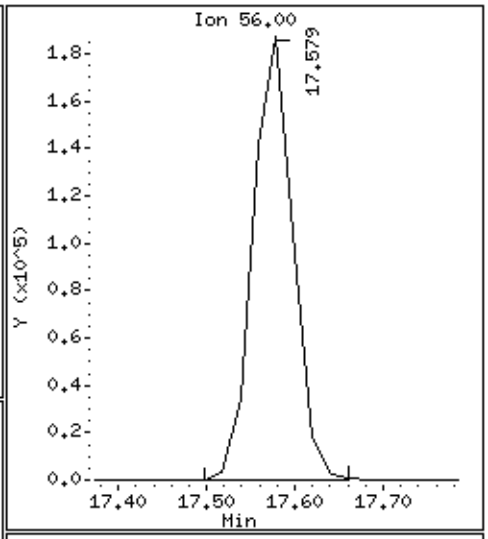
Concentration: 10.707 PPBV

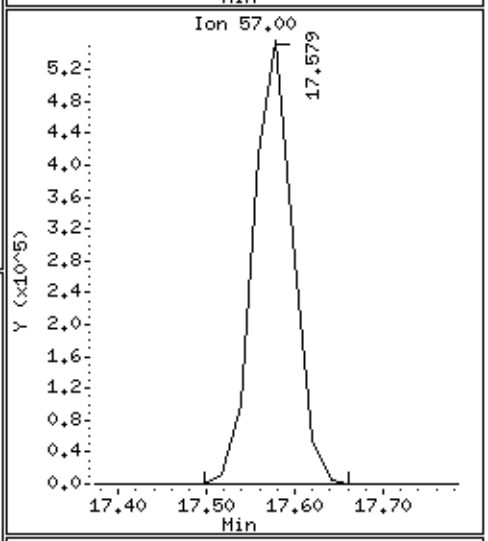


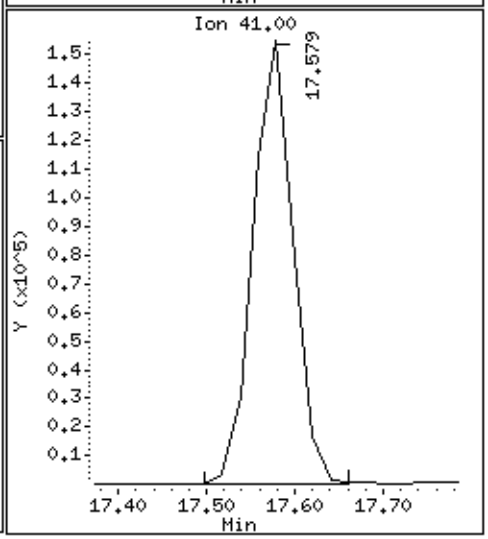












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

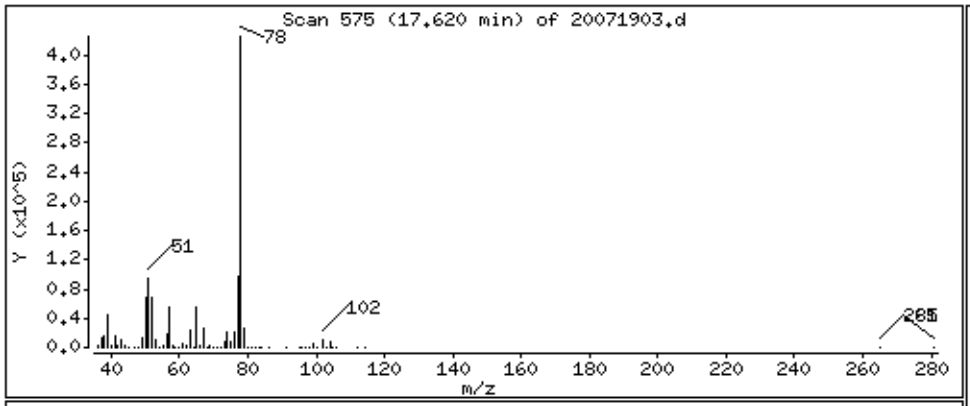
Operator: su

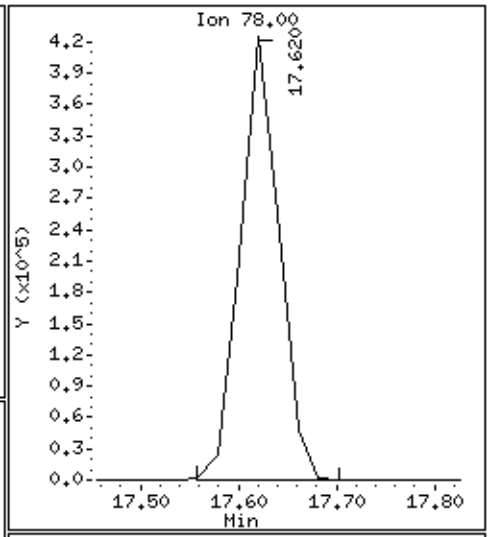
Column phase: RTX-624

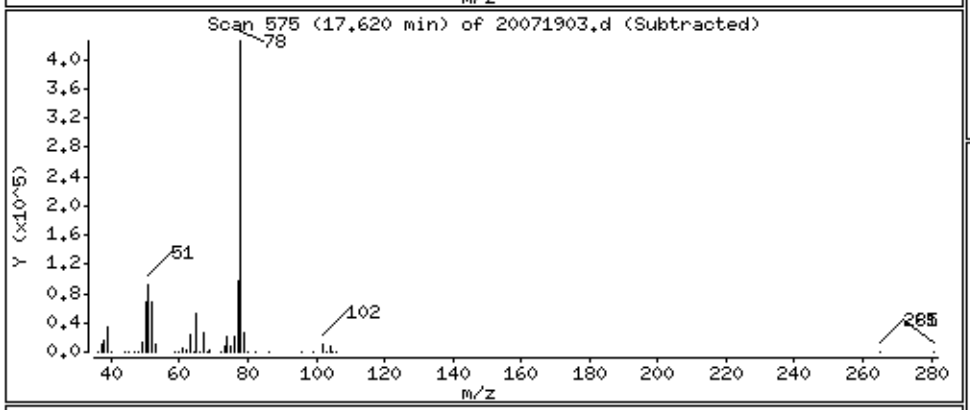
Column diameter: 0.32

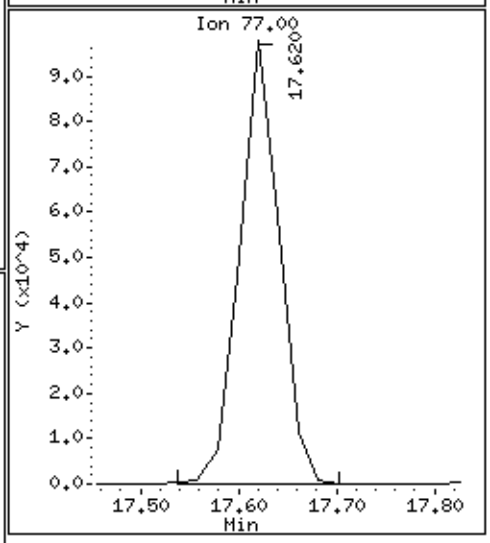
116 Benzene

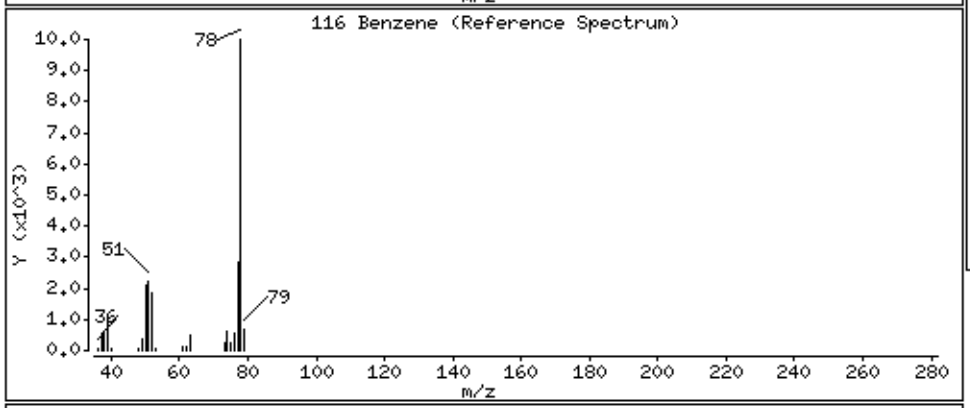
Concentration: 11.493 PPBV

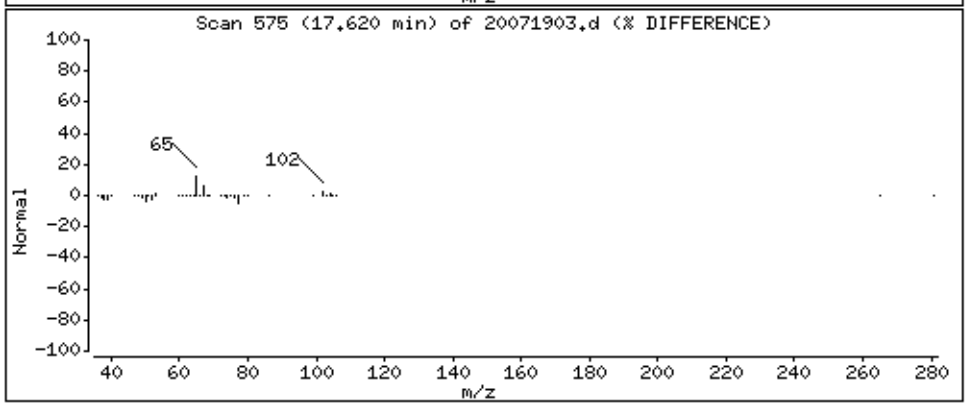












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

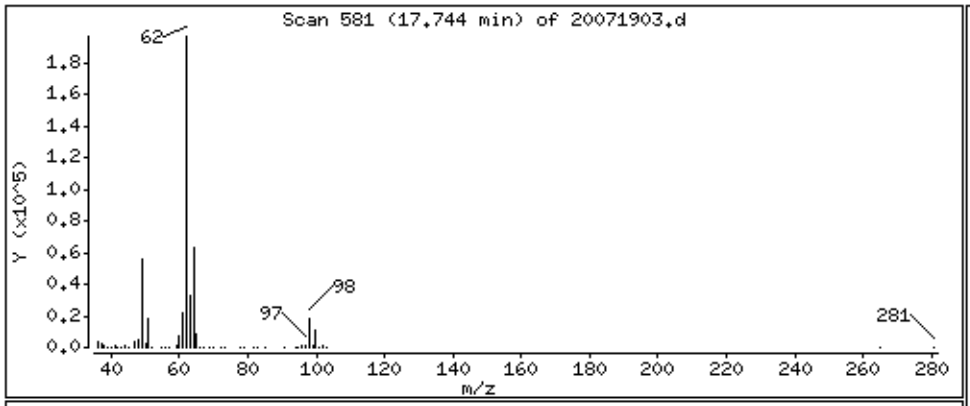
Operator: su

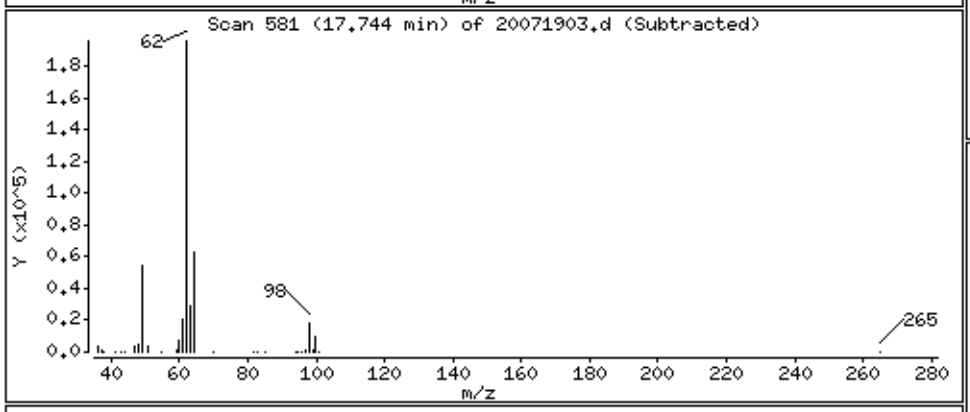
Column phase: RTX-624

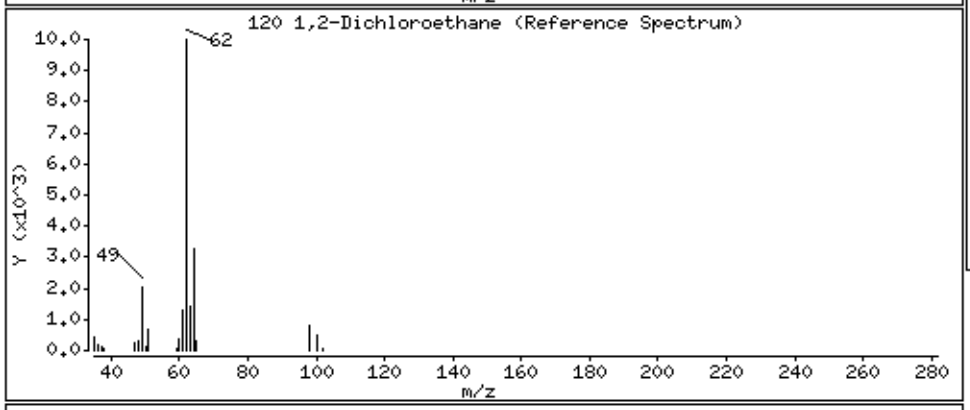
Column diameter: 0.32

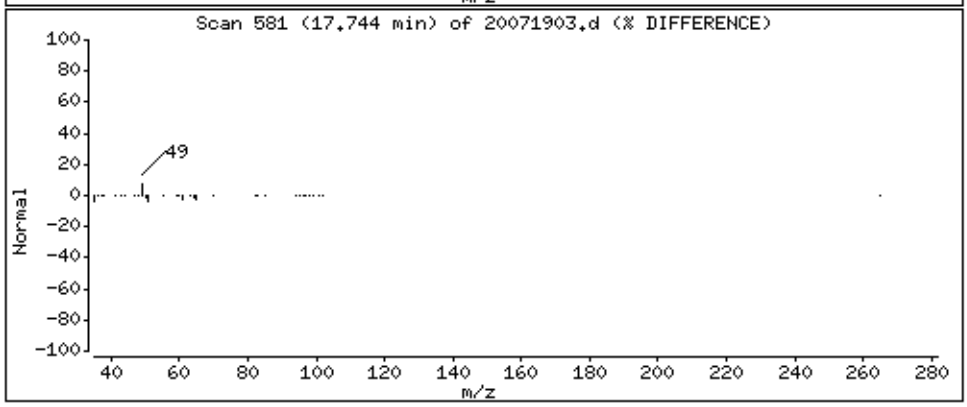
120 1,2-Dichloroethane

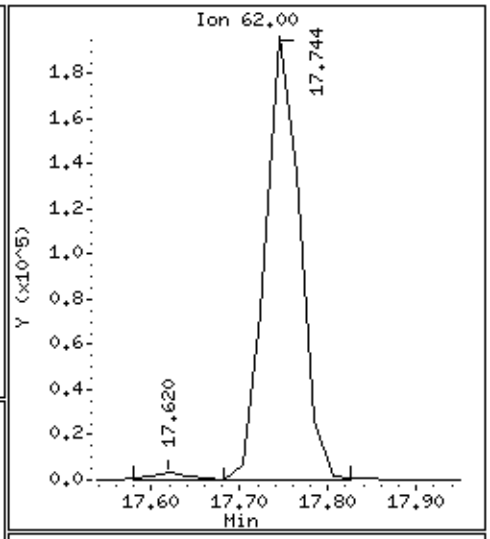
Concentration: 12.161 PPBV

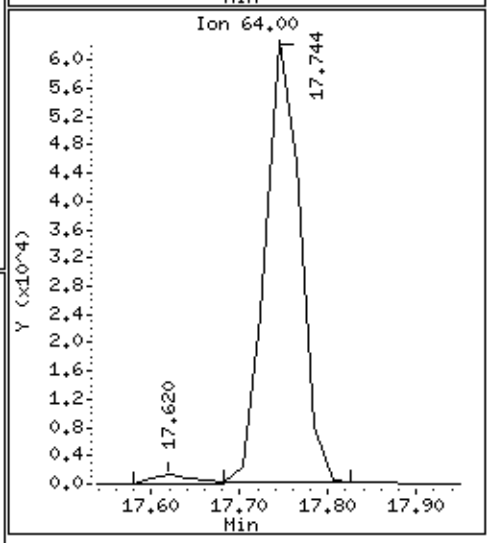












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

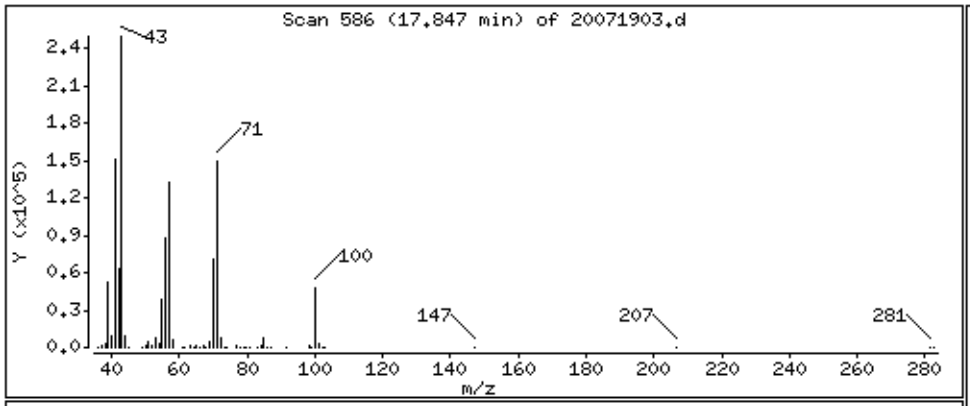
Operator: su

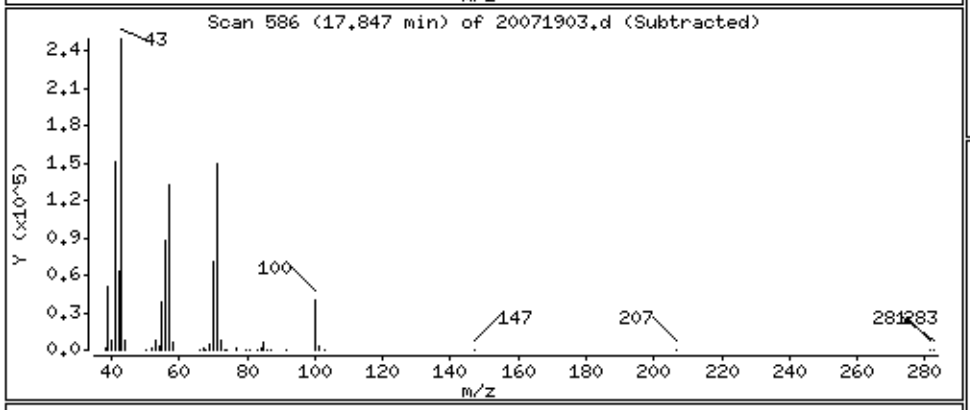
Column phase: RTX-624

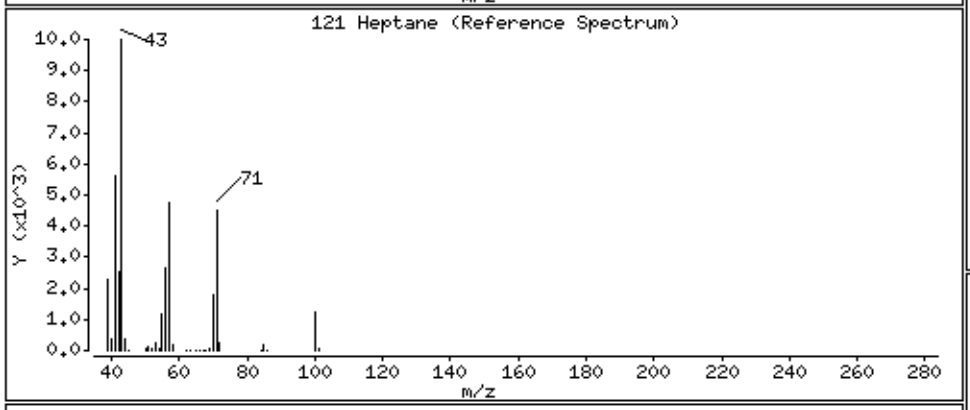
Column diameter: 0.32

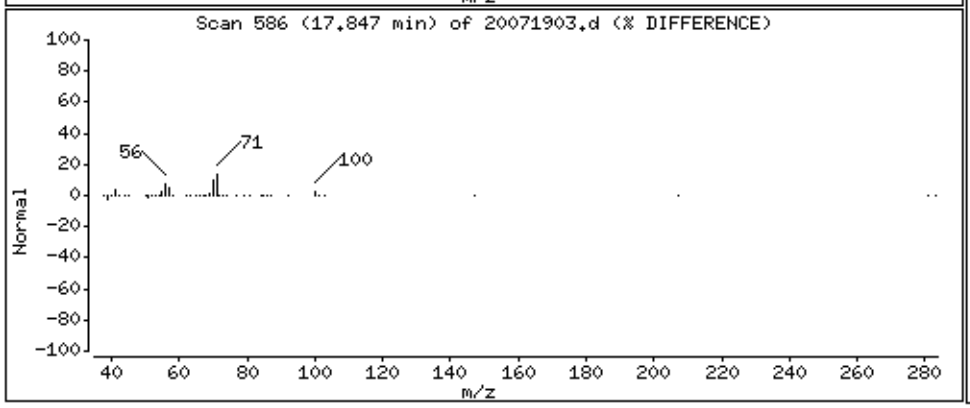
121 Heptane

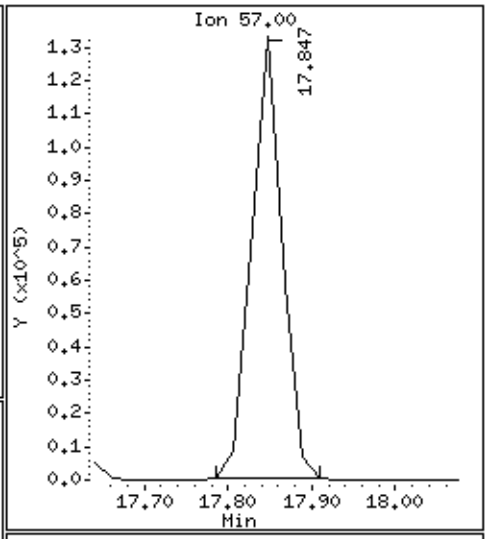
Concentration: 12.226 PPBV

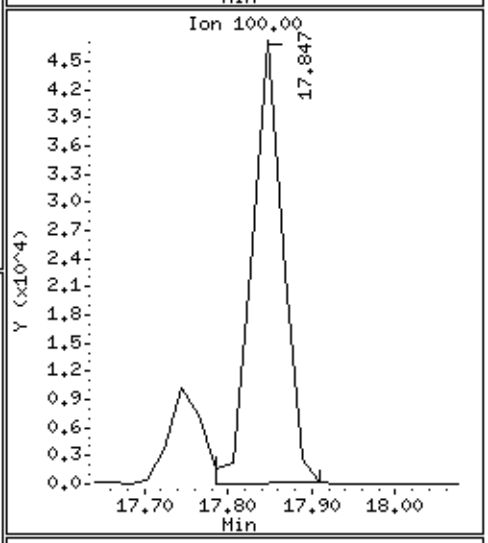


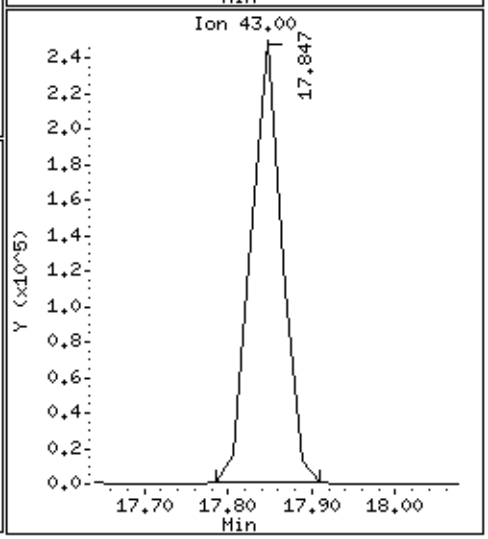












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

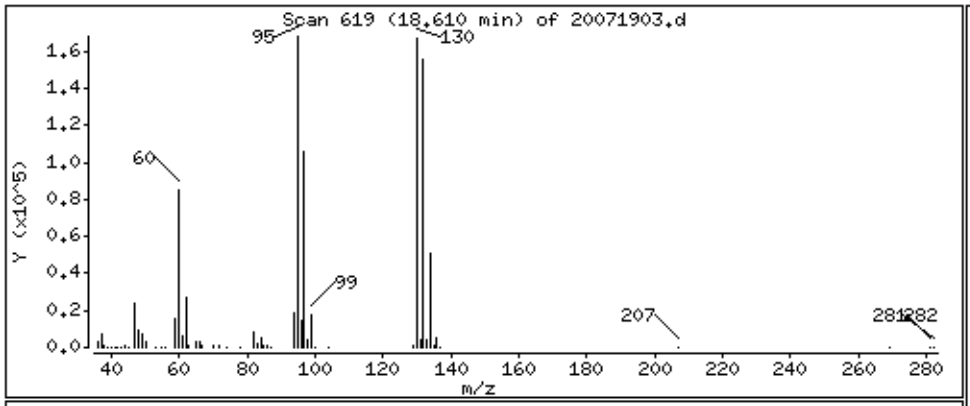
Operator: su

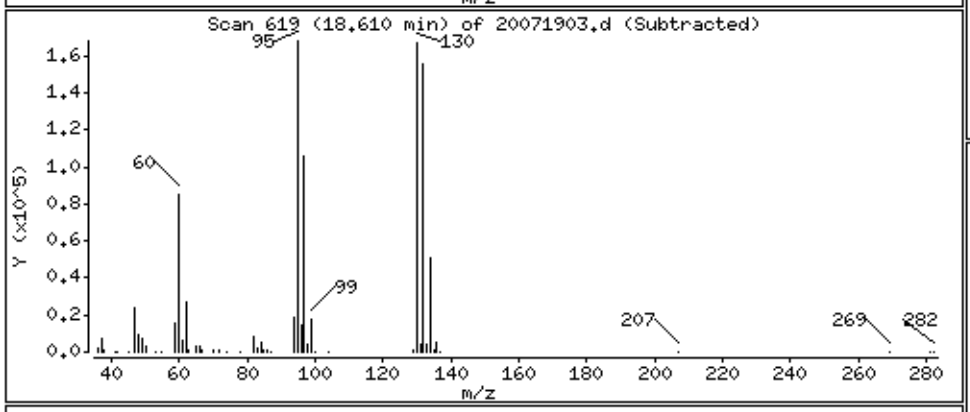
Column phase: RTX-624

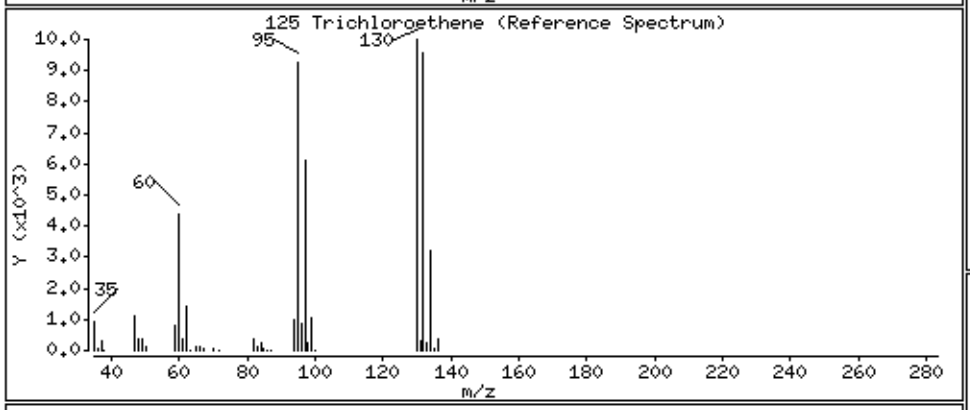
Column diameter: 0.32

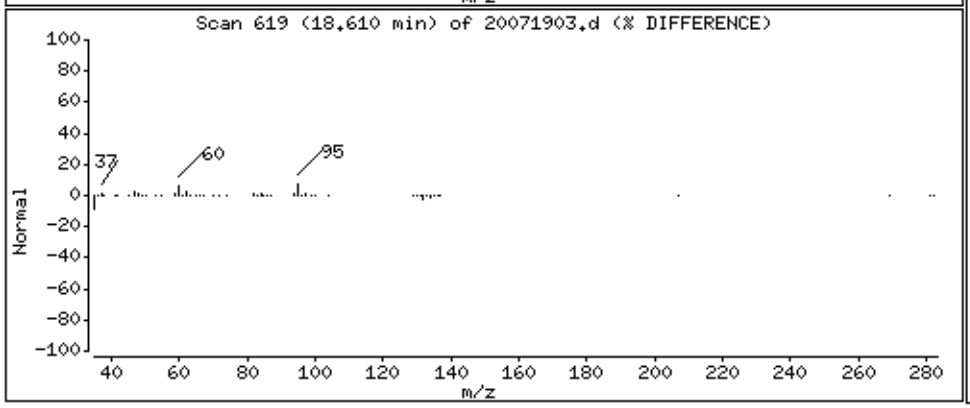
125 Trichloroethene

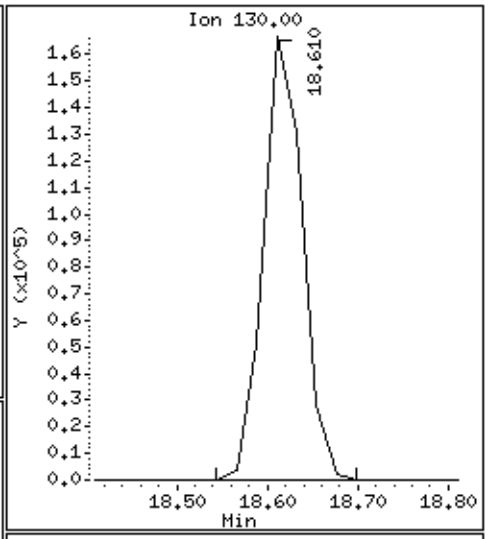
Concentration: 11.016 PPBV

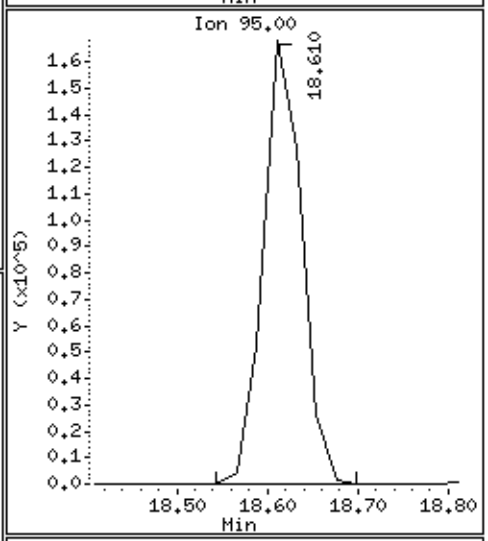


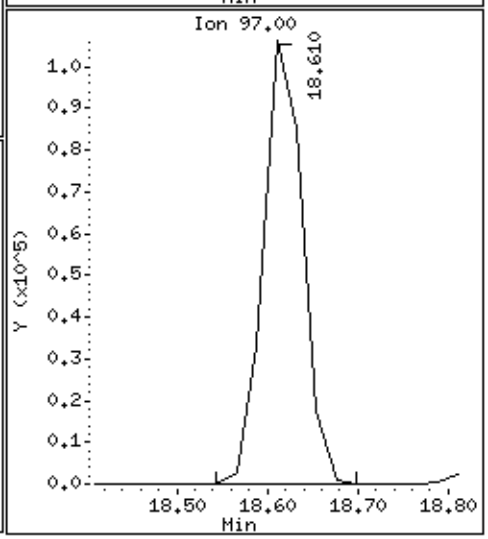












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

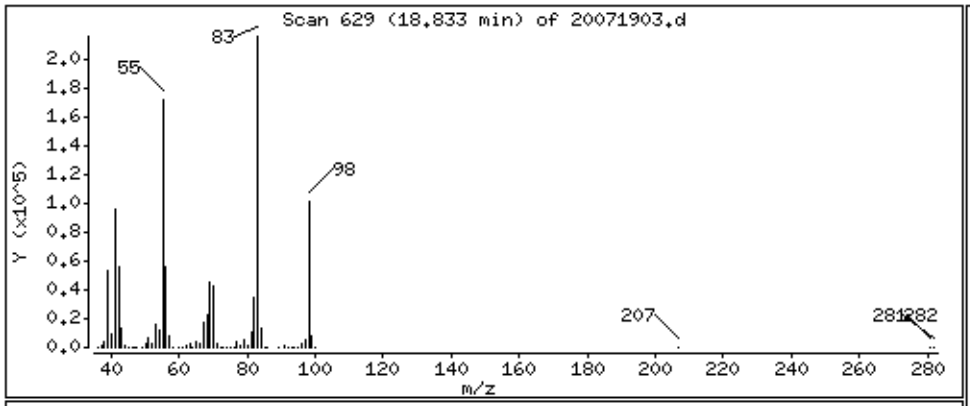
Operator: su

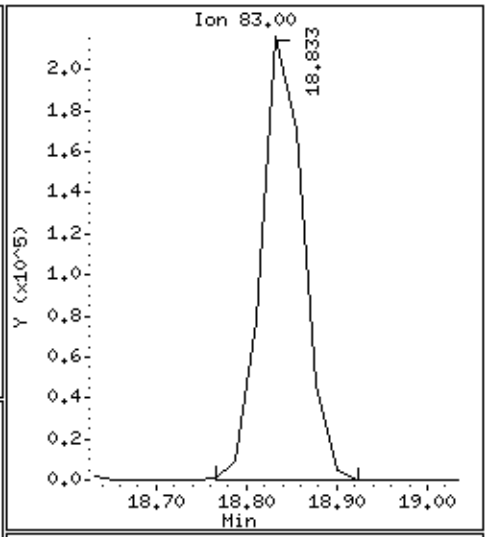
Column phase: RTX-624

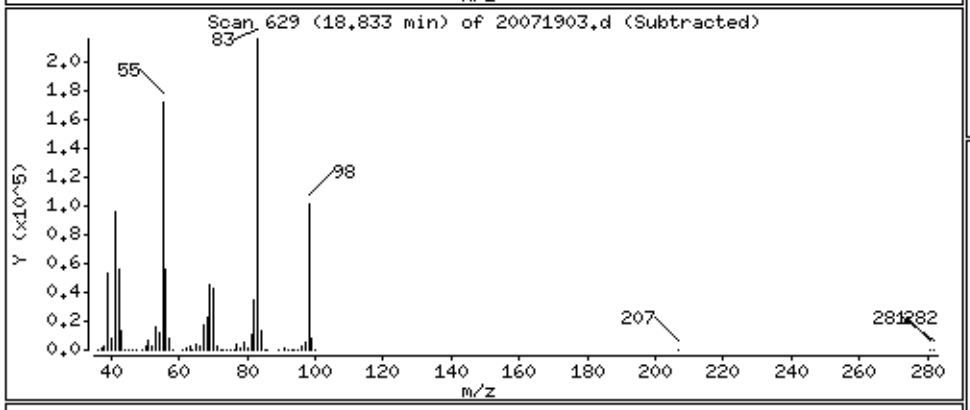
Column diameter: 0.32

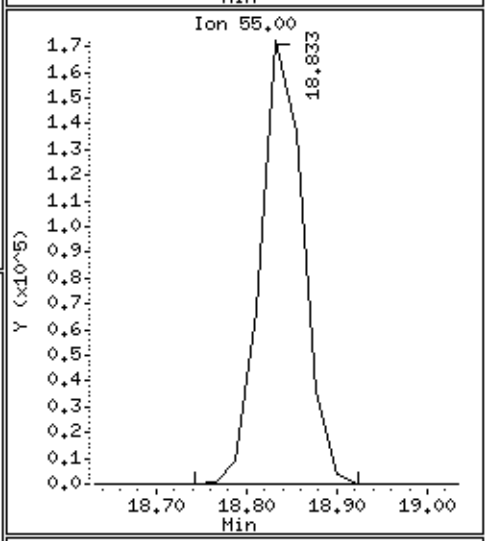
127 Methylcyclohexane

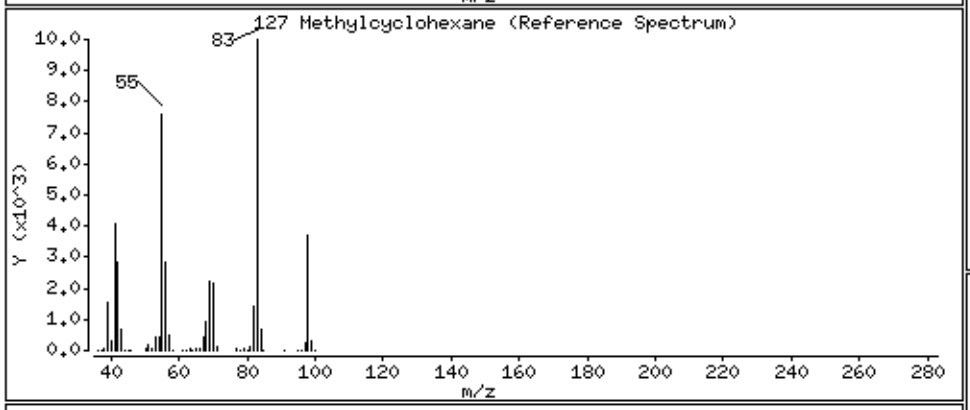
Concentration: 11.872 PPBV

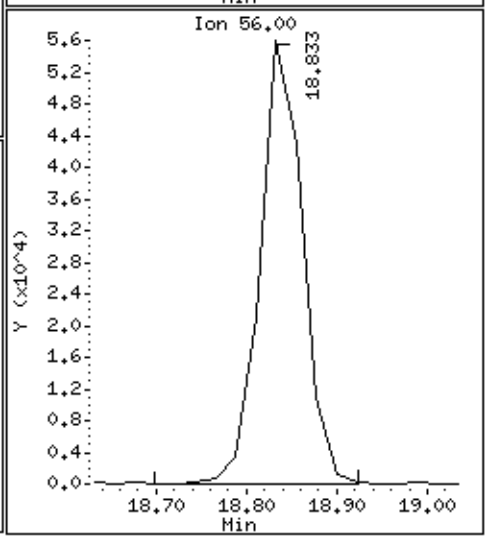


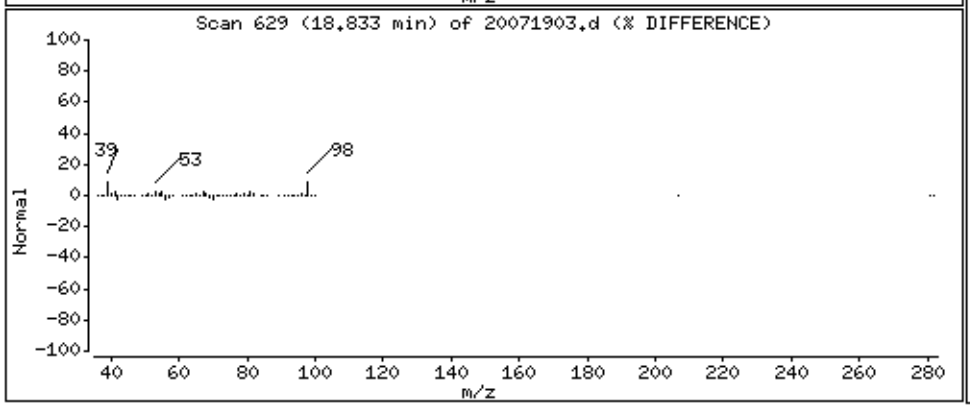












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

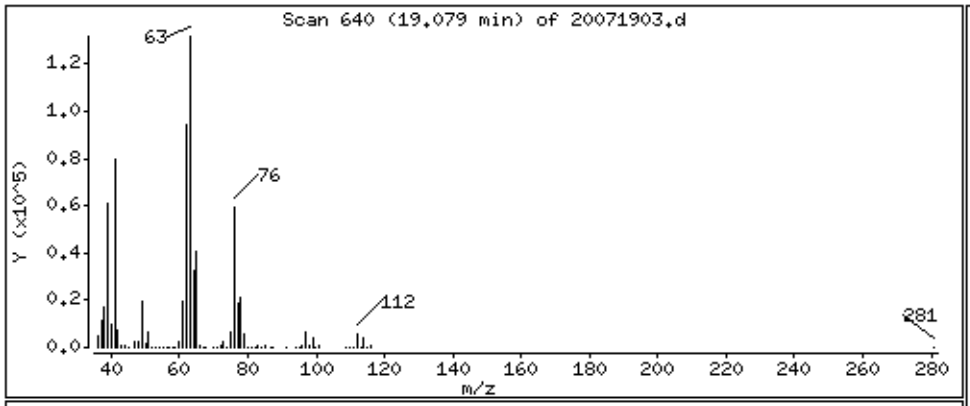
Operator: su

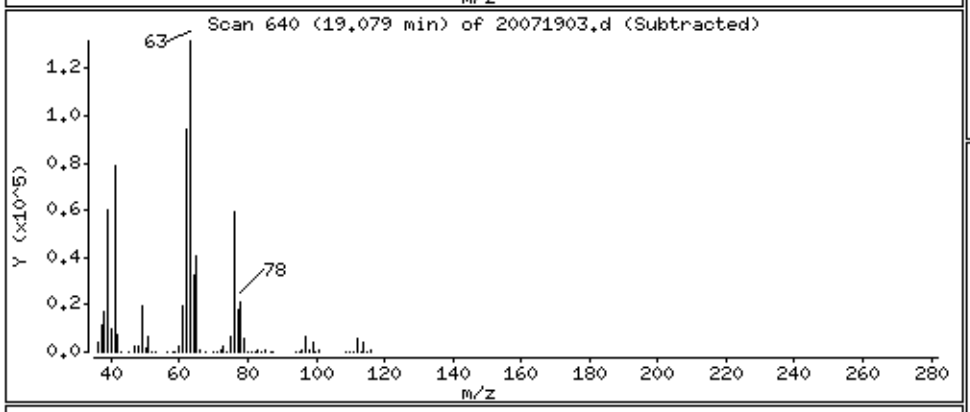
Column phase: RTX-624

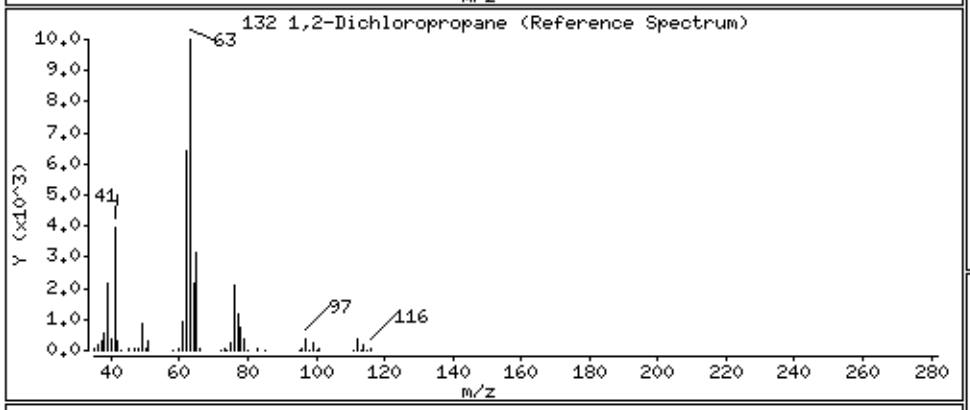
Column diameter: 0.32

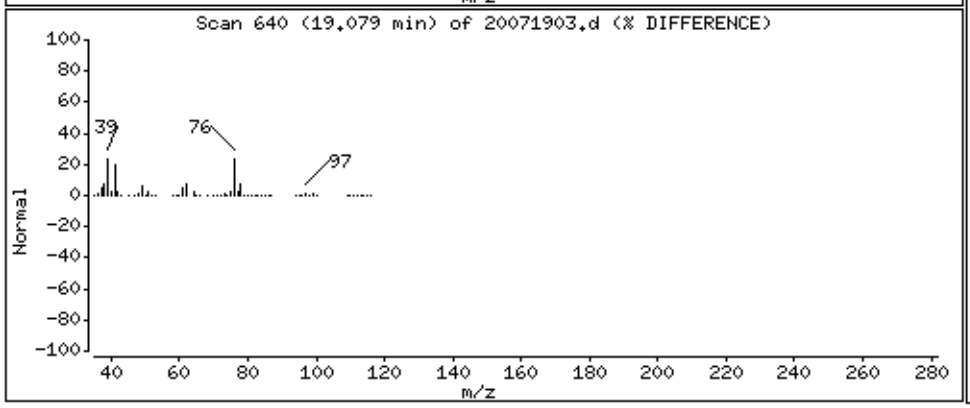
132 1,2-Dichloropropane

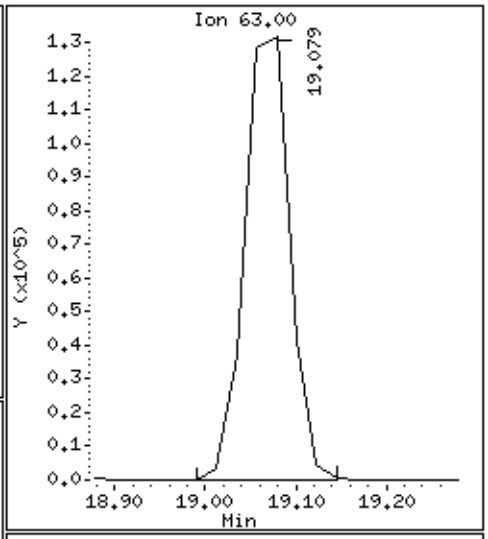
Concentration: 11.902 PPBV

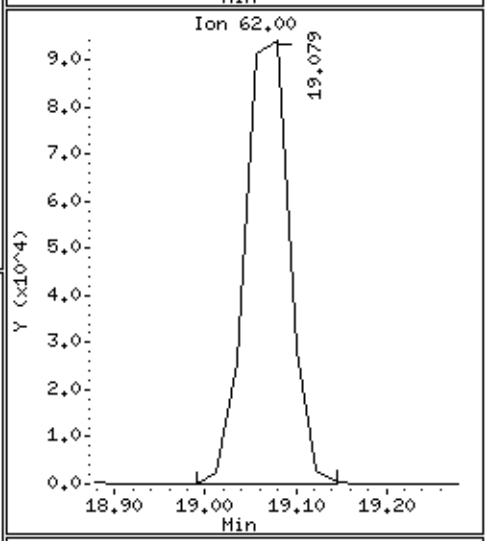


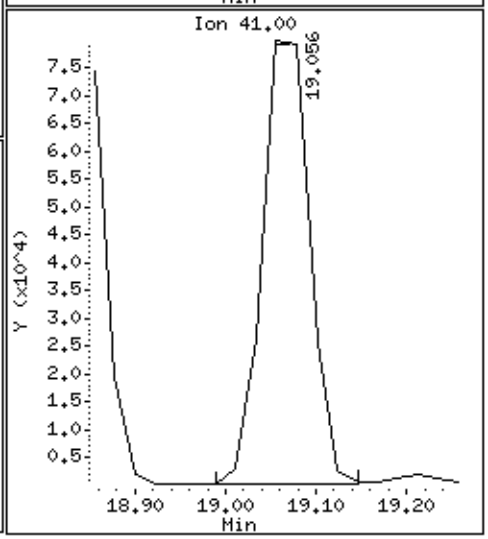












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

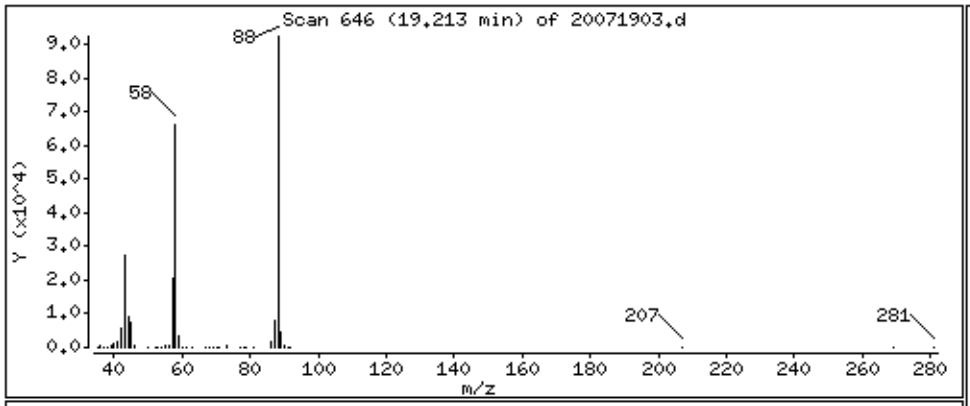
Operator: su

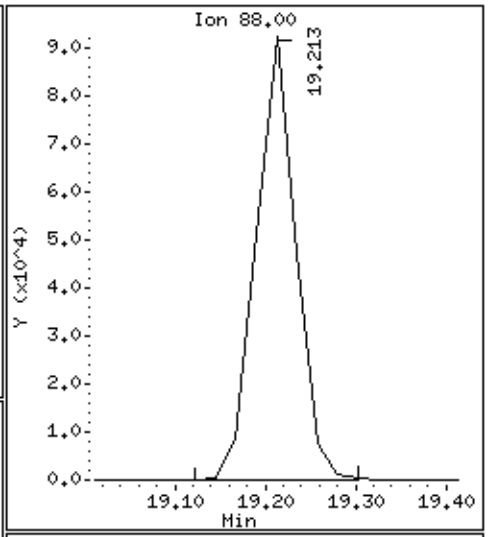
Column phase: RTX-624

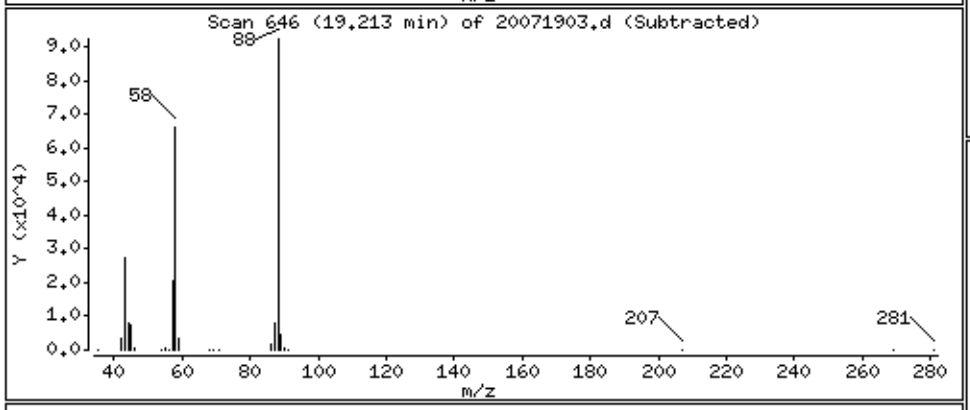
Column diameter: 0.32

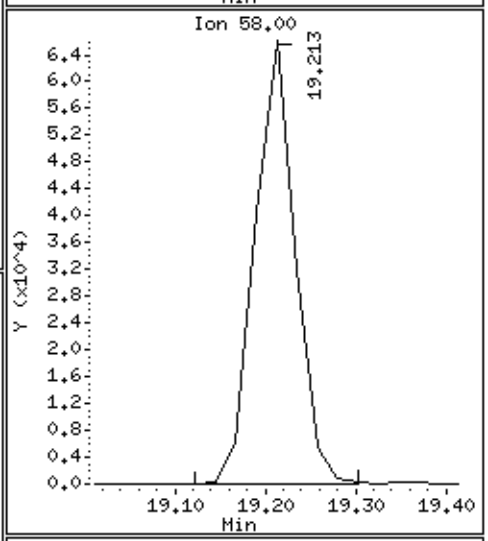
136 1,4-Dioxane

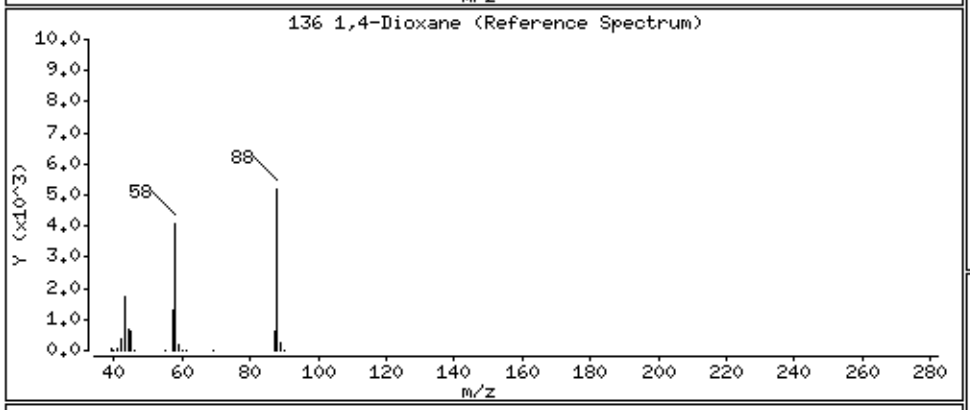
Concentration: 10.916 PPBV

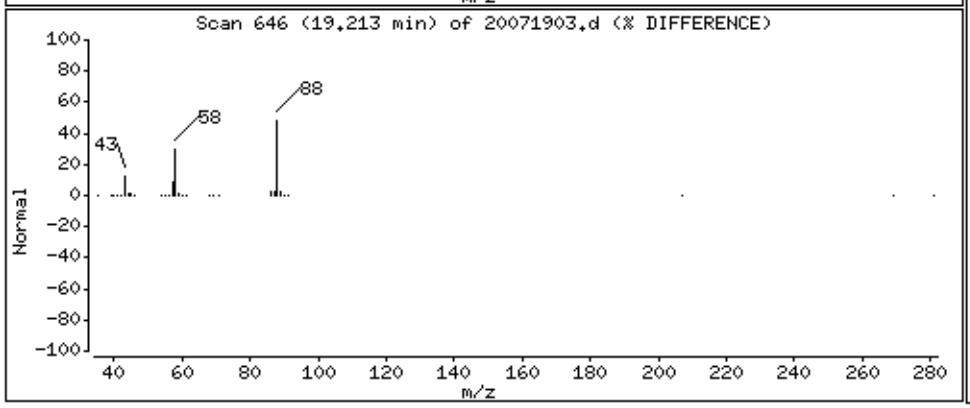


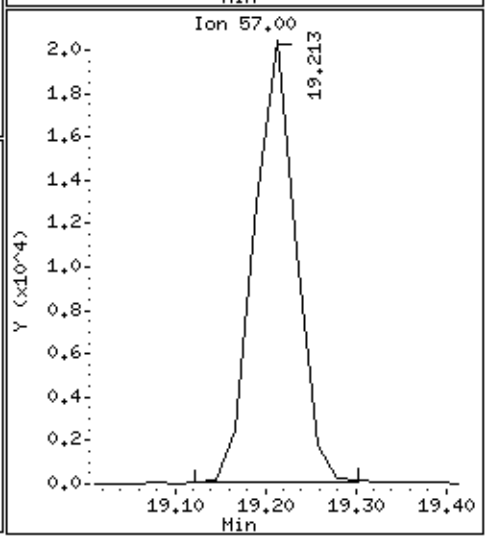












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

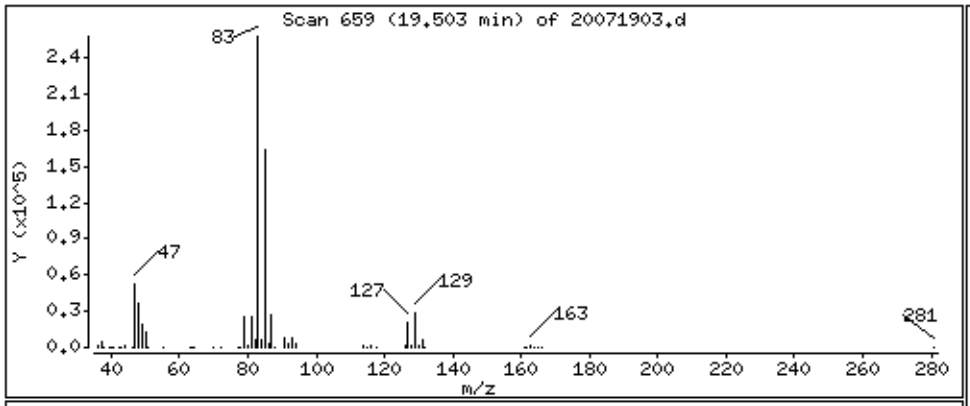
Operator: su

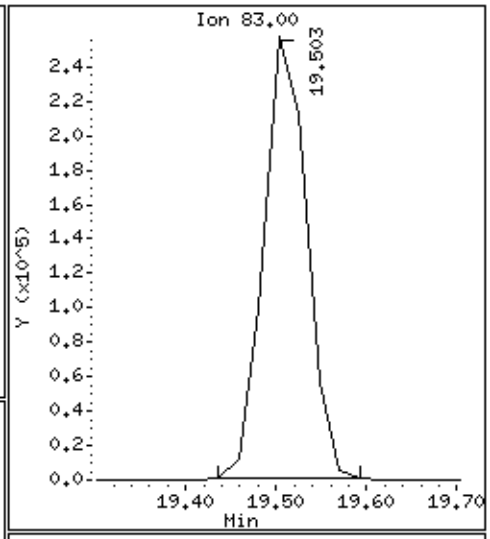
Column phase: RTX-624

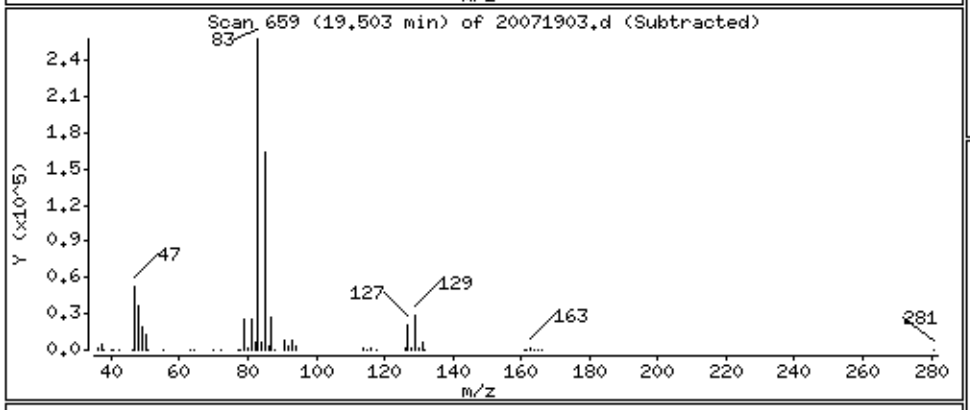
Column diameter: 0.32

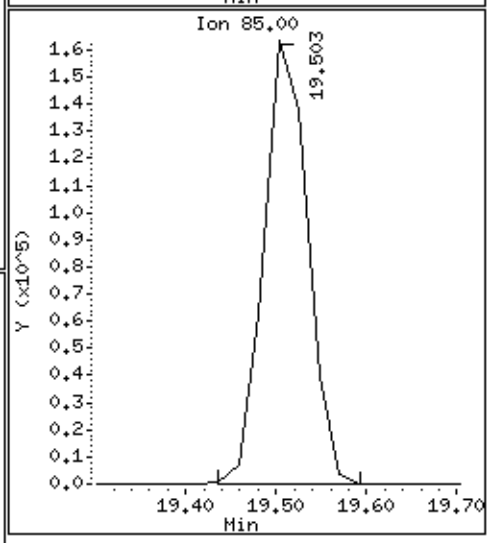
138 Bromodichloromethane

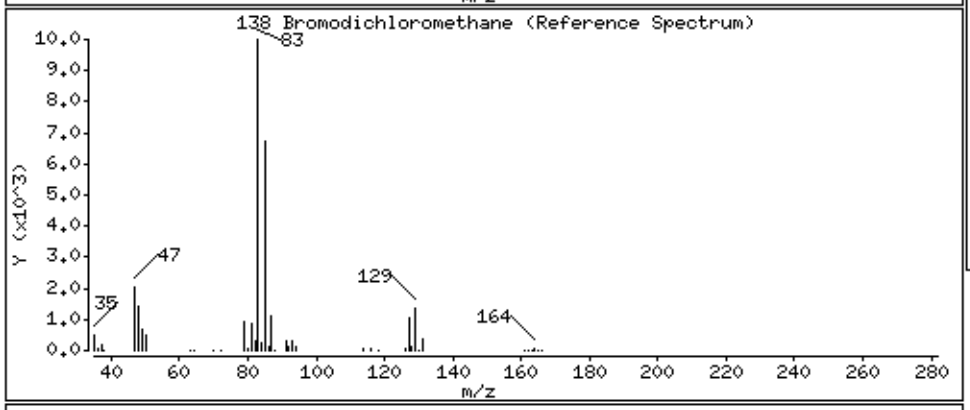
Concentration: 12.337 PPBV

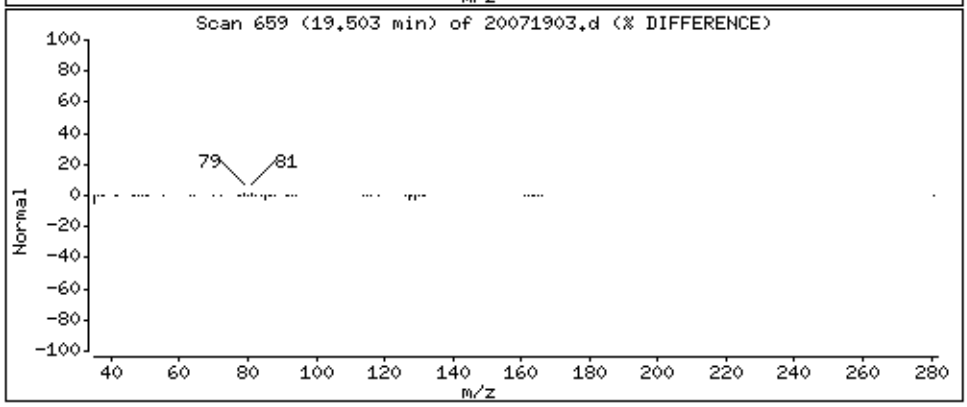












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

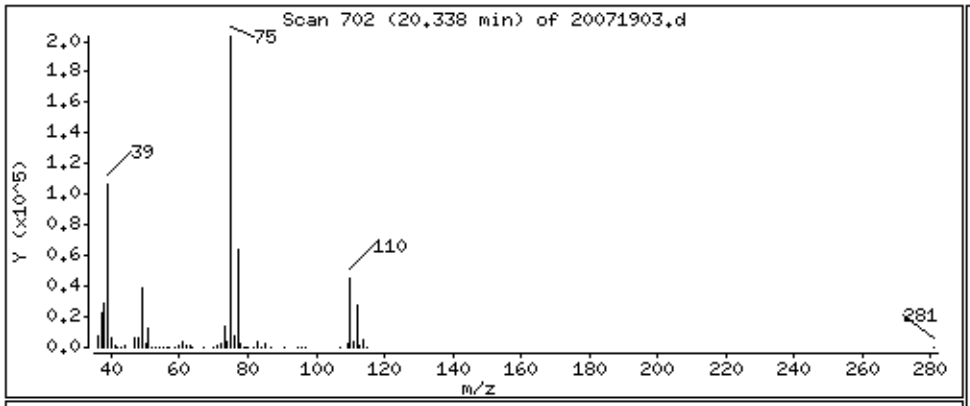
Operator: su

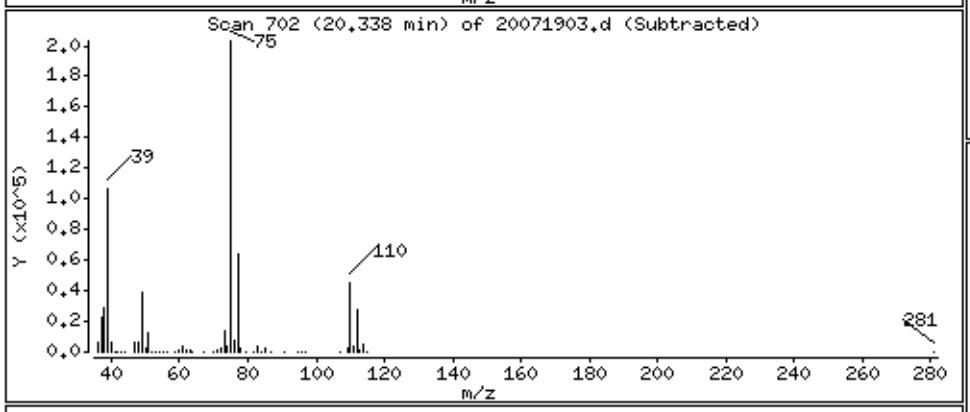
Column phase: RTX-624

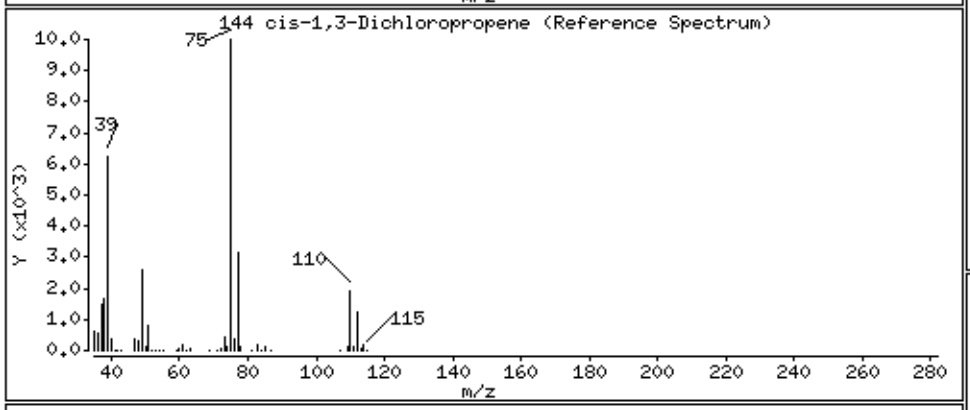
Column diameter: 0.32

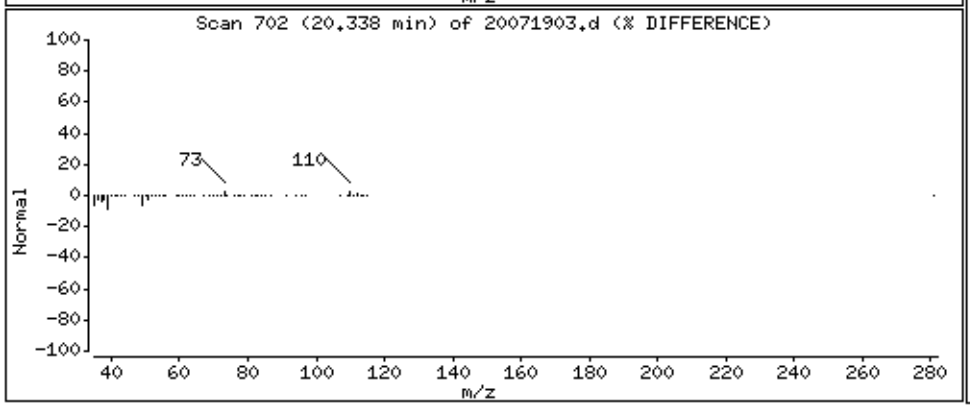
144 cis-1,3-Dichloropropene

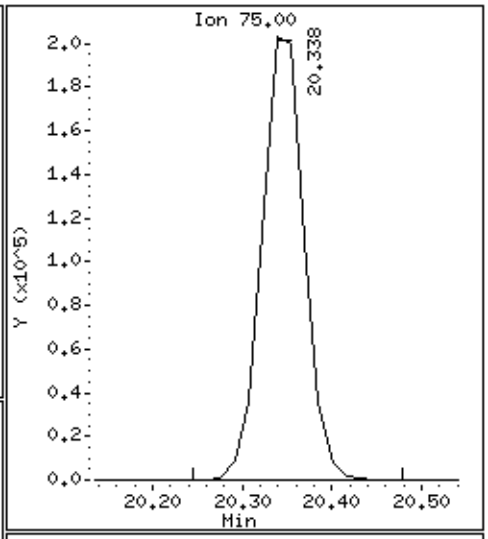
Concentration: 11.093 PPBV

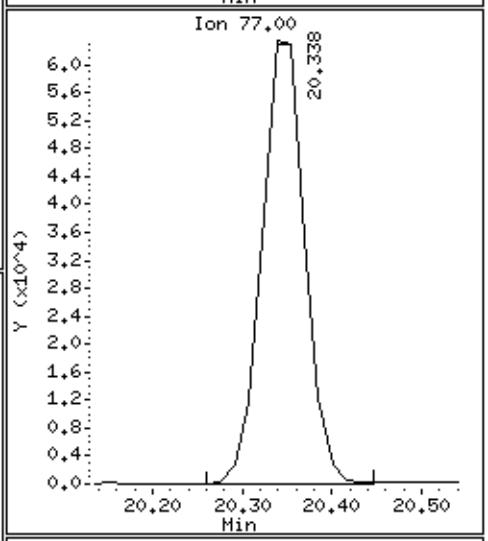


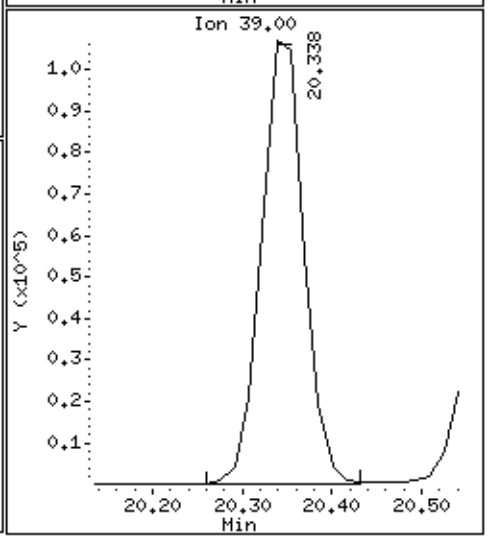












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

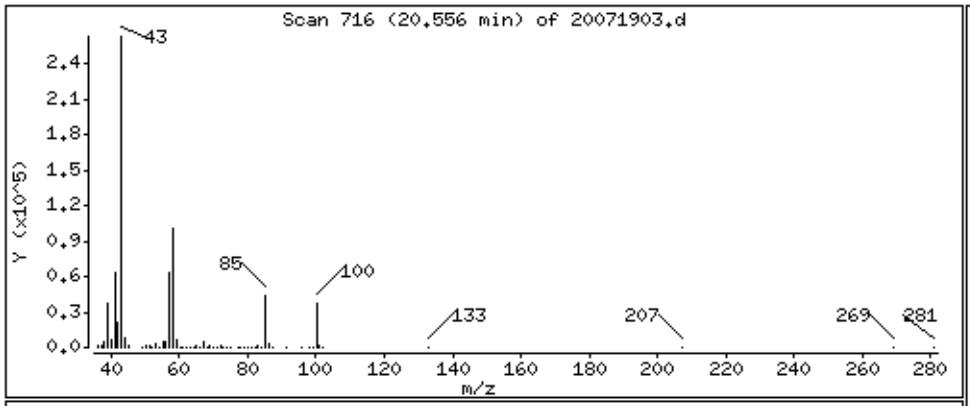
Operator: su

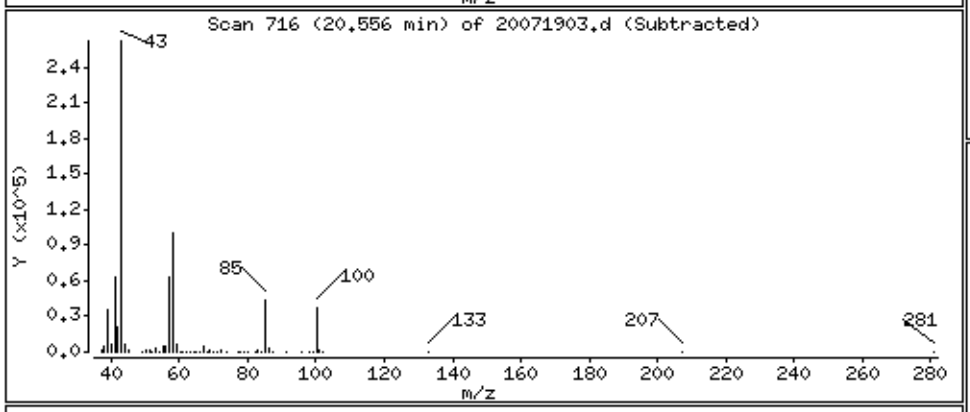
Column phase: RTX-624

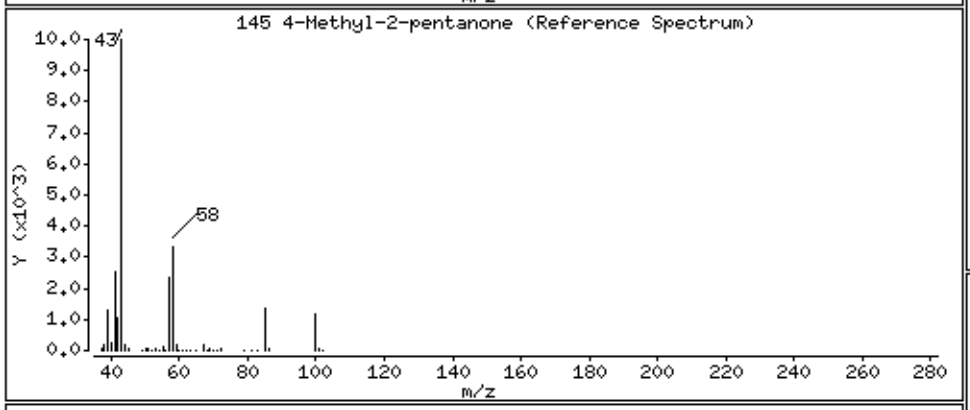
Column diameter: 0.32

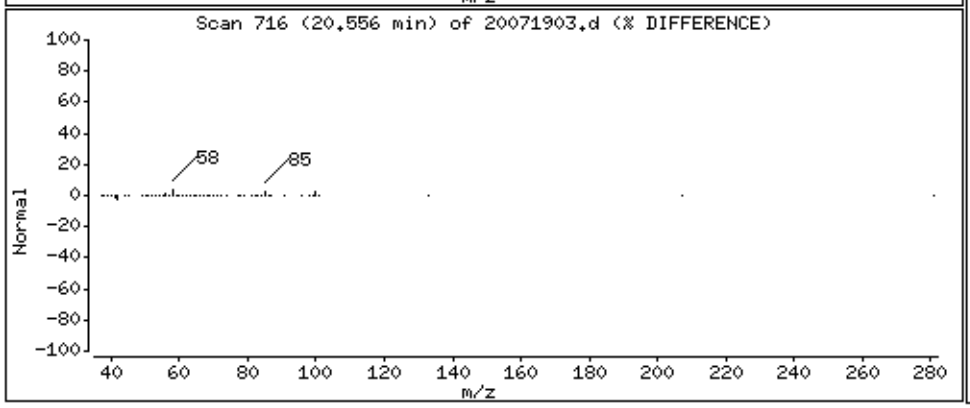
145 4-Methyl-2-pentanone

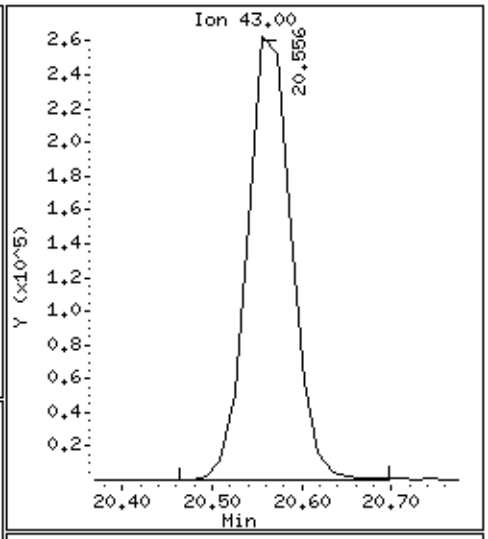
Concentration: 12.969 PPBV

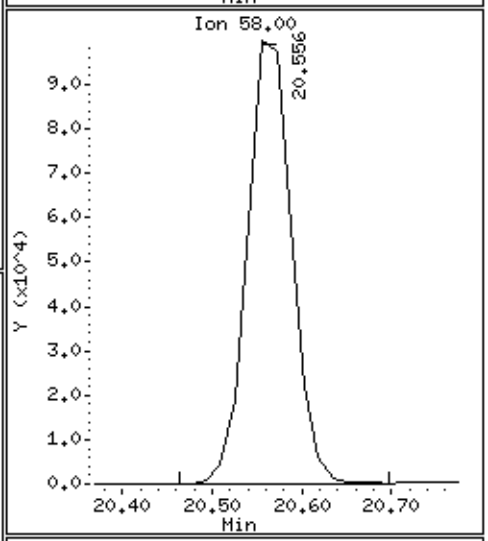


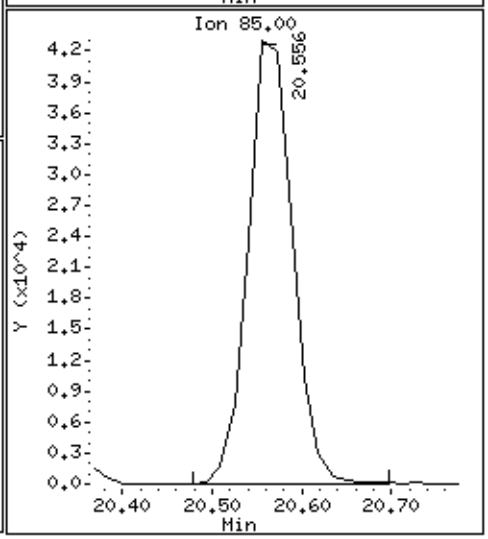












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

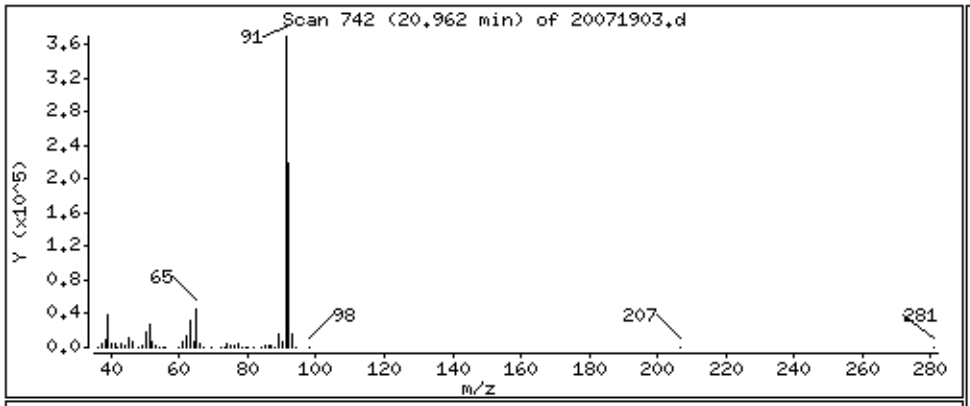
Operator: su

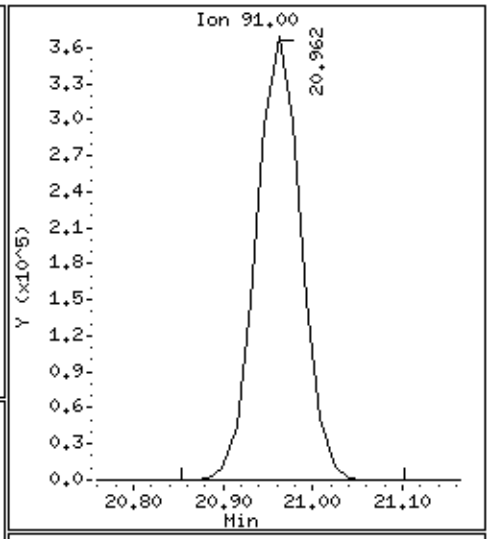
Column phase: RTX-624

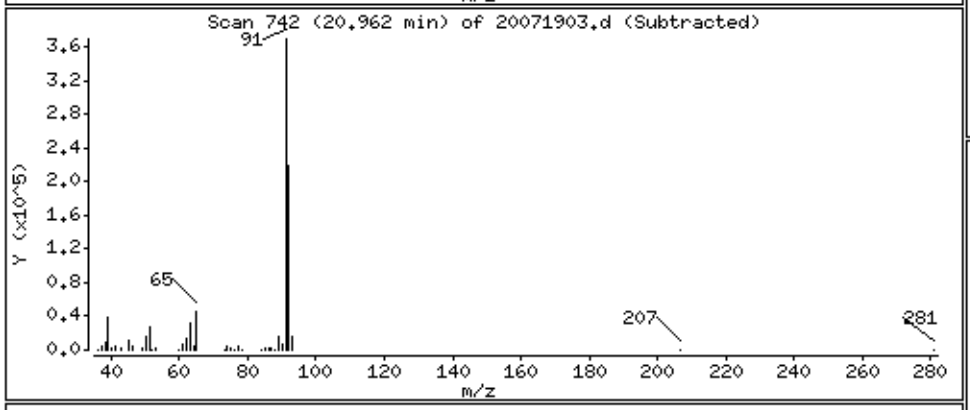
Column diameter: 0.32

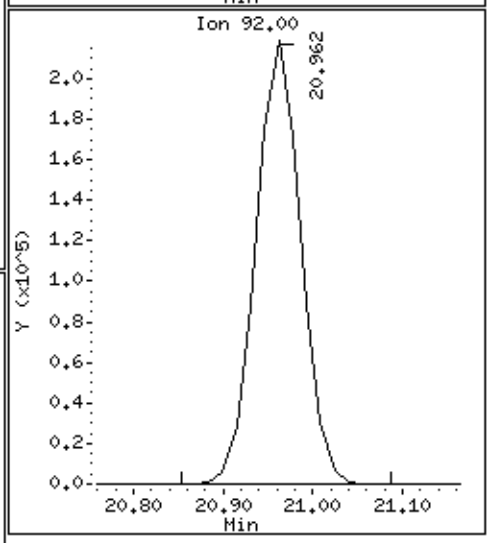
147 Toluene

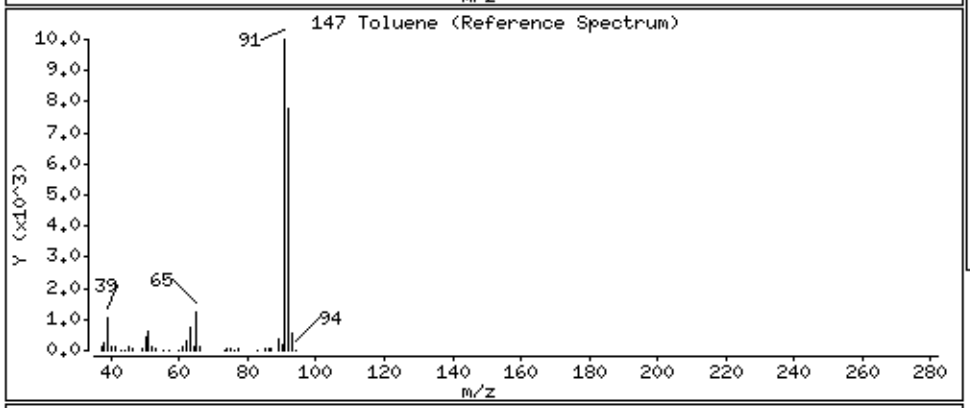
Concentration: 11.900 PPBV

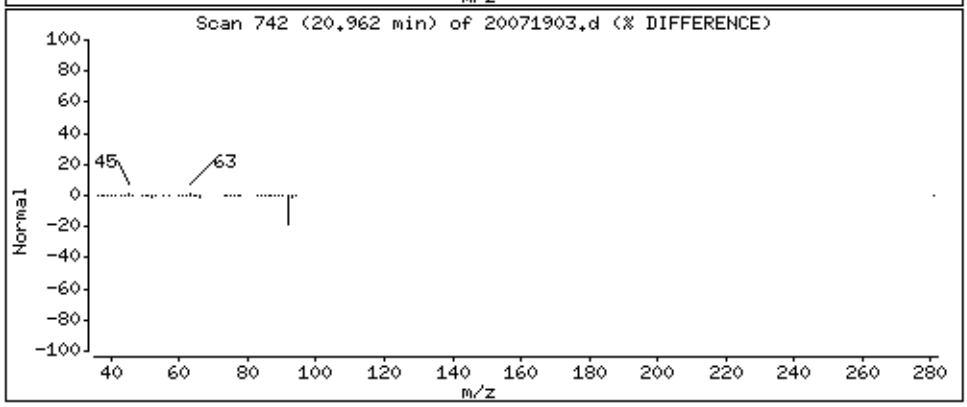












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

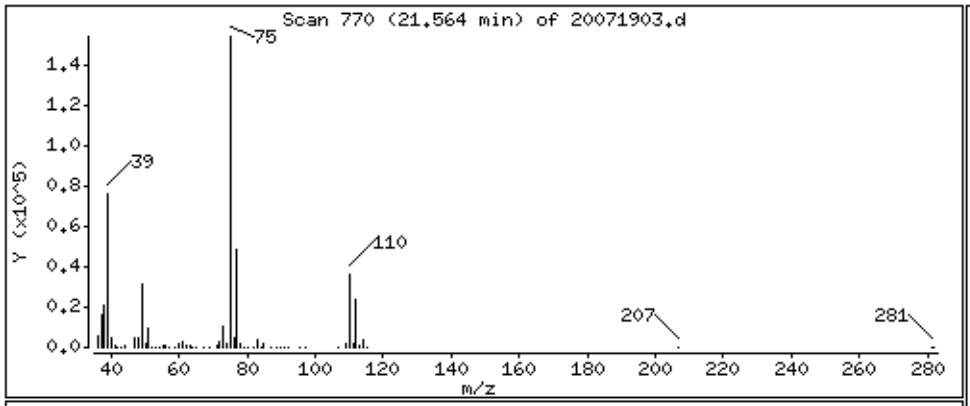
Operator: su

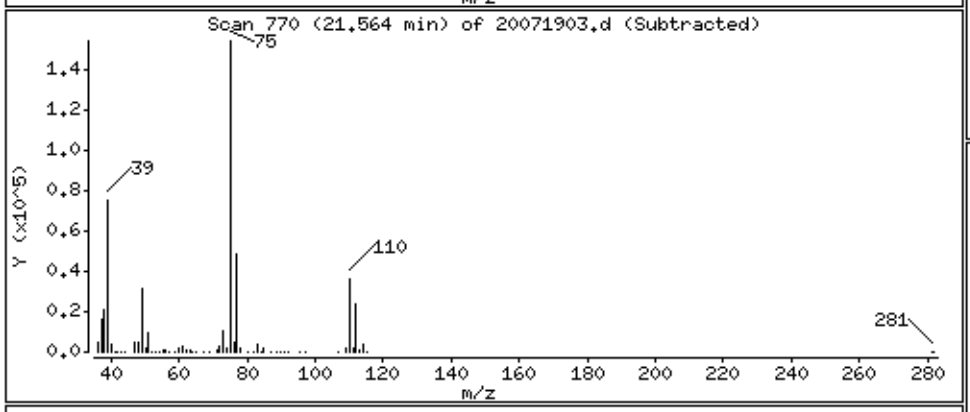
Column phase: RTX-624

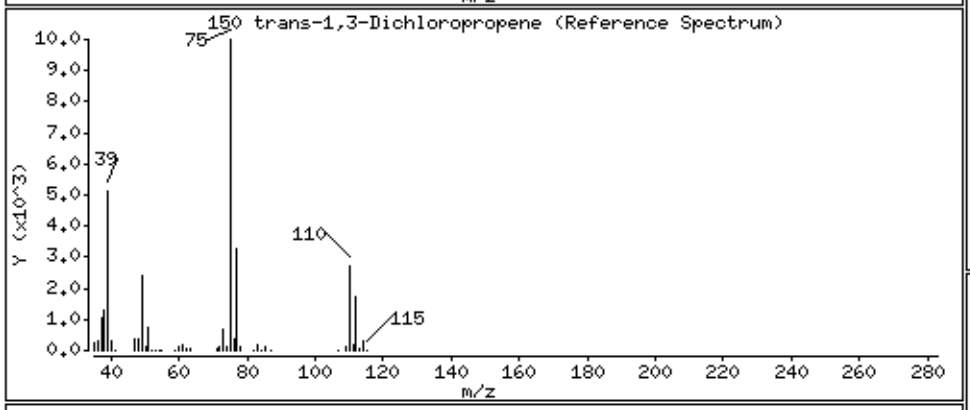
Column diameter: 0.32

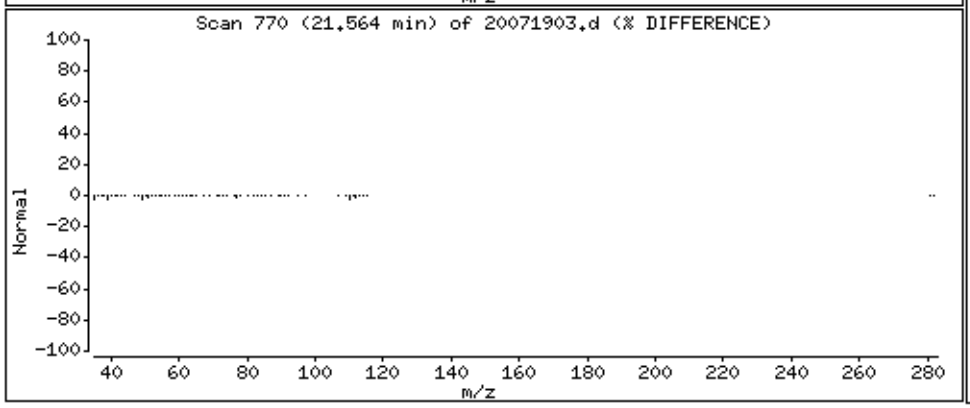
150 trans-1,3-Dichloropropene

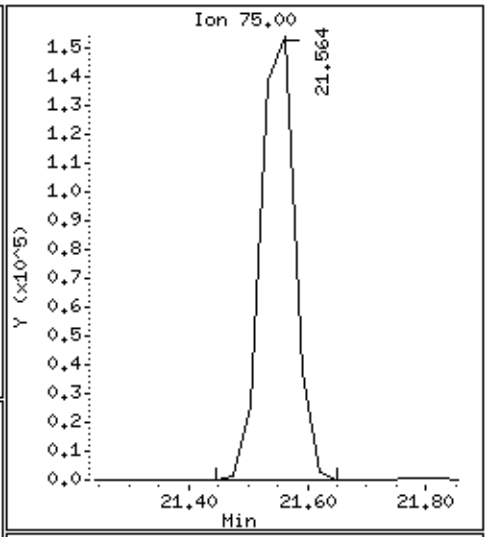
Concentration: 11.942 PPBV

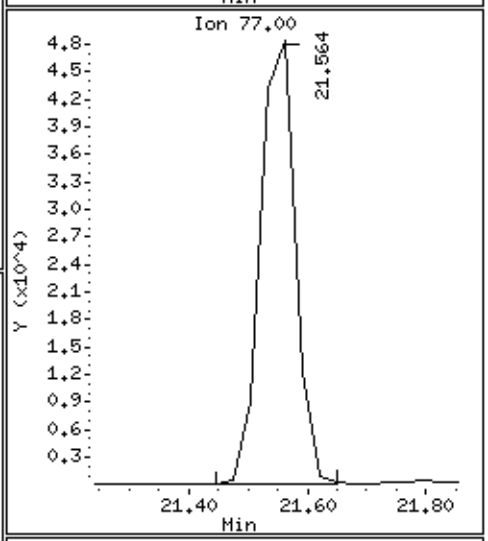


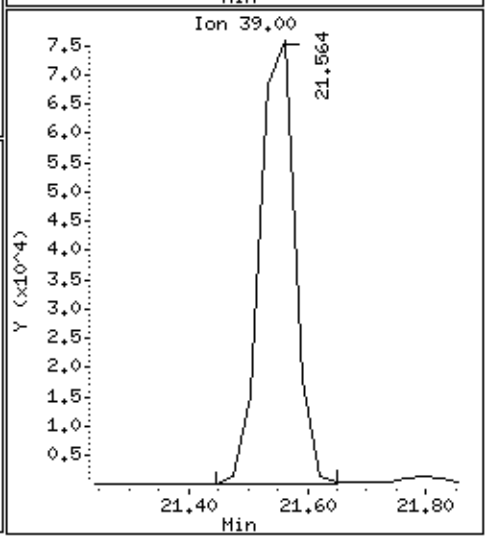












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

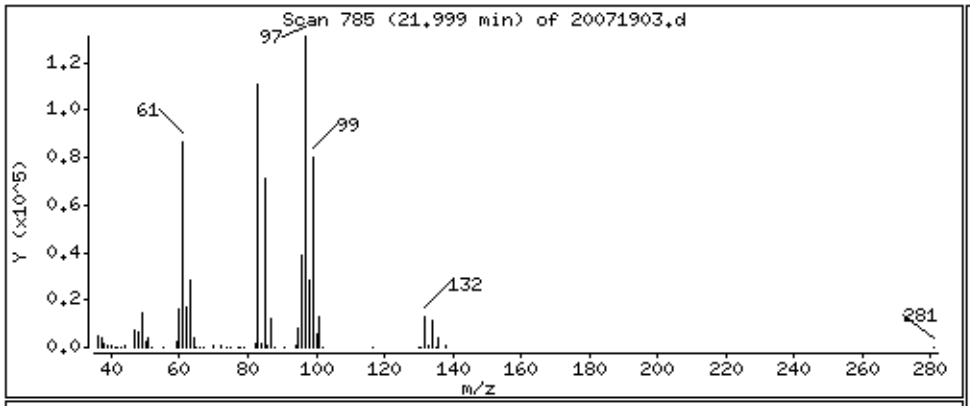
Operator: su

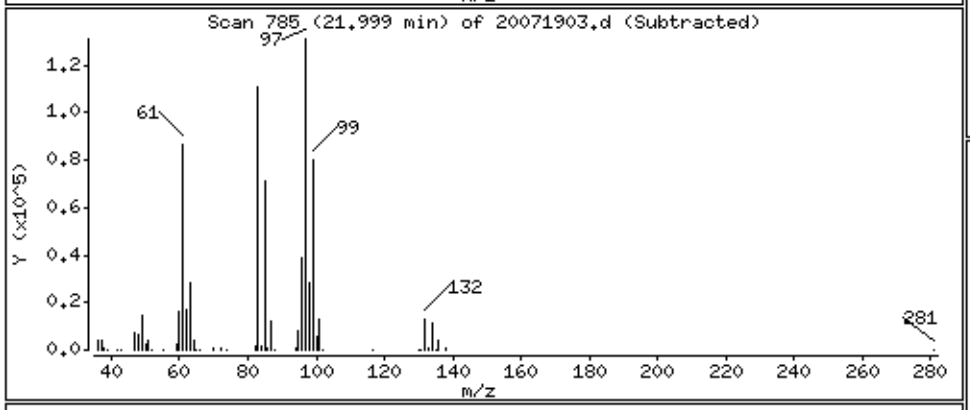
Column phase: RTX-624

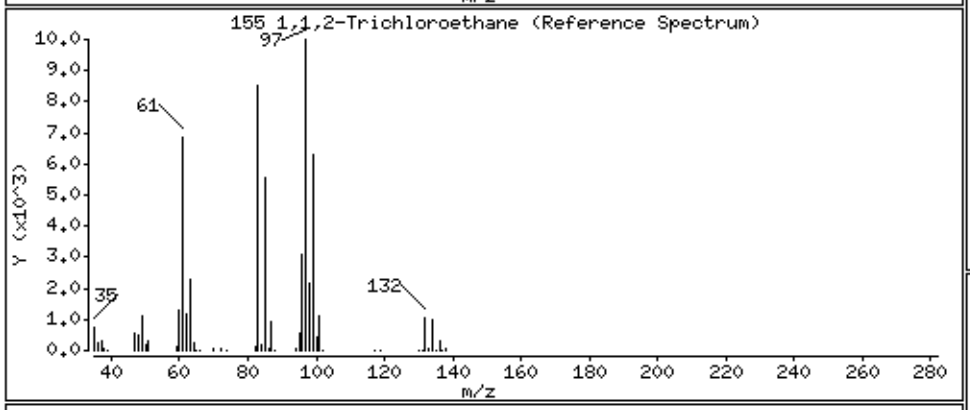
Column diameter: 0.32

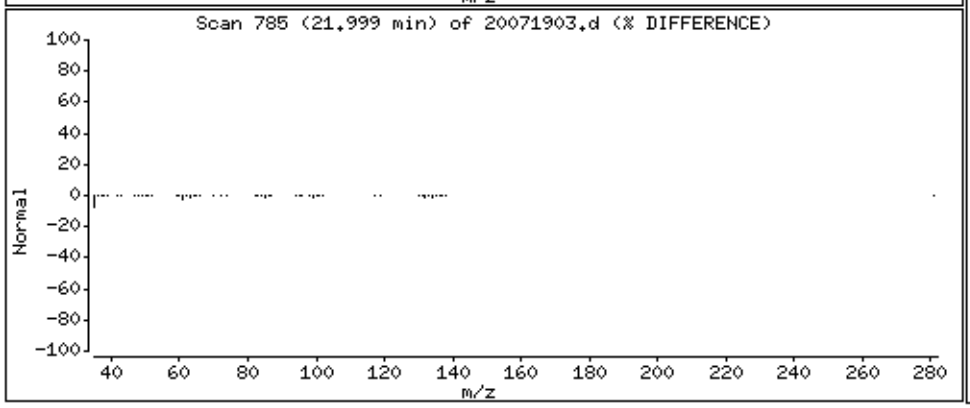
155 1,1,2-Trichloroethane

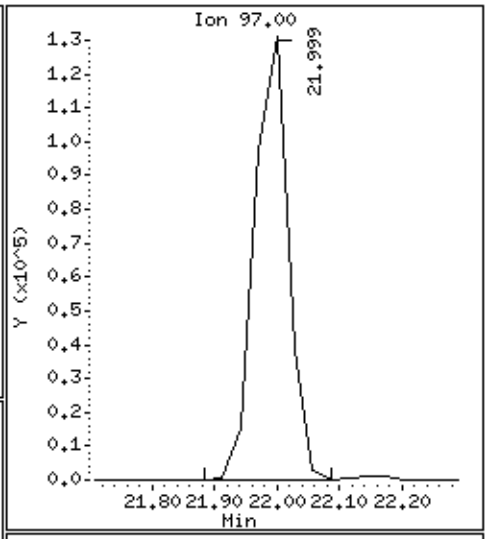
Concentration: 10.892 PPBV

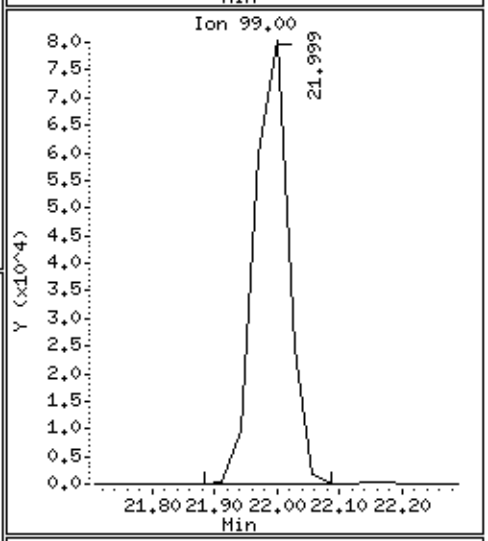


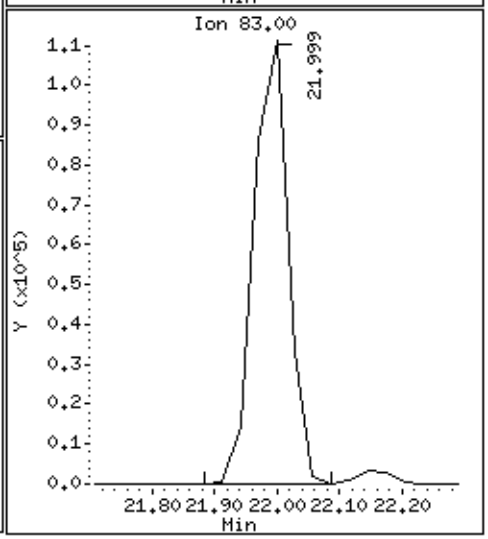












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

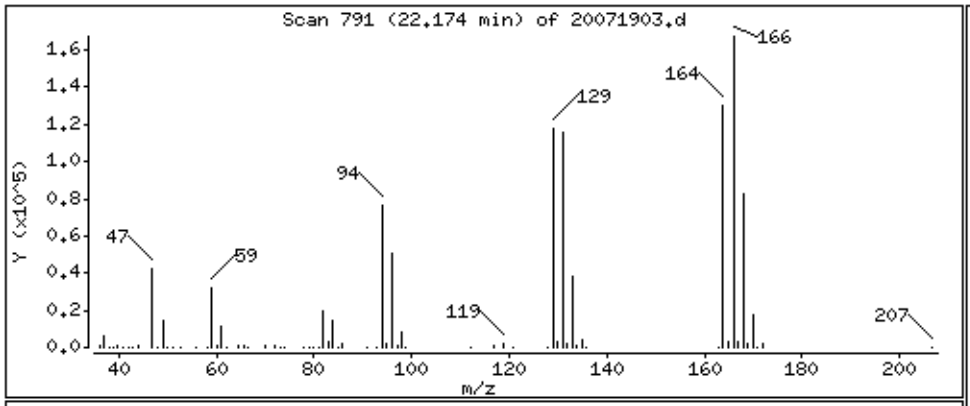
Operator: su

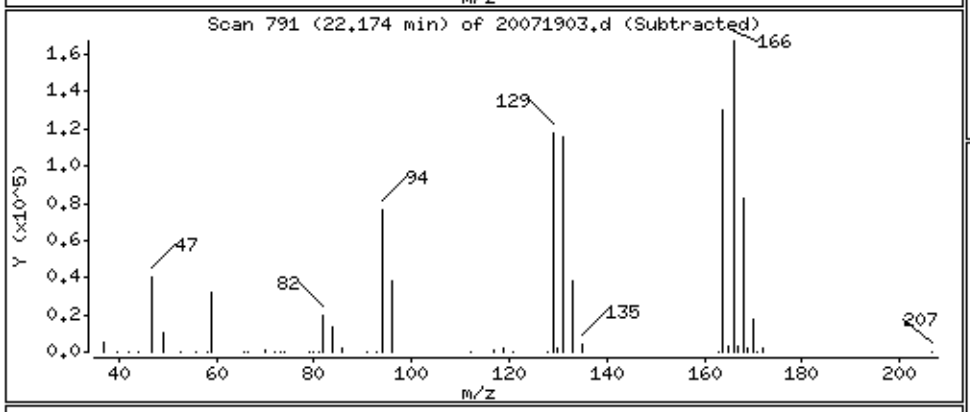
Column phase: RTX-624

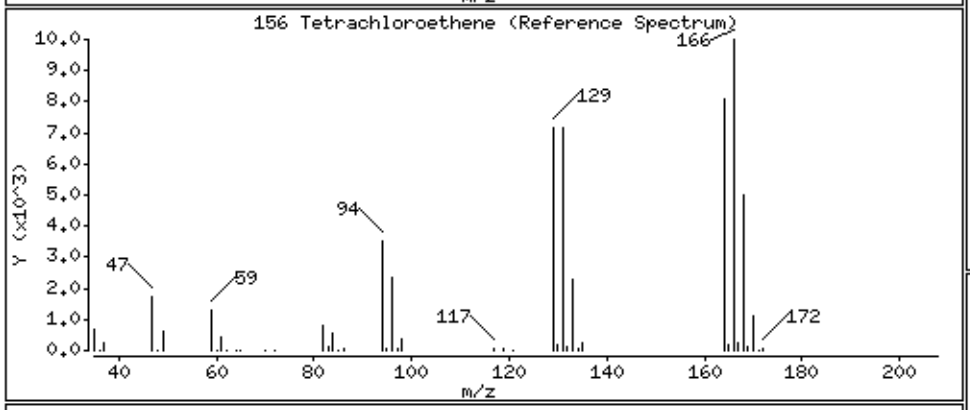
Column diameter: 0.32

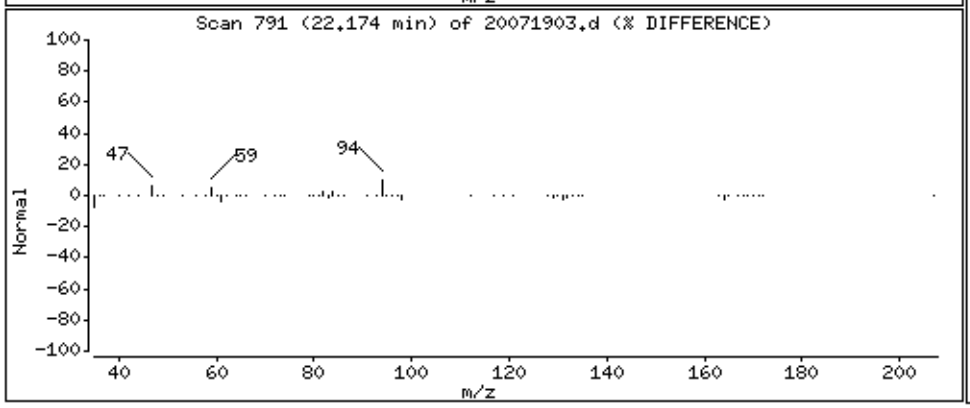
156 Tetrachloroethene

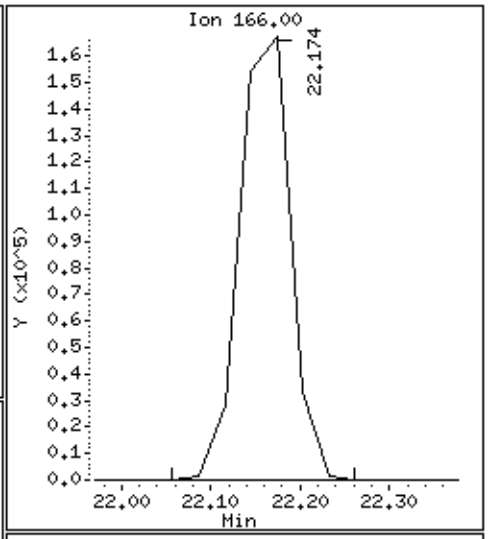
Concentration: 10.386 PPBV

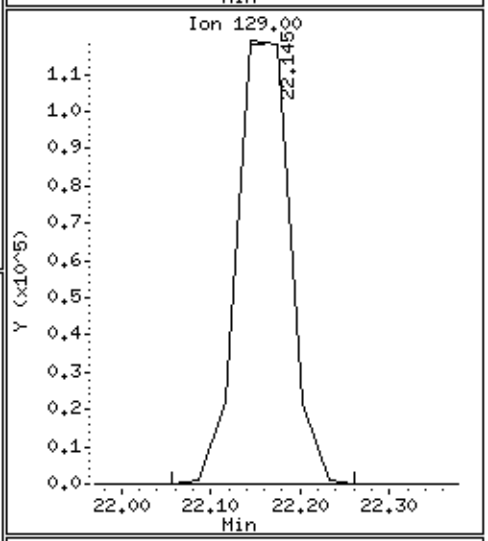


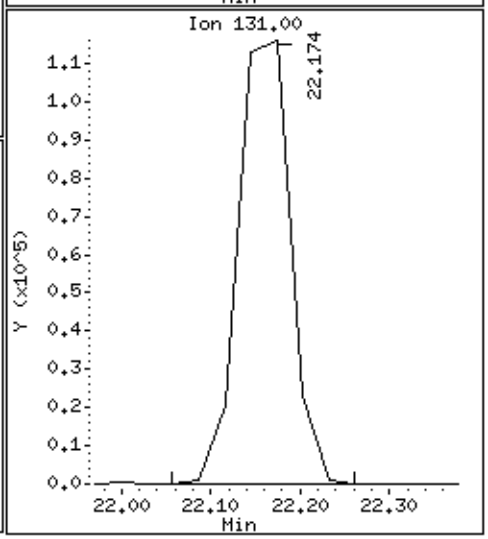












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

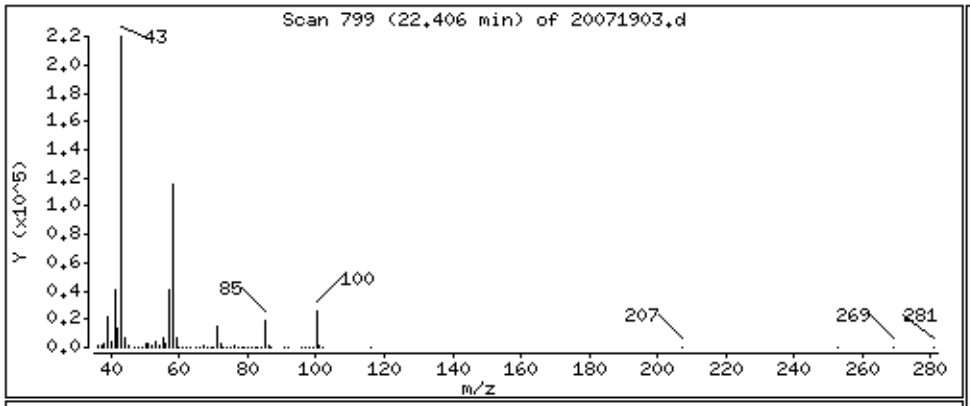
Operator: su

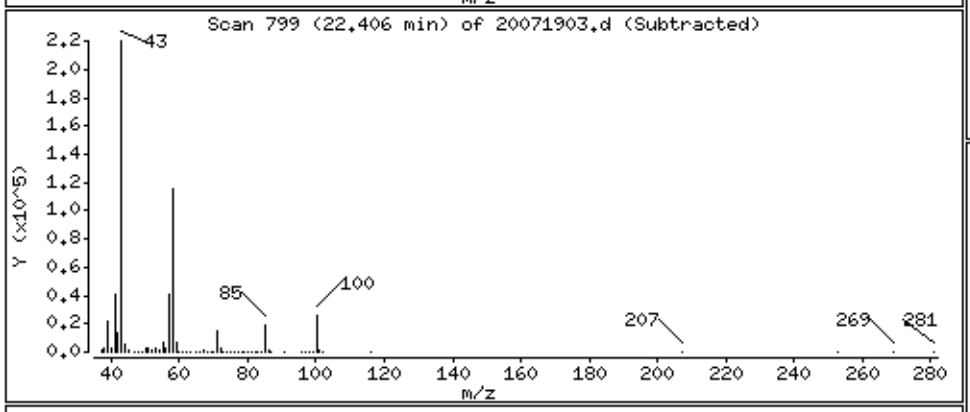
Column phase: RTX-624

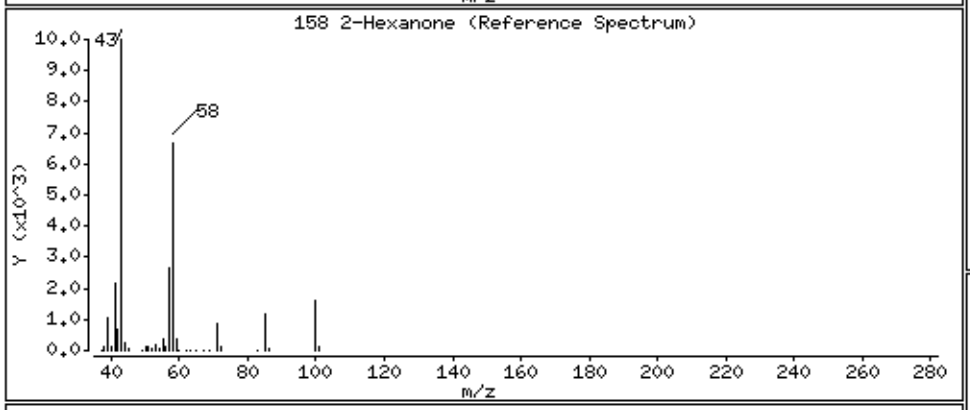
Column diameter: 0.32

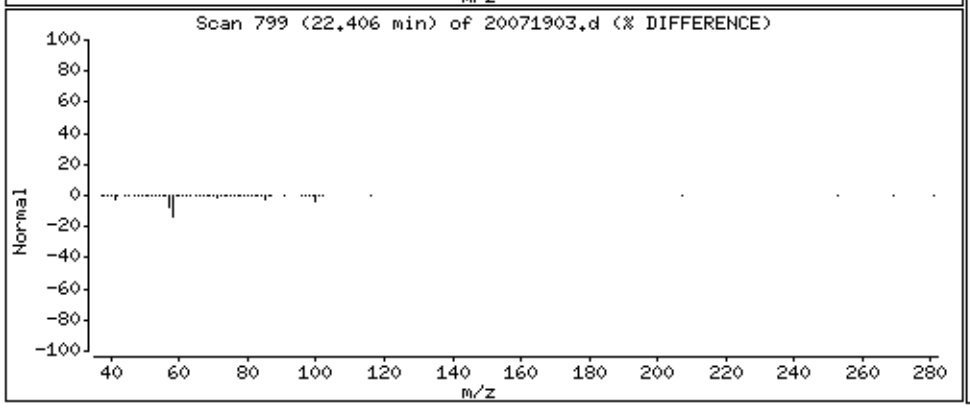
158 2-Hexanone

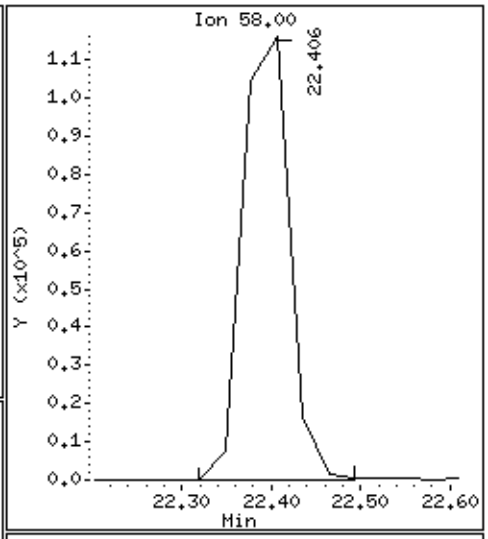
Concentration: 11.421 PPBV

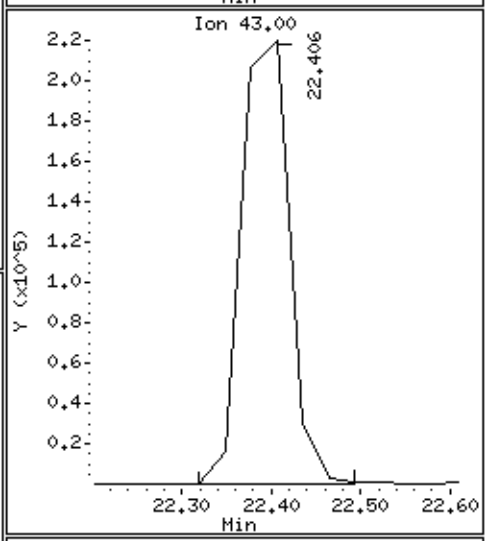


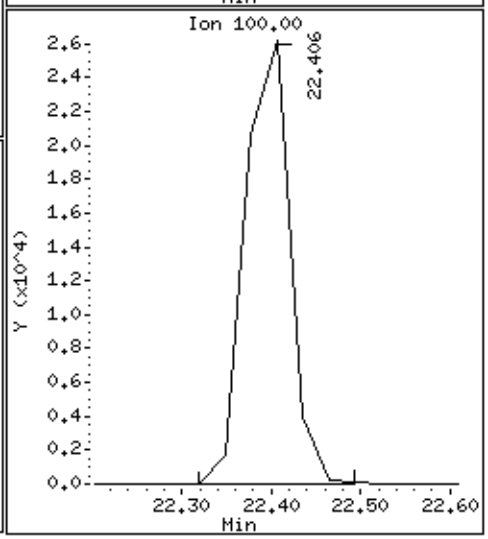












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

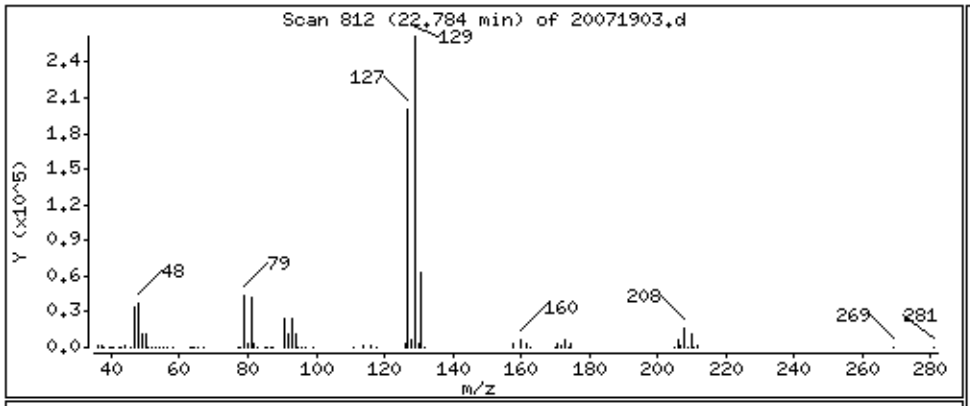
Operator: su

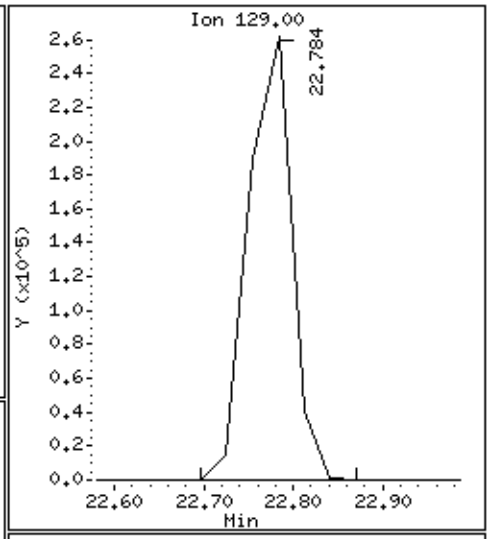
Column phase: RTX-624

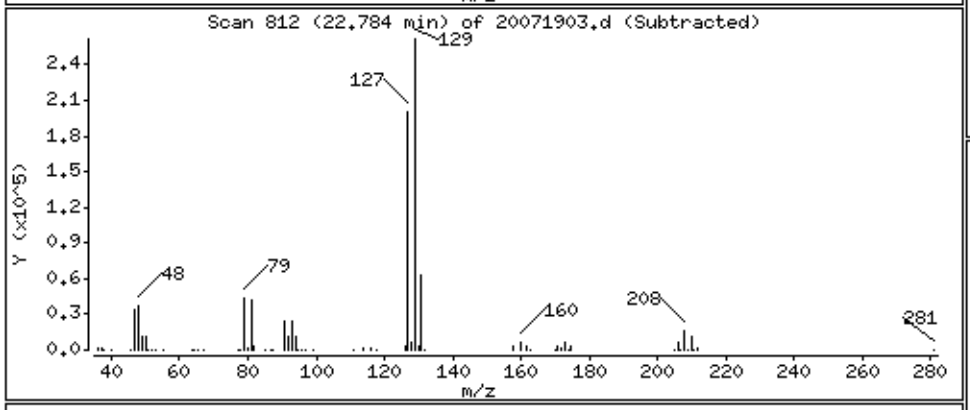
Column diameter: 0.32

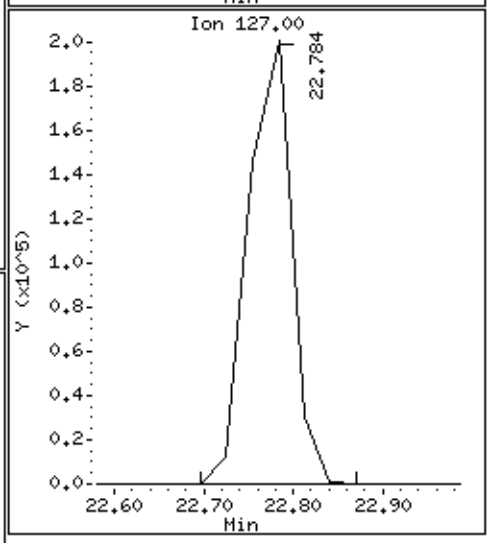
160 Dibromochloromethane

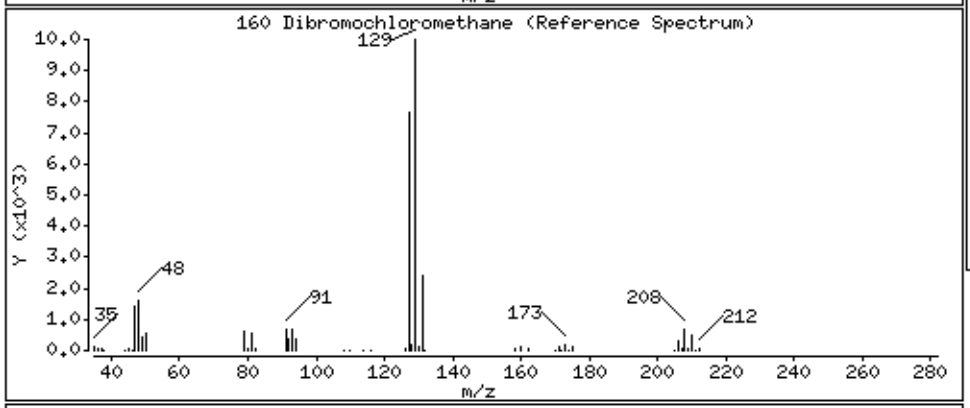
Concentration: 12.854 PPBV

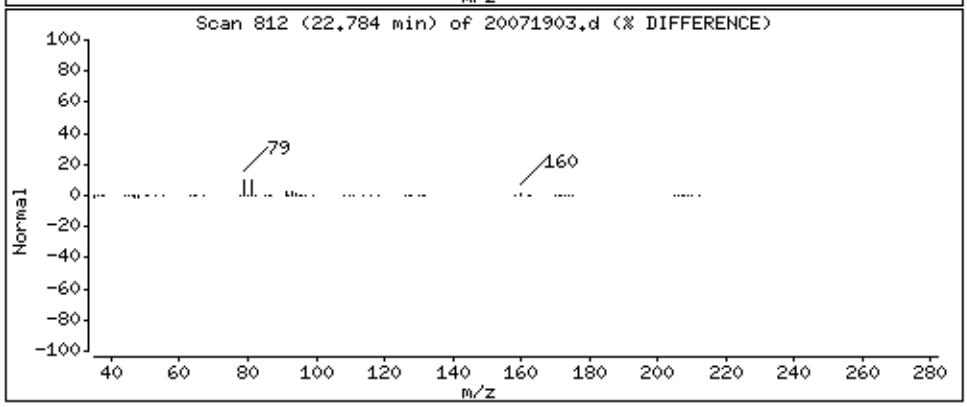












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

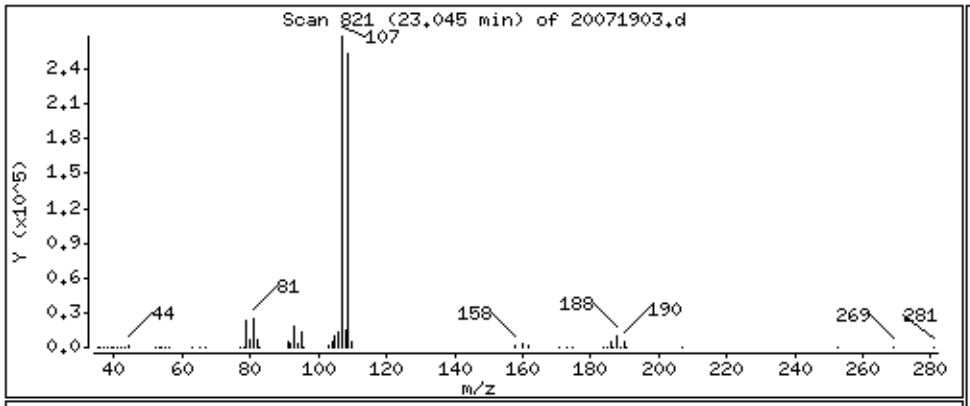
Operator: su

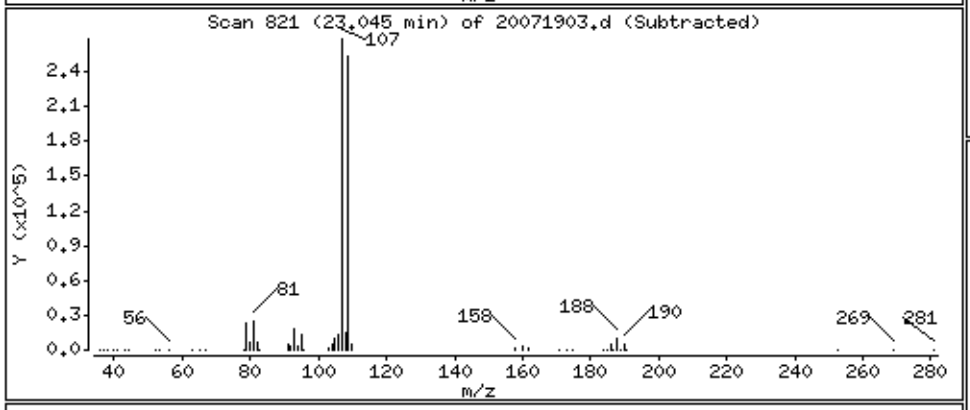
Column phase: RTX-624

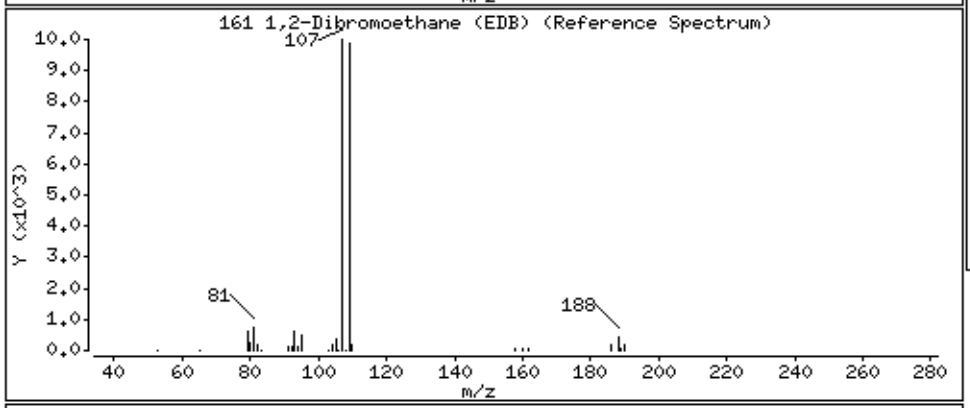
Column diameter: 0.32

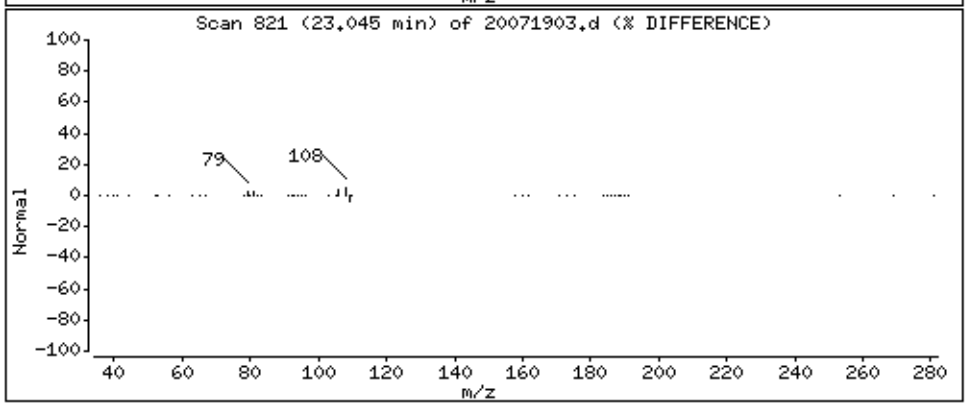
161 1,2-Dibromoethane (EDB)

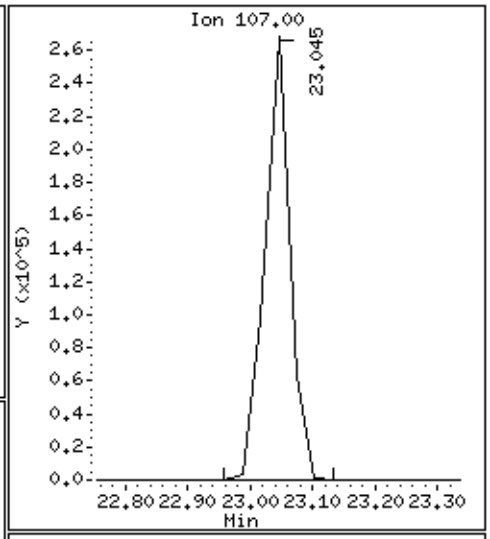
Concentration: 11.282 PPBV

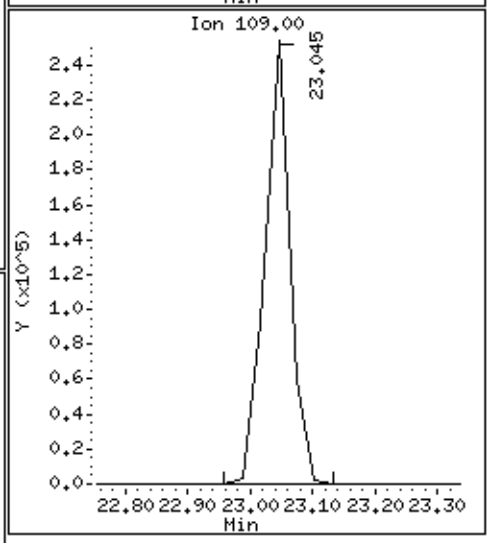












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

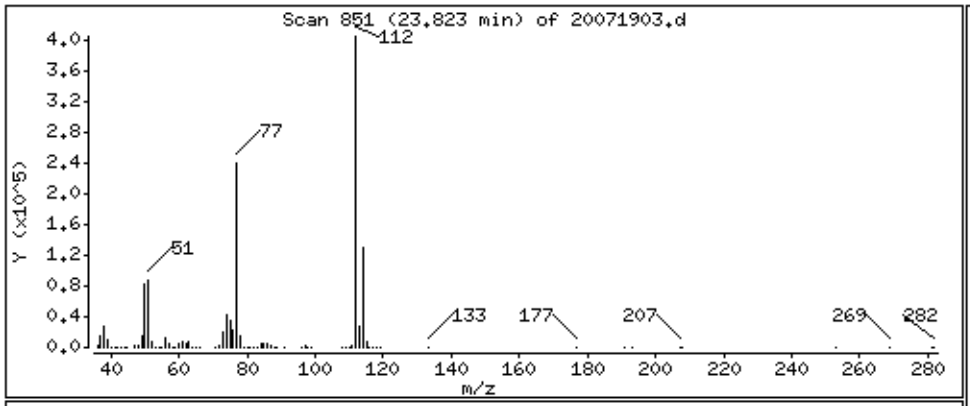
Operator: su

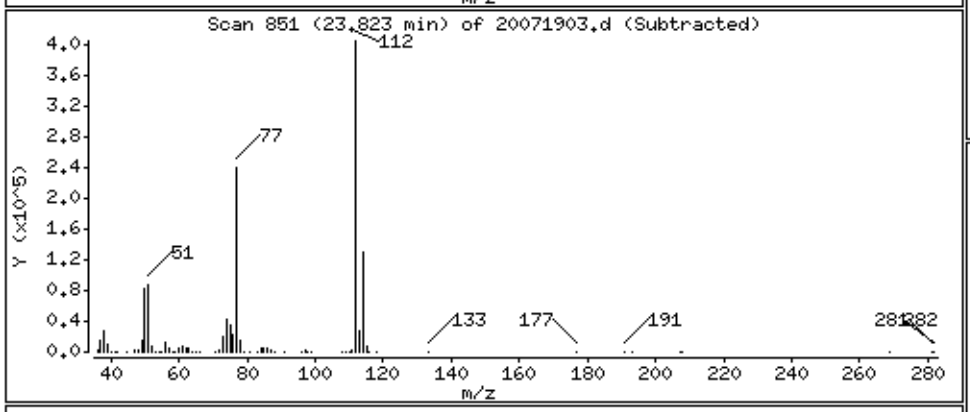
Column phase: RTX-624

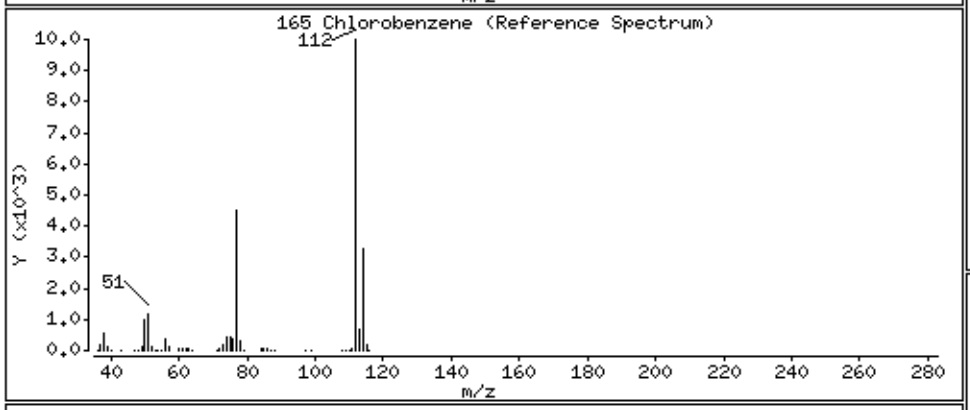
Column diameter: 0.32

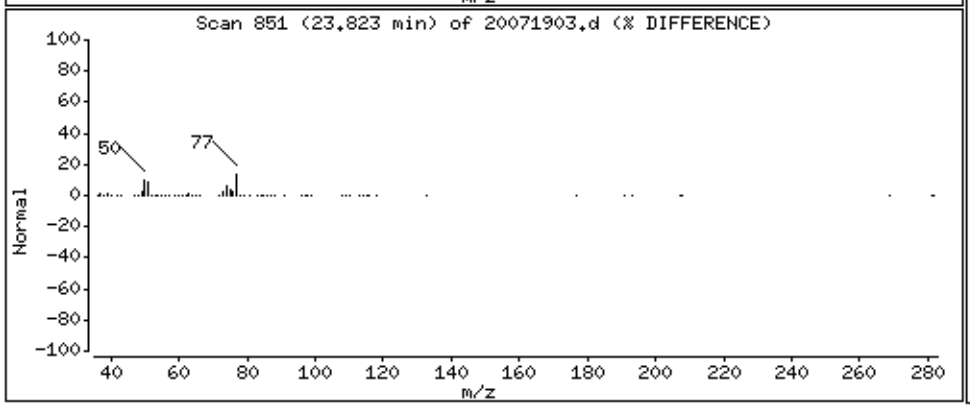
165 Chlorobenzene

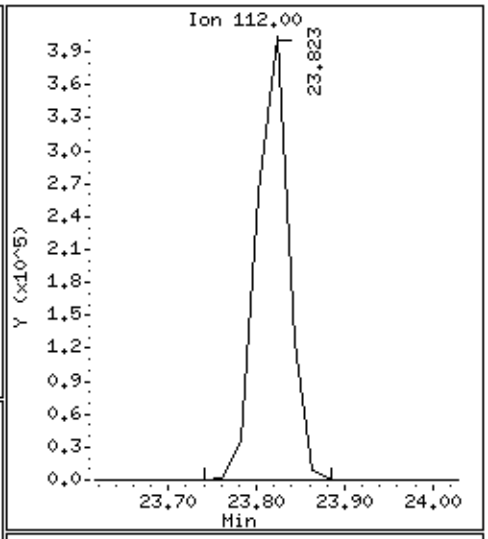
Concentration: 10.825 PPBV

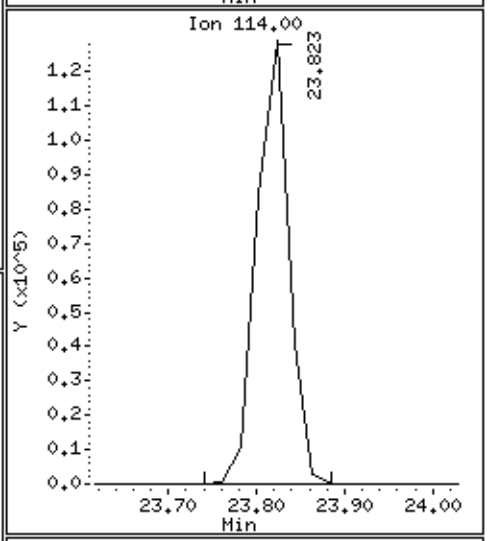


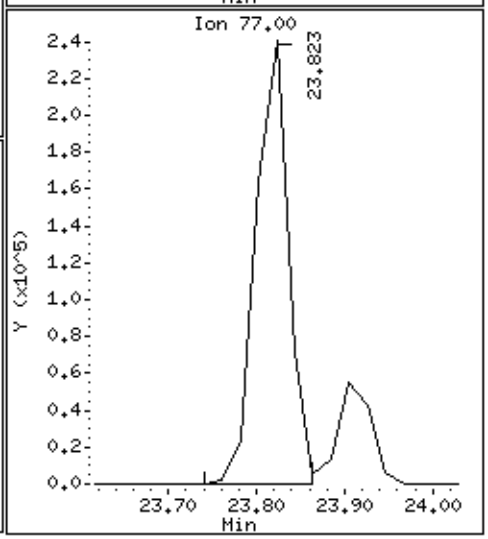












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

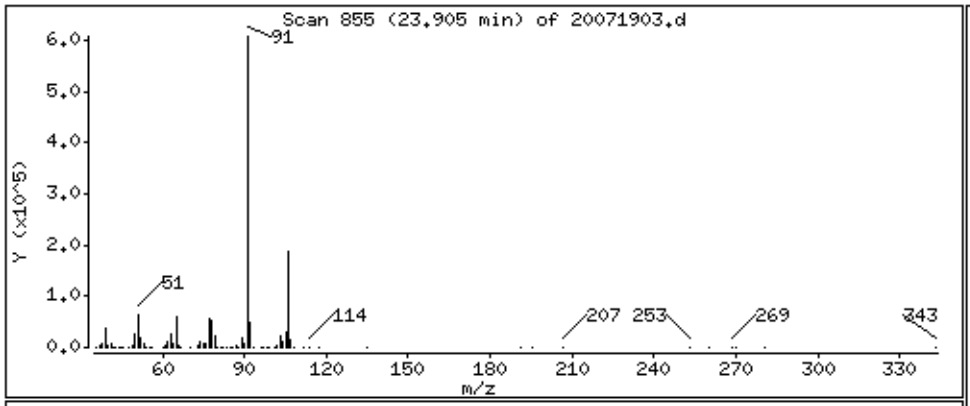
Operator: su

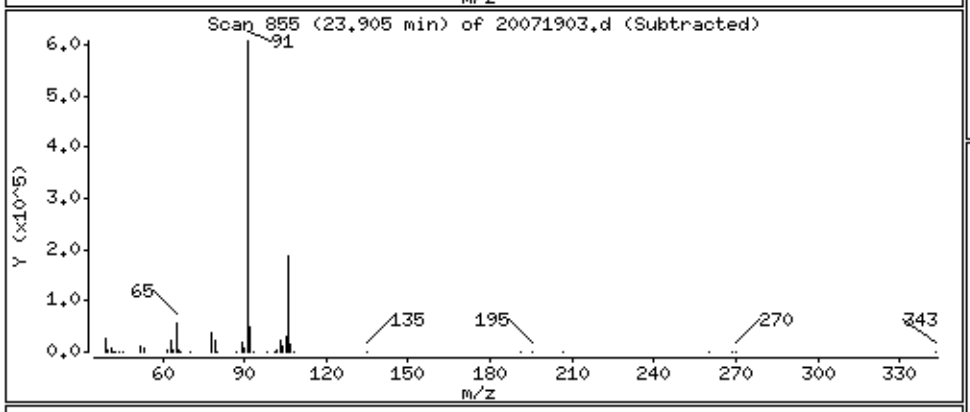
Column phase: RTX-624

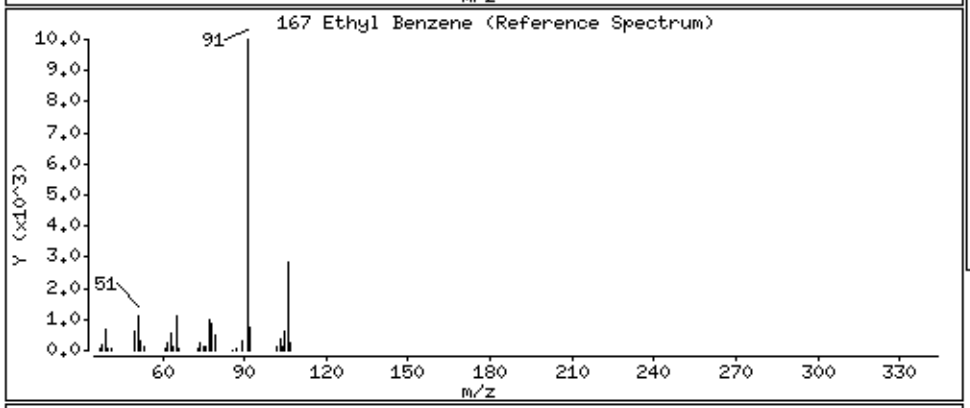
Column diameter: 0.32

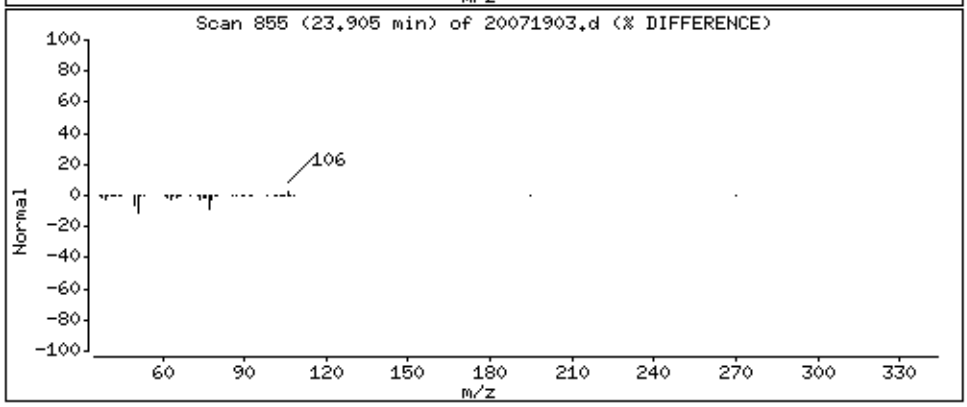
167 Ethyl Benzene

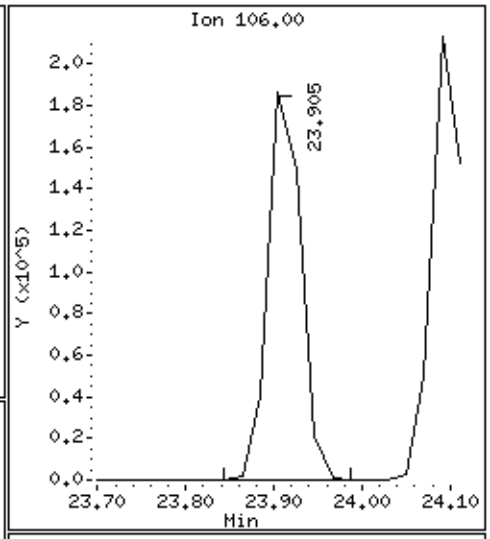
Concentration: 11.250 PPBV

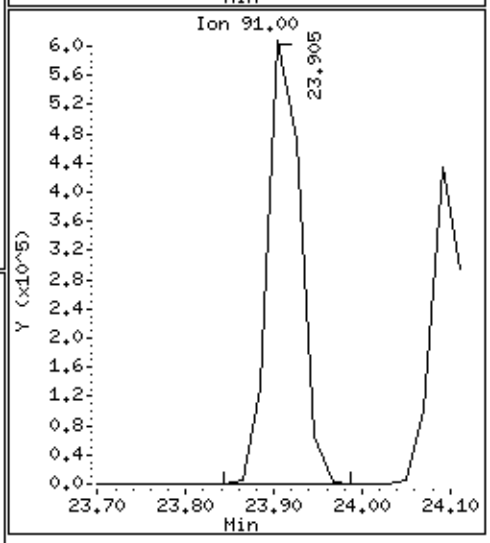












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

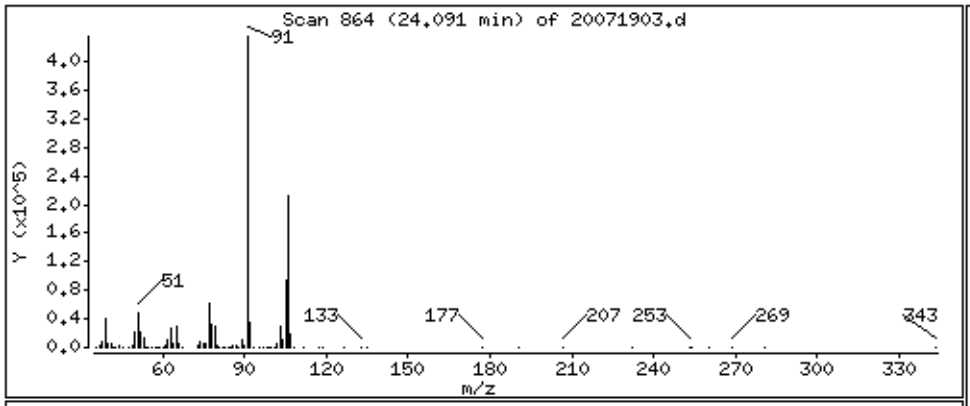
Operator: su

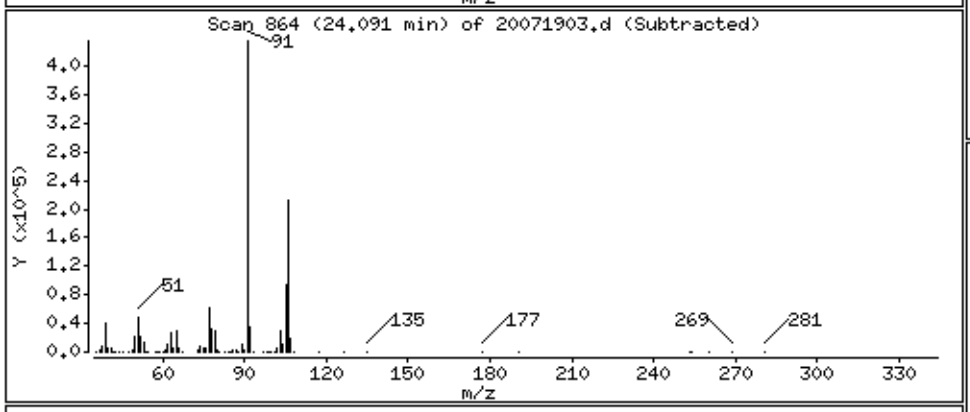
Column phase: RTX-624

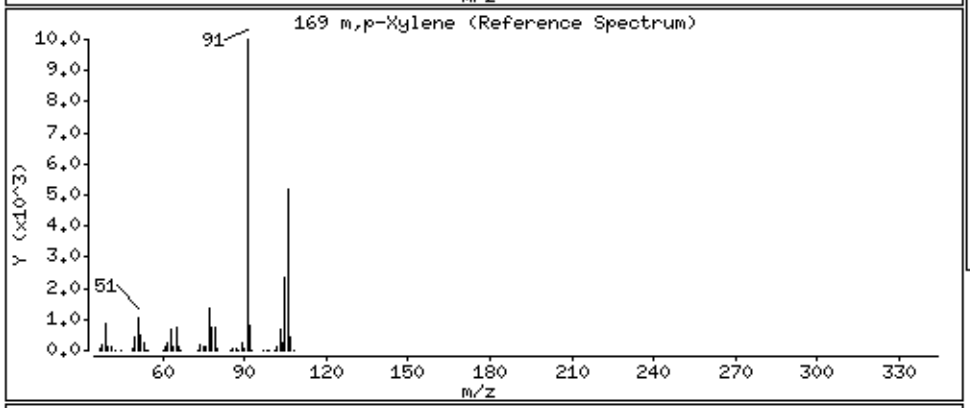
Column diameter: 0.32

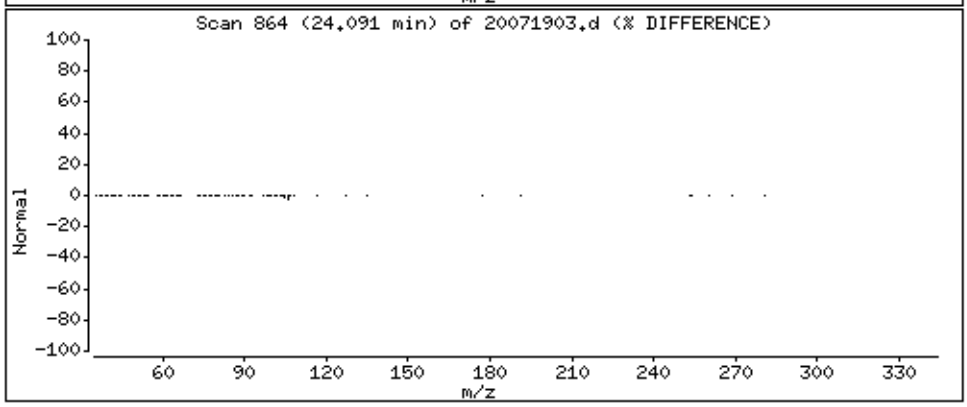
169 m,p-Xylene

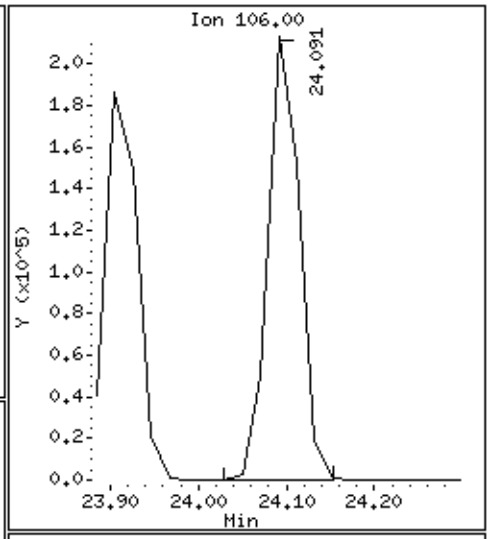
Concentration: 11.484 PPBV

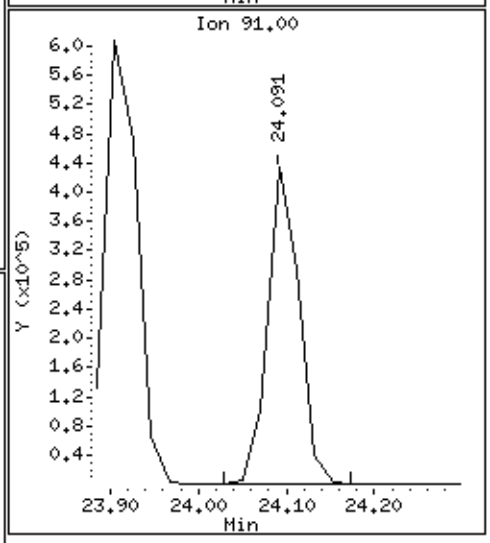












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

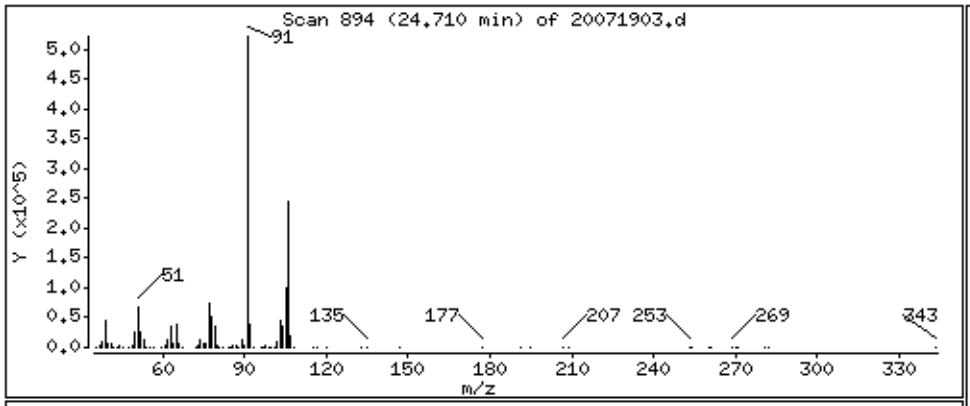
Operator: su

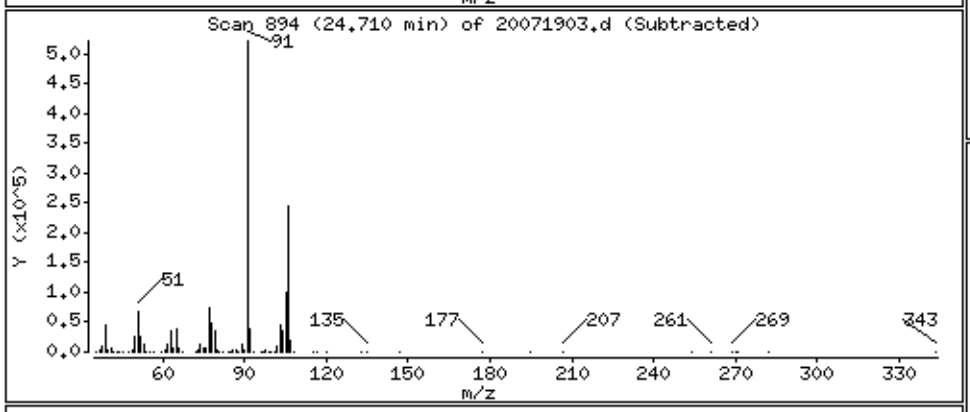
Column phase: RTX-624

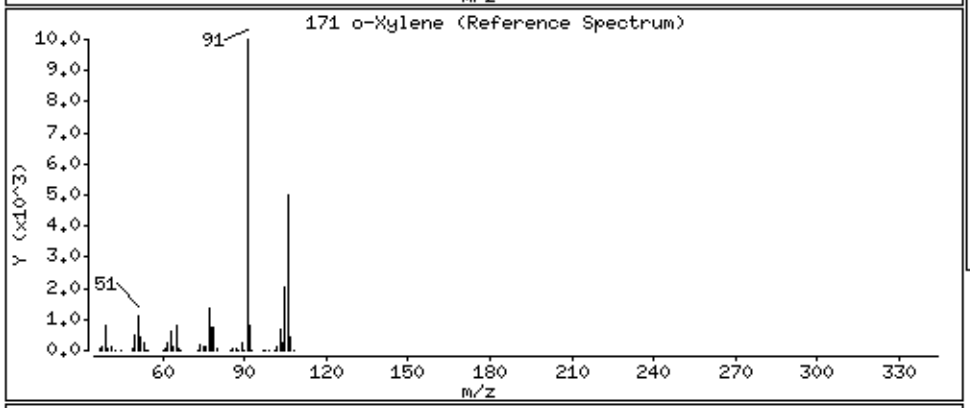
Column diameter: 0.32

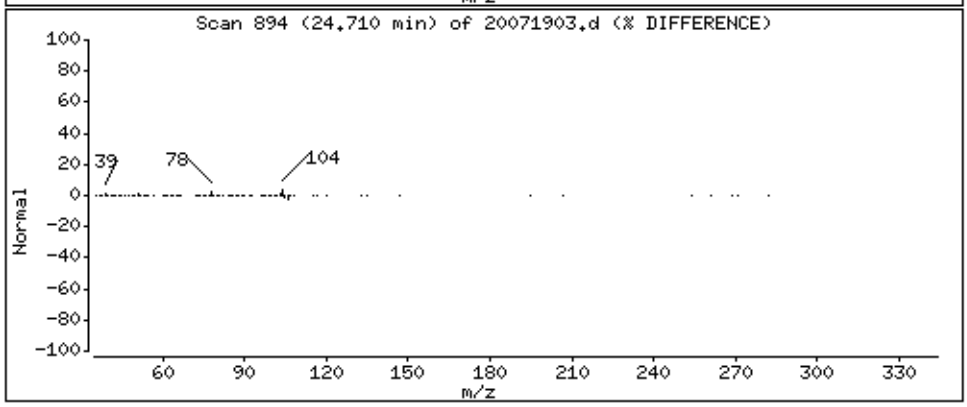
171 o-Xylene

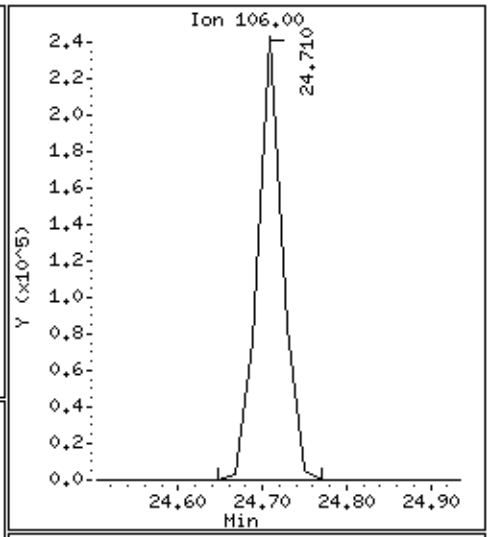
Concentration: 11.427 PPBV

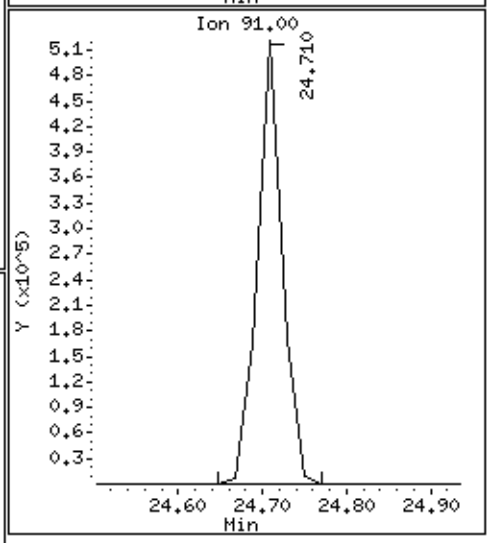












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

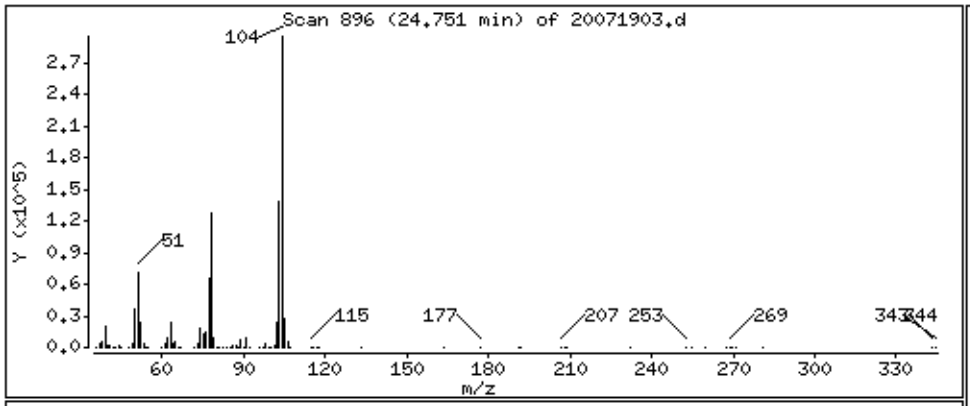
Operator: su

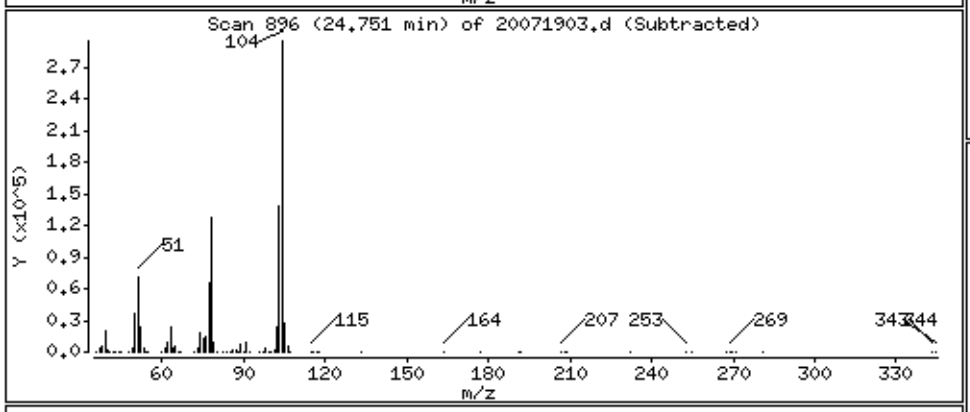
Column phase: RTX-624

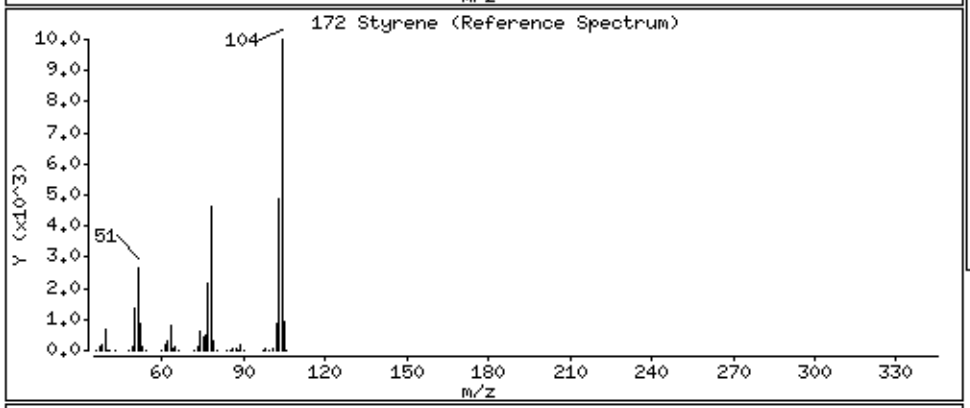
Column diameter: 0.32

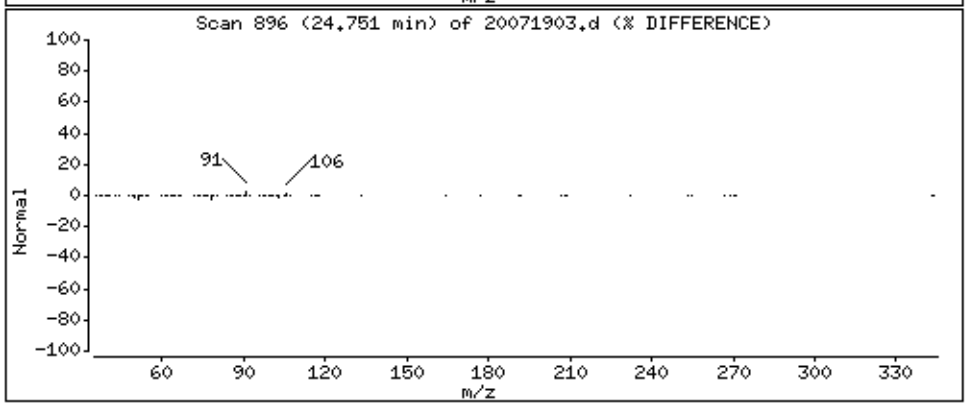
172 Styrene

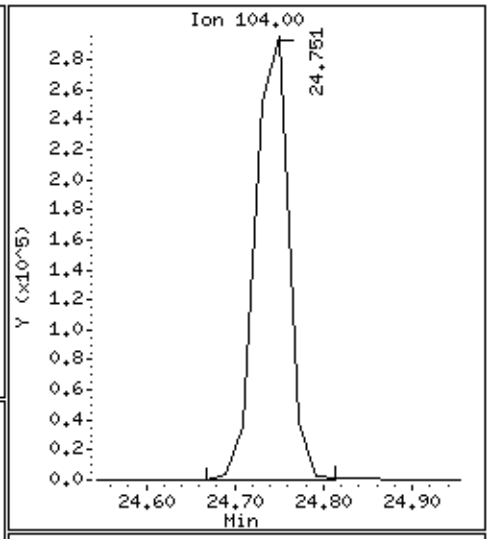
Concentration: 12.244 PPBV

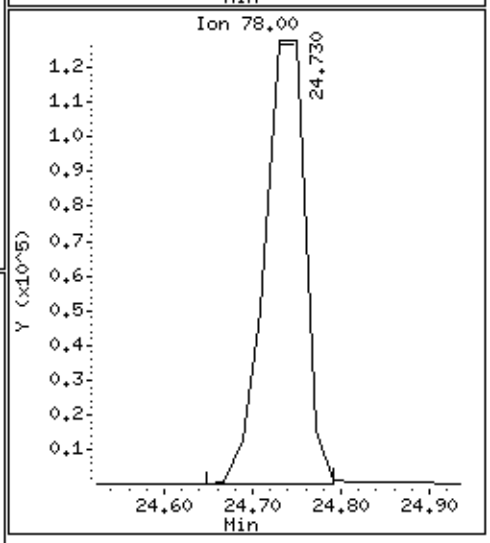












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

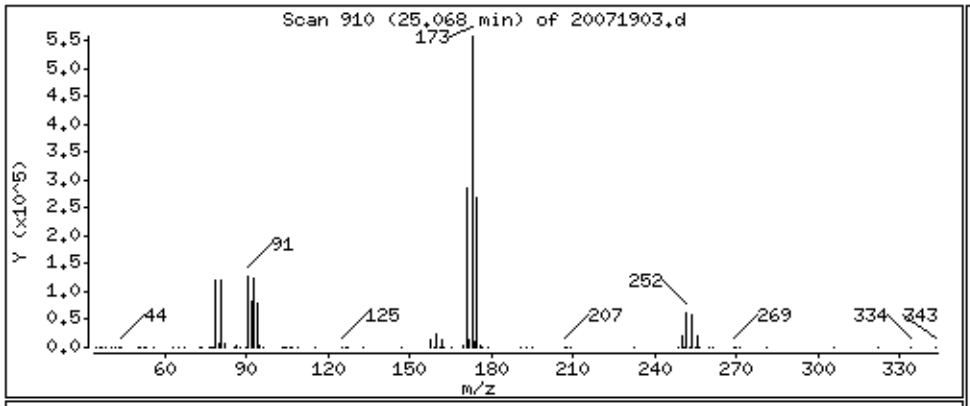
Operator: su

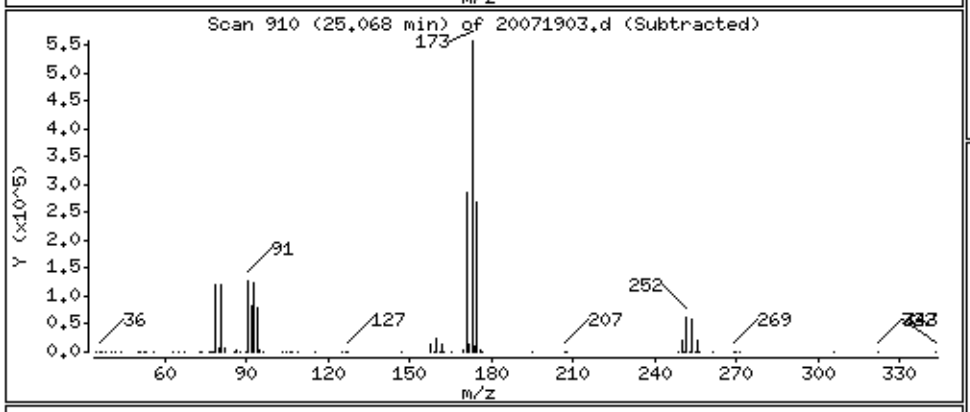
Column phase: RTX-624

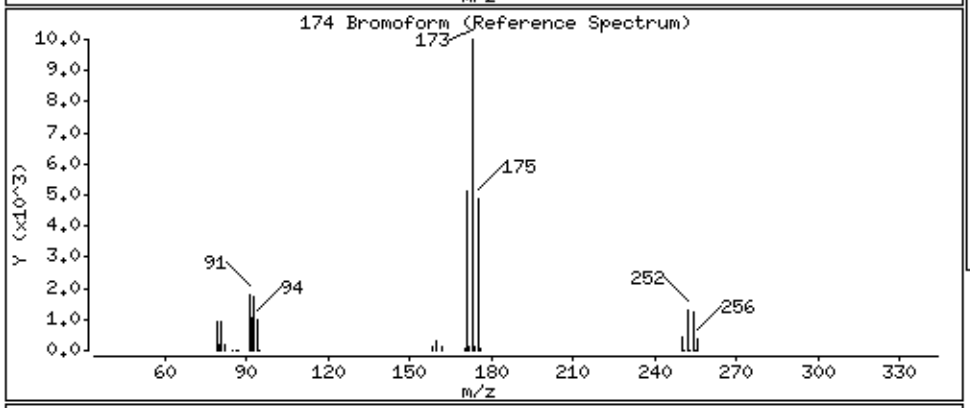
Column diameter: 0.32

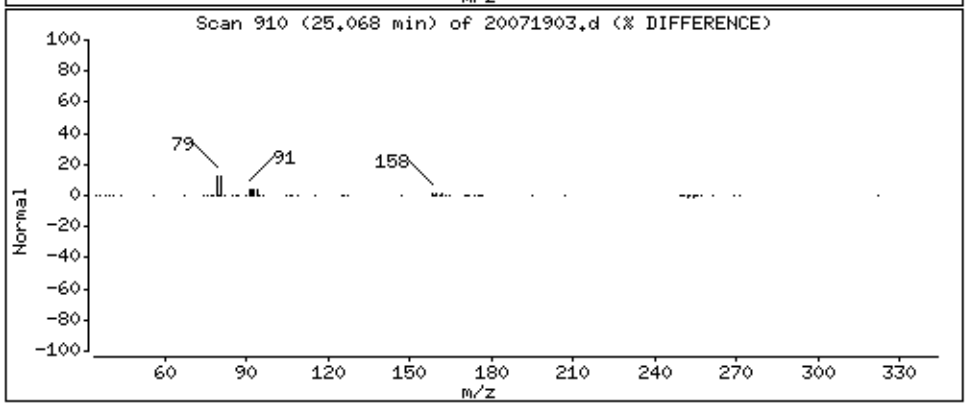
174 Bromoform

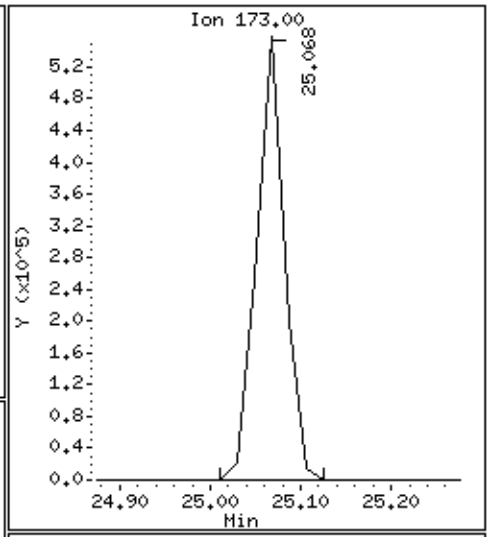
Concentration: 17.630 PPBV

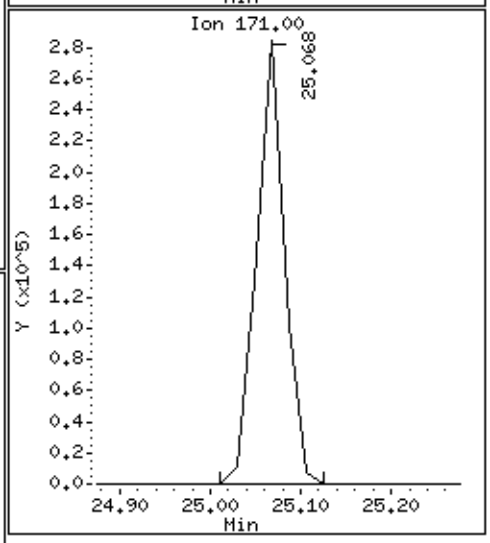












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

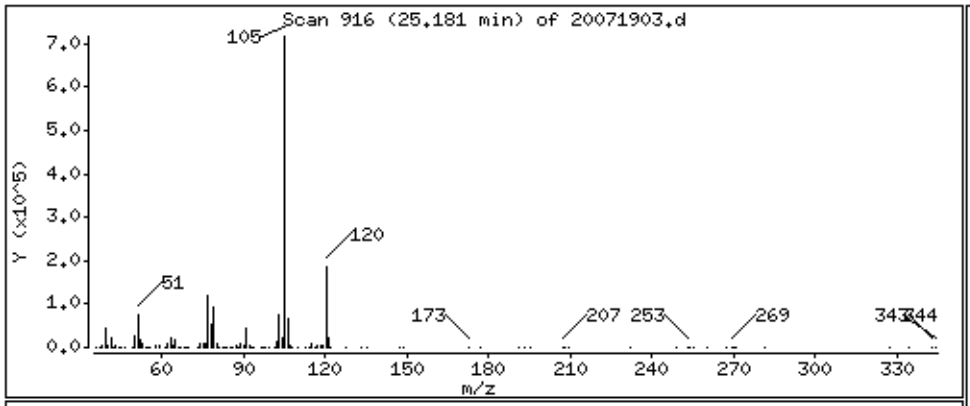
Operator: su

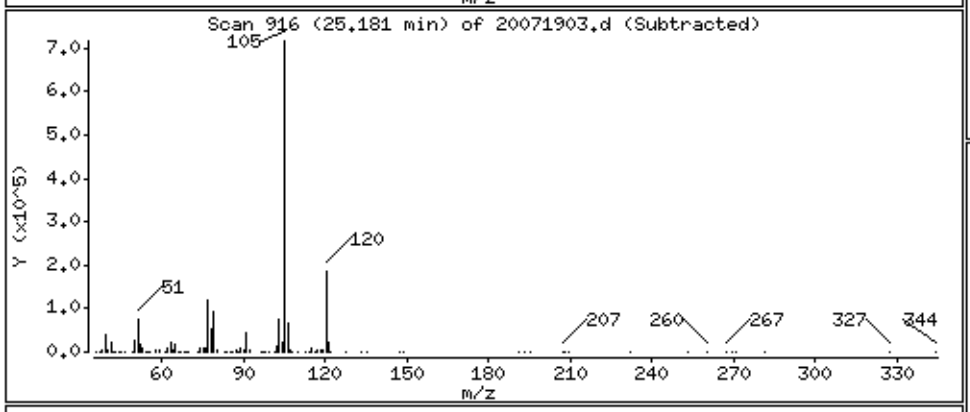
Column phase: RTX-624

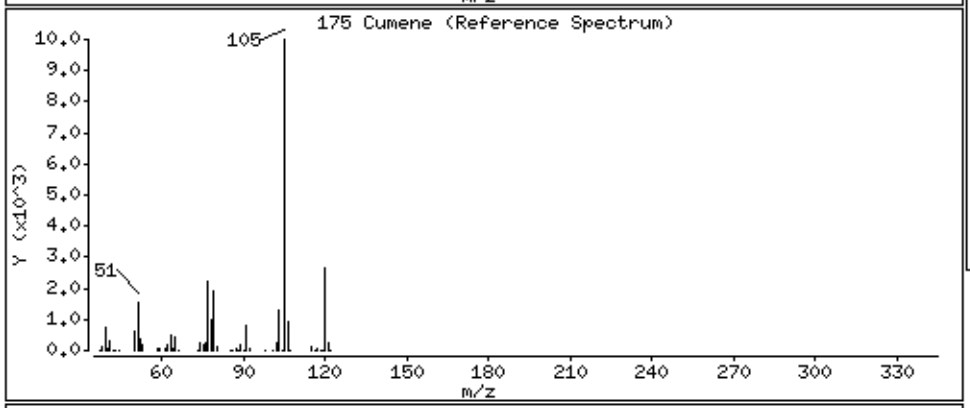
Column diameter: 0.32

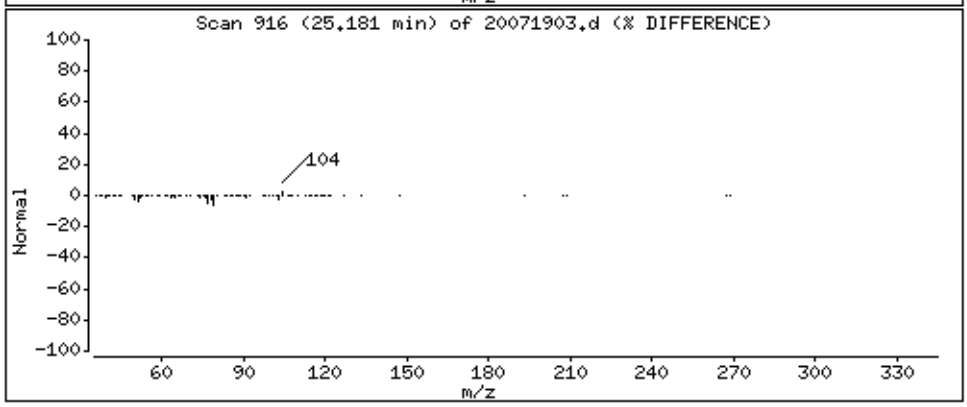
175 Cumene

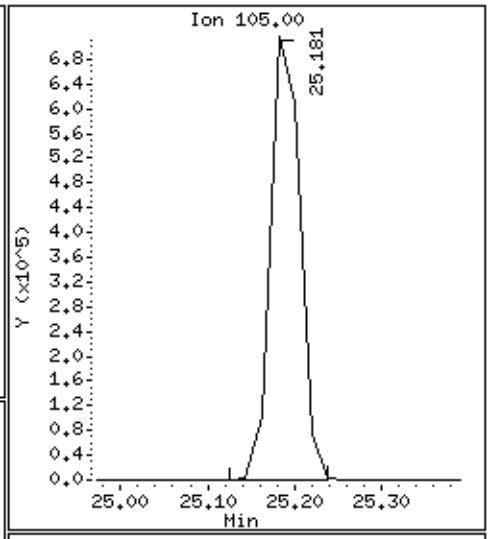
Concentration: 11.886 PPBV

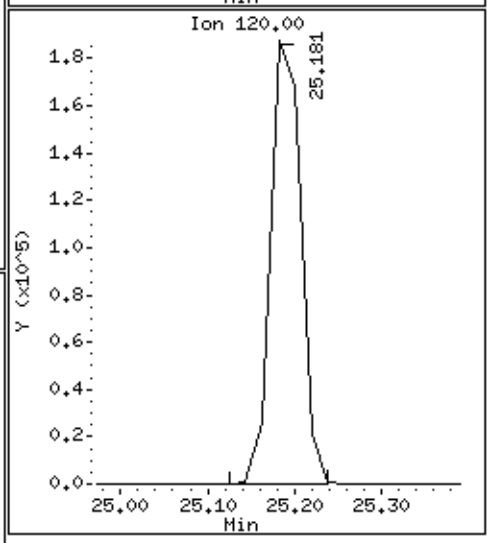












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

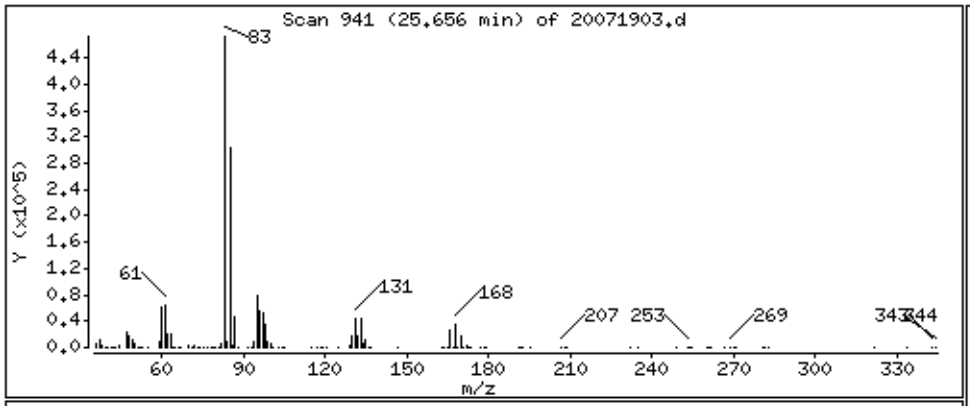
Operator: su

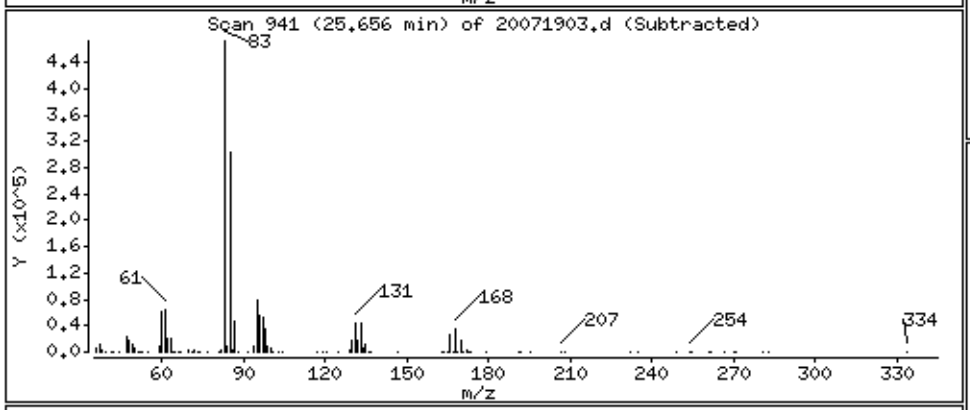
Column phase: RTX-624

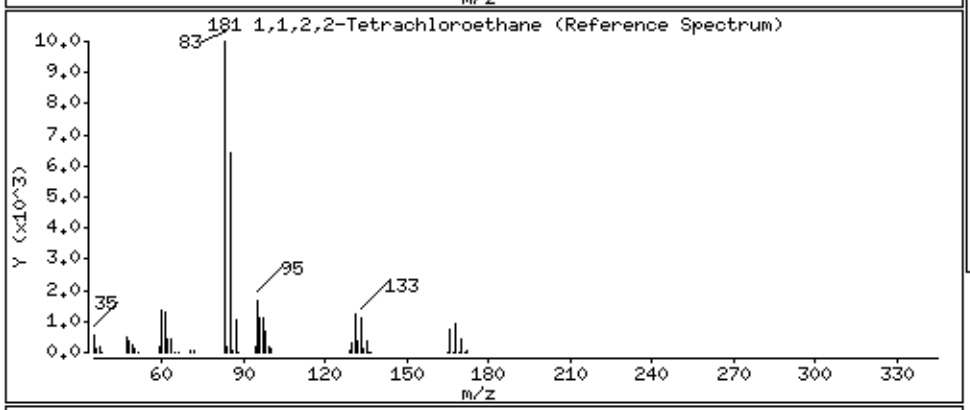
Column diameter: 0.32

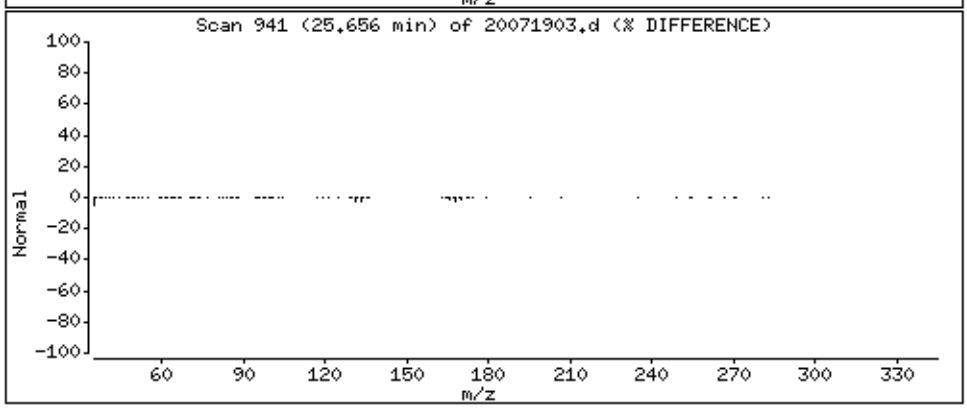
181 1,1,2,2-Tetrachloroethane

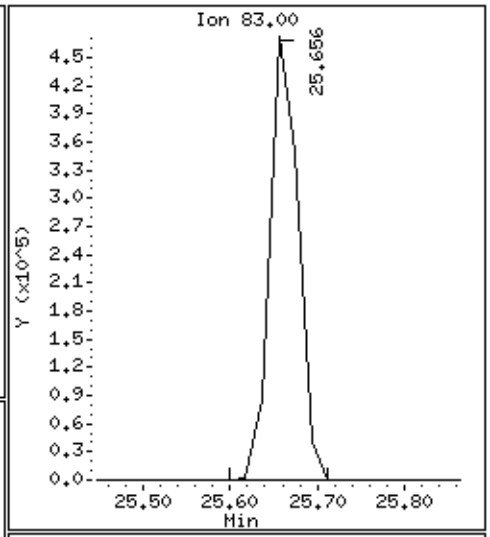
Concentration: 12.050 PPBV

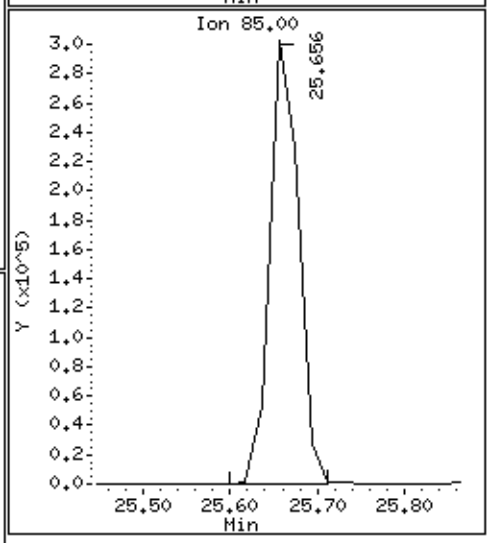












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

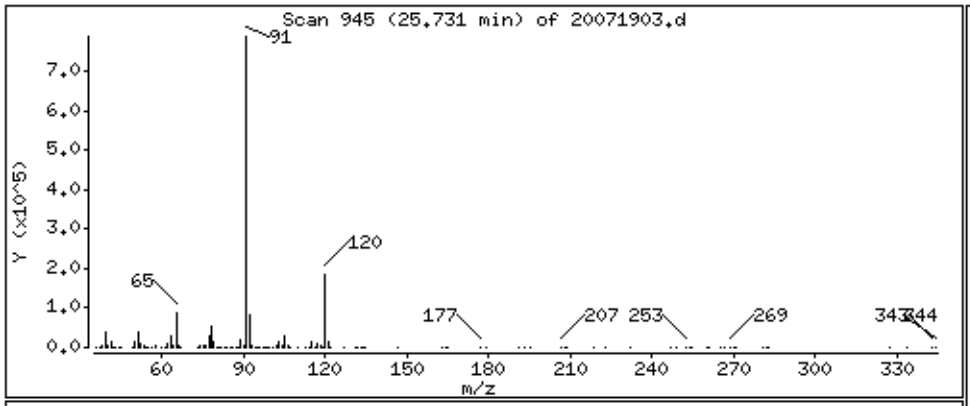
Operator: su

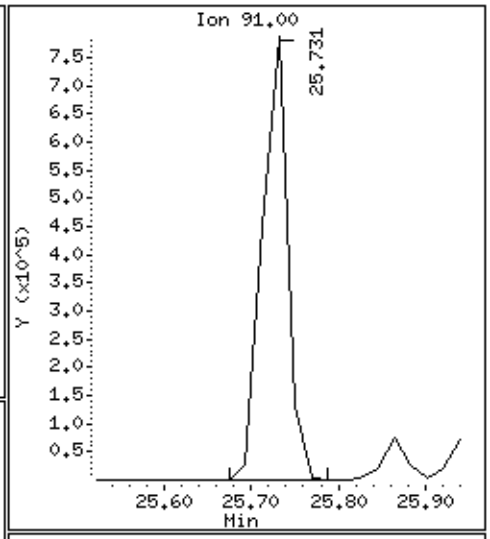
Column phase: RTX-624

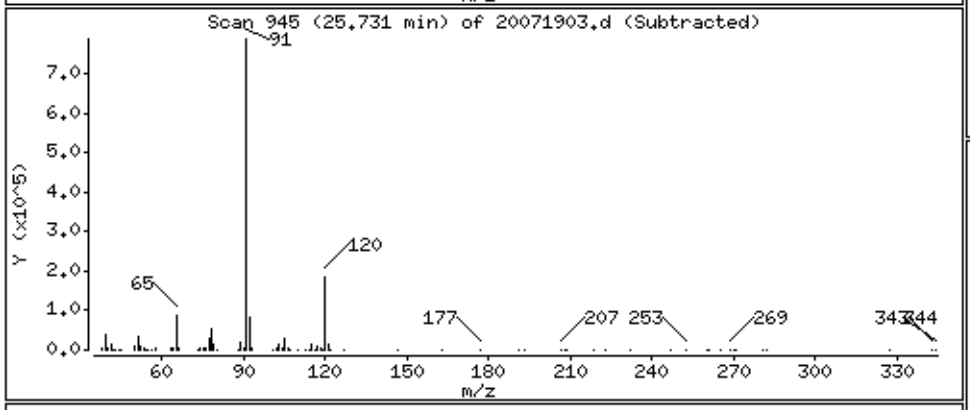
Column diameter: 0.32

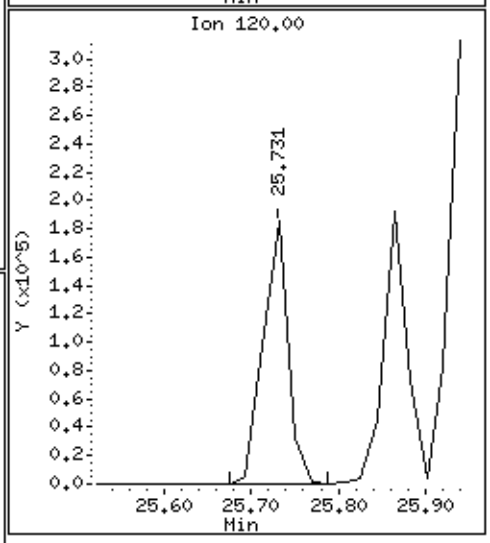
182 Propylbenzene

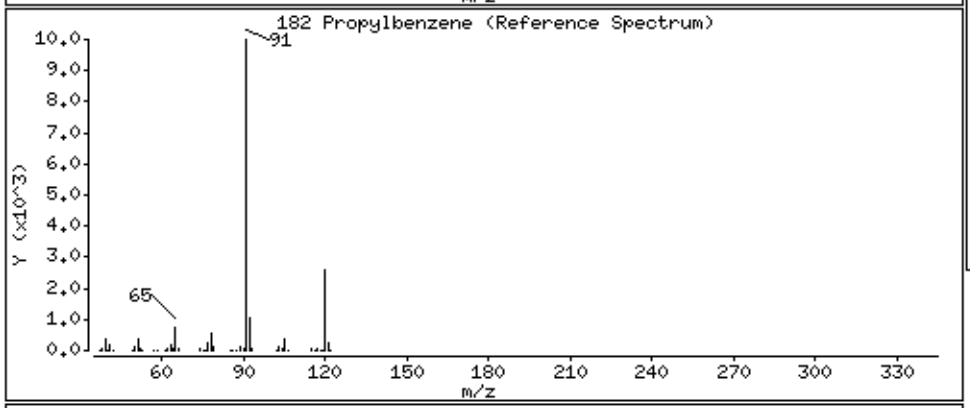
Concentration: 11.220 PPBV

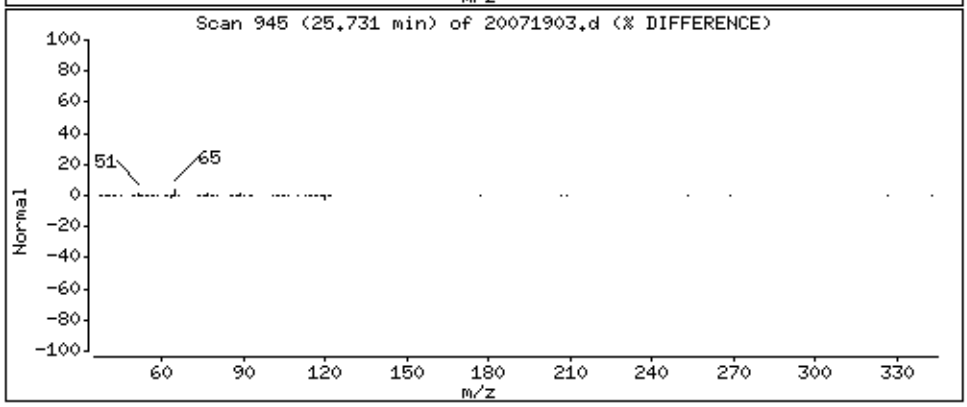












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

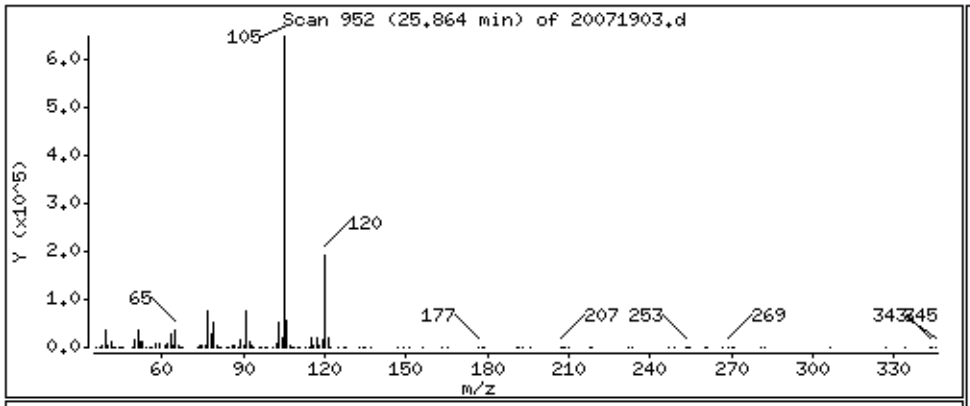
Operator: su

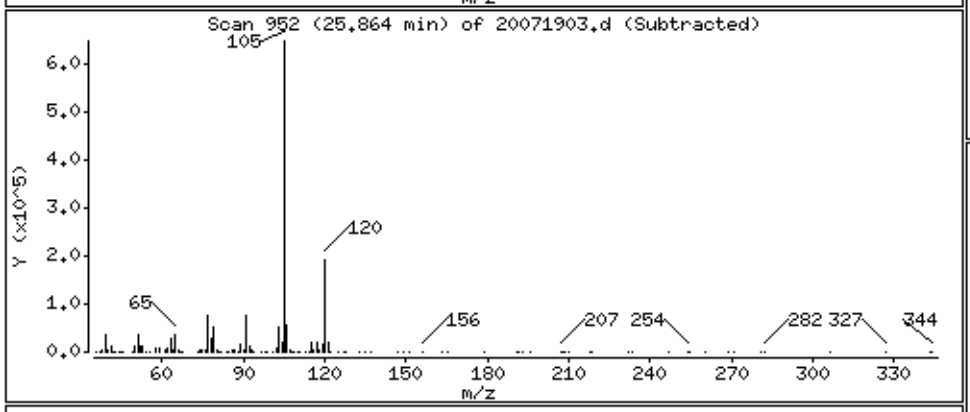
Column phase: RTX-624

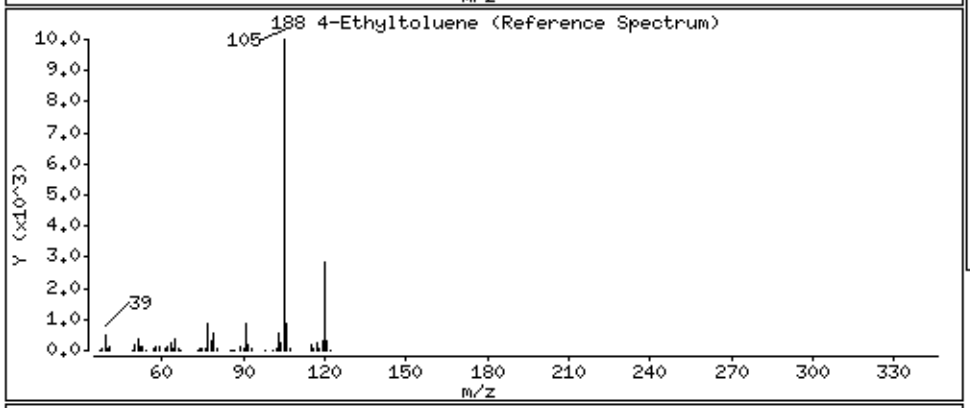
Column diameter: 0.32

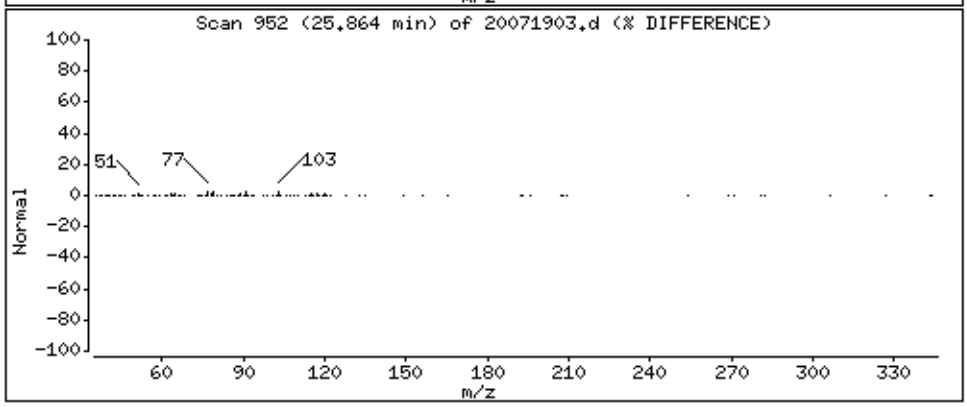
188 4-Ethyltoluene

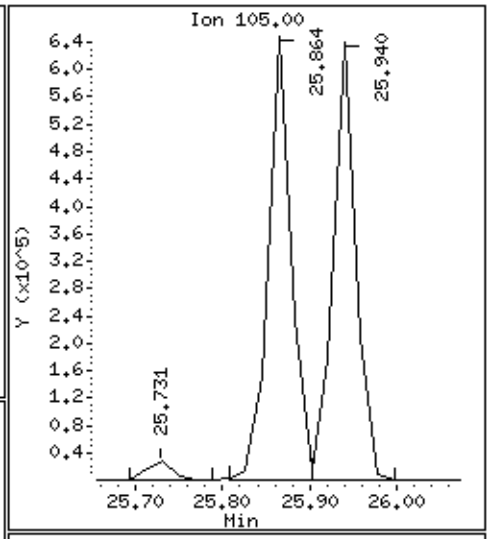
Concentration: 10.075 PPBV

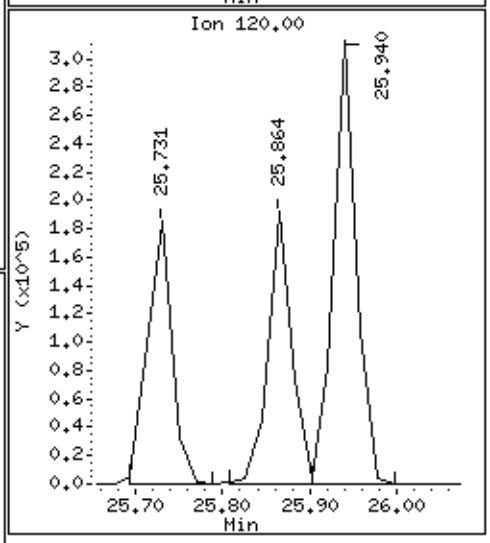












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

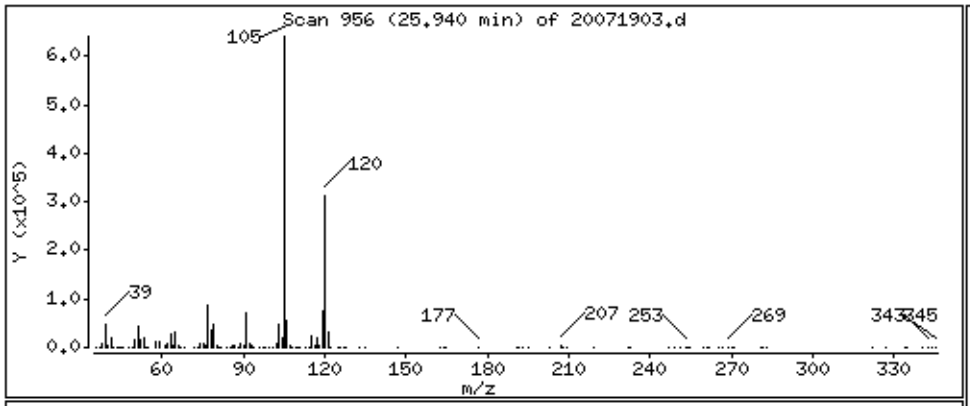
Operator: su

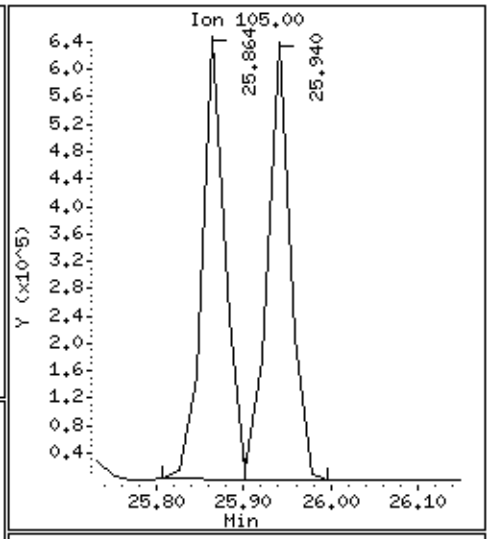
Column phase: RTX-624

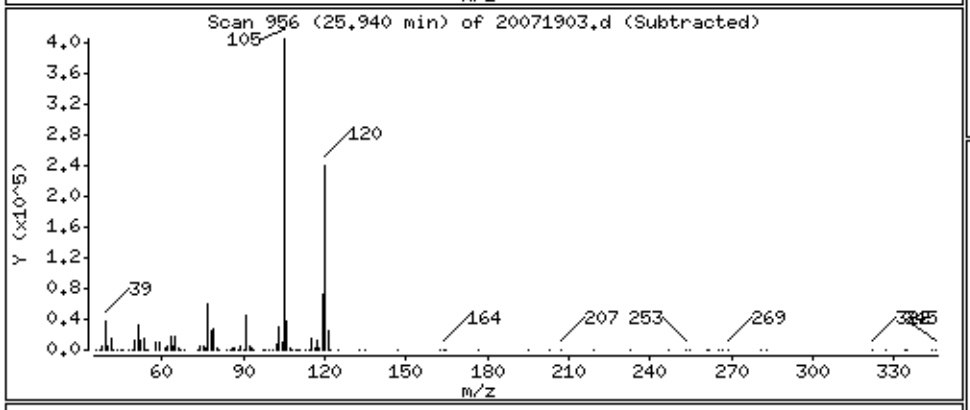
Column diameter: 0.32

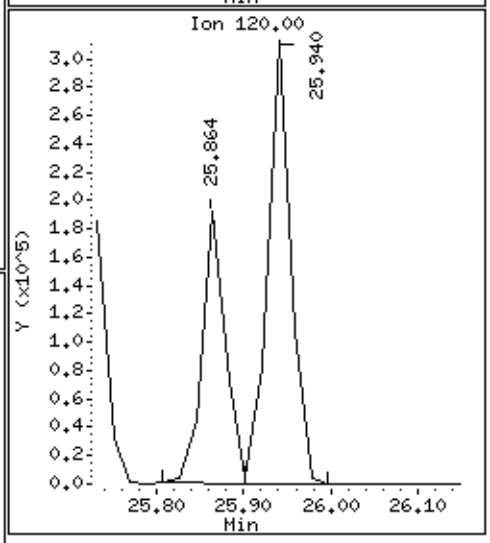
190 1,3,5-Trimethylbenzene

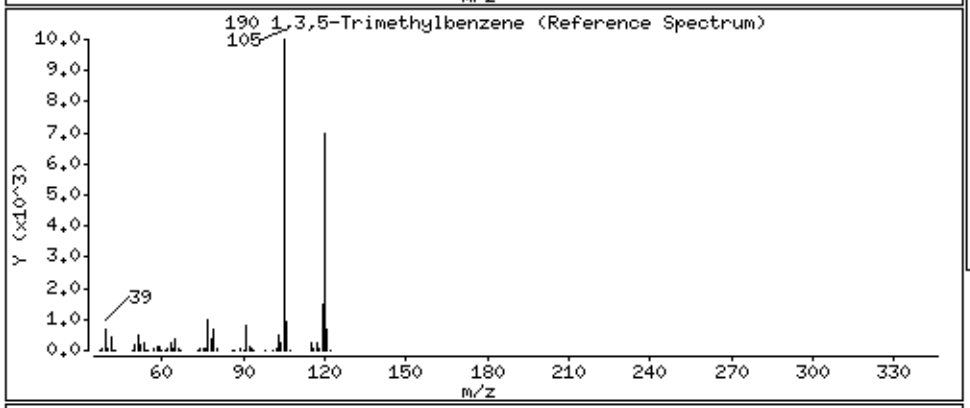
Concentration: 11.720 PPBV

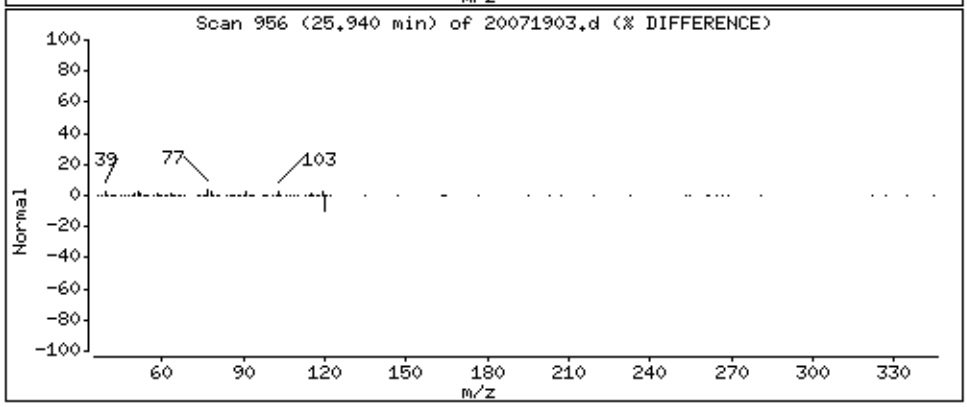












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

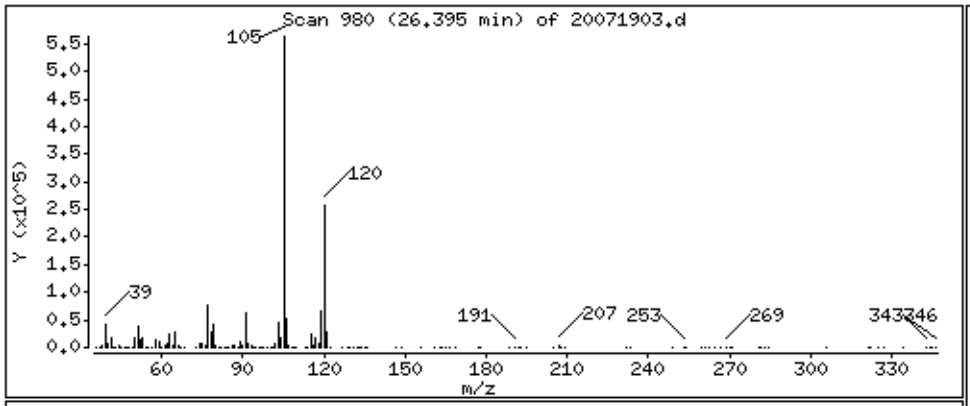
Operator: su

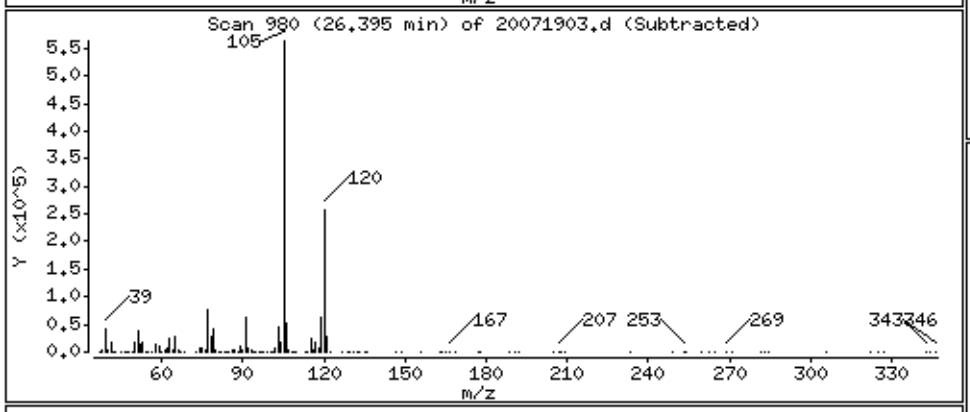
Column phase: RTX-624

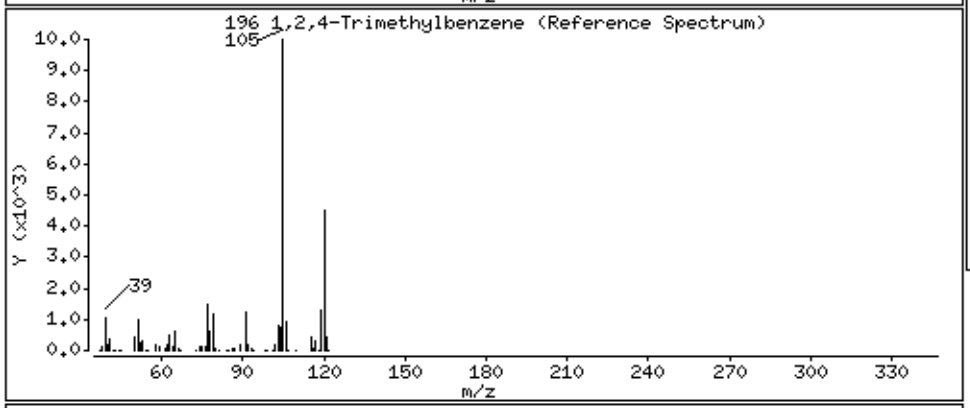
Column diameter: 0.32

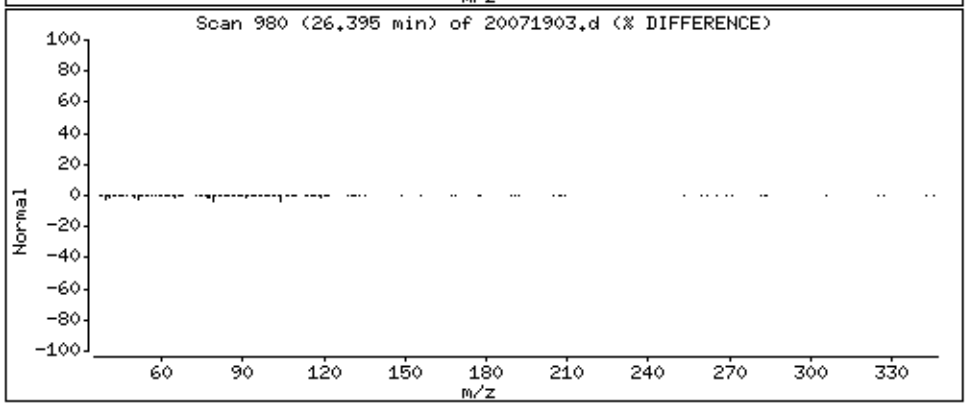
196 1,2,4-Trimethylbenzene

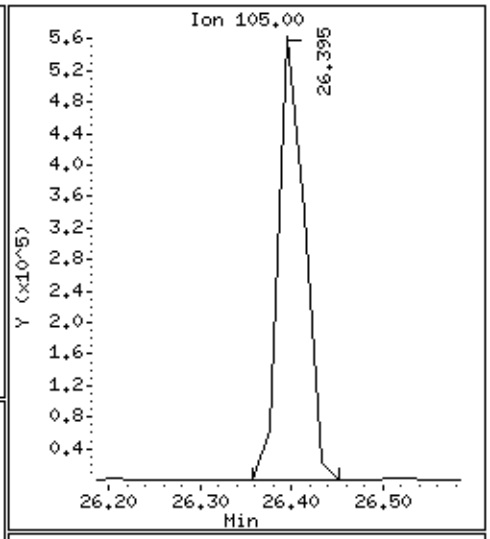
Concentration: 11.004 PPBV

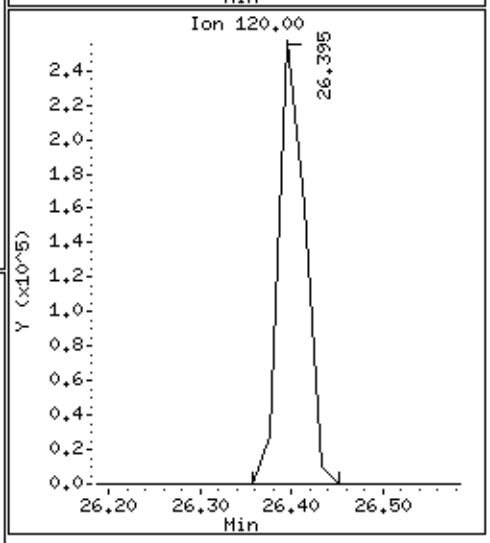












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

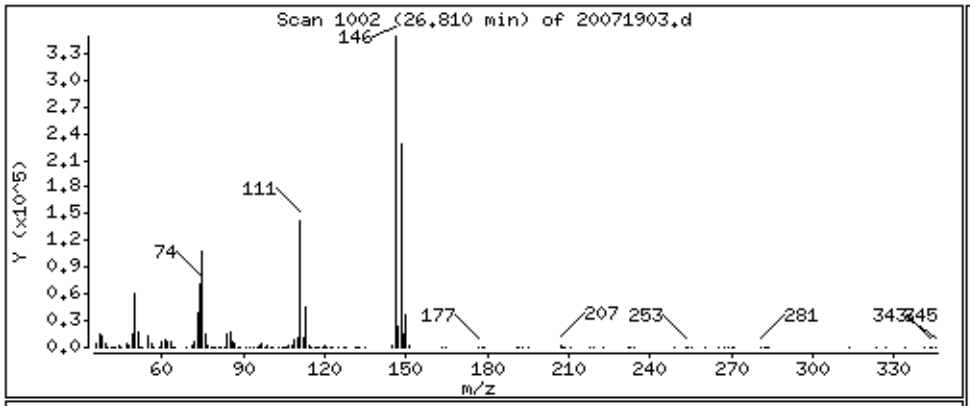
Operator: su

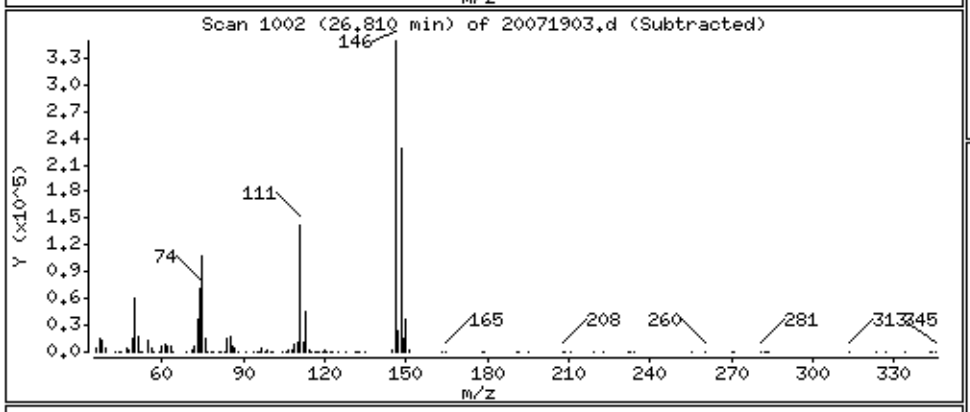
Column phase: RTX-624

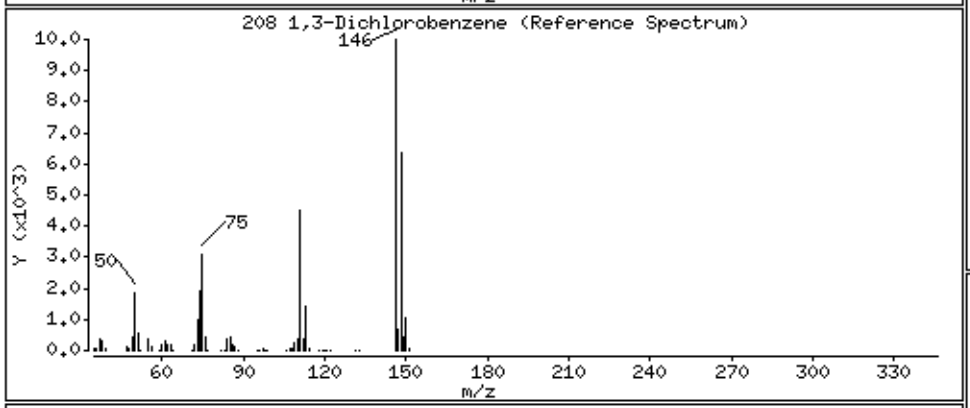
Column diameter: 0.32

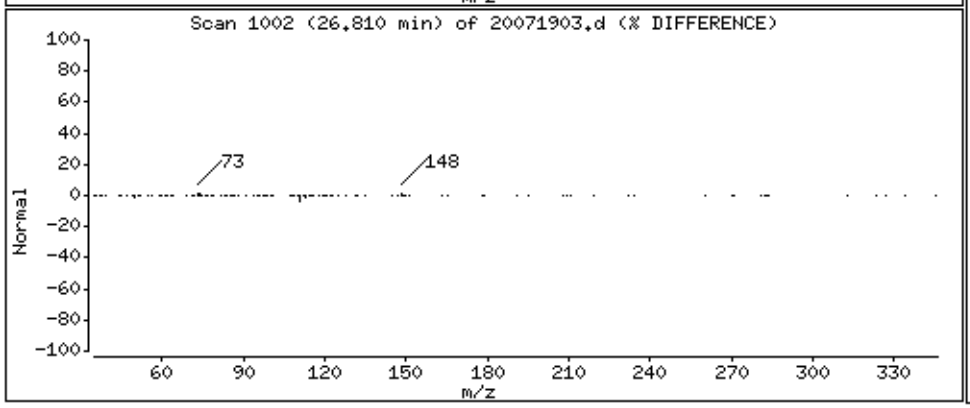
208 1,3-Dichlorobenzene

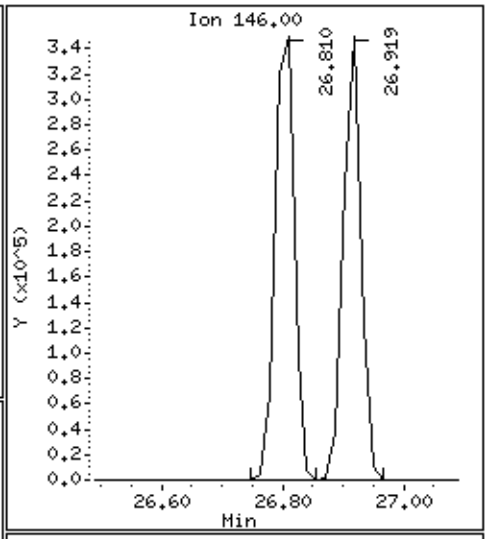
Concentration: 10.479 PPBV

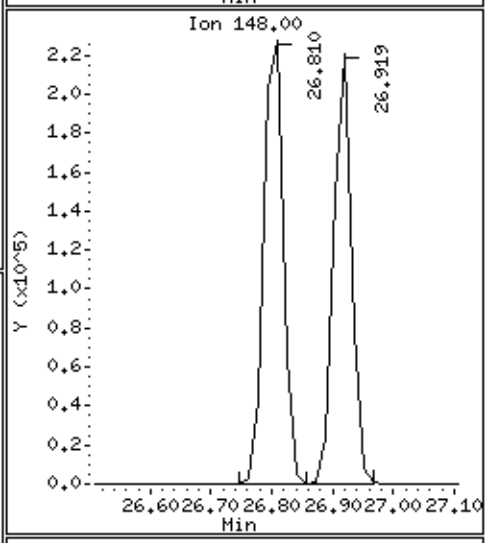


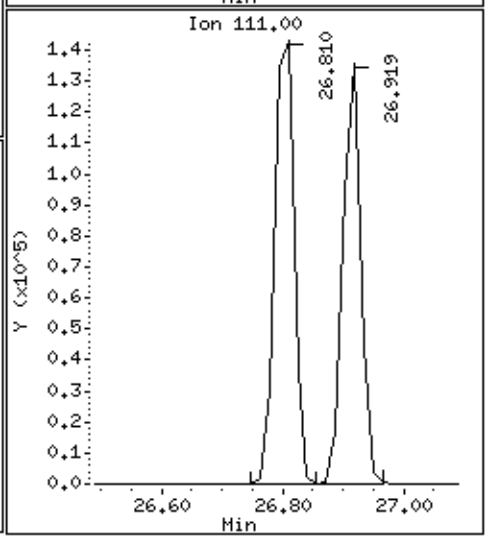












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

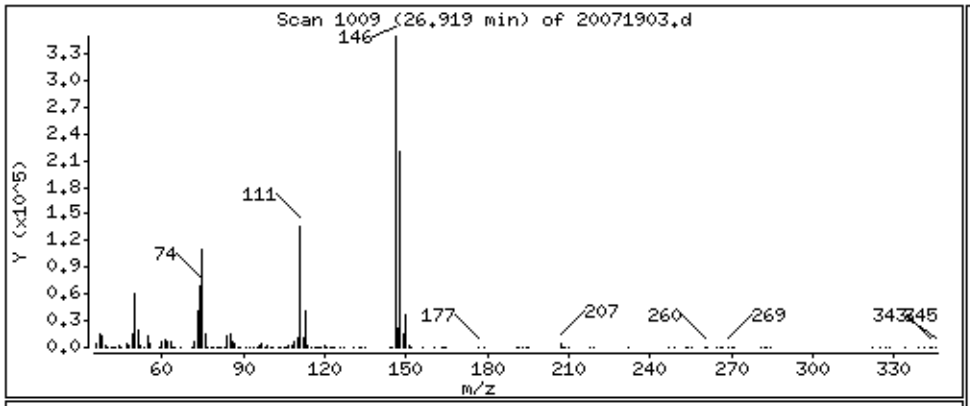
Operator: su

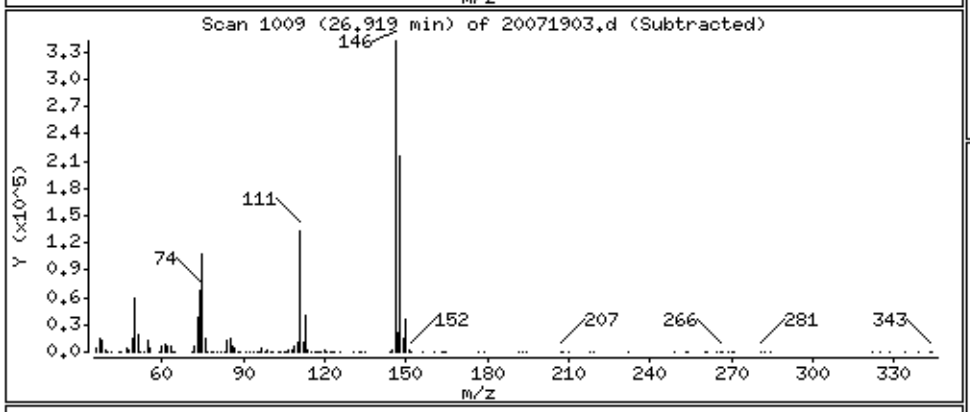
Column phase: RTX-624

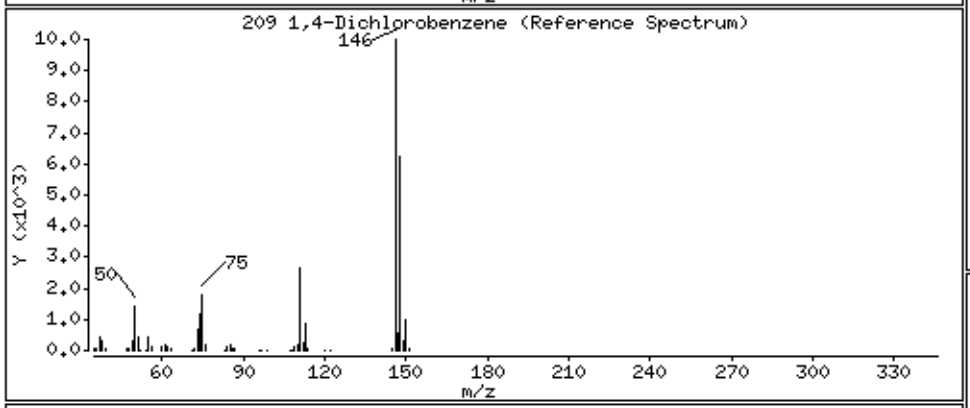
Column diameter: 0.32

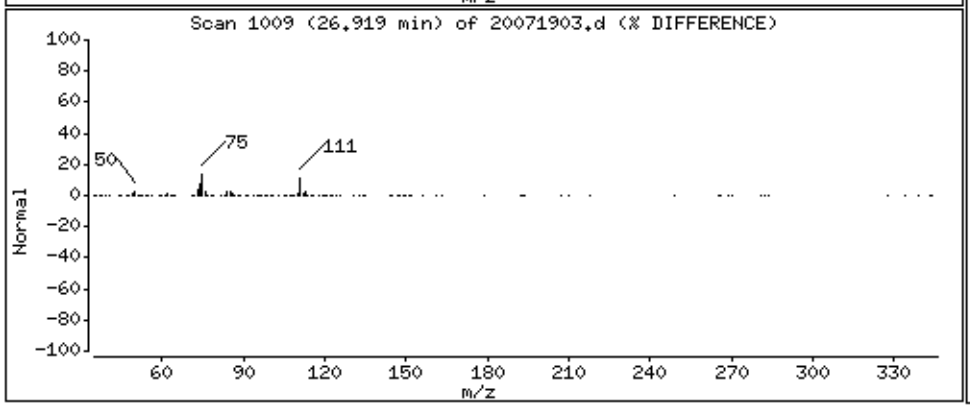
209 1,4-Dichlorobenzene

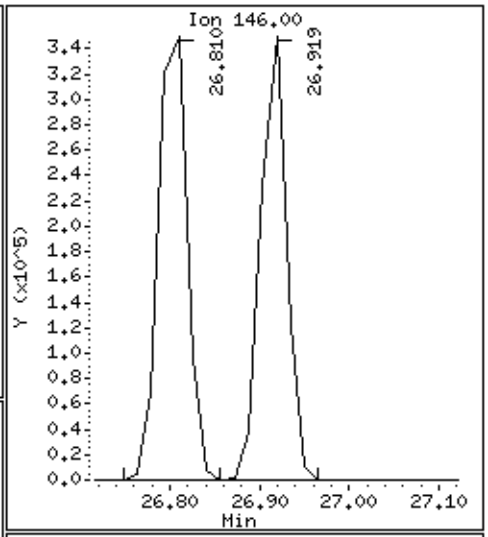
Concentration: 9.896 PPBV

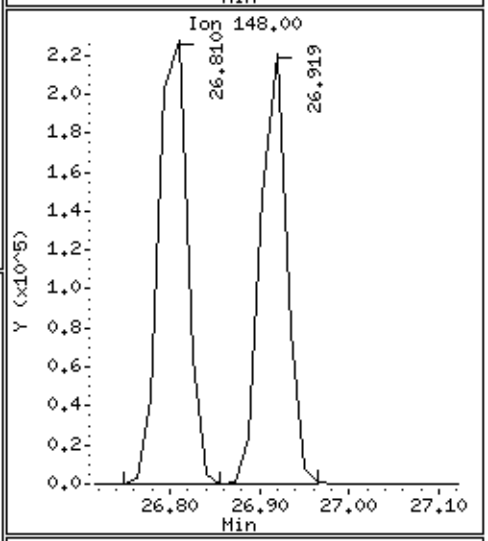


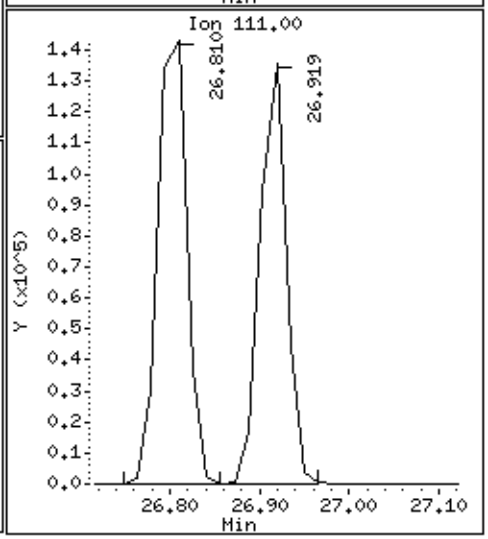












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

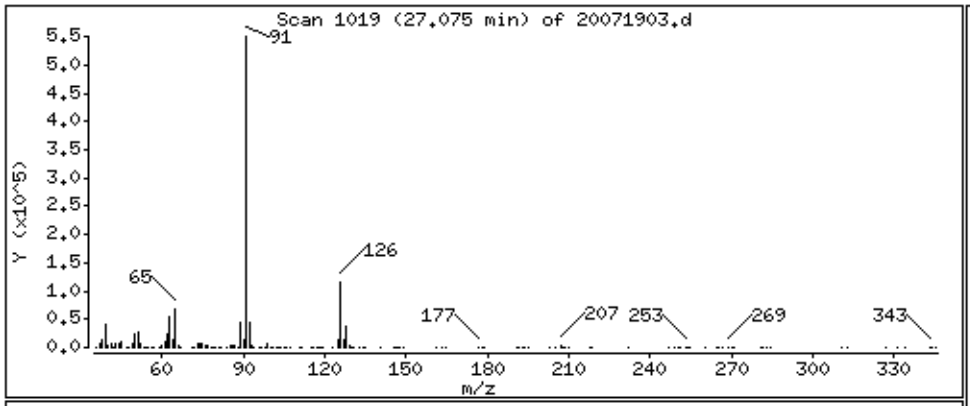
Operator: su

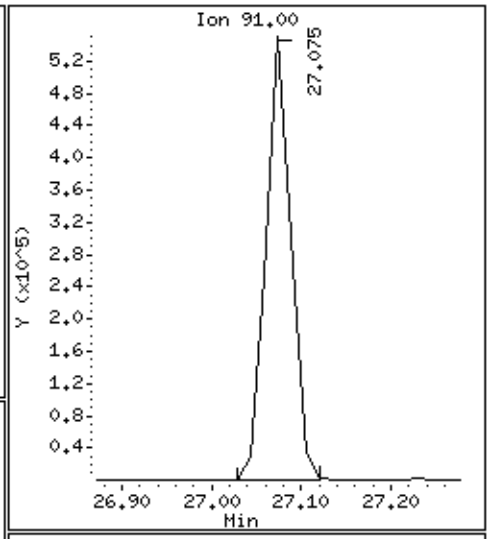
Column phase: RTX-624

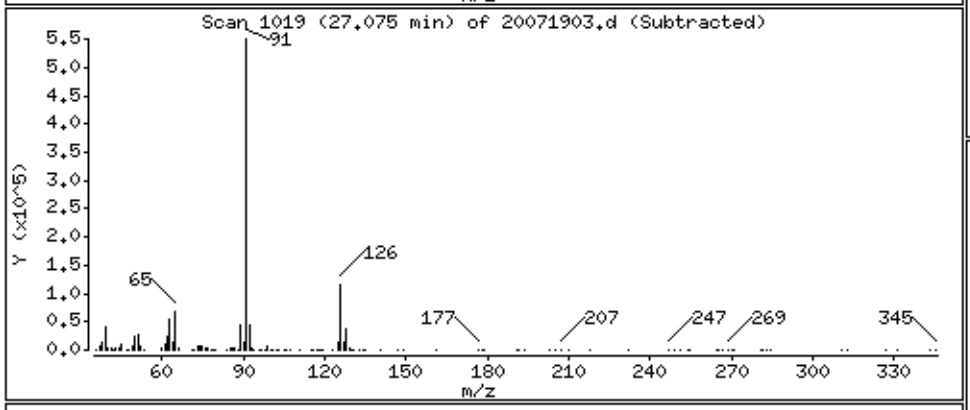
Column diameter: 0.32

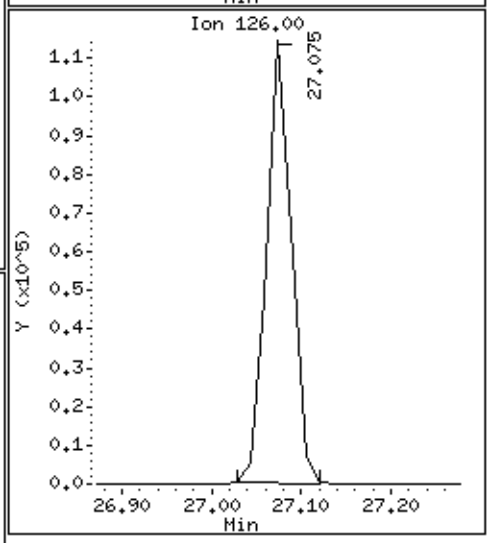
212 alpha-Chlorotoluene

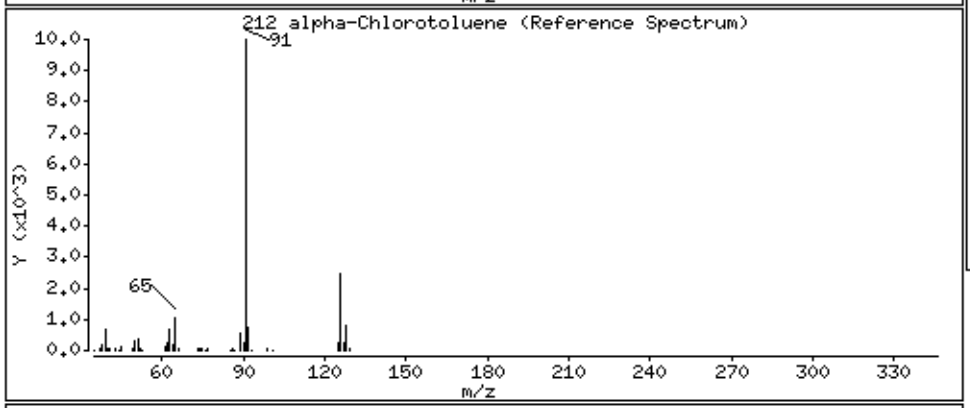
Concentration: 13.530 PPBV

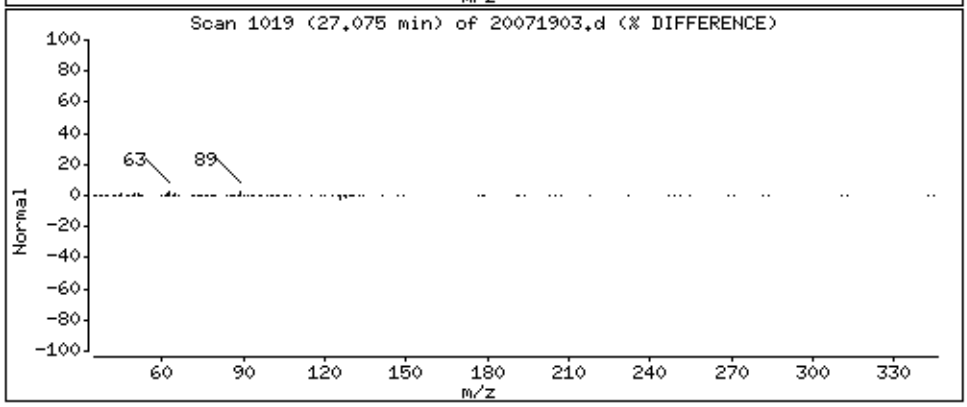












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

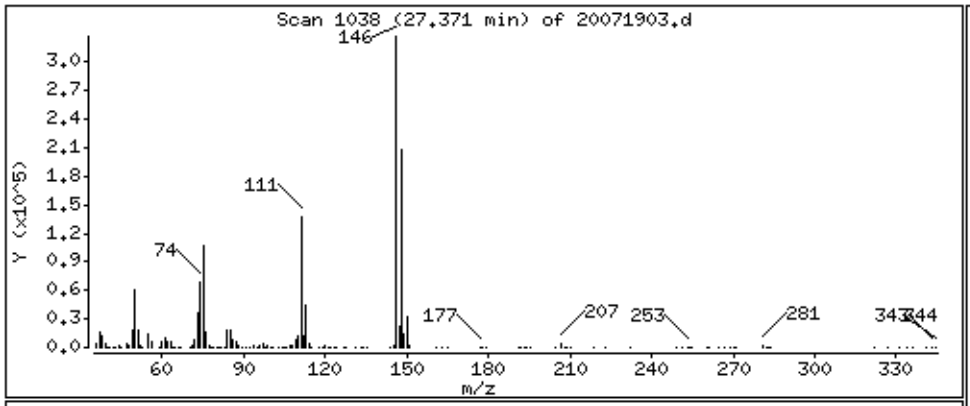
Operator: su

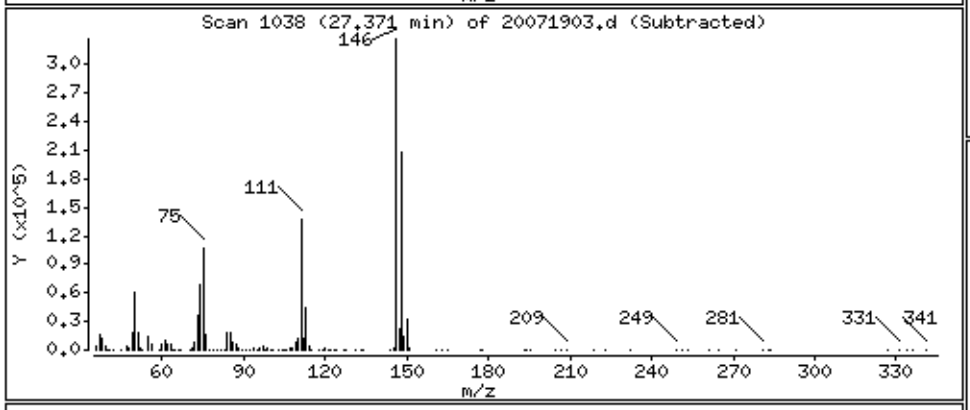
Column phase: RTX-624

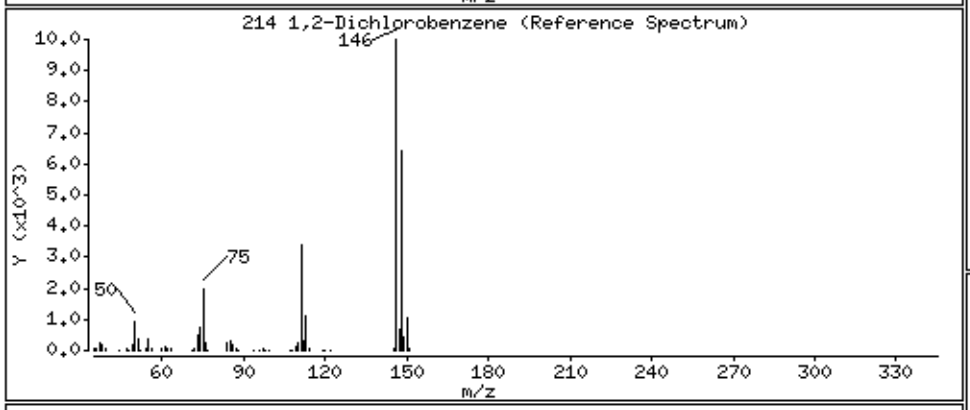
Column diameter: 0.32

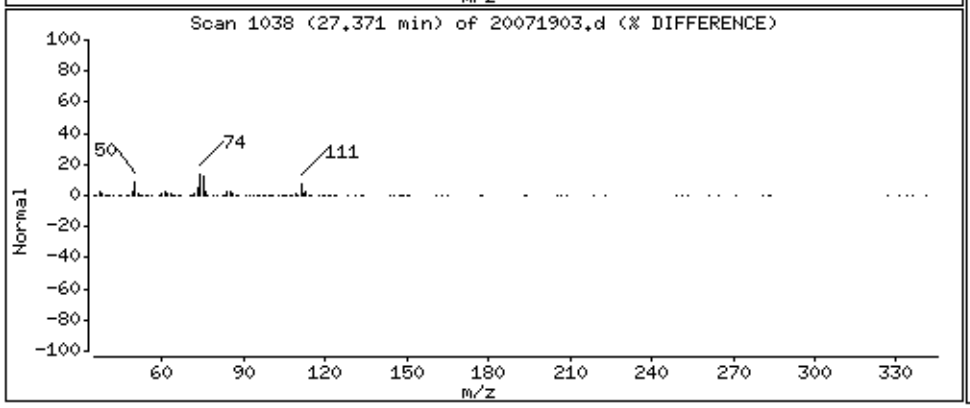
214 1,2-Dichlorobenzene

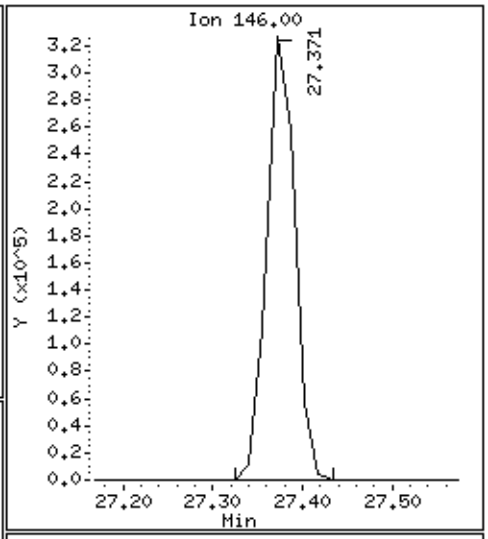
Concentration: 10.563 PPBV

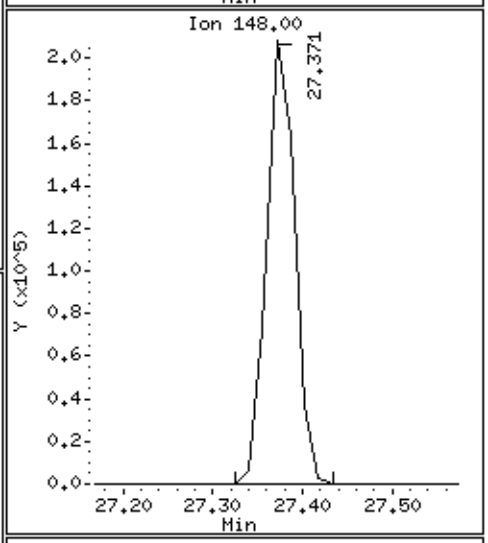


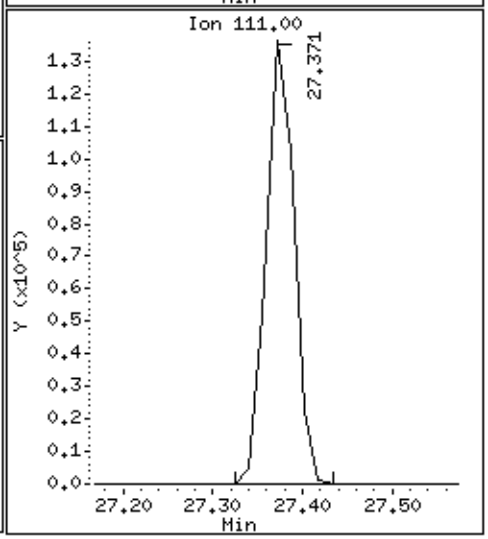












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

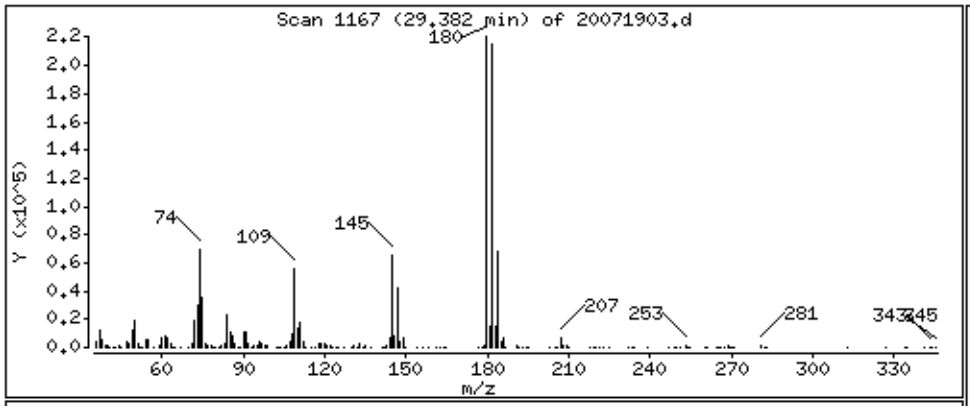
Operator: su

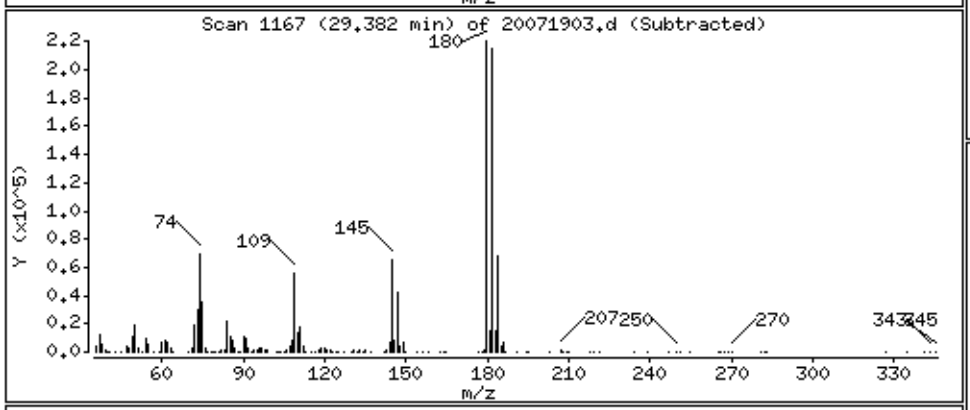
Column phase: RTX-624

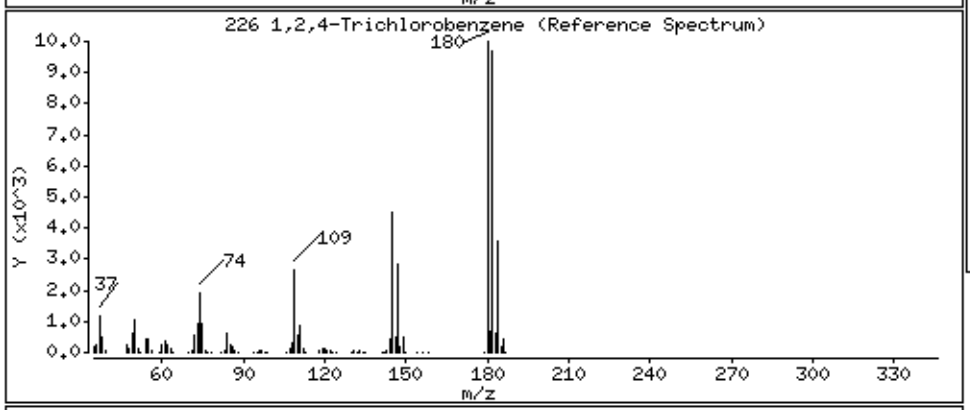
Column diameter: 0.32

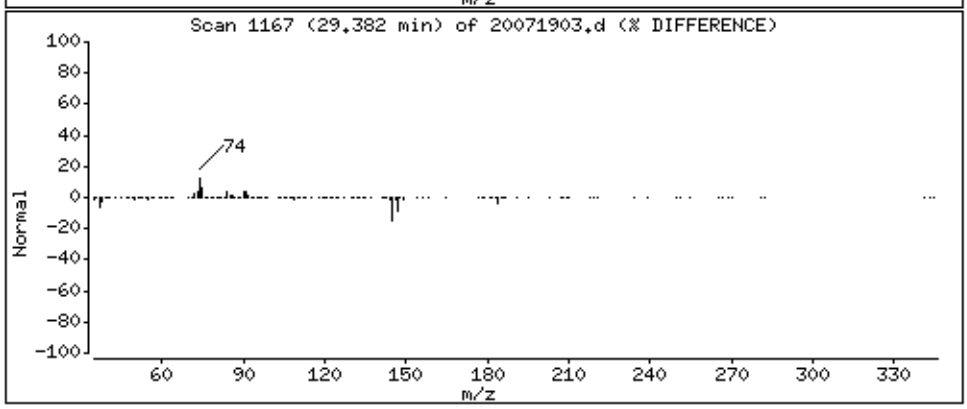
226 1,2,4-Trichlorobenzene

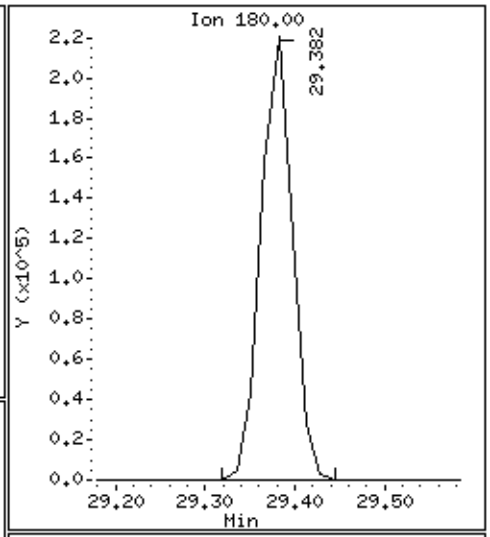
Concentration: 8.633 PPBV

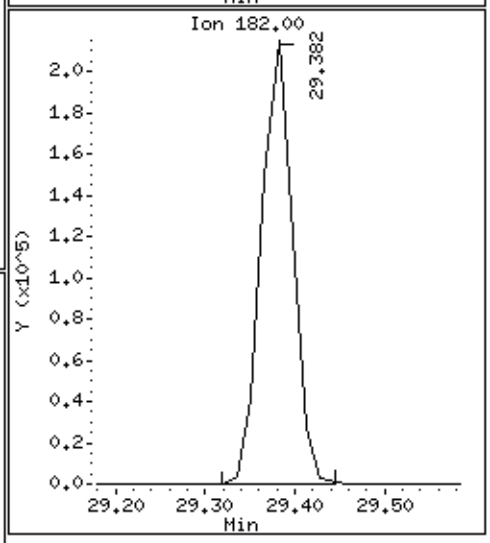












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

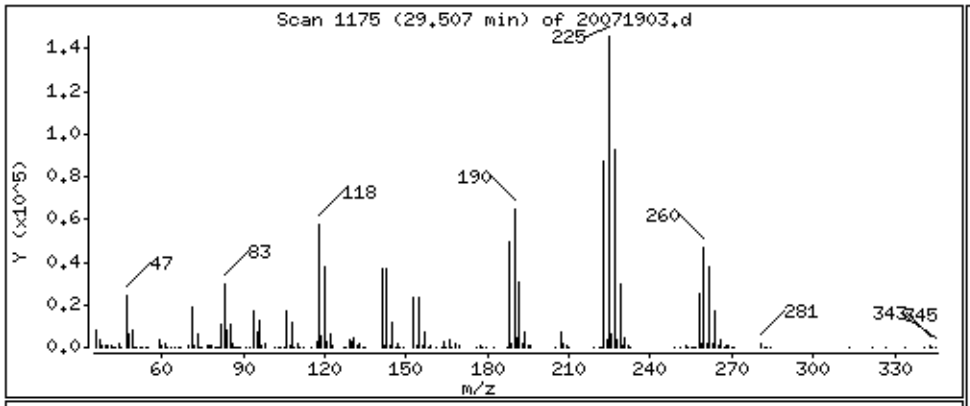
Operator: su

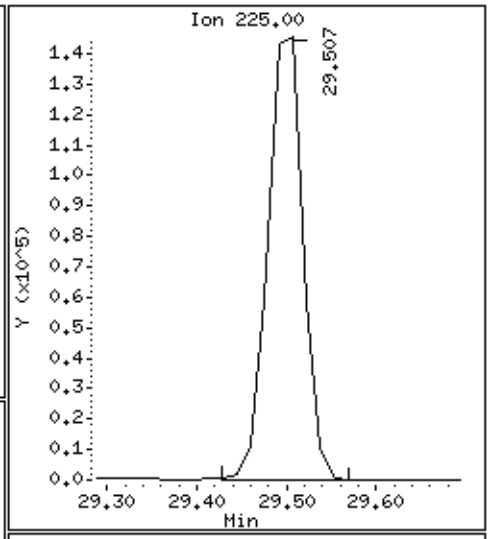
Column phase: RTX-624

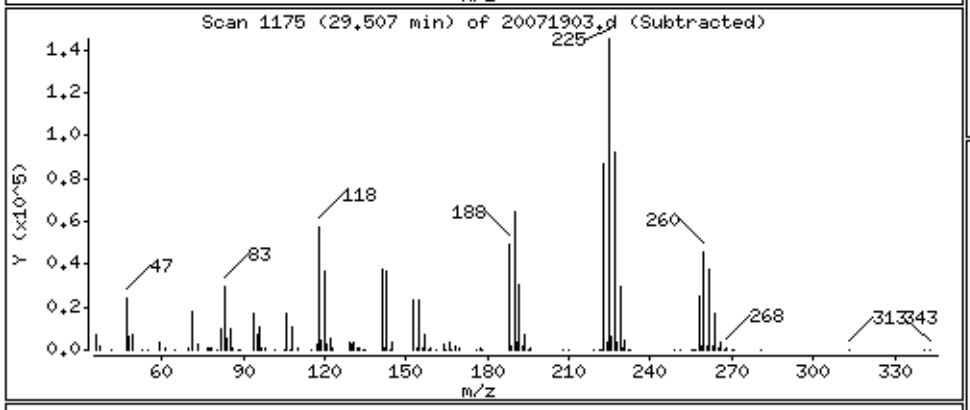
Column diameter: 0.32

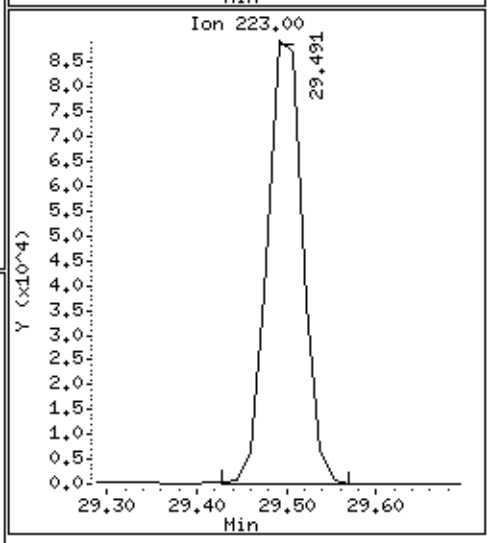
227 Hexachlorobutadiene

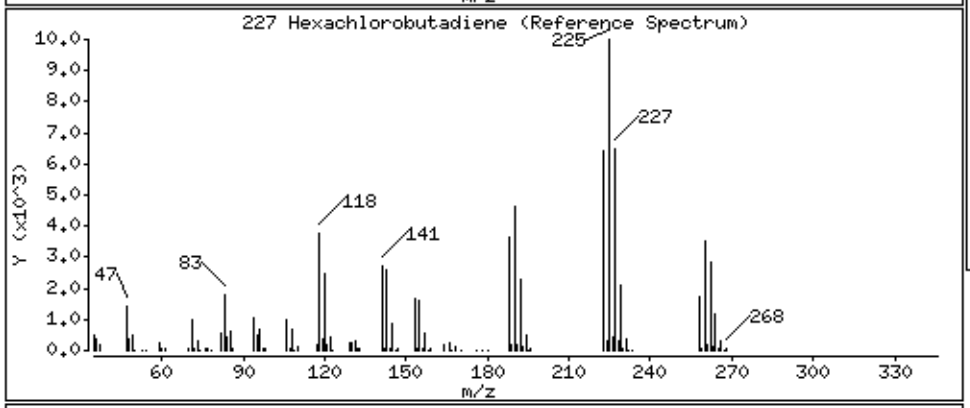
Concentration: 8.381 PPBV

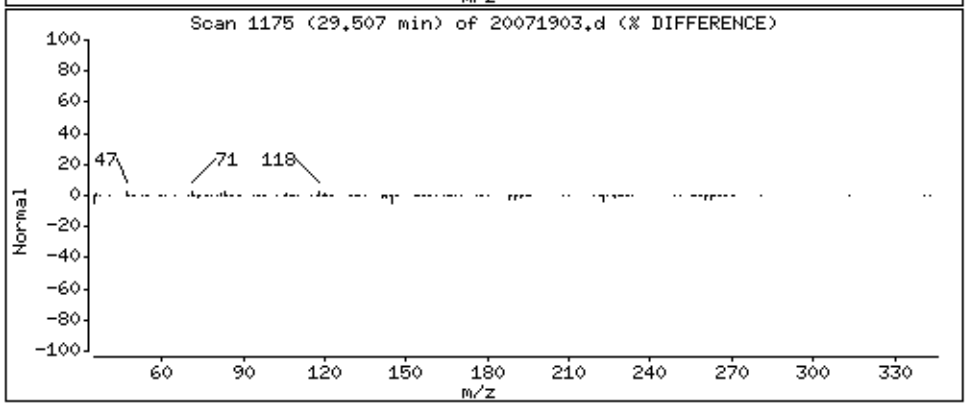












Data File: /chem/msd20.i/19Jul2016.b/20071903.d

Date : 19-JUL-2016 08:40

Client ID: LCS

Instrument: msd20.i

Sample Info: 50mL# 2789-168

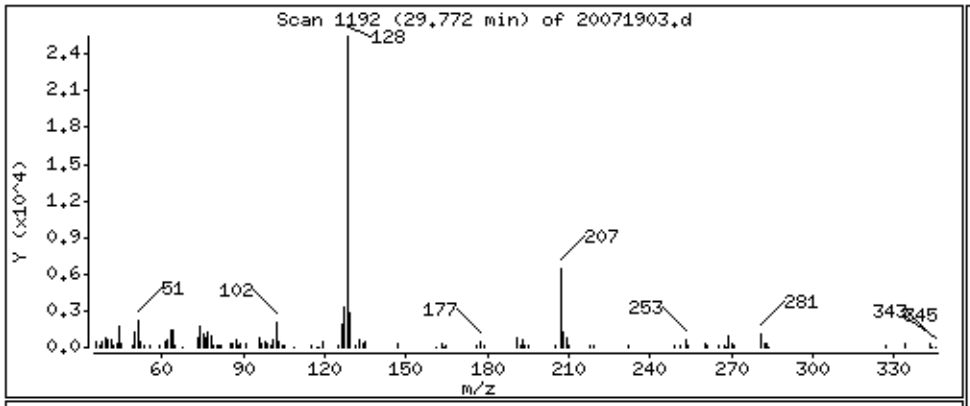
Operator: su

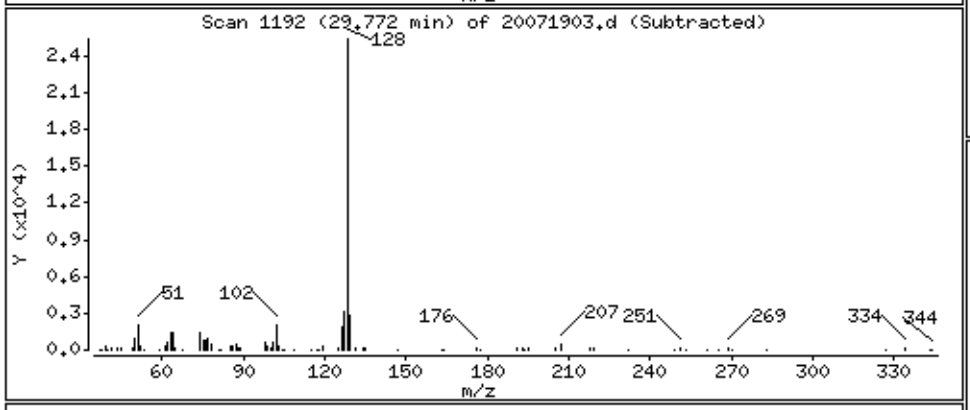
Column phase: RTX-624

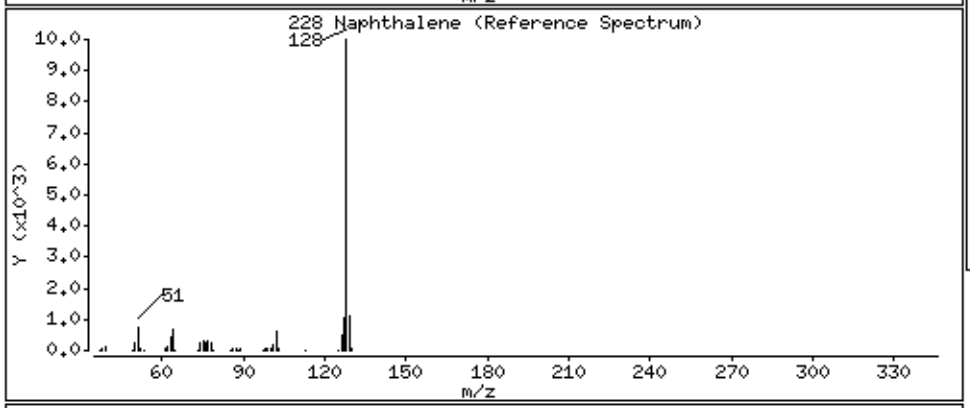
Column diameter: 0.32

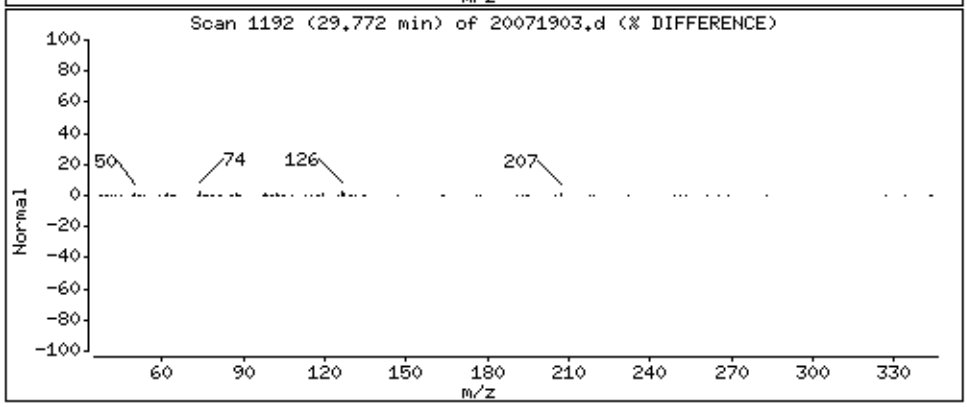
228 Naphthalene

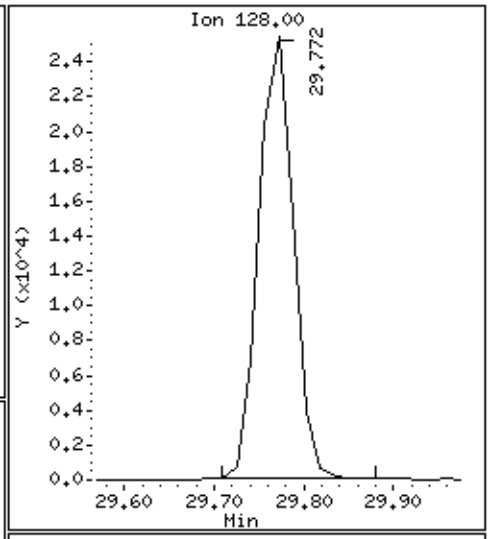
Concentration: 0.8042 PPBV

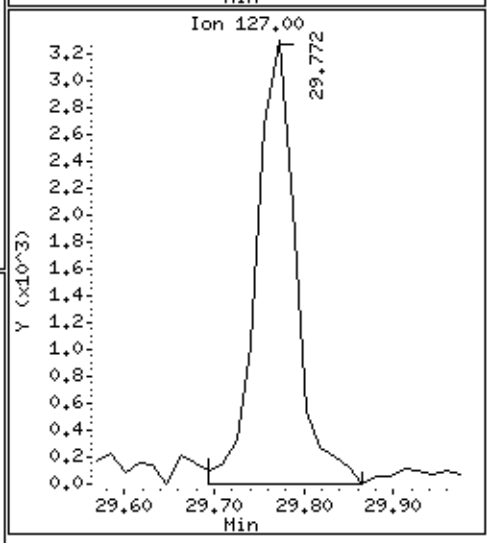












eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1607235D-17AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 09:24 AM**	

Compound	%Recovery	Method Limits
Freon 12	118	70-130
Freon 114	110	70-130
Chloromethane	108	70-130
Vinyl Chloride	109	70-130
1,3-Butadiene	104	70-130
Bromomethane	100	70-130
Chloroethane	112	70-130
Freon 11	109	70-130
Ethanol	108	70-130
Freon 113	95	70-130
1,1-Dichloroethene	96	70-130
Acetone	98	70-130
2-Propanol	107	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	102	70-130
Methylene Chloride	98	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	102	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	97	70-130
Tetrahydrofuran	106	70-130
Chloroform	108	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	119	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	112	70-130
1,2-Dichloroethane	118	70-130
Heptane	120	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	116	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	122	70-130
cis-1,3-Dichloropropene	109	70-130
4-Methyl-2-pentanone	126	70-130
Toluene	114	70-130
trans-1,3-Dichloropropene	118	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	104	70-130
2-Hexanone	113	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1607235D-17AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20071904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/19/16 09:24 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	126	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	111	70-130
o-Xylene	114	70-130
Styrene	120	70-130
Bromoform	132 Q	70-130
Cumene	117	70-130
1,1,2,2-Tetrachloroethane	119	70-130
Propylbenzene	112	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	109	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	99	70-130
alpha-Chlorotoluene	136 Q	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	86	70-130
Hexachlorobutadiene	84	70-130
Naphthalene	83	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130

Report Date: 20-Jul-2016 11:48

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 19Jul2016
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: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AT12.sub
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	10.838	108.39	60-140
11 Freon 12	10.000	11.800	118.00	70-130
15 Freon 114	10.000	10.969	109.69	70-130
17 Chloromethane	10.000	10.786	107.86	70-130
23 Butane	10.000	10.877	108.77	60-140
25 Vinyl Chloride	10.000	10.934	109.34	70-130
26 1,3-Butadiene	10.000	10.392	103.92	70-130
29 Bromomethane	10.000	9.997	99.97	70-130
30 Chloroethane	10.000	11.226	112.26	70-130
31 Isopentane	10.000	10.191	101.91	60-140
35 Freon 11	10.000	10.889	108.89	70-130
42 Ethanol	10.000	10.842	108.42	70-130
49 Freon 113	10.000	9.529	95.29	70-130
50 1,1-Dichloroethene	10.000	9.577	95.77	70-130
52 Acetone	10.000	9.790	97.90	70-130
56 Carbon Disulfide	10.000	9.589	95.89	70-130
57 2-Propanol	10.000	10.669	106.69	70-130
58 3-Chloropropene	10.000	10.239	102.39	70-130
66 Methylene Chloride	10.000	9.849	98.49	70-130
72 Methyl tert-butyl	10.000	9.800	98.01	70-130
73 trans-1,2-Dichloro	8.500	8.718	102.57	70-130
78 Hexane	10.000	10.202	102.02	70-130
82 1,1-Dichloroethane	10.000	10.330	103.30	70-130
86 Vinyl Acetate	10.000	9.898	98.98	60-140
91 cis-1,2-Dichloroet	11.300	11.010	97.44	70-130
92 2-Butanone	10.000	10.375	103.75	70-130
99 Tetrahydrofuran	10.000	10.586	105.86	70-130
100 Chloroform	10.000	10.762	107.62	70-130
103 1,1,1-Trichloroeth	10.000	10.758	107.59	70-130
106 Carbon Tetrachlori	10.000	11.860	118.60	70-130
102 Cyclohexane	10.000	10.072	100.72	70-130
113 2,2,4-Trimethylpen	10.000	10.816	108.16	70-130
116 Benzene	10.000	11.193	111.93	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.761	117.61	70-130
121 Heptane	10.000	11.988	119.89	70-130
125 Trichloroethene	10.000	10.829	108.29	70-130
127 Methylcyclohexane	10.000	11.257	112.57	60-140
132 1,2-Dichloropropan	10.000	11.559	115.59	70-130
136 1,4-Dioxane	10.000	10.454	104.54	70-130
138 Bromodichlorometha	10.000	12.226	122.26	70-130
144 cis-1,3-Dichloropr	10.000	10.930	109.30	70-130
145 4-Methyl-2-pentano	10.000	12.656	126.56	70-130
147 Toluene	10.000	11.361	113.61	70-130
150 trans-1,3-Dichloro	10.000	11.805	118.05	70-130
155 1,1,2-Trichloroeth	10.000	10.635	106.35	70-130
156 Tetrachloroethene	10.000	10.415	104.15	70-130
158 2-Hexanone	10.000	11.330	113.31	70-130
160 Dibromochlorometha	10.000	12.600	126.00	70-130
161 1,2-Dibromoethane	10.000	11.112	111.12	70-130
165 Chlorobenzene	10.000	10.650	106.50	70-130
167 Ethyl Benzene	10.000	11.033	110.33	70-130
169 m,p-Xylene	10.000	11.127	111.27	70-130
171 o-Xylene	10.000	11.373	113.73	70-130
172 Styrene	10.000	12.026	120.26	70-130
174 Bromoform	13.000	17.196	132.28*	70-130
175 Cumene	10.000	11.699	116.99	70-130
181 1,1,2,2-Tetrachlor	10.000	11.882	118.82	70-130
182 Propylbenzene	10.000	11.161	111.61	70-130
188 4-Ethyltoluene	10.000	10.071	100.71	70-130
190 1,3,5-Trimethylben	10.000	11.421	114.21	70-130
196 1,2,4-Trimethylben	10.000	10.937	109.37	70-130
208 1,3-Dichlorobenzen	10.000	10.315	103.15	70-130
209 1,4-Dichlorobenzen	10.000	9.887	98.87	70-130
212 alpha-Chlorotoluen	10.000	13.643	136.43*	70-130
214 1,2-Dichlorobenzen	10.000	10.515	105.15	70-130
226 1,2,4-Trichloroben	10.000	8.639	86.39	70-130
227 Hexachlorobutadien	10.000	8.351	83.51	70-130
228 Naphthalene	1.000	0.8336	83.36	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.221	104.42	70-130
$ 146 Toluene-d8	5.000	5.376	107.51	70-130
$ 177 4-Bromofluorobenze	5.000	5.215	104.30	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd20.i/19Jul2016.b/20071904.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 19-JUL-2016 09:24
Operator : ef Inst ID: msd20.i
Smp Info : 50mL# 2789-168
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msd20.i/19Jul2016.b/2016l0624b.m
Meth Date : 19-Jul-2016 08:35 efinn Quant Type: ISTD
Cal Date : 18-JUL-2016 11:53 Cal File: 20071807.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
16.726	16.726 (1.000)	130	119439	5.00000		80.00- 120.00	100.00
16.726	16.726 (1.000)	128	92354			47.94- 107.94	77.32
16.726	16.726 (1.000)	49	169047			102.10- 162.10	141.53
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
18.231	18.231 (1.000)	114	441816	5.00000		80.00- 120.00	100.00
18.231	18.231 (1.000)	88	70305			0.00- 45.77	15.91
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
23.761	23.761 (1.000)	117	390155	5.00000		80.00- 120.00	100.00
23.761	23.761 (1.000)	82	223570			26.51- 86.51	57.30
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
17.641	17.641 (1.055)	65	180882	5.22115	5.221	80.00- 120.00	100.00
17.641	17.621 (1.055)	67	107552			32.47- 92.47	59.46
$ 146 Toluene-d8					CAS #: 2037-26-5		
20.821	20.822 (1.142)	98	458737	5.37575	5.376	80.00- 120.00	100.00
20.821	20.822 (1.142)	70	56599			0.00- 41.37	12.34

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
20.821	20.822 (1.142)	100	309401			36.07- 96.07	67.45
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
25.485	25.485 (1.073)	174	218463	5.21518	5.215	80.00- 120.00	100.00
25.466	25.466 (1.072)	95	270802			89.67- 149.67	123.96
25.485	25.485 (1.073)	176	212531			67.40- 127.40	97.28
9 Propylene					CAS #: 115-07-1		
4.166	4.166 (0.249)	41	340144	10.8386	10.838	80.00- 120.00	100.00
4.142	4.190 (0.248)	42	228154			37.70- 97.70	67.08
4.142	4.142 (0.248)	39	251864			41.61- 101.61	74.05
11 Freon 12					CAS #: 75-71-8		
4.648	4.672 (0.278)	85	1197022	11.8002	11.800	80.00- 120.00	100.00
4.648	4.672 (0.278)	87	383668			2.54- 62.54	32.05
15 Freon 114					CAS #: 76-14-2		
6.215	6.215 (0.372)	135	768461	10.9695	10.969	80.00- 120.00	100.00
6.215	6.215 (0.372)	137	243540			1.78- 61.78	31.69
6.191	6.215 (0.370)	85	1079021			116.61- 176.61	140.41
17 Chloromethane					CAS #: 74-87-3		
6.552	6.577 (0.392)	50	366365	10.7860	10.786	80.00- 120.00	100.00
6.552	6.553 (0.392)	52	119001			3.03- 63.03	32.48
23 Butane					CAS #: 106-97-8		
7.416	7.434 (0.443)	58	90558	10.8772	10.877	80.00- 120.00	100.00
7.416	7.416 (0.443)	43	641357			656.82- 716.82	708.23
25 Vinyl Chloride					CAS #: 75-01-4		
7.573	7.573 (0.453)	62	414245	10.9336	10.934	80.00- 120.00	100.00
7.573	7.590 (0.453)	64	132273			1.50- 61.50	31.93
26 1,3-Butadiene					CAS #: 106-99-0		
7.868	7.868 (0.470)	54	301247	10.3917	10.392	80.00- 120.00	100.00
7.868	7.868 (0.470)	39	303806			69.00- 129.00	100.85
29 Bromomethane					CAS #: 74-83-9		
9.596	9.596 (0.574)	94	239913	9.99735	9.997	80.00- 120.00	100.00
9.596	9.596 (0.574)	96	222948			63.60- 123.60	92.93
30 Chloroethane					CAS #: 75-00-3		
10.174	10.174 (0.608)	64	192492	11.2264	11.226	80.00- 120.00	100.00
10.174	10.174 (0.608)	49	51078			0.00- 55.63	26.54
10.174	10.174 (0.608)	66	60804			2.70- 62.70	31.59

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 Isopentane					CAS #: 78-78-4		
10.367	10.367 (0.620)	57	301554	10.1908	10.191	80.00- 120.00	100.00
10.367	10.367 (0.620)	43	454882			115.62- 175.62	150.85
10.367	10.367 (0.620)	42	413771			100.35- 160.35	137.21
35 Freon 11					CAS #: 75-69-4		
11.114	11.114 (0.664)	101	1067545	10.8889	10.889	80.00- 120.00	100.00
11.114	11.114 (0.664)	103	683186			34.91- 94.91	64.00
42 Ethanol					CAS #: 64-17-5		
12.269	12.269 (0.734)	45	137571	10.8417	10.842	80.00- 120.00	100.00
12.269	12.269 (0.734)	46	54321			11.72- 71.72	39.49
12.269	12.269 (0.734)	43	34731			0.00- 52.99	25.25
49 Freon 113					CAS #: 76-13-1		
12.763	12.763 (0.763)	151	630735	9.52885	9.529	80.00- 120.00	100.00
12.763	12.763 (0.763)	153	406421			34.49- 94.49	64.44
12.763	12.763 (0.763)	101	813423			96.39- 156.39	128.96
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.736	12.736 (0.761)	98	219268	9.57681	9.577	80.00- 120.00	100.00
12.736	12.736 (0.761)	61	601640			227.70- 287.70	274.39
12.736	12.736 (0.761)	96	346299			125.12- 185.12	157.93
52 Acetone					CAS #: 67-64-1		
13.093	13.093 (0.783)	58	178249	9.78995	9.790	80.00- 120.00	100.00
13.093	13.093 (0.783)	43	592636			278.33- 338.33	332.48
56 Carbon Disulfide					CAS #: 75-15-0		
13.120	13.121 (0.784)	76	986904	9.58909	9.589	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
13.533	13.533 (0.809)	45	600804	10.6694	10.669	80.00- 120.00	100.00
13.533	13.533 (0.809)	43	157558			0.00- 52.04	26.22
13.533	13.533 (0.809)	59	24203			0.00- 34.17	4.03
58 3-Chloropropene					CAS #: 107-05-1		
13.697	13.697 (0.819)	76	149613	10.2389	10.239	80.00- 120.00	100.00
13.697	13.697 (0.819)	41	428912			236.04- 296.04	286.68
66 Methylene Chloride					CAS #: 75-09-2		
14.027	14.027 (0.839)	84	365649	9.84928	9.849	80.00- 120.00	100.00
14.027	14.027 (0.839)	49	494537			97.79- 157.79	135.25
14.027	14.027 (0.839)	51	151572			9.84- 69.84	41.45
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
14.439	14.439 (0.863)	73	1005284	9.80054	9.800	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
14.439	14.439 (0.863)	57	227472			0.00- 52.45	22.63
14.439	14.439 (0.863)	41	268405			0.00- 53.55	26.70
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
14.494	14.494 (0.866)	98	215187	8.71806	8.718	80.00- 120.00	100.00
14.494	14.494 (0.866)	61	502044			194.43- 254.43	233.31
14.494	14.494 (0.866)	96	340907			127.78- 187.78	158.42
78 Hexane					CAS #: 110-54-3		
14.878	14.878 (0.889)	57	589843	10.2017	10.202	80.00- 120.00	100.00
14.878	14.878 (0.889)	43	387691			33.20- 93.20	65.73
14.878	14.878 (0.889)	86	102088			0.00- 48.21	17.31
82 1,1-Dichloroethane					CAS #: 75-34-3		
15.345	15.345 (0.917)	63	733328	10.3298	10.330	80.00- 120.00	100.00
15.345	15.345 (0.917)	65	233148			1.84- 61.84	31.79
86 Vinyl Acetate					CAS #: 108-05-4		
15.400	15.400 (0.921)	86	87557	9.89843	9.898	80.00- 120.00	100.00
15.400	15.400 (0.921)	42	82678			55.70- 115.70	94.43
15.400	15.400 (0.921)	43	936233			963.84-1023.84	1069.28
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
16.323	16.324 (0.976)	98	285917	11.0105	11.010	80.00- 120.00	100.00
16.323	16.324 (0.976)	61	614036			172.98- 232.98	214.76
16.323	16.324 (0.976)	96	446606			124.81- 184.81	156.20
92 2-Butanone					CAS #: 78-93-3		
16.344	16.344 (0.977)	72	191616	10.3746	10.375	80.00- 120.00	100.00
16.344	16.344 (0.977)	43	758617			345.54- 405.54	395.90
16.344	16.344 (0.977)	57	58741			0.00- 59.64	30.66
99 Tetrahydrofuran					CAS #: 109-99-9		
16.696	16.696 (0.998)	42	454707	10.5862	10.586	80.00- 120.00	100.00
16.696	16.696 (0.998)	71	174618			10.37- 70.37	38.40
16.696	16.696 (0.998)	72	185738			13.30- 73.30	40.85
100 Chloroform					CAS #: 67-66-3		
16.819	16.819 (1.006)	83	866031	10.7624	10.762	80.00- 120.00	100.00
16.819	16.819 (1.006)	85	559887			35.08- 95.08	64.65
102 Cyclohexane					CAS #: 110-82-7		
17.035	17.035 (1.018)	84	557607	10.0715	10.072	80.00- 120.00	100.00
17.035	17.035 (1.018)	56	646417			82.51- 142.51	115.93
17.035	17.035 (1.018)	41	372860			30.91- 90.91	66.87

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
17.065	17.066 (1.020)	97	900495	10.7585	10.758	80.00- 120.00	100.00
17.065	17.066 (1.020)	99	573552			34.55- 94.55	63.69
106 Carbon Tetrachloride					CAS #: 56-23-5		
17.250	17.250 (1.031)	119	825435	11.8598	11.860	80.00- 120.00	100.00
17.250	17.250 (1.031)	117	864661			75.13- 135.13	104.75
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
17.579	17.579 (1.051)	56	607914	10.8157	10.816	80.00- 120.00	100.00
17.579	17.579 (1.051)	57	1778581			266.38- 326.38	292.57
17.579	17.579 (1.051)	41	503978			47.04- 107.04	82.90
116 Benzene					CAS #: 71-43-2		
17.620	17.621 (0.966)	78	1199357	11.1926	11.193	80.00- 120.00	100.00
17.620	17.621 (0.966)	77	281459			0.00- 54.04	23.47
120 1,2-Dichloroethane					CAS #: 107-06-2		
17.744	17.744 (0.973)	62	554160	11.7606	11.761	80.00- 120.00	100.00
17.744	17.744 (0.973)	64	177777			2.26- 62.26	32.08
121 Heptane					CAS #: 142-82-5		
17.847	17.847 (0.979)	57	350294	11.9886	11.988	80.00- 120.00	100.00
17.847	17.847 (0.979)	100	125320			9.17- 69.17	35.78
17.847	17.847 (0.979)	43	658026			158.08- 218.08	187.85
125 Trichloroethene					CAS #: 79-01-6		
18.610	18.610 (1.021)	130	529627	10.8286	10.829	80.00- 120.00	100.00
18.610	18.610 (1.021)	95	517436			67.33- 127.33	97.70
18.610	18.610 (1.021)	97	341145			32.56- 92.56	64.41
127 Methylcyclohexane					CAS #: 108-87-2		
18.833	18.834 (1.033)	83	703286	11.2569	11.257	80.00- 120.00	100.00
18.833	18.834 (1.033)	55	585399			48.63- 108.63	83.24
18.833	18.834 (1.033)	56	188778			0.00- 55.66	26.84
132 1,2-Dichloropropane					CAS #: 78-87-5		
19.057	19.079 (1.045)	63	474488	11.5587	11.559	80.00- 120.00	100.00
19.057	19.079 (1.045)	62	333948			41.89- 101.89	70.38
19.057	19.057 (1.045)	41	295618			27.78- 87.78	62.30
136 1,4-Dioxane					CAS #: 123-91-1		
19.213	19.213 (1.054)	88	282183	10.4544	10.454	80.00- 120.00	100.00
19.213	19.213 (1.054)	58	205903			39.29- 99.29	72.97
19.213	19.213 (1.054)	57	66130			0.00- 52.49	23.44

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
19.503	19.503 (0.821)	83	886618	12.2259	12.226	80.00- 120.00	100.00
19.503	19.503 (0.821)	85	564345			34.81- 94.81	63.65
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
20.338	20.339 (1.116)	75	699822	10.9296	10.930	80.00- 120.00	100.00
20.338	20.339 (1.116)	77	218343			1.96- 61.96	31.20
20.338	20.339 (1.116)	39	366211			18.92- 78.92	52.33
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
20.557	20.572 (1.128)	43	927272	12.6562	12.656	80.00- 120.00	100.00
20.572	20.572 (1.128)	58	356185			9.48- 69.48	38.41
20.557	20.572 (1.128)	85	153511			0.00- 47.76	16.56
147 Toluene					CAS #: 108-88-3		
20.962	20.962 (1.150)	91	1305189	11.3612	11.361	80.00- 120.00	100.00
20.962	20.962 (1.150)	92	777661			30.04- 90.04	59.58
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
21.564	21.564 (0.908)	75	645196	11.8054	11.805	80.00- 120.00	100.00
21.564	21.564 (0.908)	77	204815			1.00- 61.00	31.74
21.535	21.564 (0.906)	39	321712			15.93- 75.93	49.86
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
21.999	22.000 (0.926)	97	507014	10.6354	10.635	80.00- 120.00	100.00
21.999	22.000 (0.926)	99	315500			32.15- 92.15	62.23
21.999	22.000 (0.926)	83	441396			55.54- 115.54	87.06
156 Tetrachloroethene					CAS #: 127-18-4		
22.174	22.174 (0.933)	166	702524	10.4150	10.415	80.00- 120.00	100.00
22.145	22.174 (0.932)	129	510088			40.48- 100.48	72.61
22.174	22.174 (0.933)	131	488841			38.27- 98.27	69.58
158 2-Hexanone					CAS #: 591-78-6		
22.406	22.406 (0.943)	58	442295	11.3305	11.330	80.00- 120.00	100.00
22.406	22.406 (0.943)	43	843173			153.17- 213.17	190.64
22.406	22.406 (0.943)	100	96416			0.00- 52.35	21.80
160 Dibromochloromethane					CAS #: 124-48-1		
22.784	22.784 (0.959)	129	902921	12.6001	12.600	80.00- 120.00	100.00
22.784	22.784 (0.959)	127	698646			46.57- 106.57	77.38
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
23.045	23.045 (0.970)	107	774760	11.1118	11.112	80.00- 120.00	100.00
23.045	23.045 (0.970)	109	726437			64.70- 124.70	93.76

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
23.823	23.823 (1.003)	112	1061551	10.6503	10.650	80.00- 120.00	100.00
23.823	23.823 (1.003)	114	336216			2.37- 62.37	31.67
23.823	23.823 (1.003)	77	633170			28.30- 88.30	59.65
167 Ethyl Benzene					CAS #: 100-41-4		
23.906	23.906 (1.006)	106	504146	11.0329	11.033	80.00- 120.00	100.00
23.906	23.906 (1.006)	91	1614893			282.65- 342.65	320.32
169 m,p-Xylene					CAS #: 108-38-3		
24.091	24.091 (1.014)	106	544792	11.1274	11.127	80.00- 120.00	100.00
24.091	24.091 (1.014)	91	1096274			170.44- 230.44	201.23
171 o-Xylene					CAS #: 95-47-6		
24.710	24.710 (1.040)	106	526698	11.3728	11.373	80.00- 120.00	100.00
24.710	24.710 (1.040)	91	1114446			177.28- 237.28	211.59
172 Styrene					CAS #: 100-42-5		
24.751	24.751 (1.042)	104	793779	12.0260	12.026	80.00- 120.00	100.00
24.731	24.731 (1.041)	78	422792			22.29- 82.29	53.26
174 Bromoform					CAS #: 75-25-2		
25.068	25.068 (1.055)	173	1209042	17.1962	17.196	80.00- 120.00	100.00(R)
25.068	25.068 (1.055)	171	623623			20.98- 80.98	51.58
175 Cumene					CAS #: 98-82-8		
25.182	25.182 (1.060)	105	1753225	11.6992	11.699	80.00- 120.00	100.00
25.182	25.182 (1.060)	120	468432			0.00- 56.93	26.72
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
25.656	25.656 (1.080)	83	1111789	11.8823	11.882	80.00- 120.00	100.00
25.656	25.656 (1.080)	85	716214			33.69- 93.69	64.42
182 Propylbenzene					CAS #: 103-65-1		
25.732	25.732 (1.083)	91	1650922	11.1608	11.161	80.00- 120.00	100.00
25.732	25.732 (1.083)	120	373095			0.00- 53.87	22.60
188 4-Ethyltoluene					CAS #: 622-96-8		
25.864	25.864 (1.089)	105	1258198	10.0712	10.071	80.00- 120.00	100.00
25.864	25.864 (1.089)	120	381694			0.21- 60.21	30.34
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
25.940	25.940 (1.092)	105	1205626	11.4208	11.421	80.00- 120.00	100.00
25.940	25.940 (1.092)	120	597646			20.26- 80.26	49.57
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
26.395	26.395 (1.111)	105	1158661	10.9372	10.937	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
26.395	26.395 (1.111)	120	546518			17.68- 77.68	47.17
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
26.794	26.794 (1.128)	146	810147	10.3152	10.315	80.00- 120.00	100.00
26.794	26.810 (1.128)	148	524274			34.18- 94.18	64.71
26.794	26.794 (1.128)	111	332880			9.70- 69.70	41.09
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
26.919	26.919 (1.133)	146	729565	9.88664	9.887	80.00- 120.00	100.00
26.919	26.919 (1.133)	148	465816			34.47- 94.47	63.85
26.919	26.919 (1.133)	111	281561			8.85- 68.85	38.59
212 alpha-Chlorotoluene					CAS #: 100-44-7		
27.075	27.075 (1.139)	91	1108198	13.6431	13.643	80.00- 120.00	100.00(R)
27.075	27.075 (1.139)	126	225206			0.00- 51.19	20.32
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
27.371	27.371 (1.152)	146	741298	10.5147	10.515	80.00- 120.00	100.00
27.371	27.371 (1.152)	148	470257			33.68- 93.68	63.44
27.371	27.371 (1.152)	111	309551			11.24- 71.24	41.76
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
29.382	29.382 (1.237)	180	562105	8.63941	8.639	80.00- 120.00	100.00
29.382	29.382 (1.237)	182	541936			63.91- 123.91	96.41
227 Hexachlorobutadiene					CAS #: 87-68-3		
29.491	29.491 (1.241)	225	418287	8.35125	8.351	80.00- 120.00	100.00
29.491	29.491 (1.241)	223	260826			31.90- 91.90	62.36
228 Naphthalene					CAS #: 91-20-3		
29.772	29.772 (1.253)	128	73884	0.83357	0.8336	80.00- 120.00	100.00
29.772	29.772 (1.253)	127	9144			0.00- 42.99	12.38

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd20.i
Lab File ID: 20071904.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msd20.i/19Jul2016.b/2016l0624b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 19-JUL-2016
Calibration Time: 07:30
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	115886	69532	162240	119439	3.07
123 1,4-Difluorobenze	406395	243837	568953	441816	8.72
163 Chlorobenzene-d5	363239	217943	508535	390155	7.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	16.73	16.40	17.06	16.73	0.00
123 1,4-Difluorobenze	18.23	17.90	18.56	18.23	0.00
163 Chlorobenzene-d5	23.76	23.43	24.09	23.76	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/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

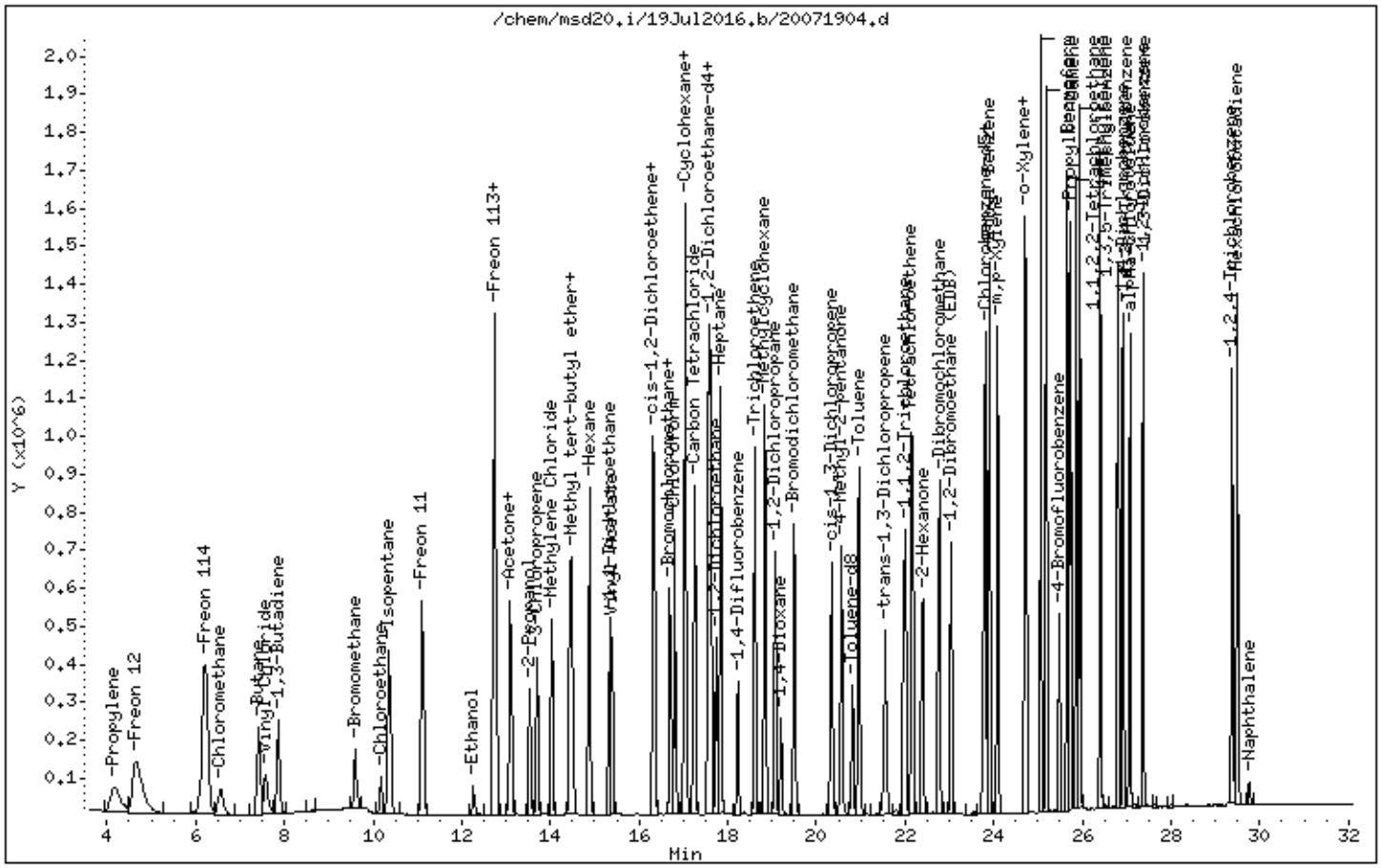
Instrument: msd20.i

Sample Info: 50mL# 2789-168

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

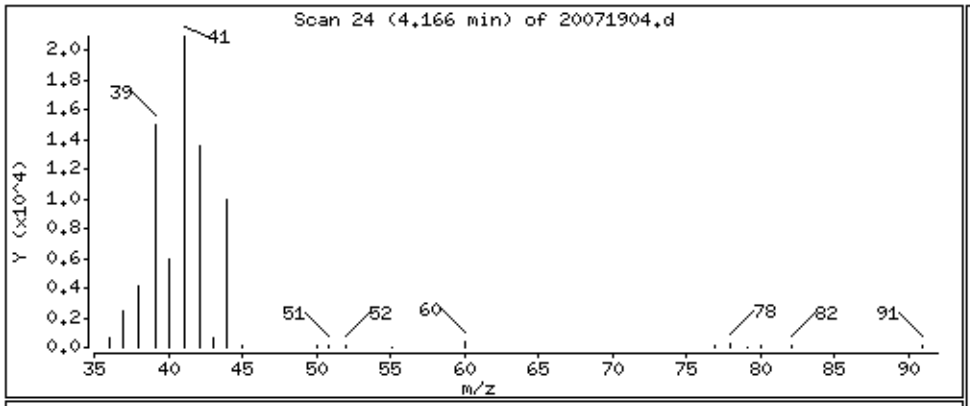
Operator: ef

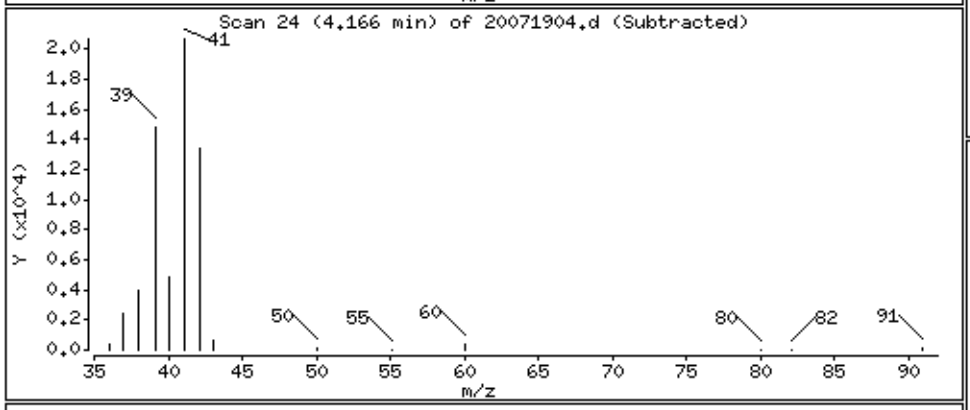
Column phase: RTX-624

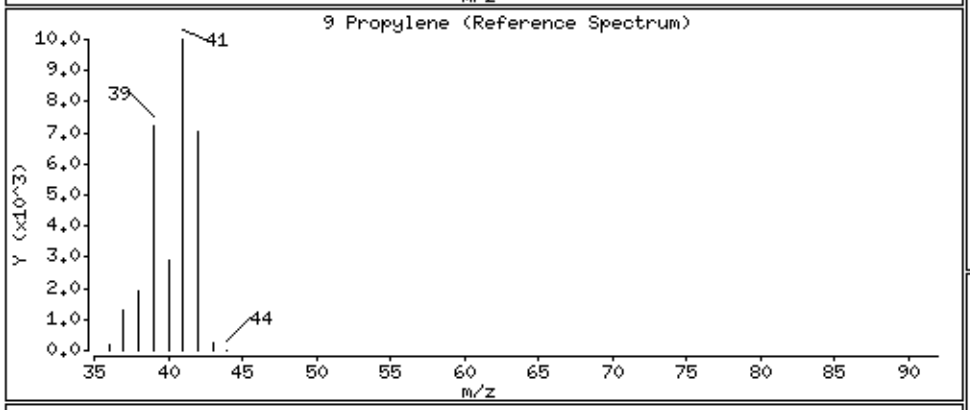
Column diameter: 0.32

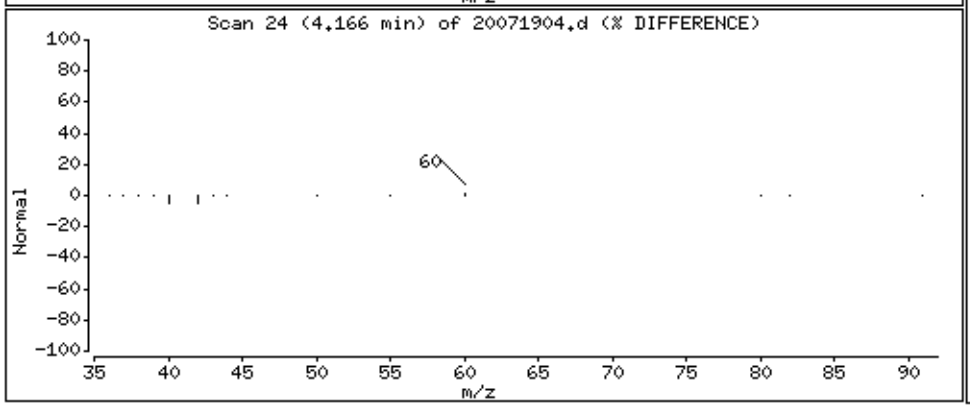
9 Propylene

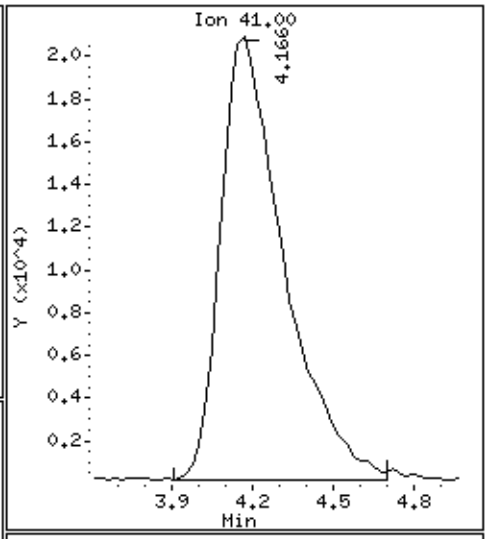
Concentration: 10.838 PPBV

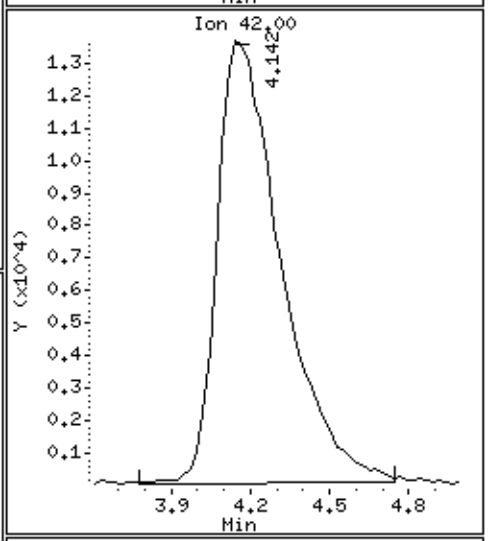


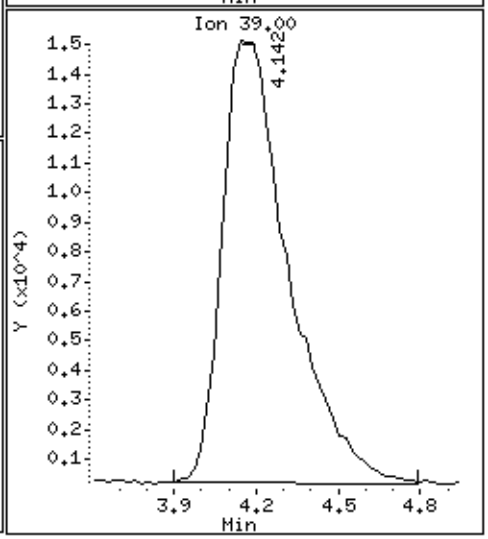












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

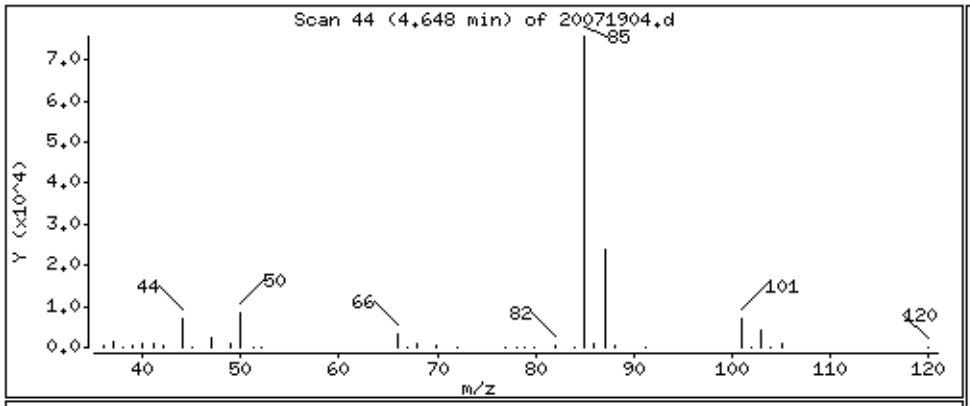
Operator: ef

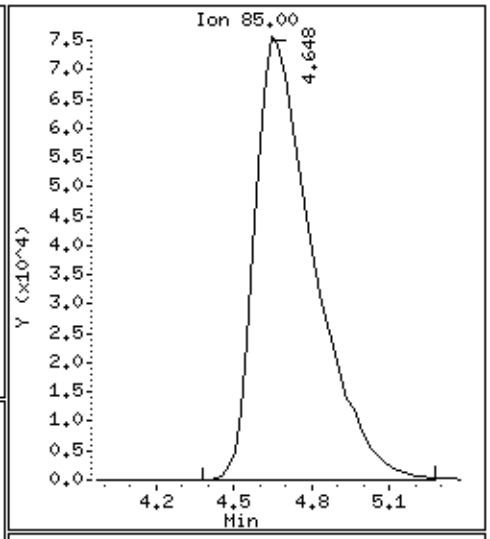
Column phase: RTX-624

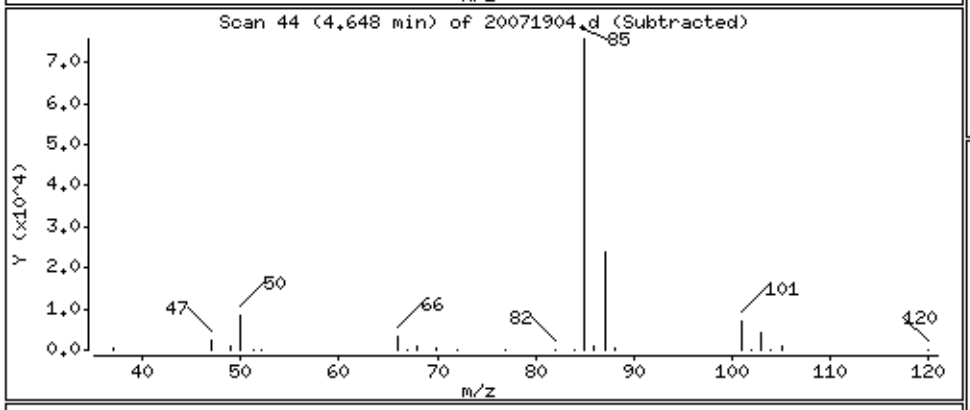
Column diameter: 0.32

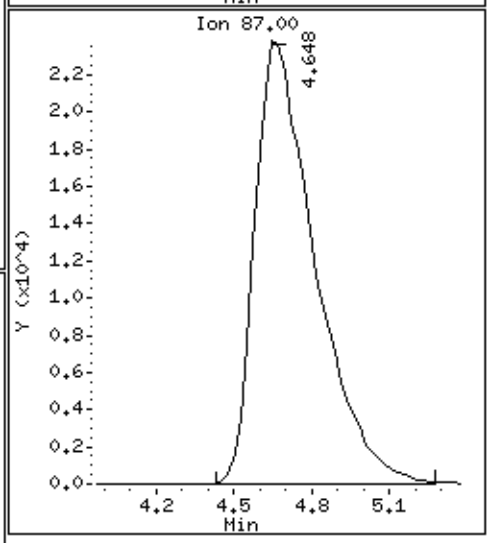
11 Freon 12

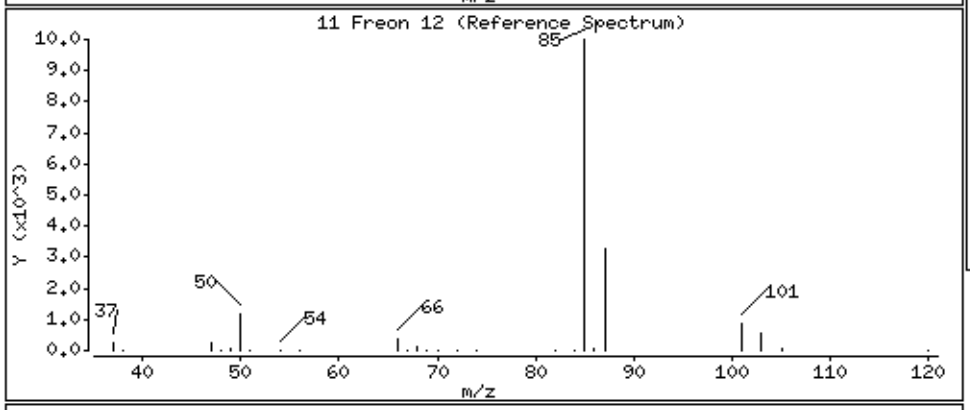
Concentration: 11.800 PPBV

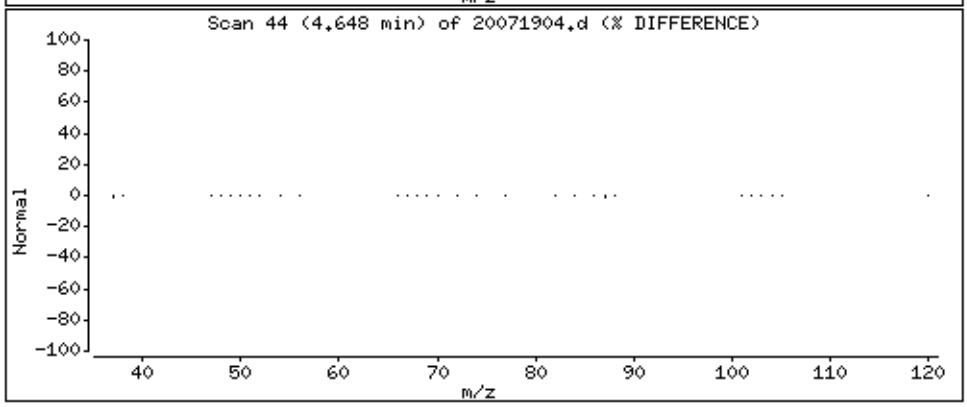












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

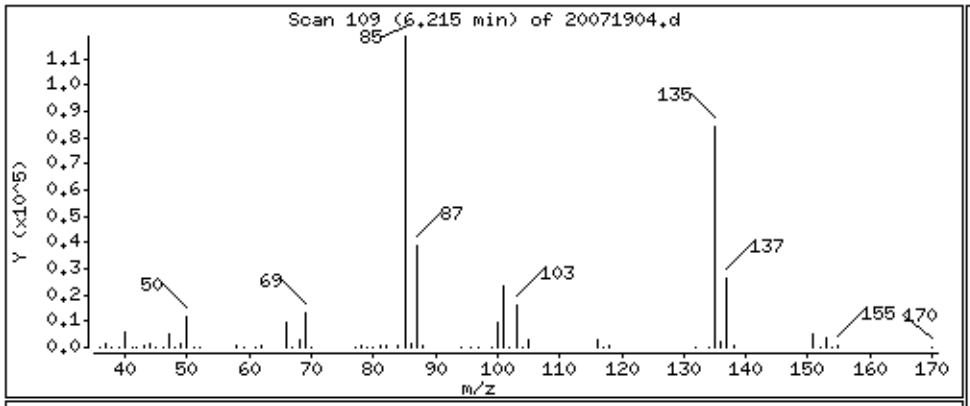
Operator: ef

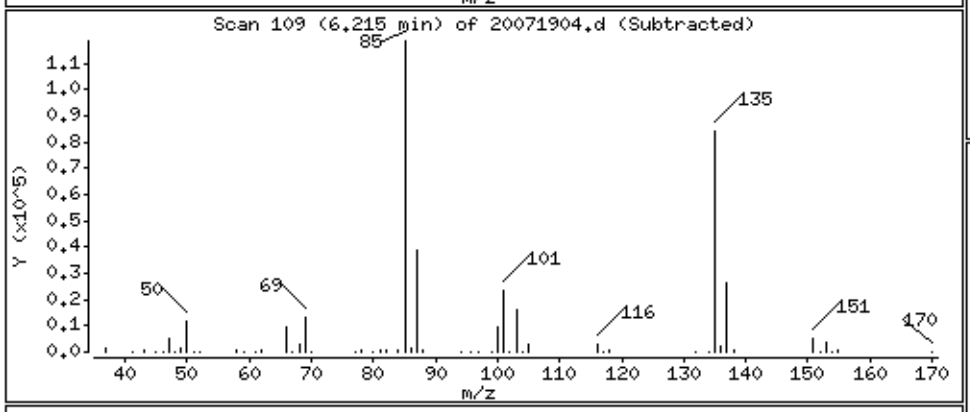
Column phase: RTX-624

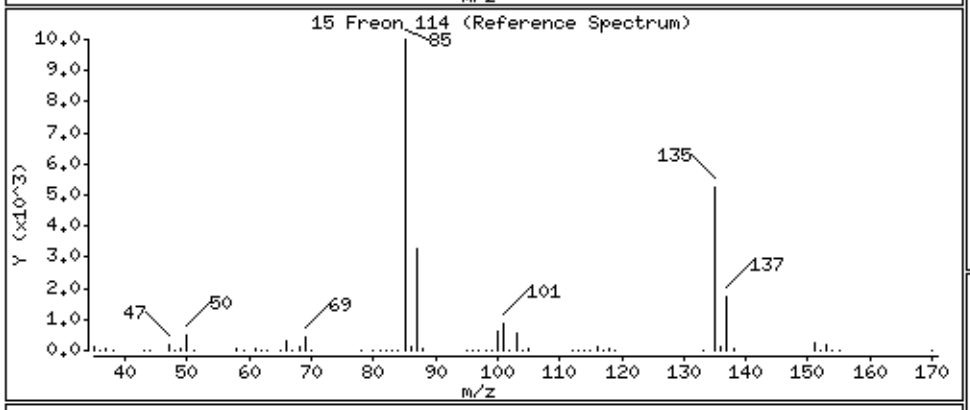
Column diameter: 0.32

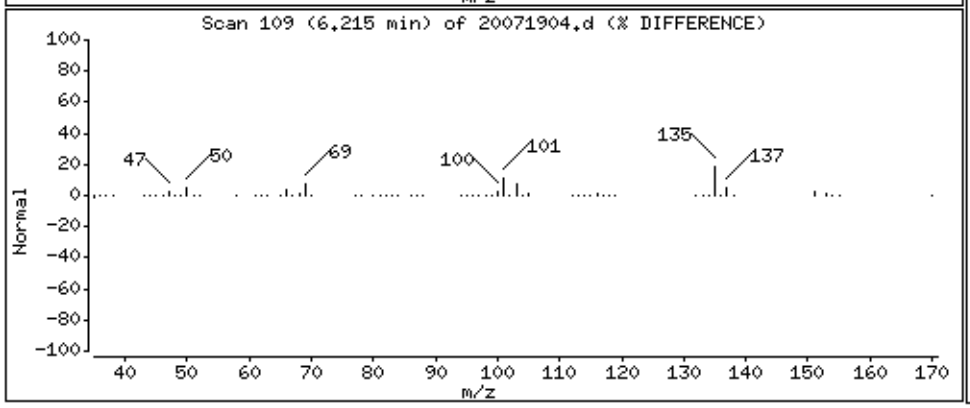
15 Freon 114

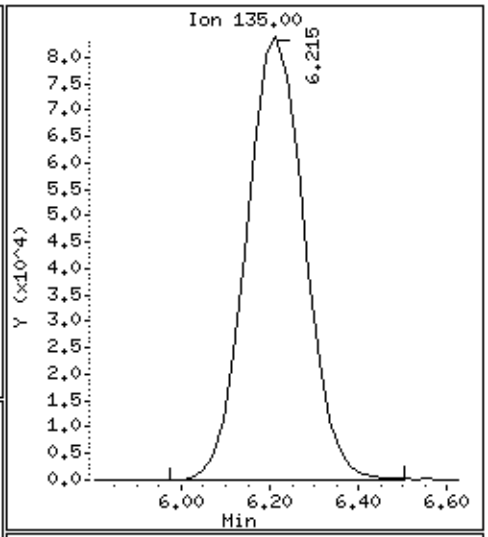
Concentration: 10.969 PPBV

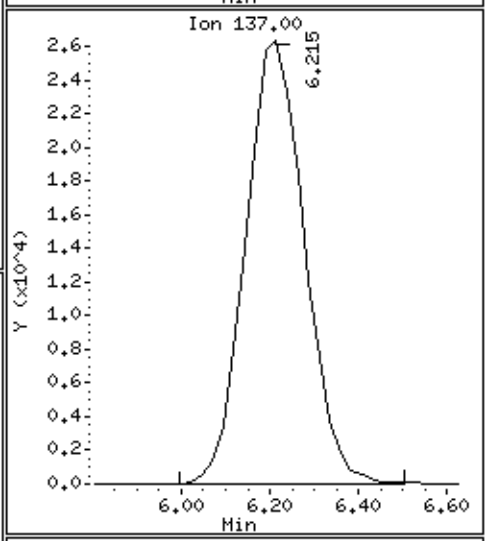


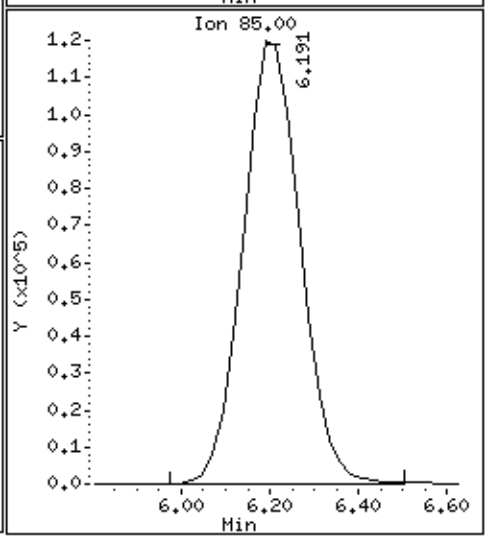












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

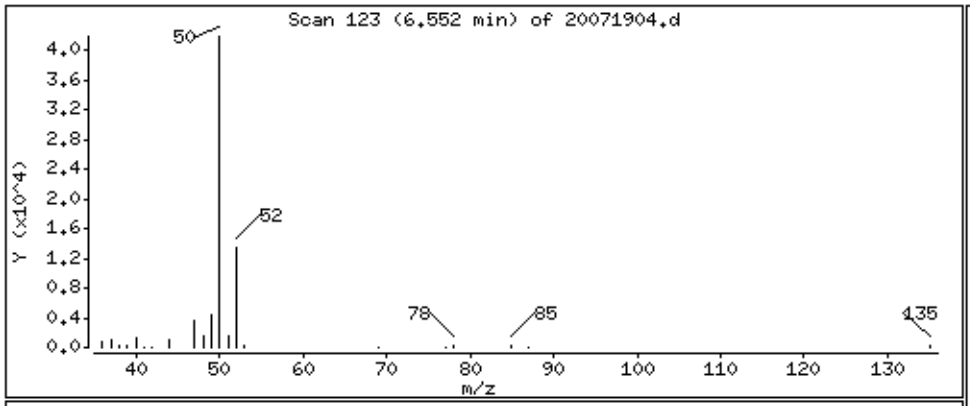
Operator: ef

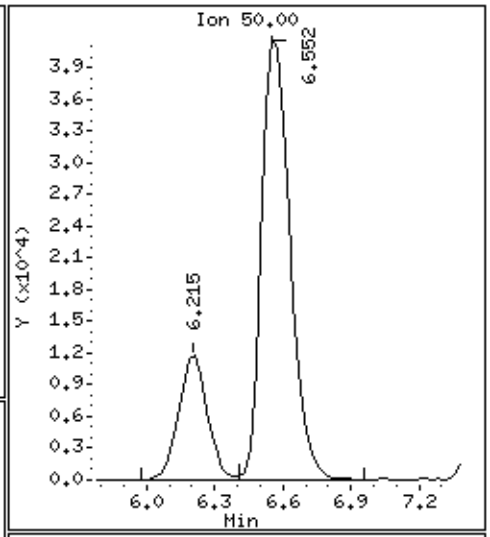
Column phase: RTX-624

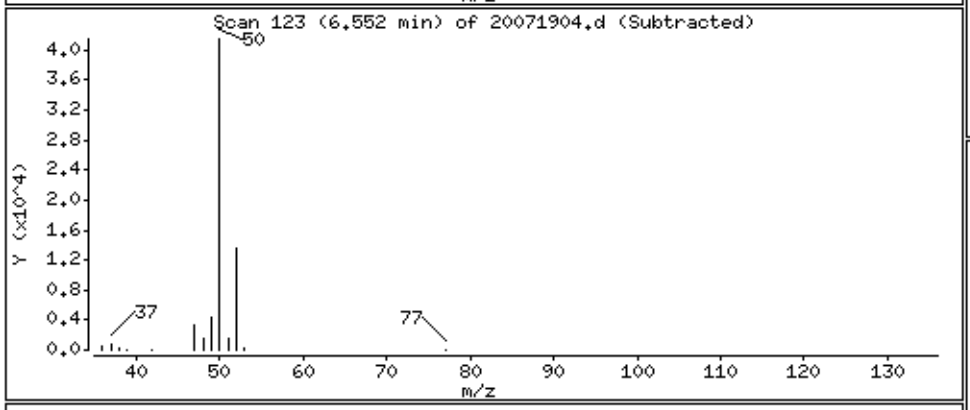
Column diameter: 0.32

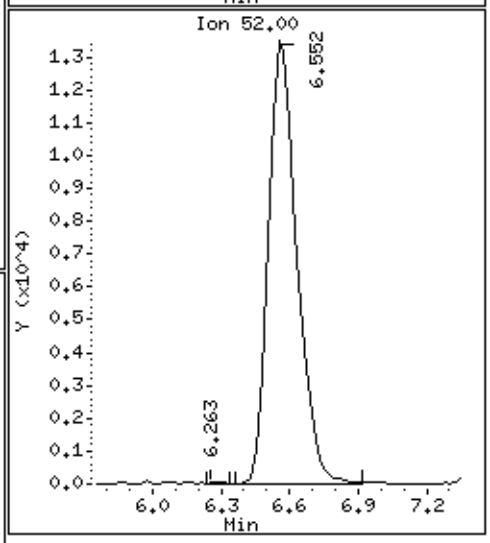
17 Chloromethane

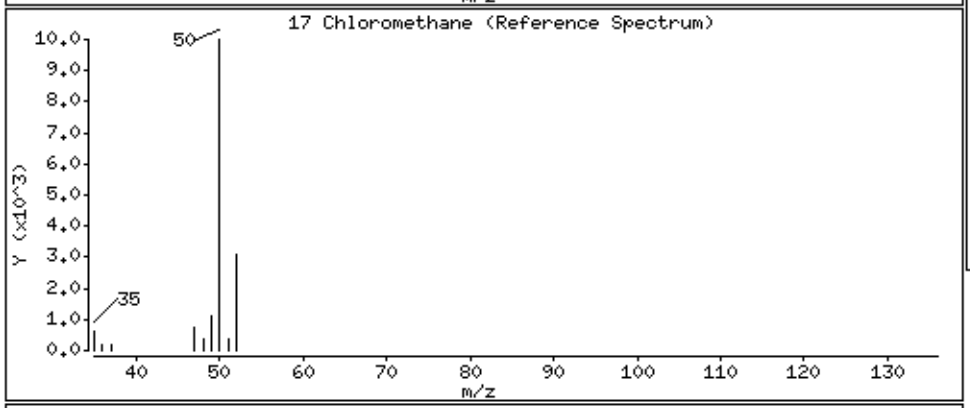
Concentration: 10.786 PPBV

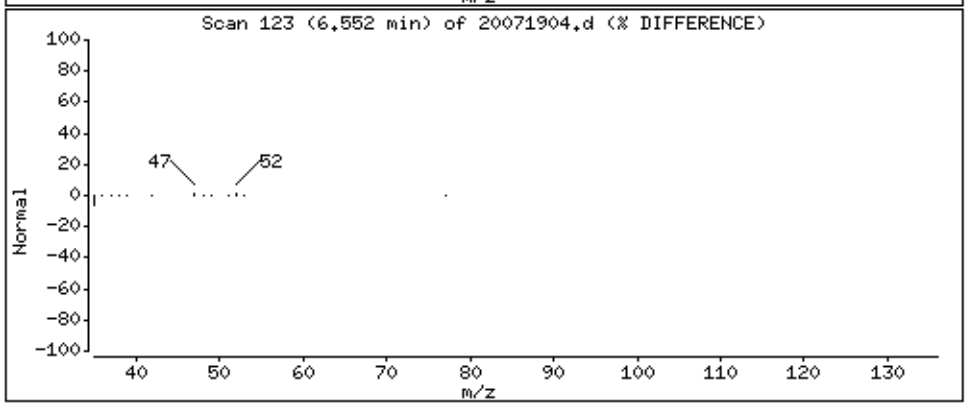












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

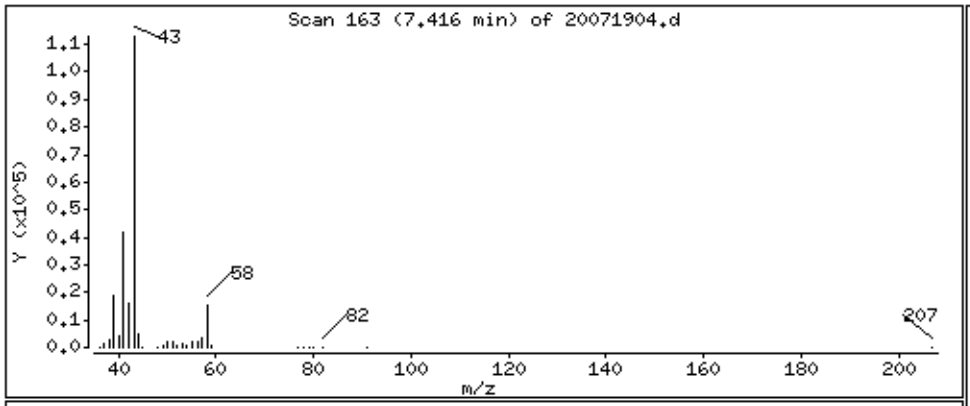
Operator: ef

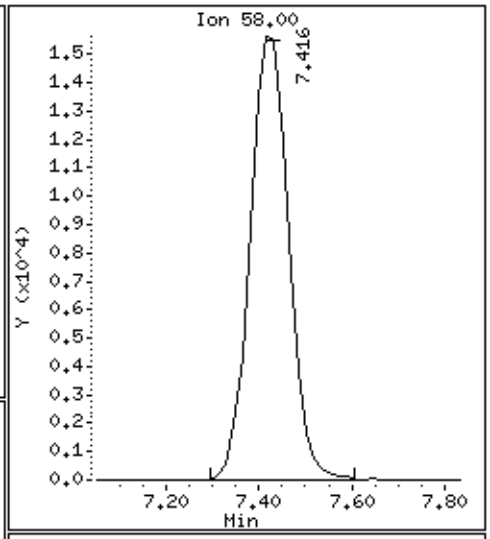
Column phase: RTX-624

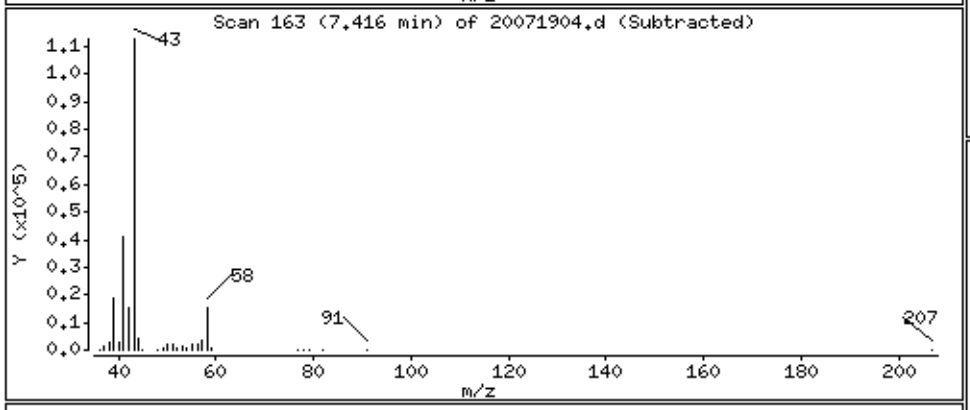
Column diameter: 0.32

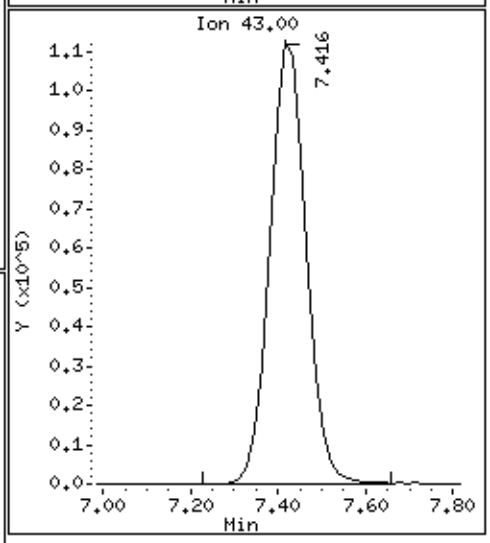
23 Butane

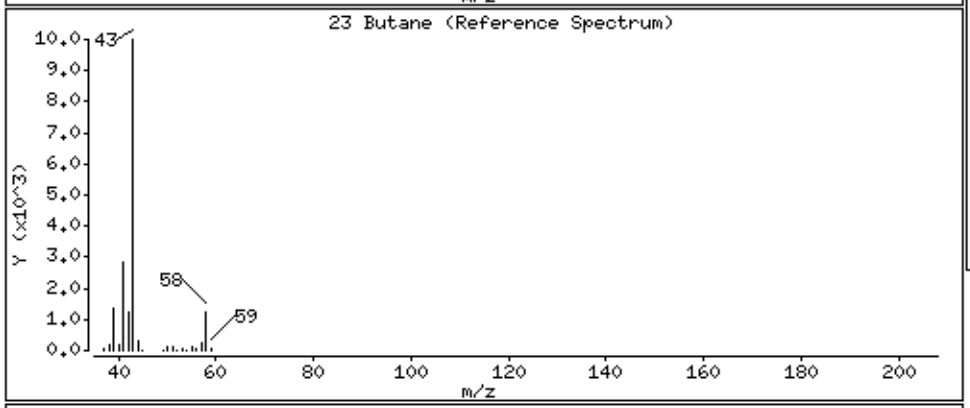
Concentration: 10.877 PPBV

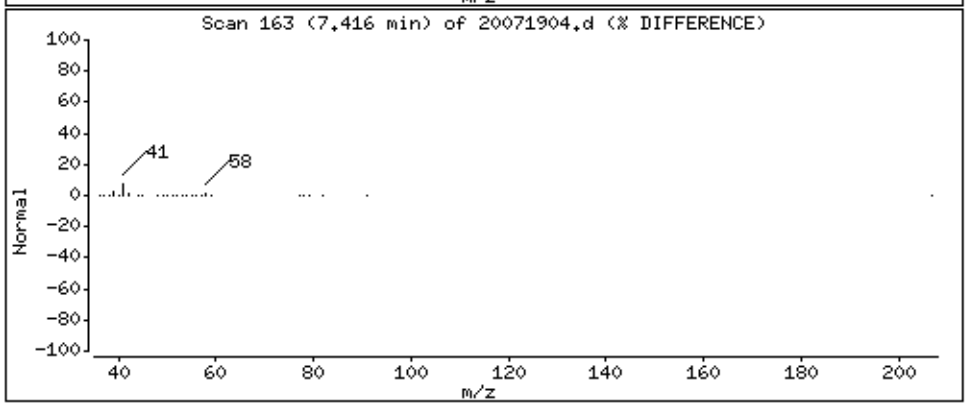












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

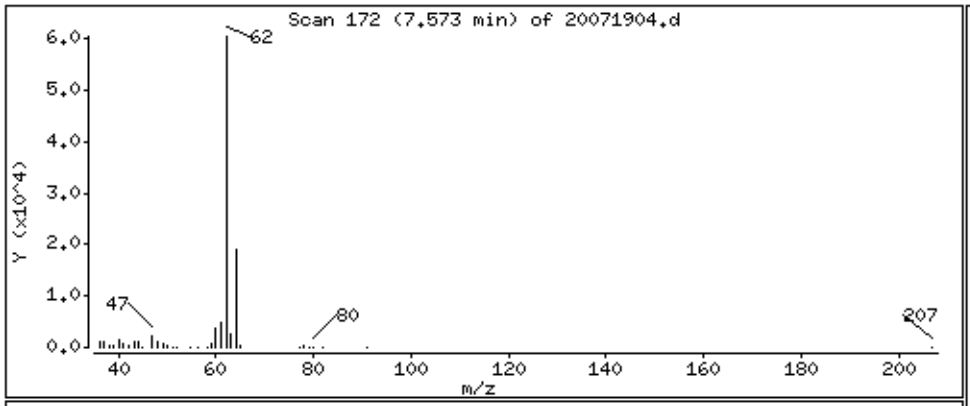
Operator: ef

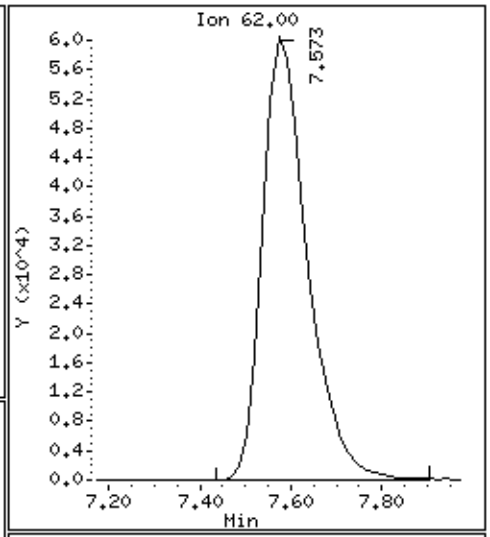
Column phase: RTX-624

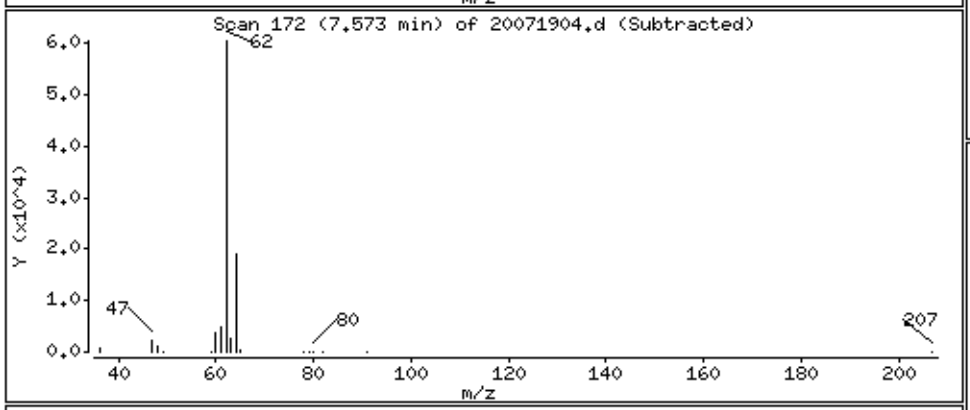
Column diameter: 0.32

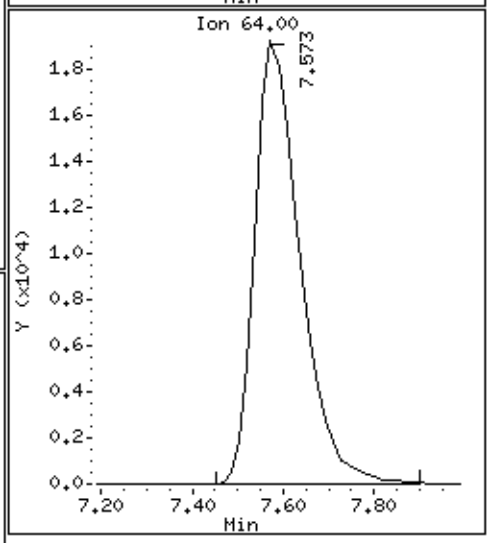
25 Vinyl Chloride

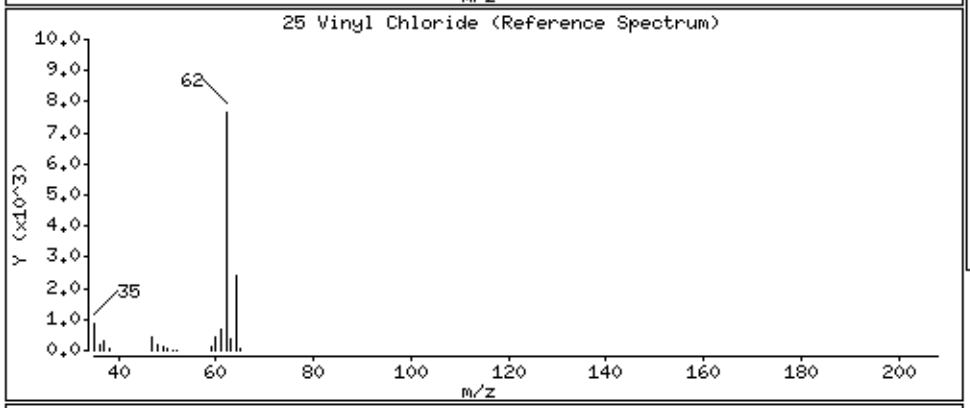
Concentration: 10.934 PPBV

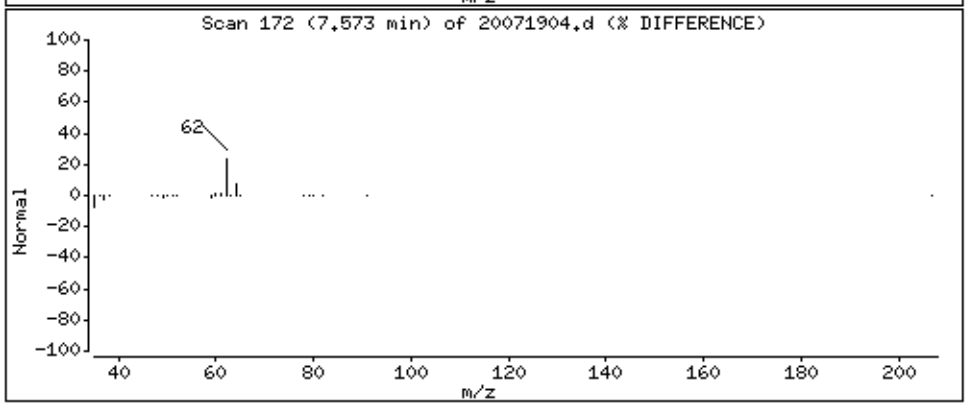












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

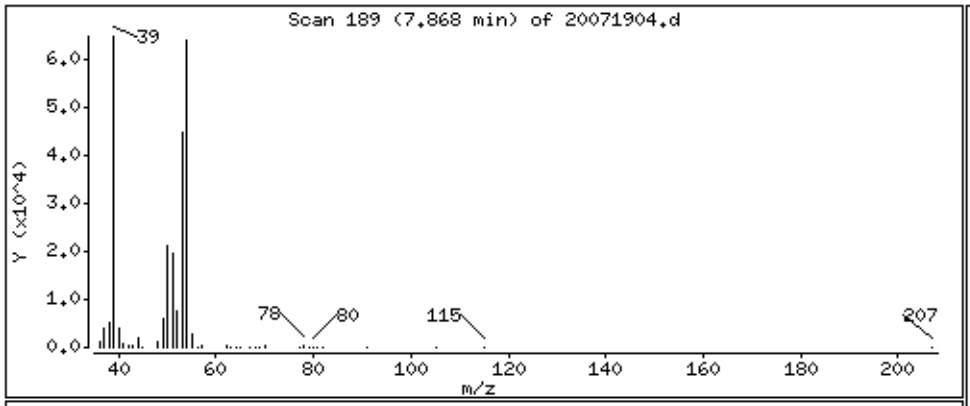
Operator: ef

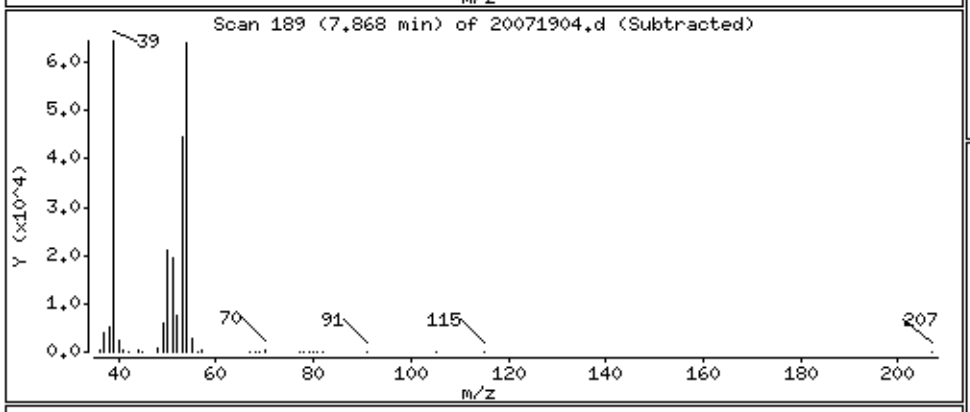
Column phase: RTX-624

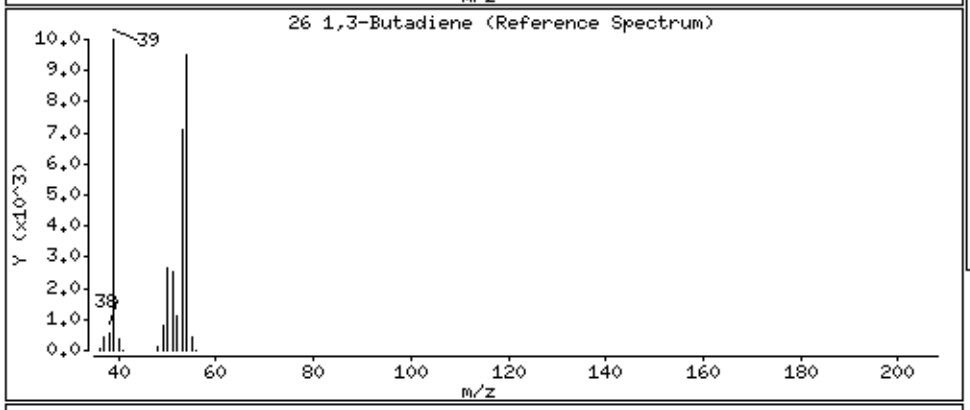
Column diameter: 0.32

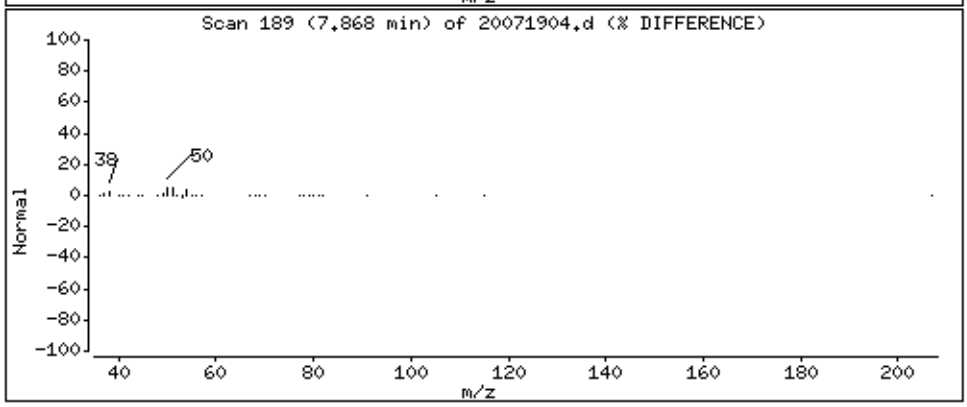
26 1,3-Butadiene

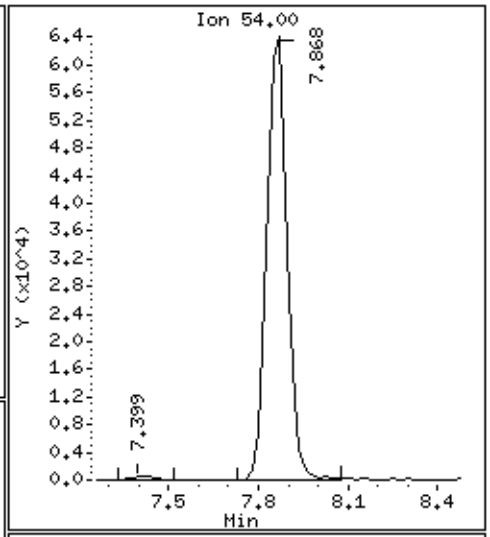
Concentration: 10.392 PPBV

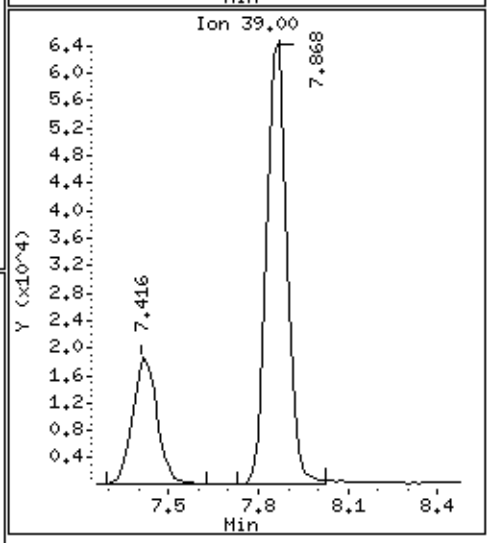












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

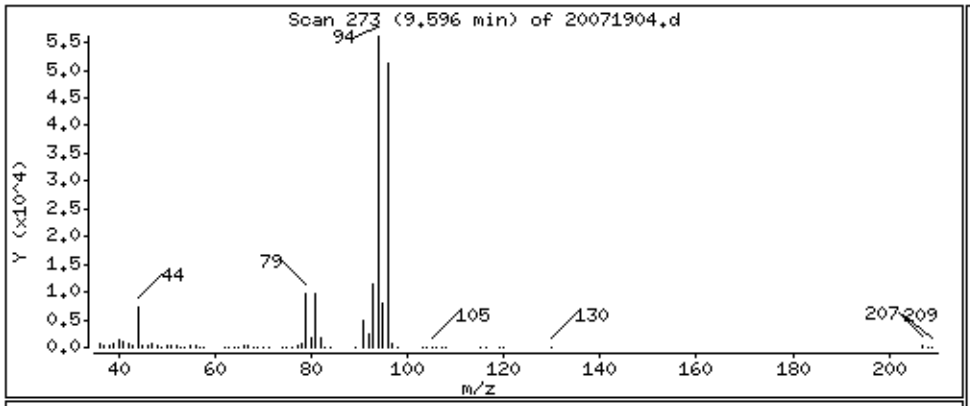
Operator: ef

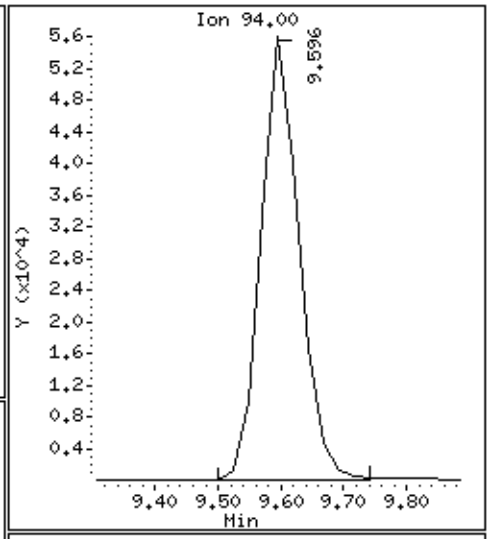
Column phase: RTX-624

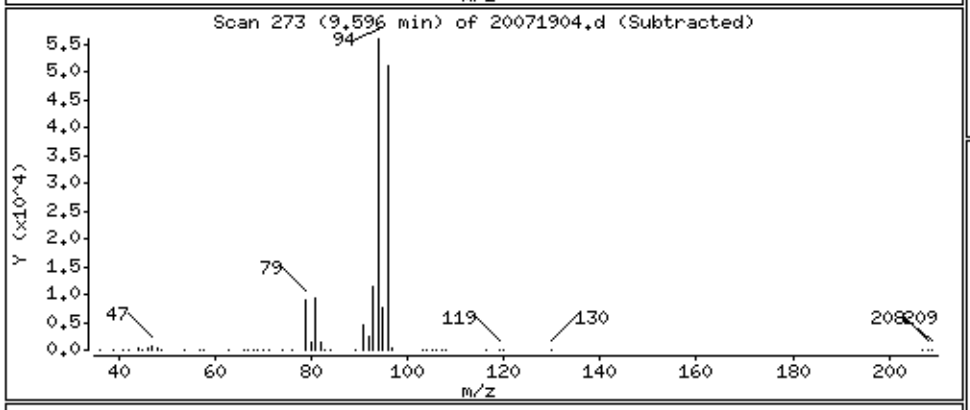
Column diameter: 0.32

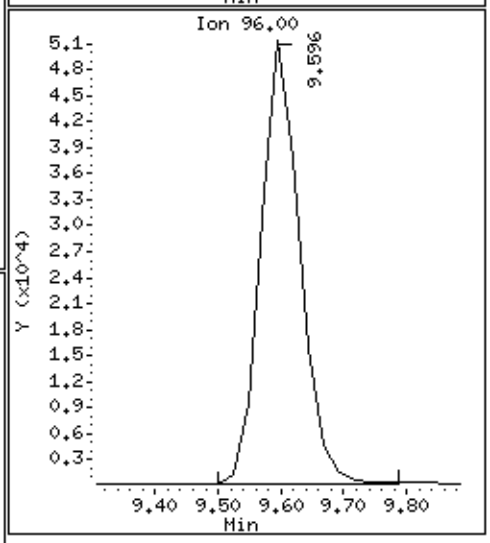
29 Bromomethane

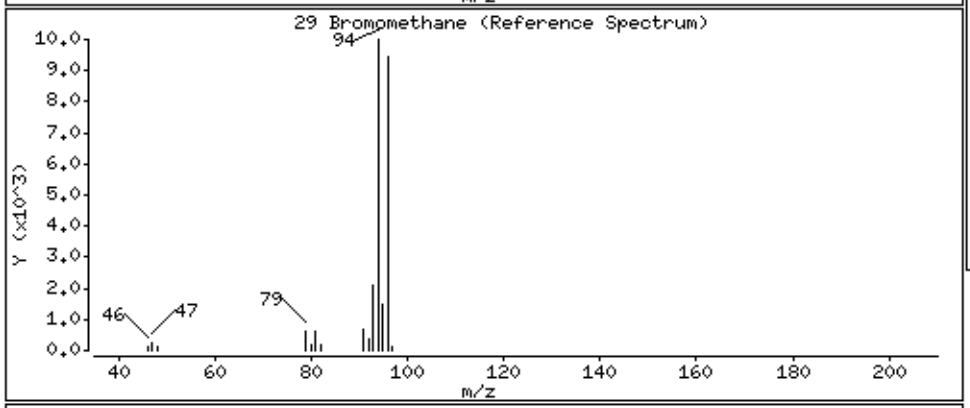
Concentration: 9.997 PPBV

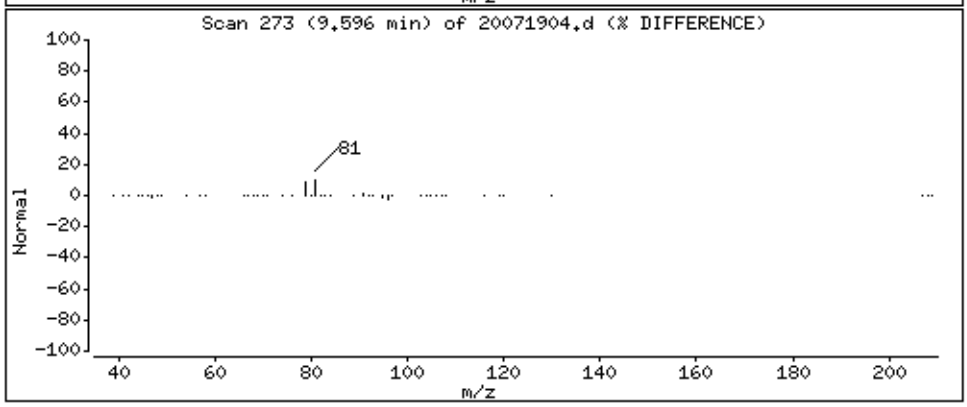












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

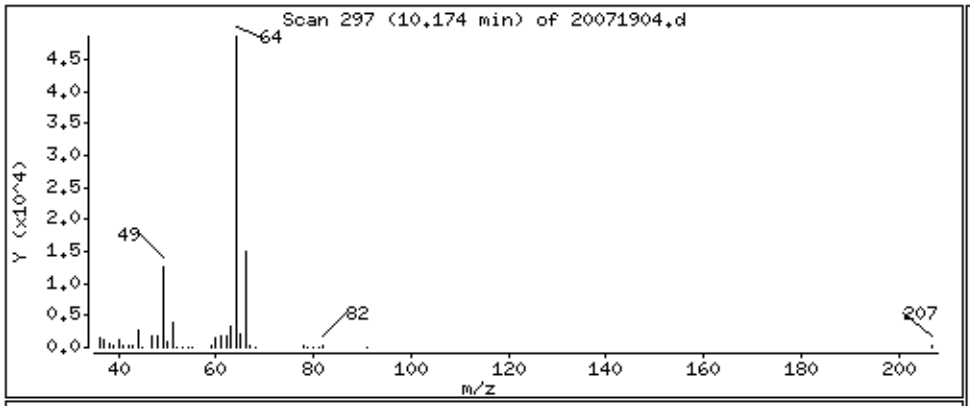
Operator: ef

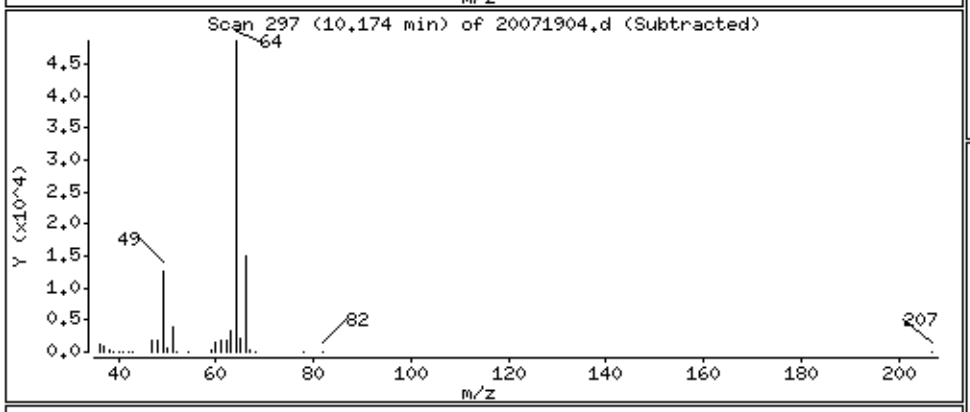
Column phase: RTX-624

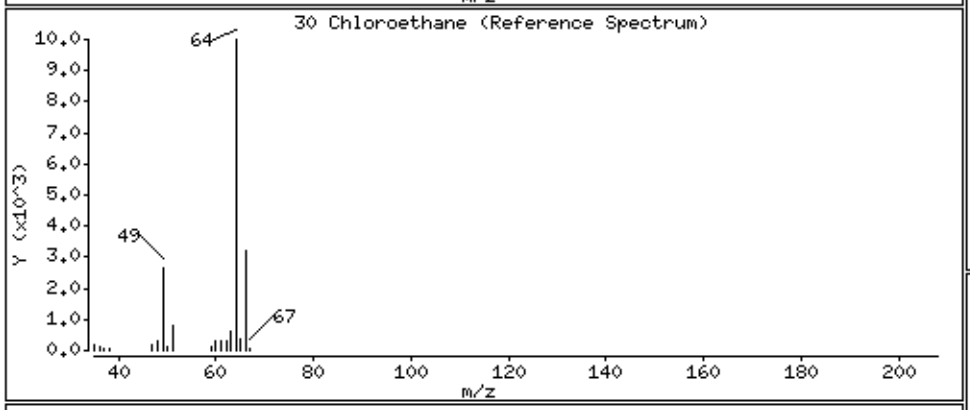
Column diameter: 0.32

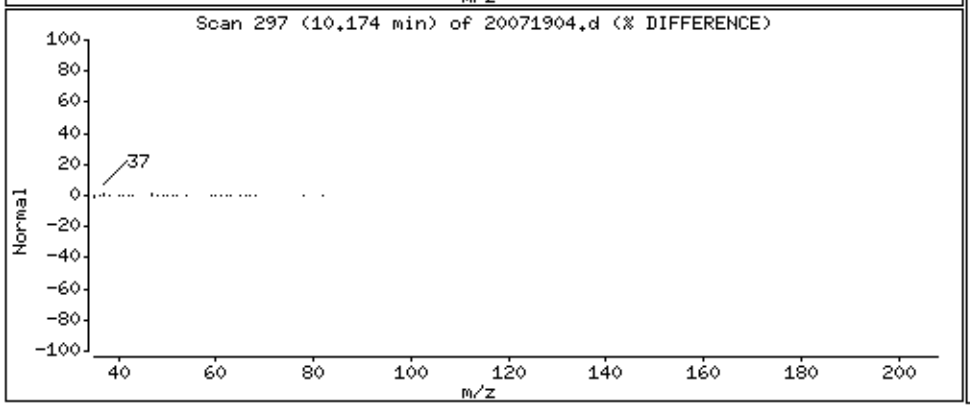
30 Chloroethane

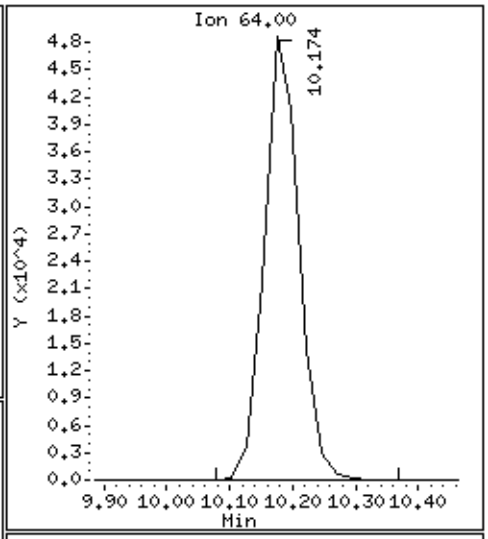
Concentration: 11.226 PPBV

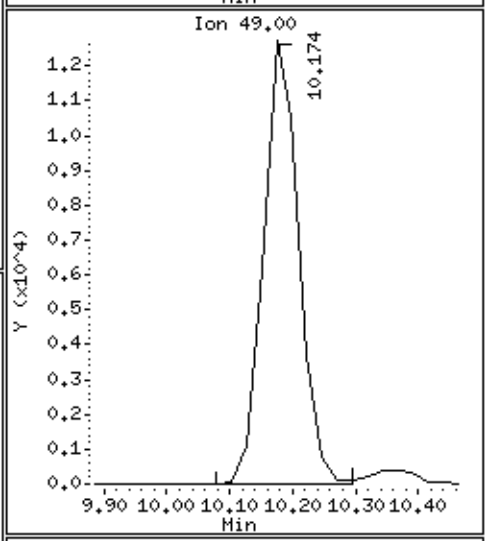


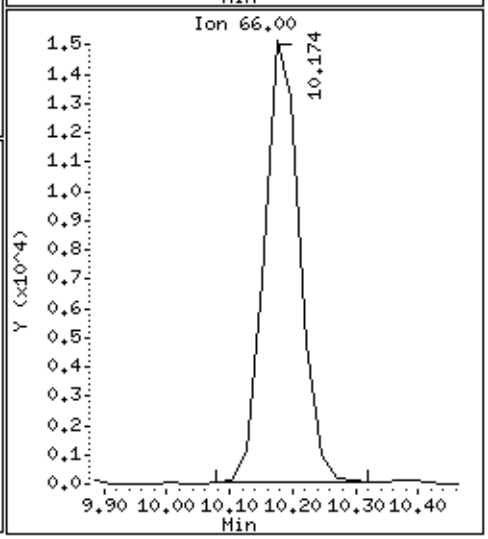












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

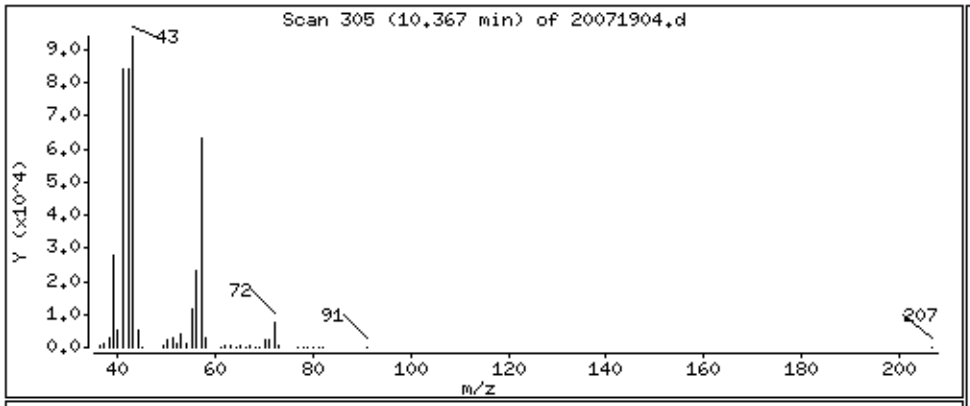
Operator: ef

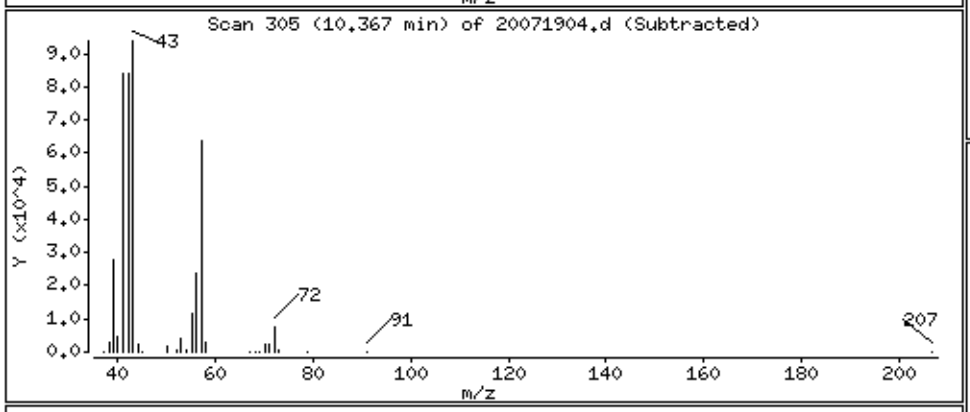
Column phase: RTX-624

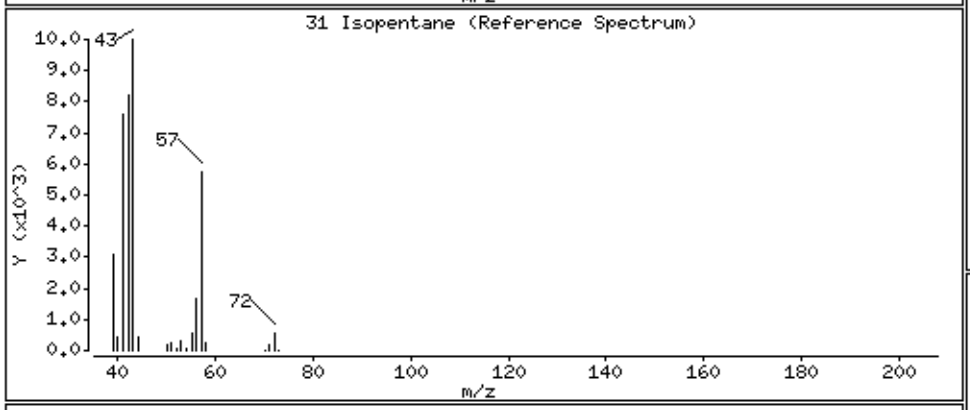
Column diameter: 0.32

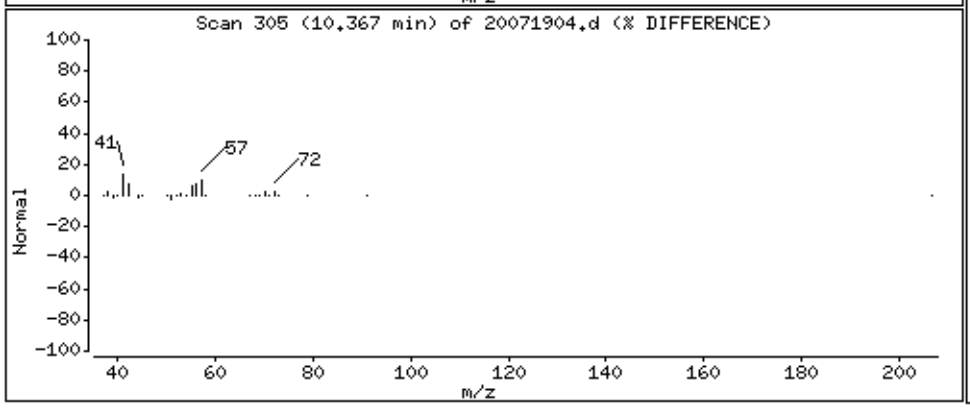
31 Isopentane

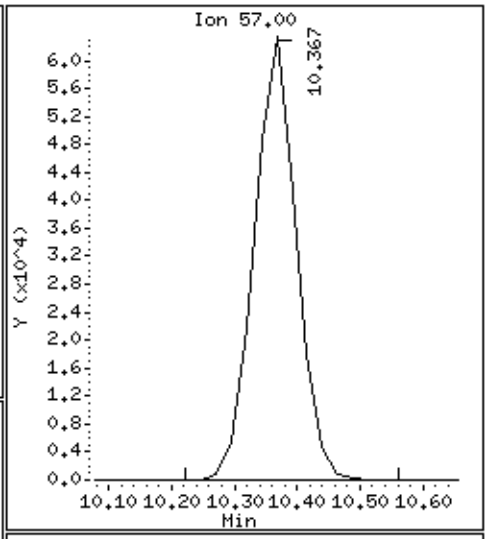
Concentration: 10.191 PPBV

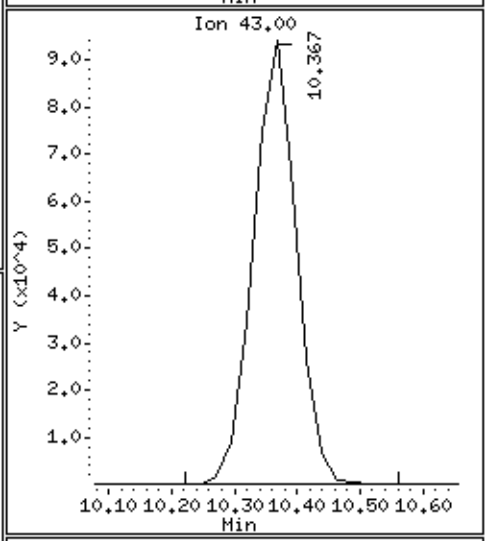


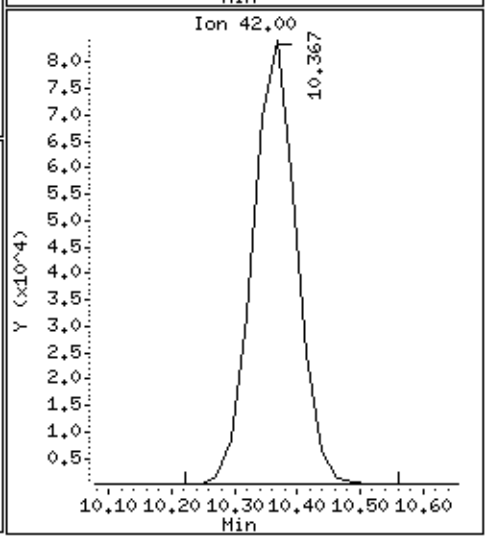












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

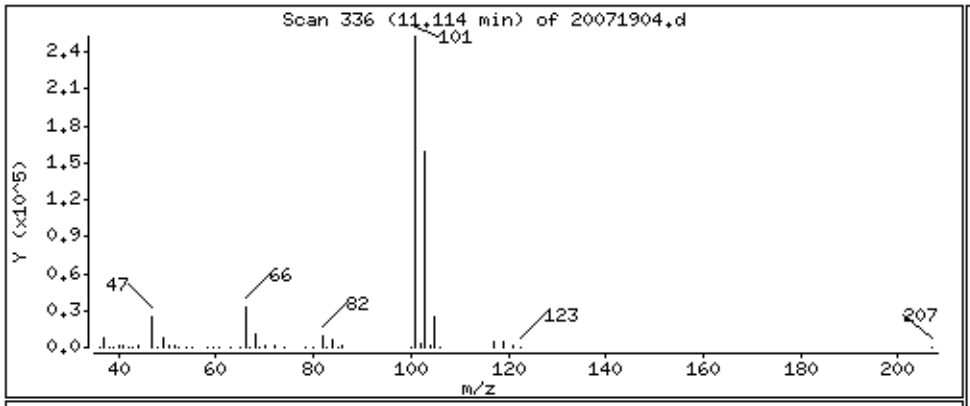
Operator: ef

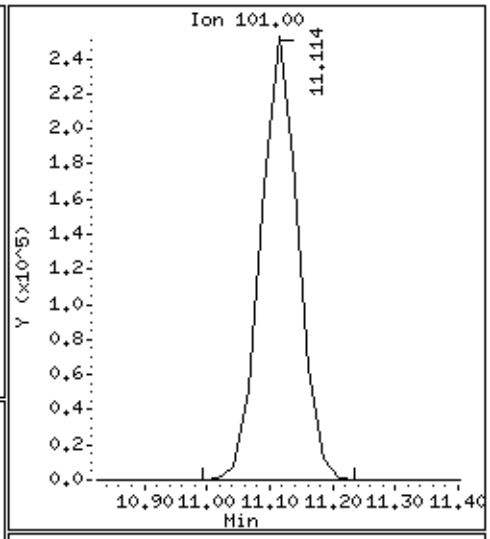
Column phase: RTX-624

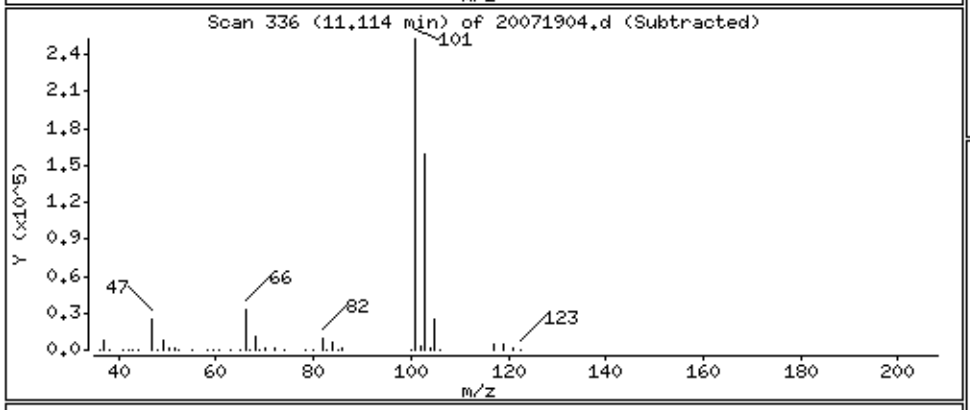
Column diameter: 0.32

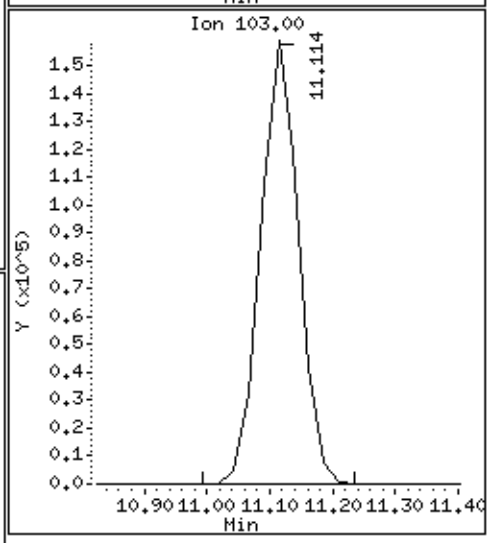
35 Freon 11

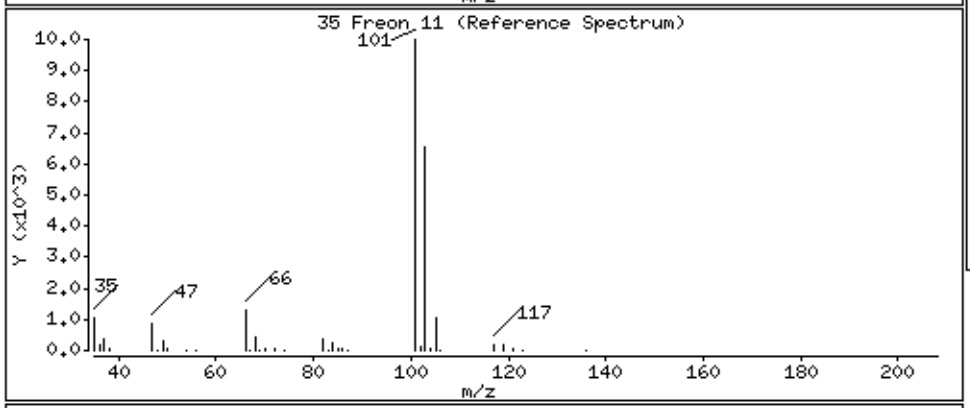
Concentration: 10.889 PPBV

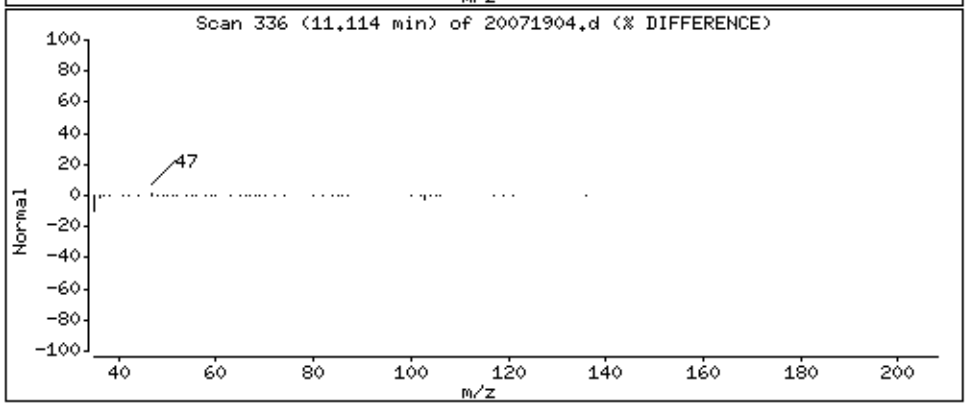












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

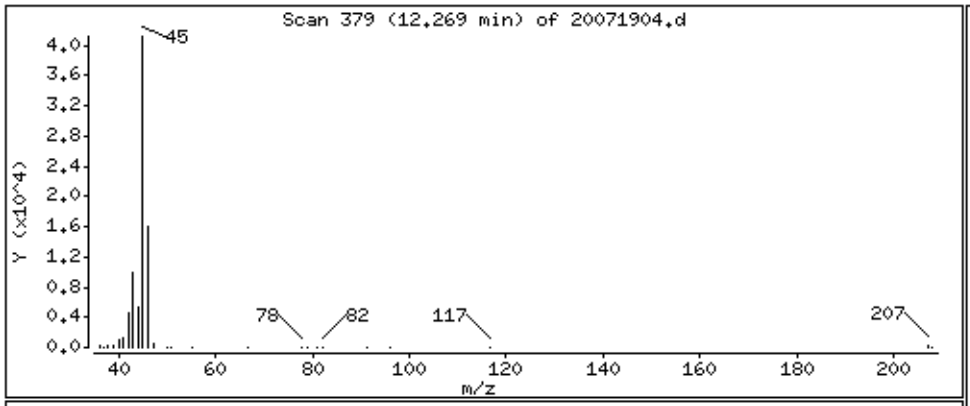
Operator: ef

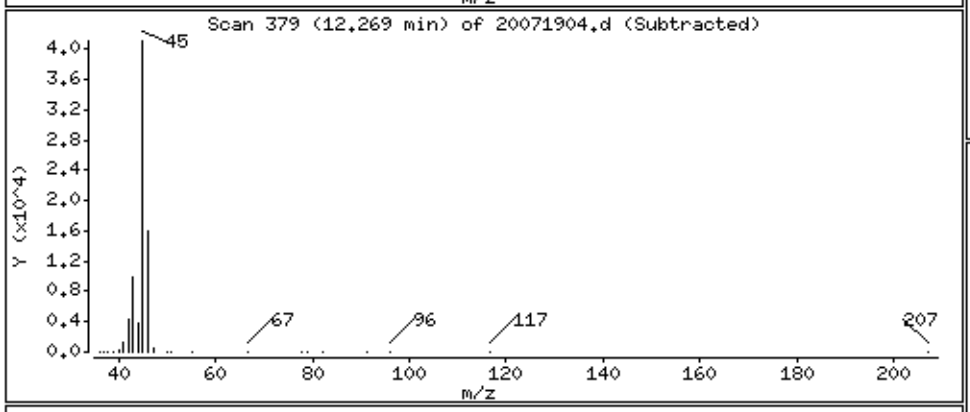
Column phase: RTX-624

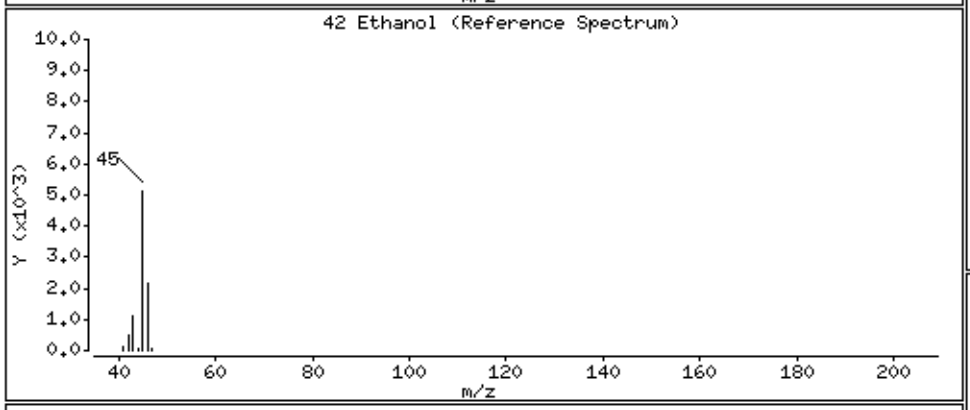
Column diameter: 0.32

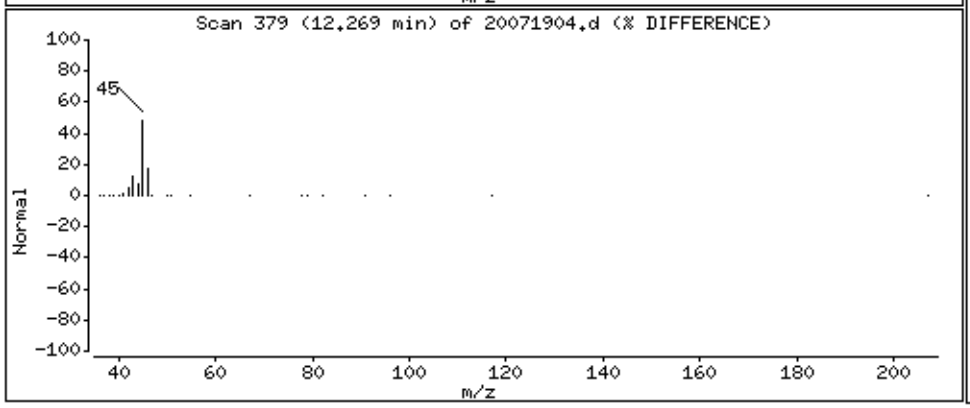
42 Ethanol

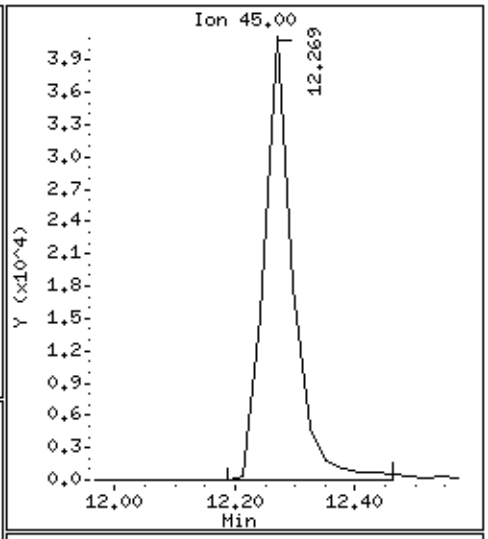
Concentration: 10.842 PPBV

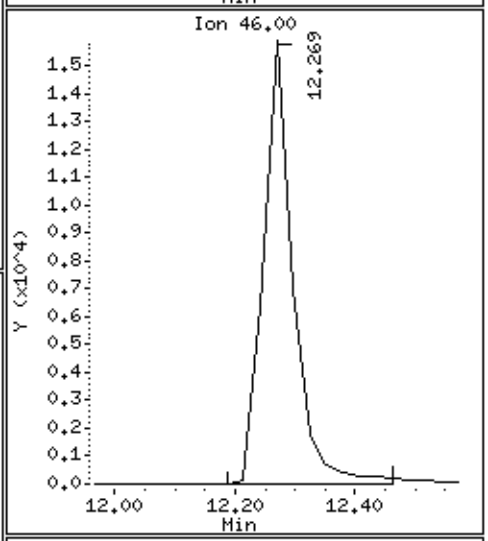


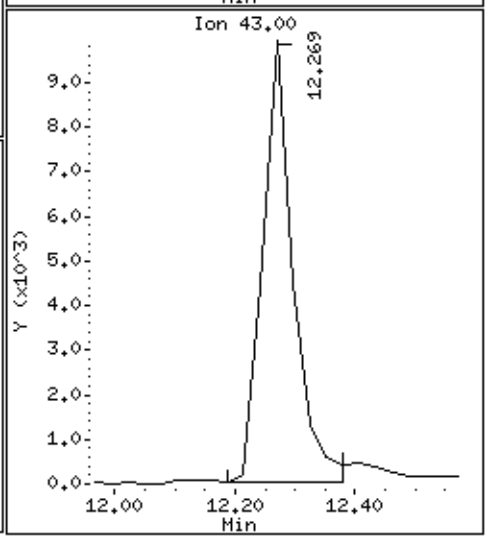












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

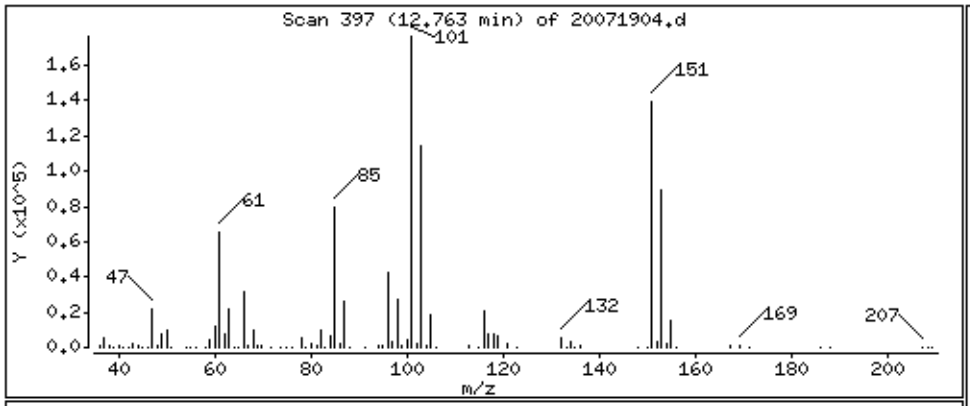
Operator: ef

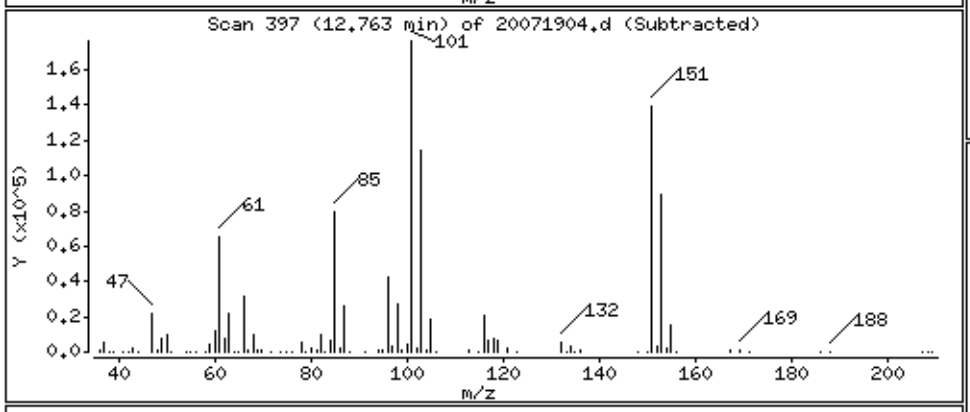
Column phase: RTX-624

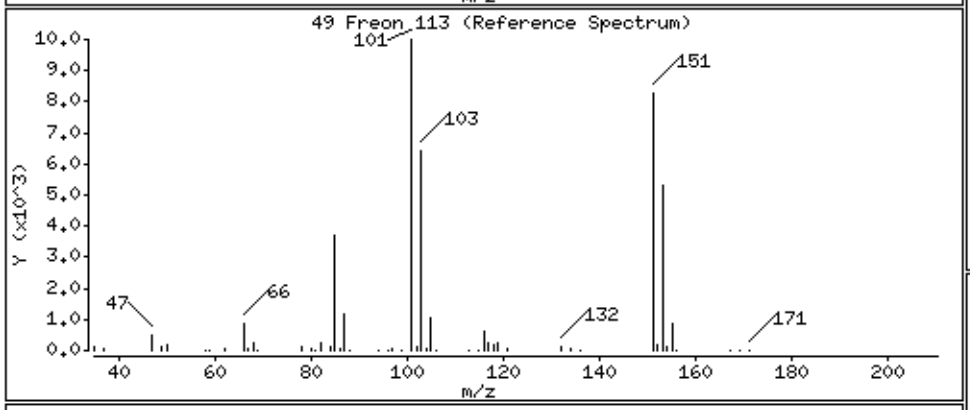
Column diameter: 0.32

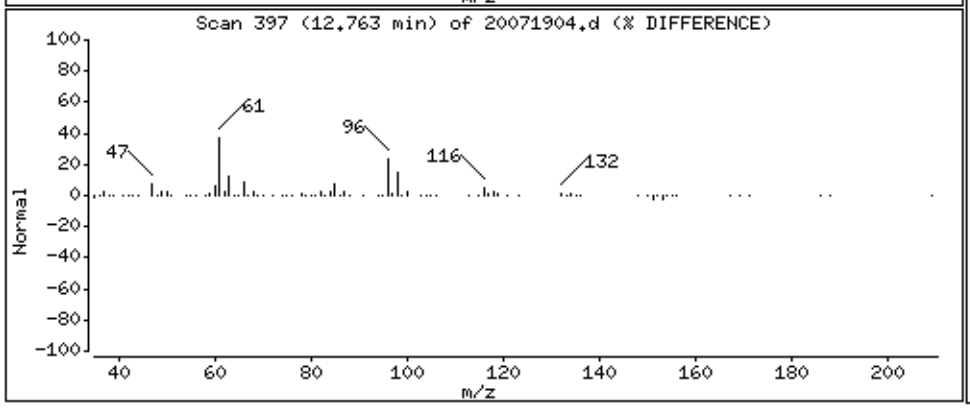
49 Freon 113

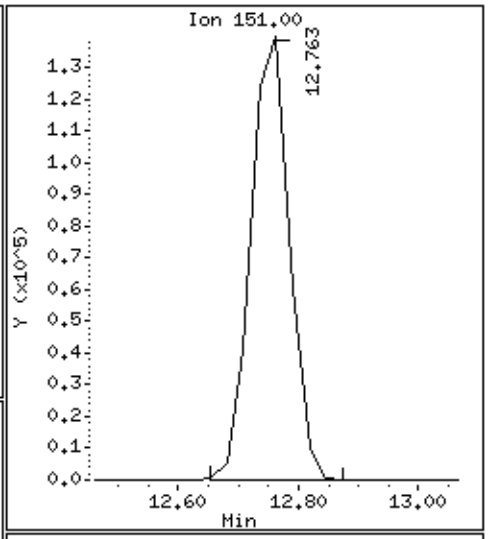
Concentration: 9.529 PPBV

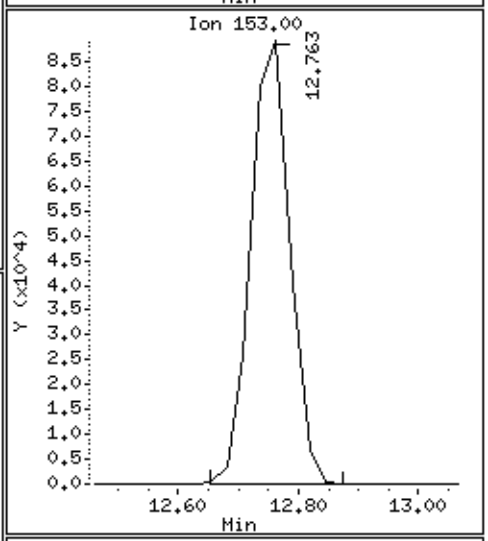


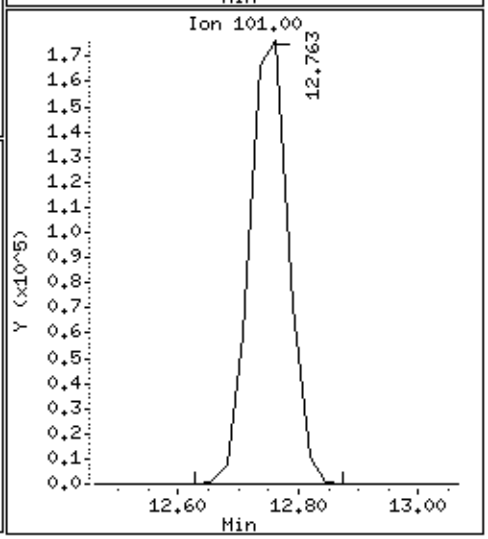












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

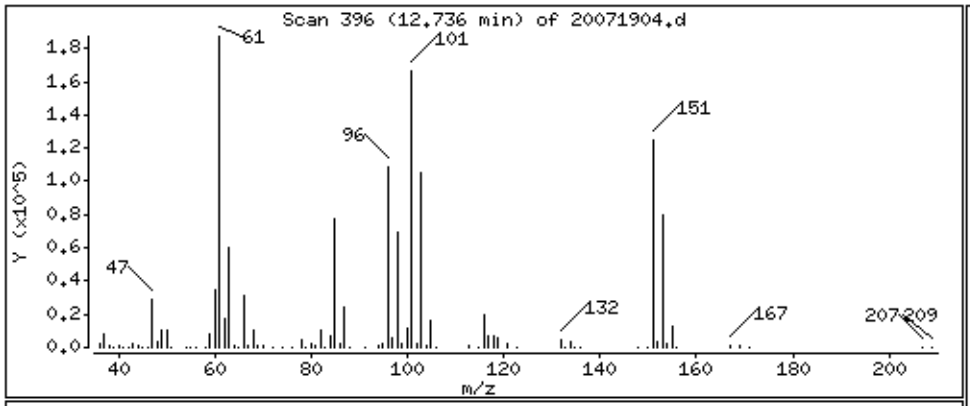
Operator: ef

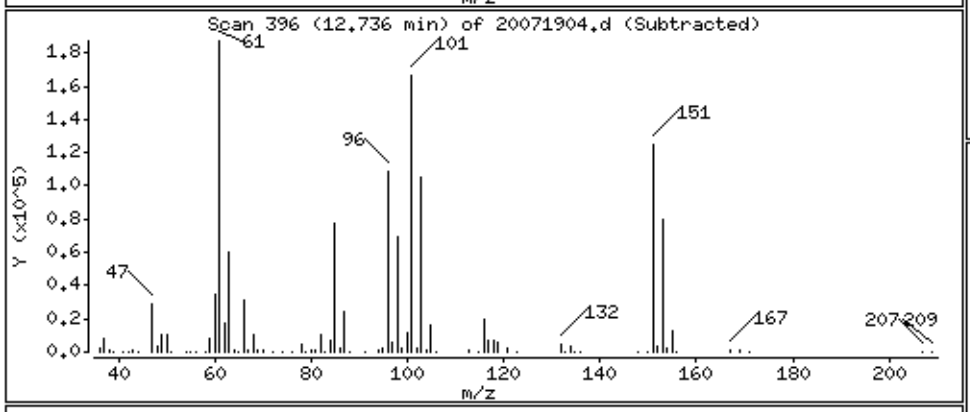
Column phase: RTX-624

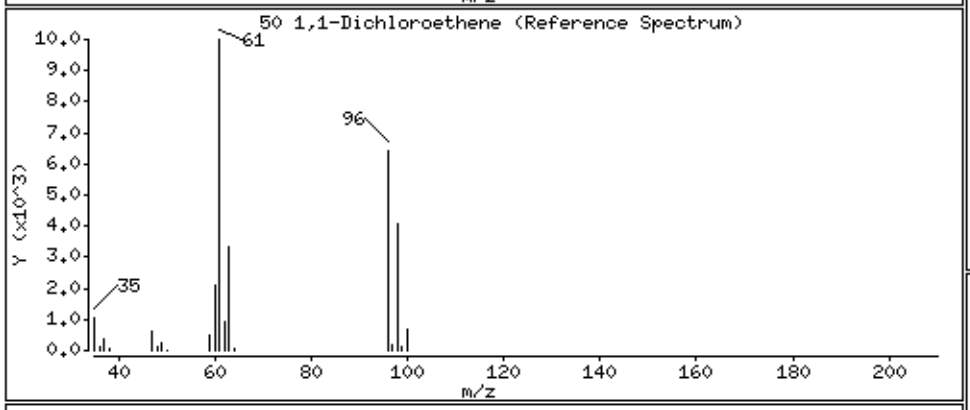
Column diameter: 0.32

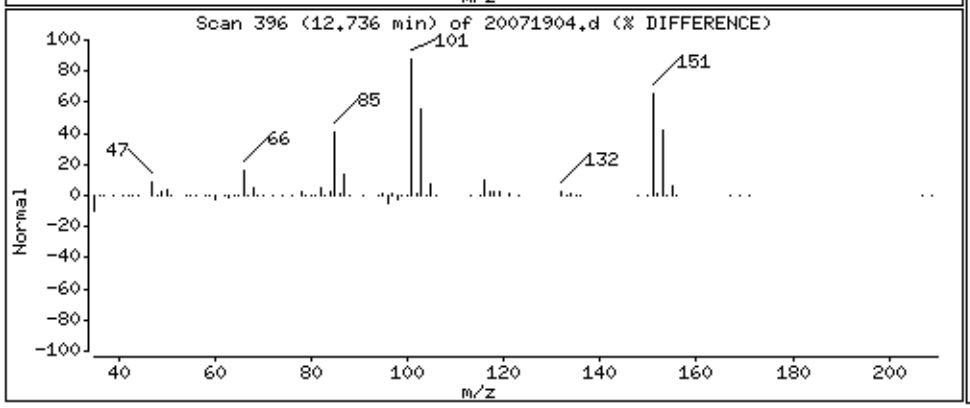
50 1,1-Dichloroethene

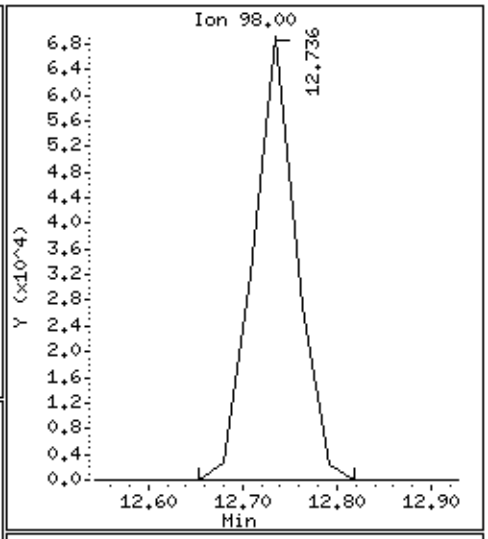
Concentration: 9.577 PPBV

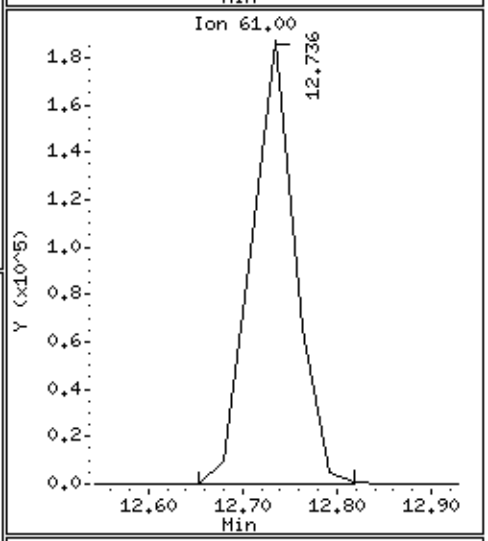


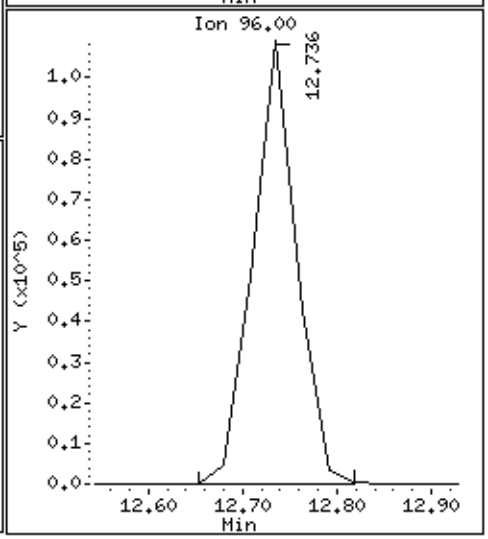












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

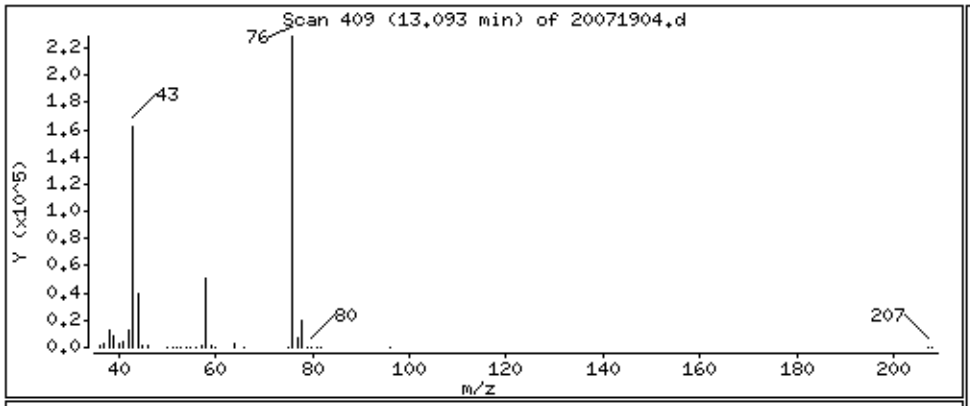
Operator: ef

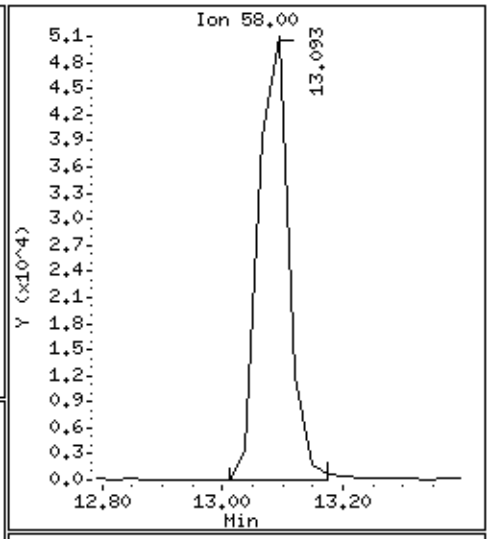
Column phase: RTX-624

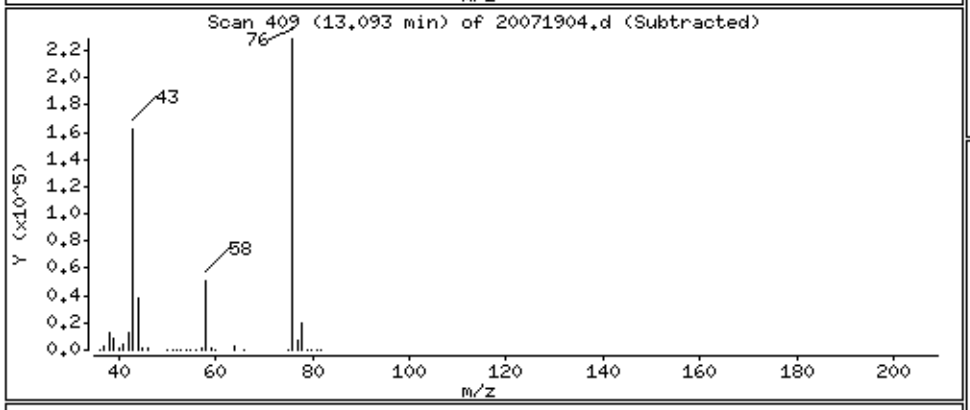
Column diameter: 0.32

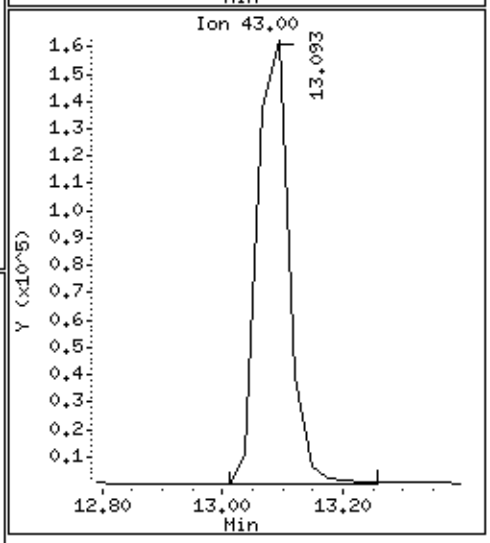
52 Acetone

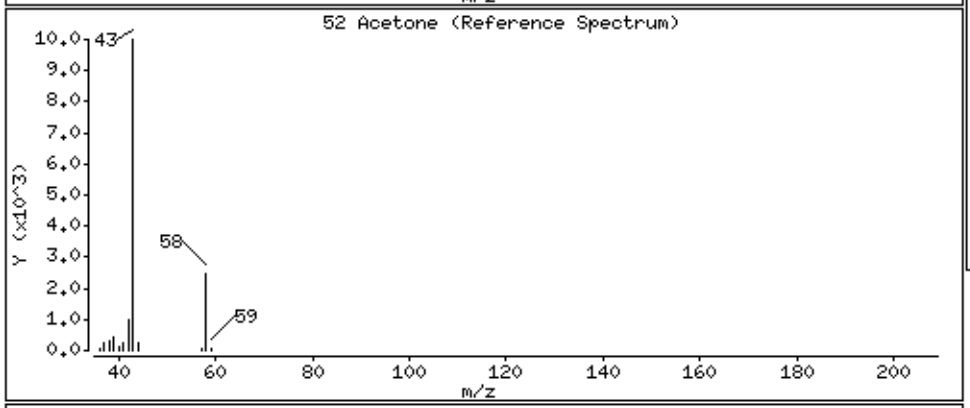
Concentration: 9.790 PPBV

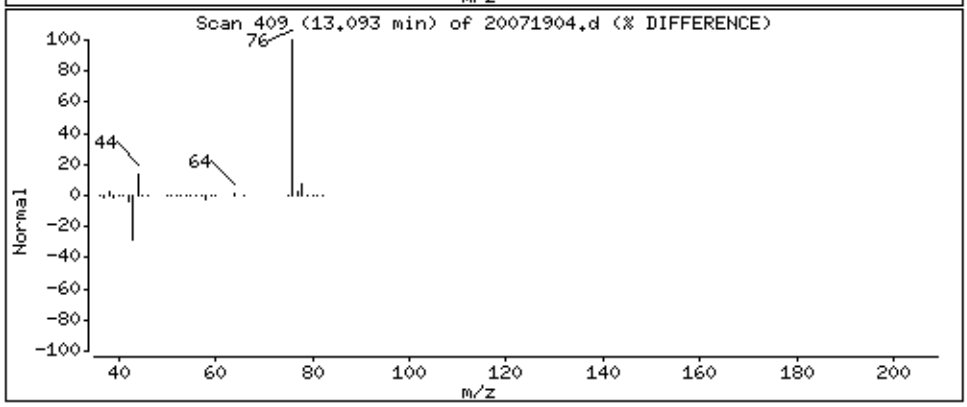












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

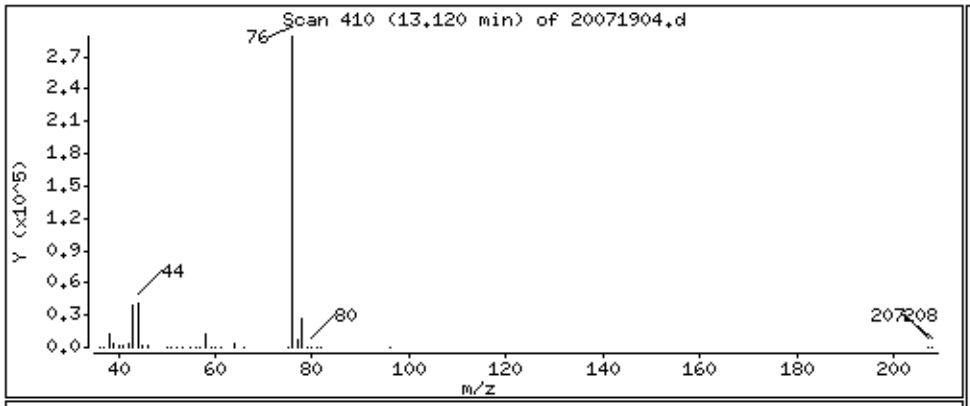
Operator: ef

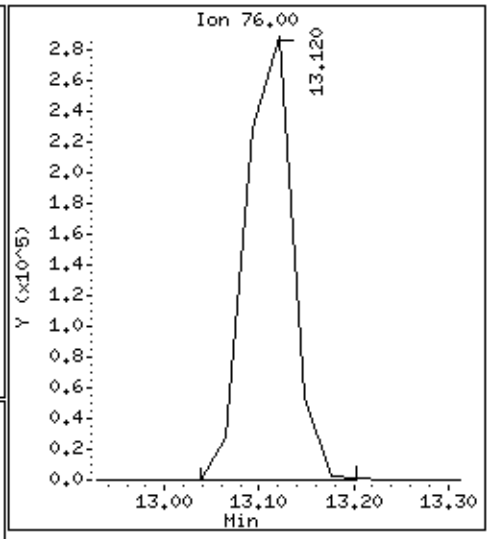
Column phase: RTX-624

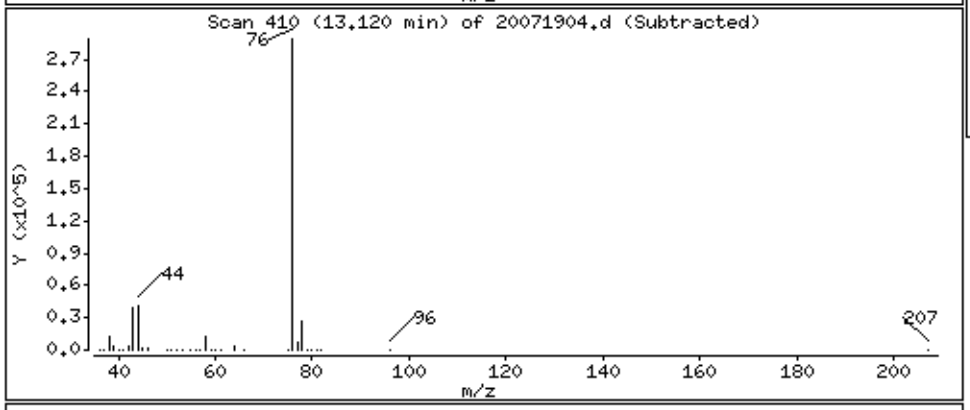
Column diameter: 0.32

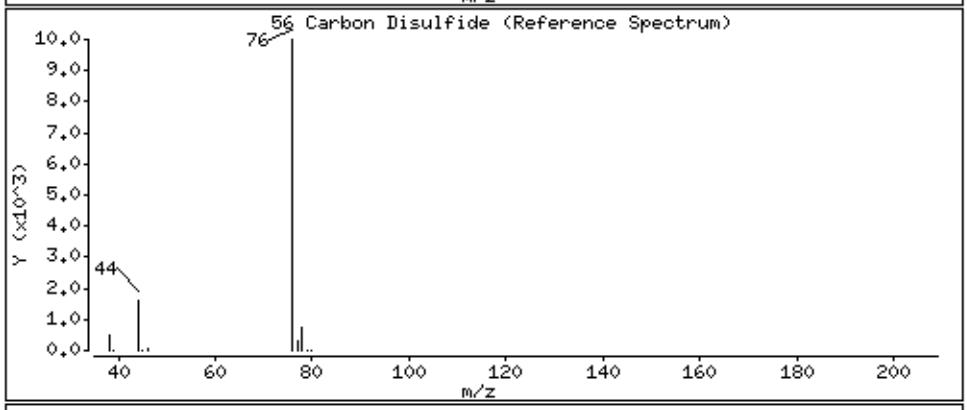
56 Carbon Disulfide

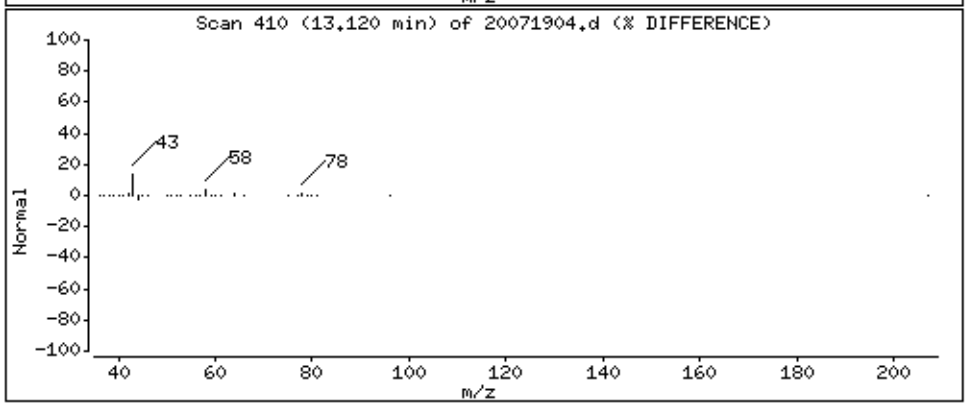
Concentration: 9.589 PPBV











Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

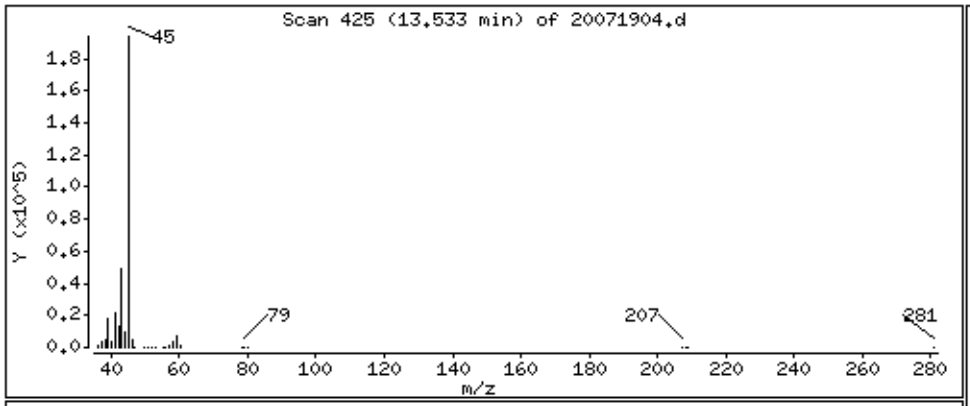
Operator: ef

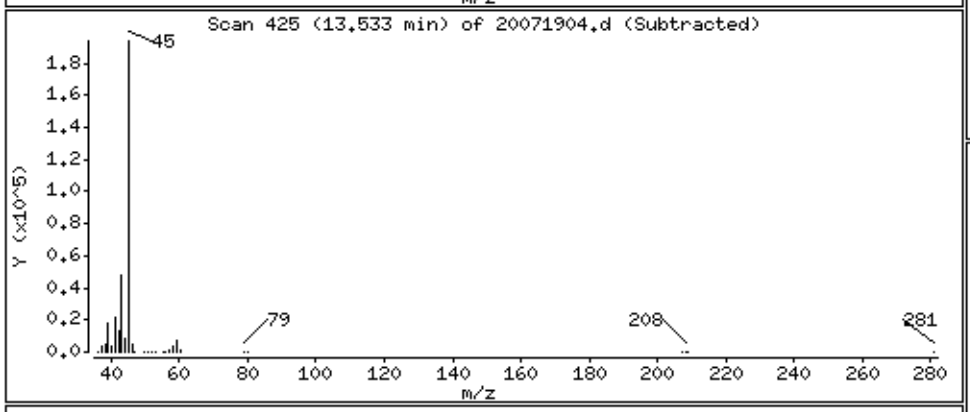
Column phase: RTX-624

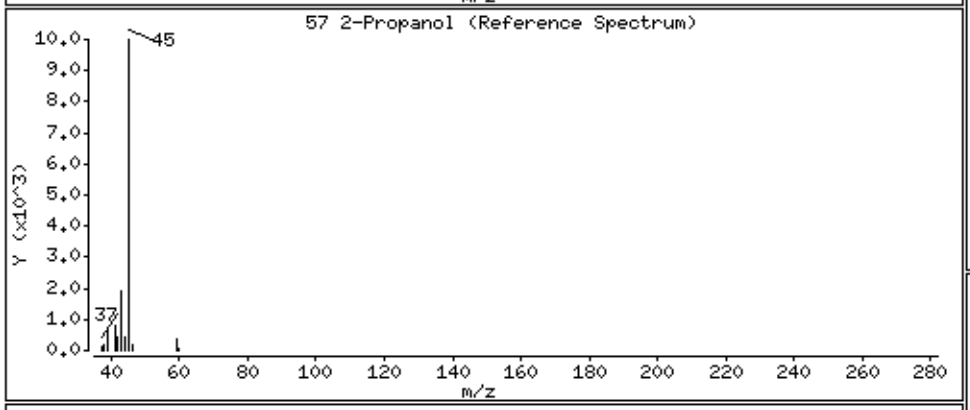
Column diameter: 0.32

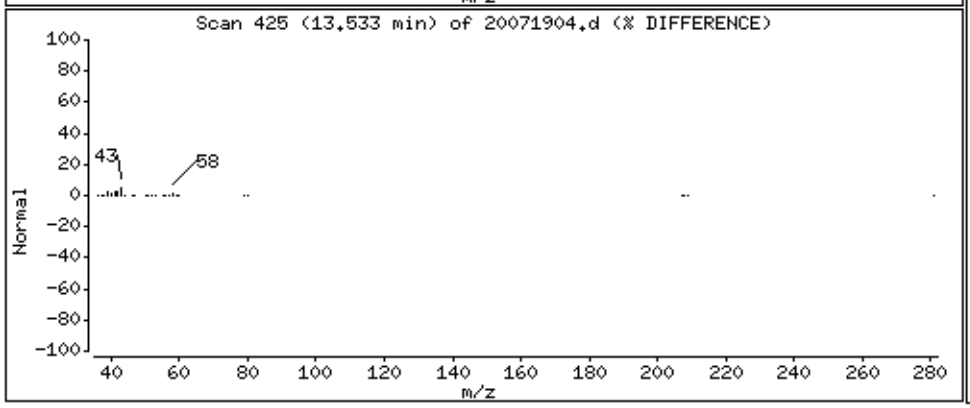
57 2-Propanol

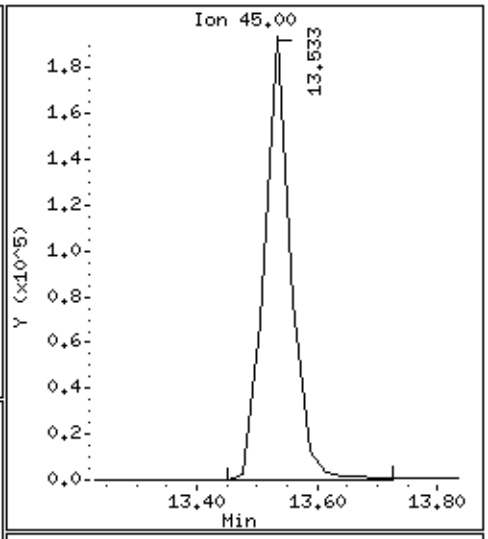
Concentration: 10.669 PPBV

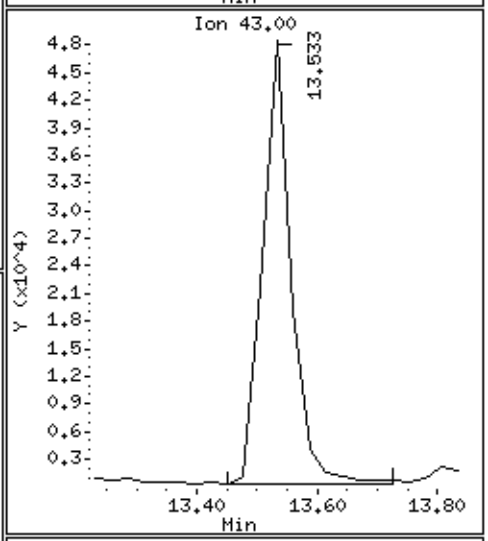


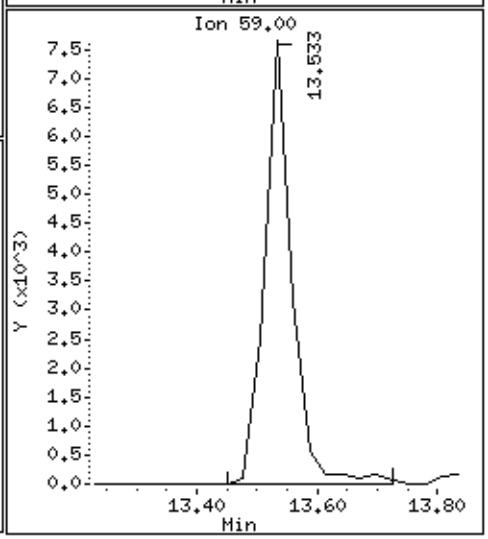












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

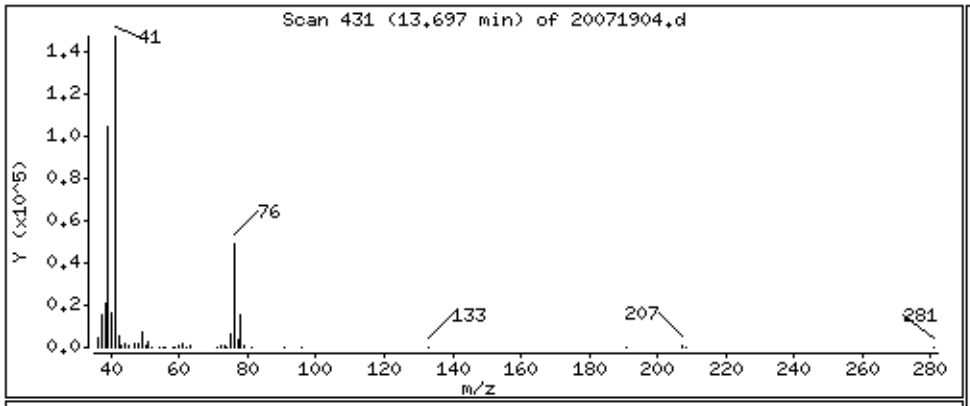
Operator: ef

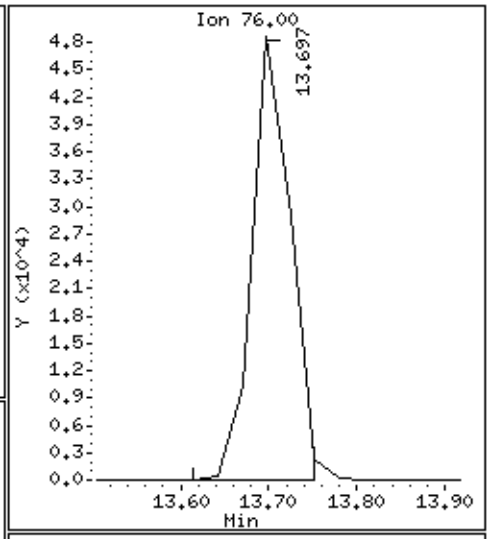
Column phase: RTX-624

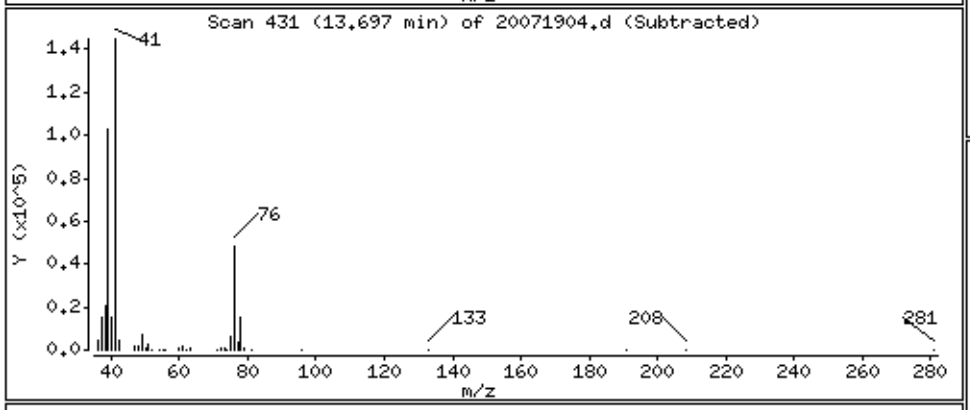
Column diameter: 0.32

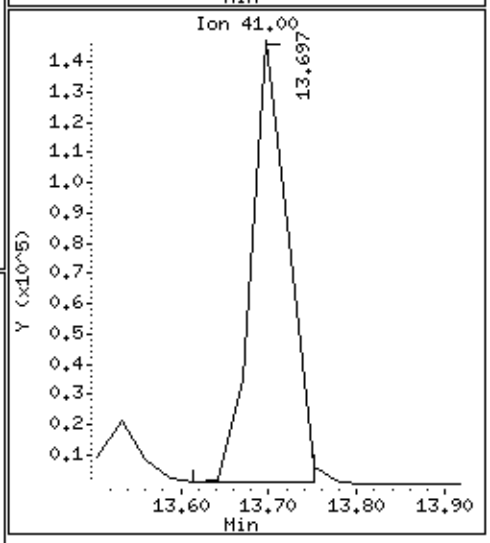
58 3-Chloropropene

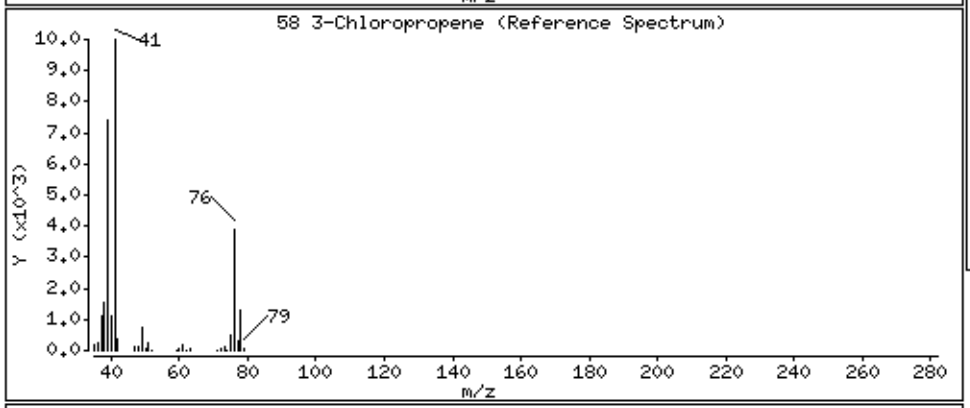
Concentration: 10.239 PPBV

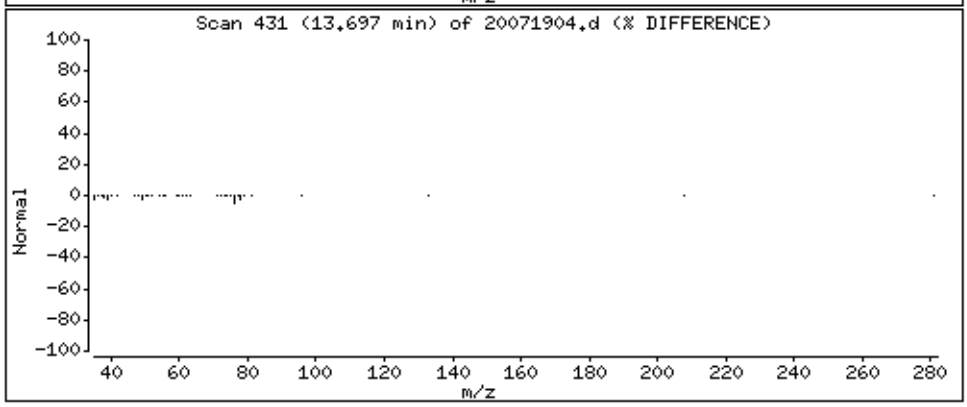












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

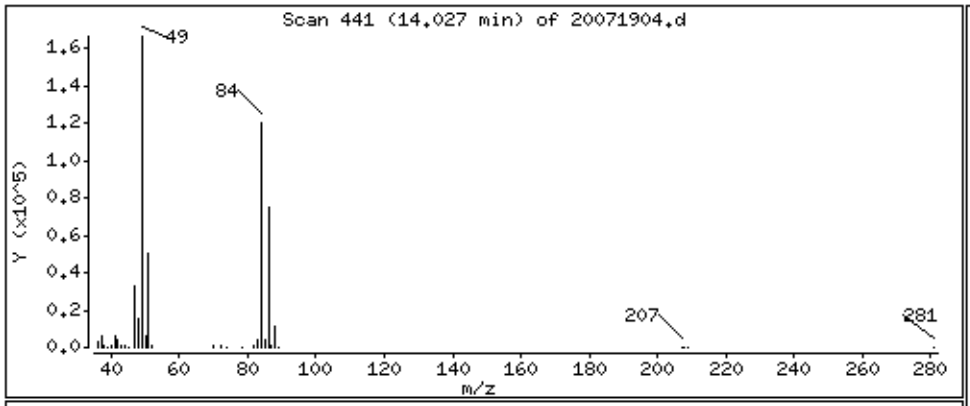
Operator: ef

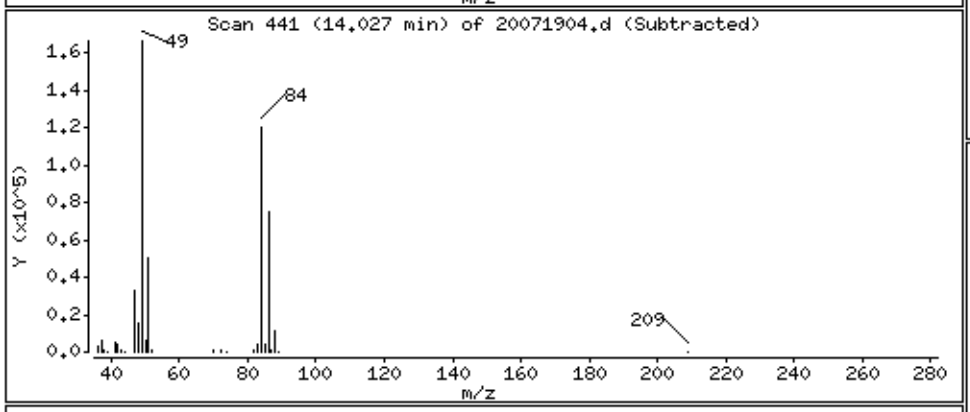
Column phase: RTX-624

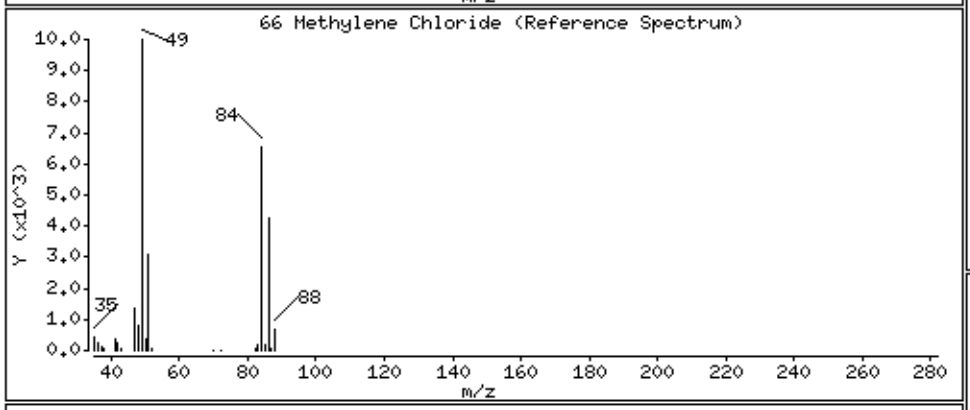
Column diameter: 0.32

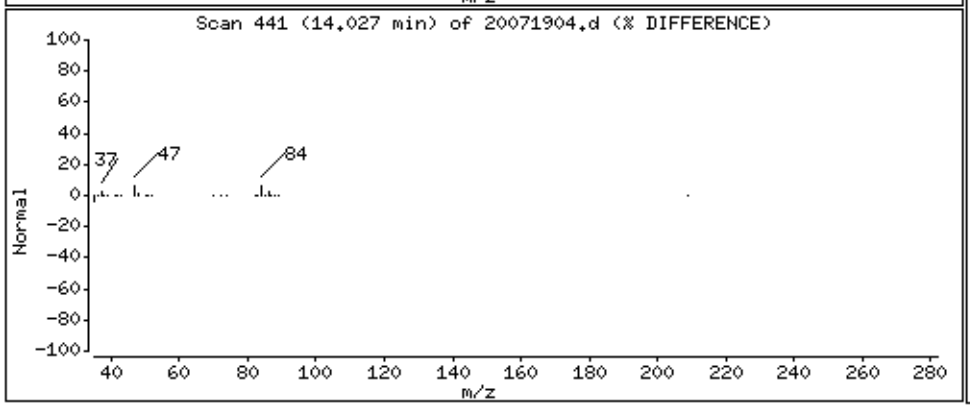
66 Methylene Chloride

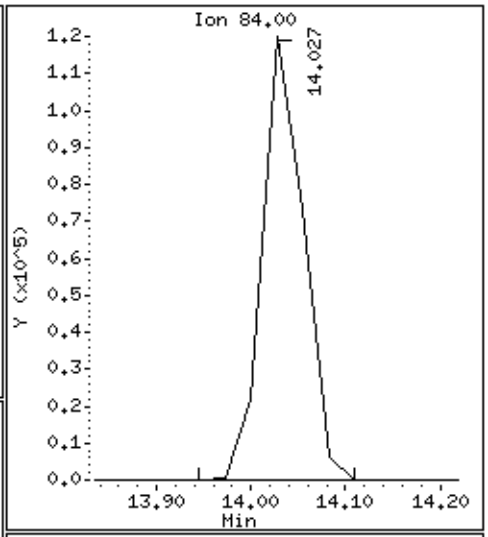
Concentration: 9.849 PPBV

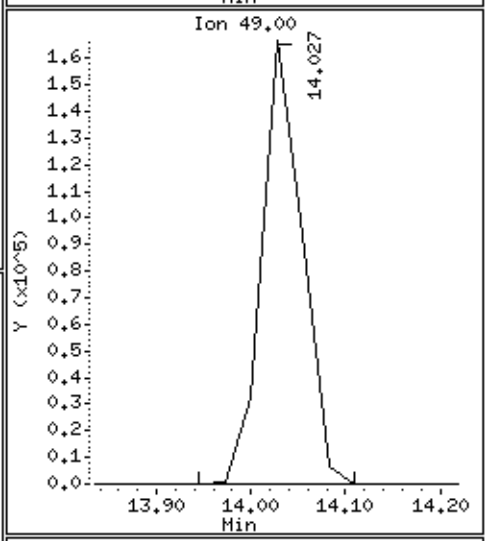


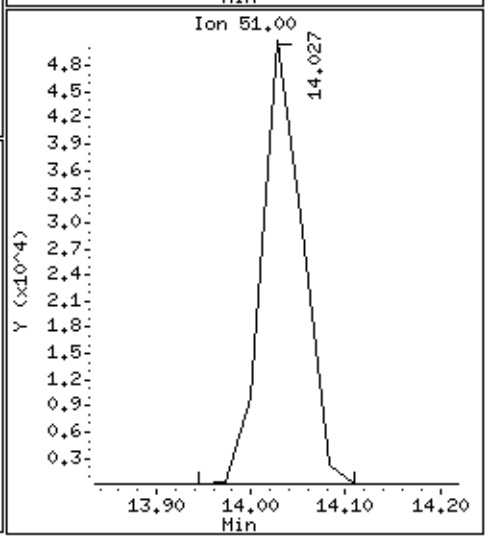












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

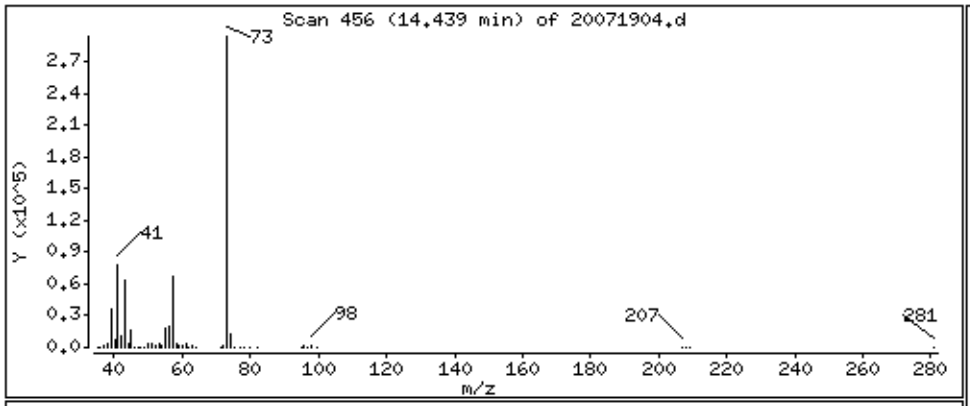
Operator: ef

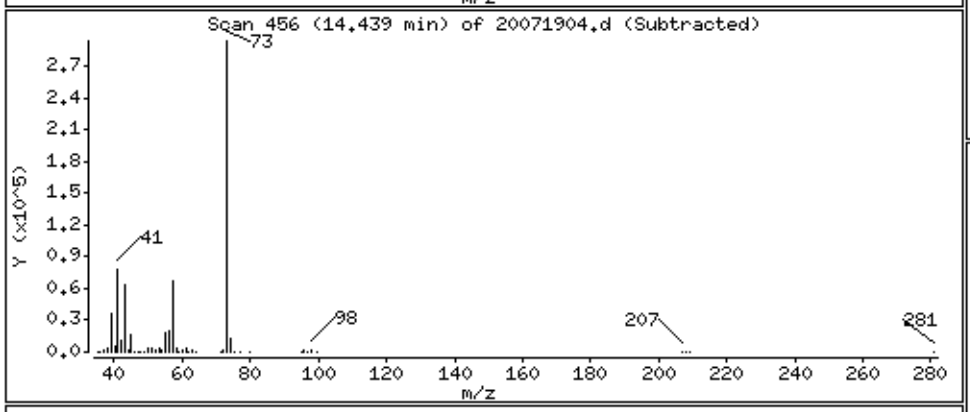
Column phase: RTX-624

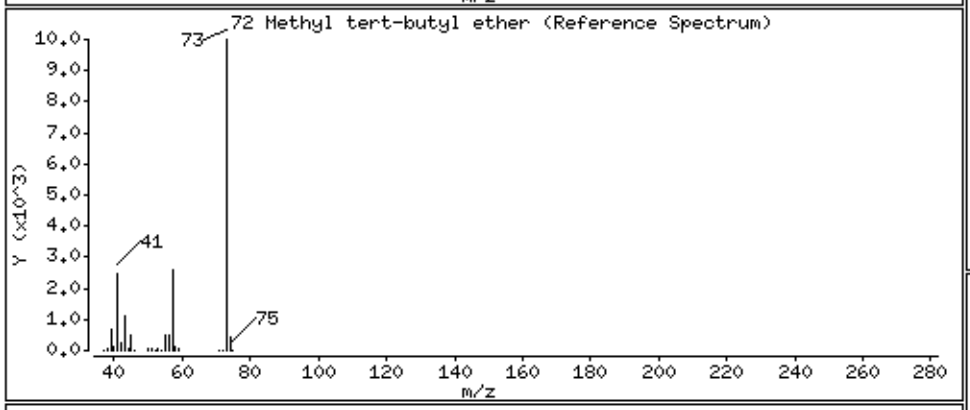
Column diameter: 0.32

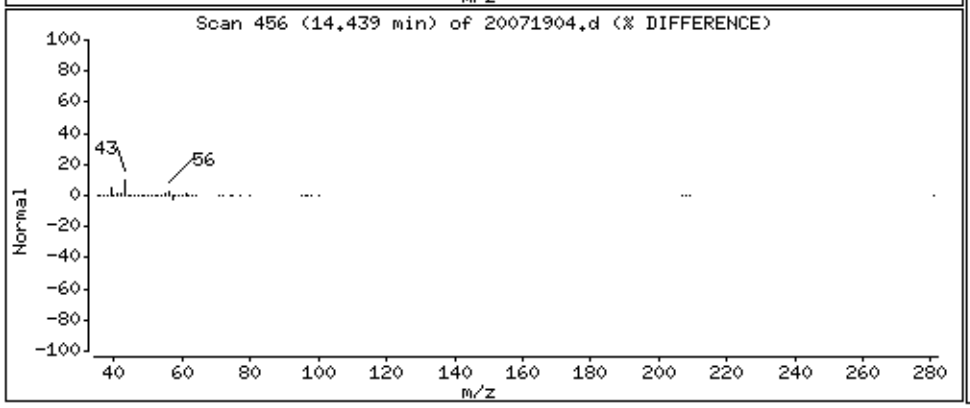
72 Methyl tert-butyl ether

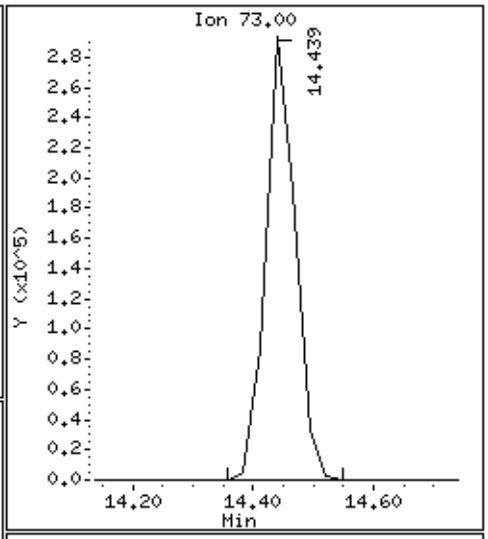
Concentration: 9.800 PPBV

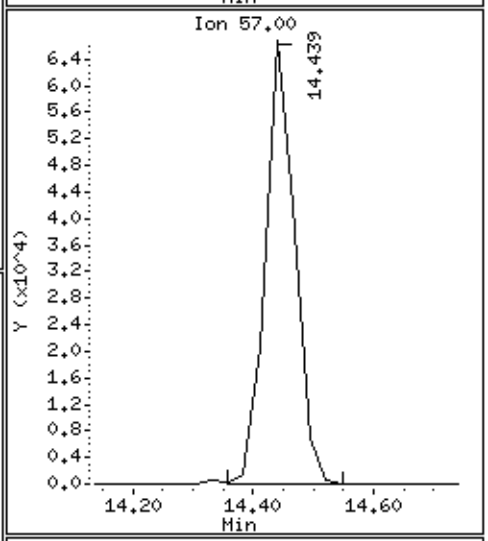


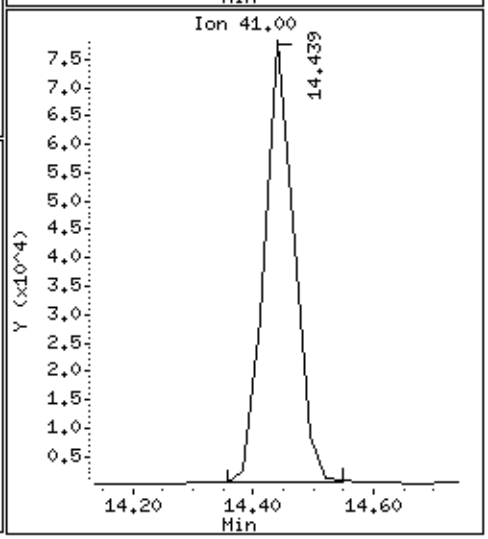












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

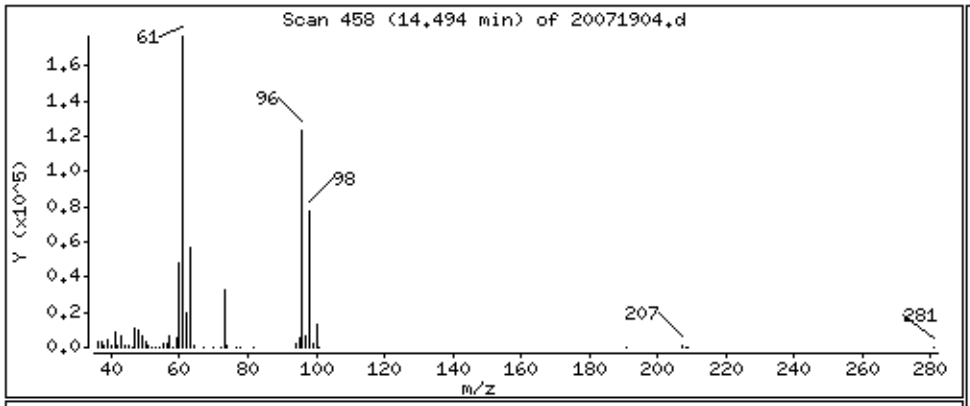
Operator: ef

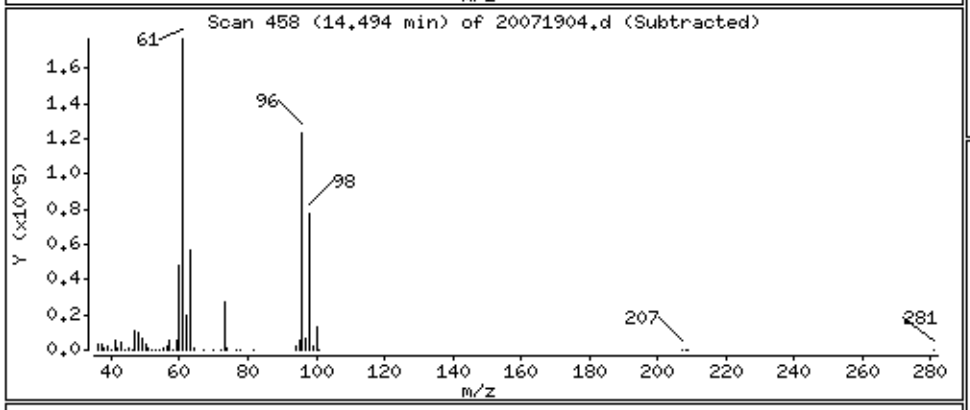
Column phase: RTX-624

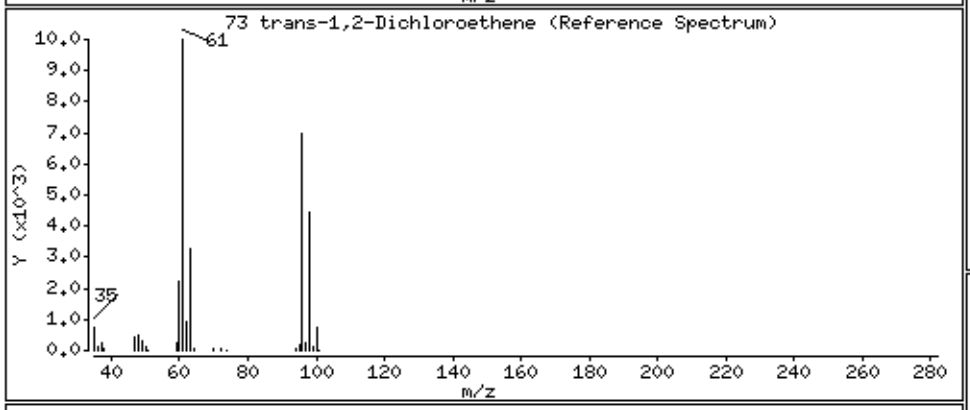
Column diameter: 0.32

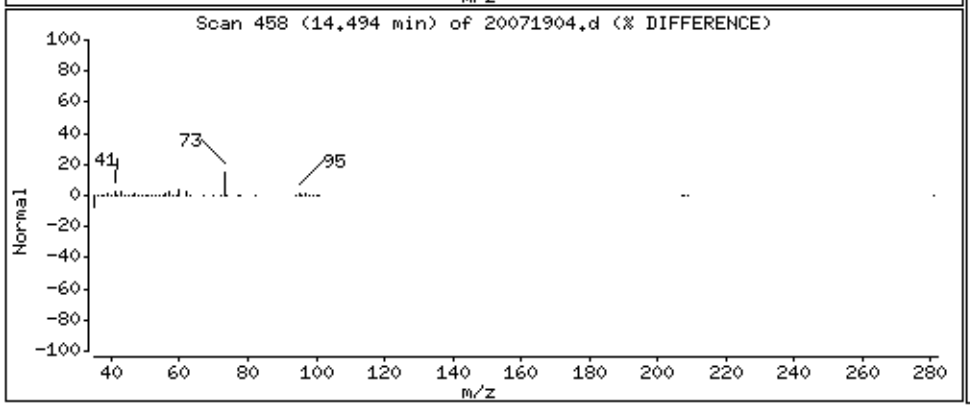
73 trans-1,2-Dichloroethene

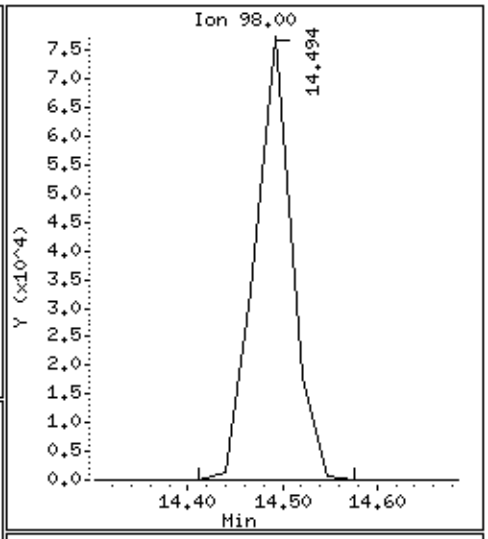
Concentration: 8.718 PPBV

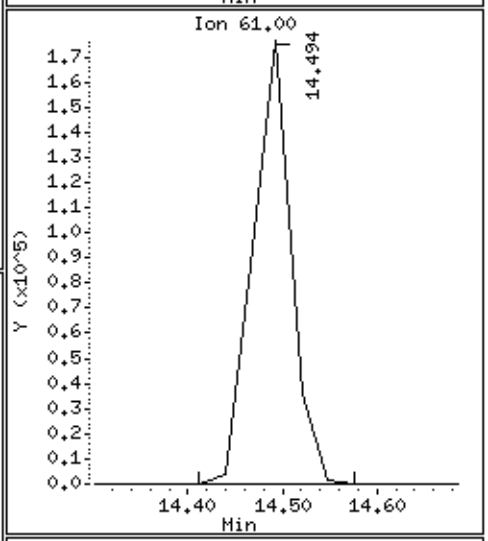


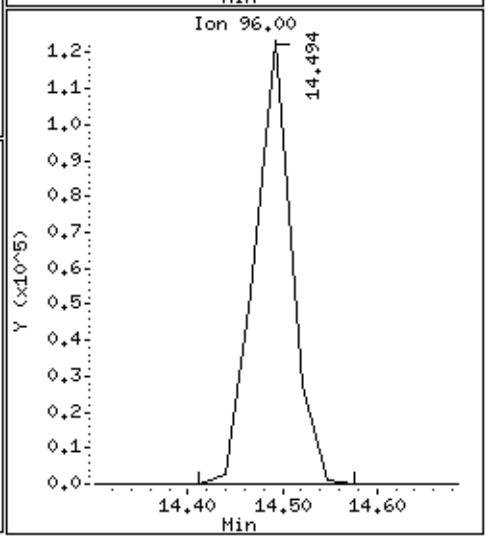












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

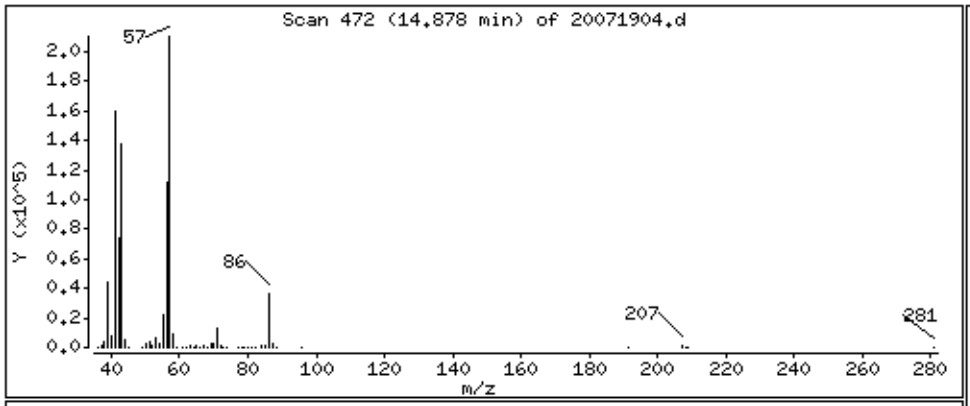
Operator: ef

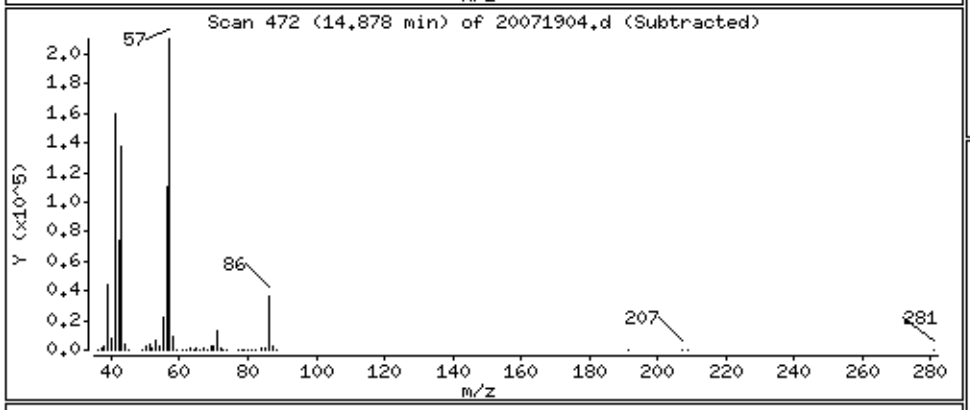
Column phase: RTX-624

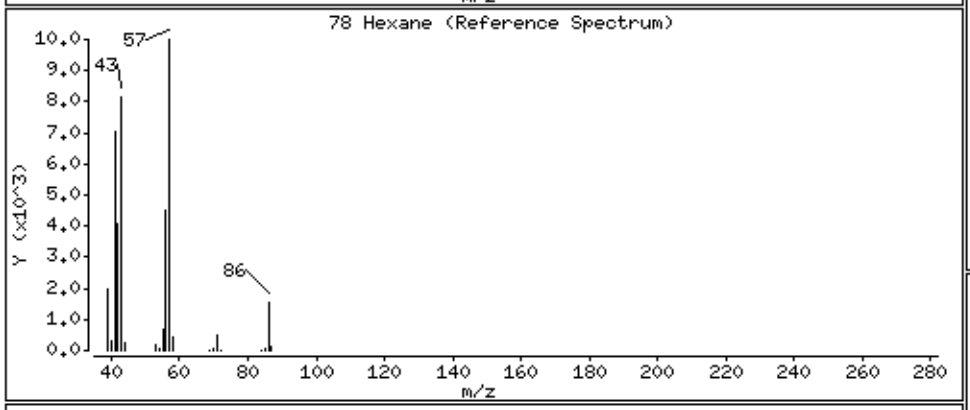
Column diameter: 0.32

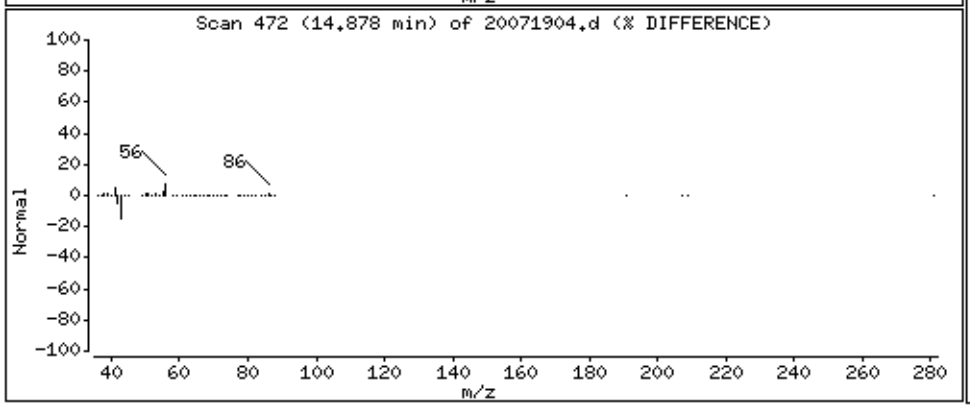
78 Hexane

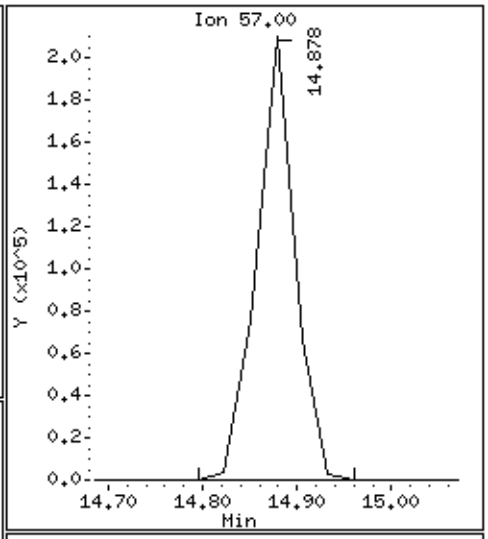
Concentration: 10.202 PPBV

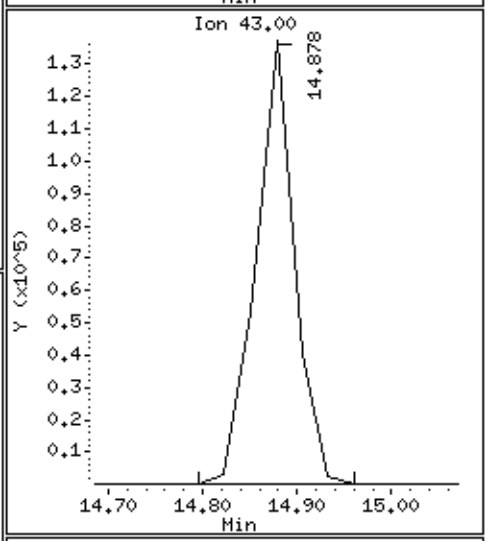


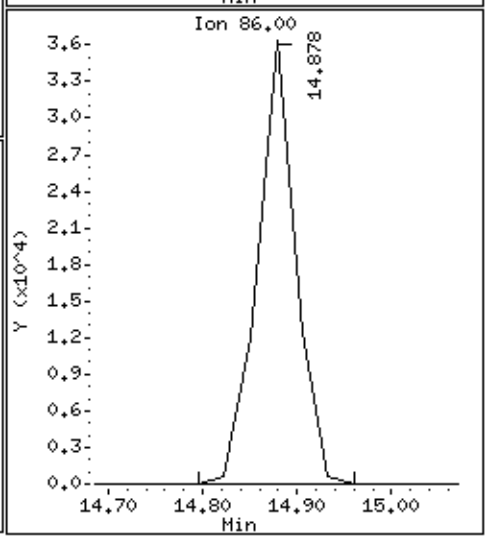












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

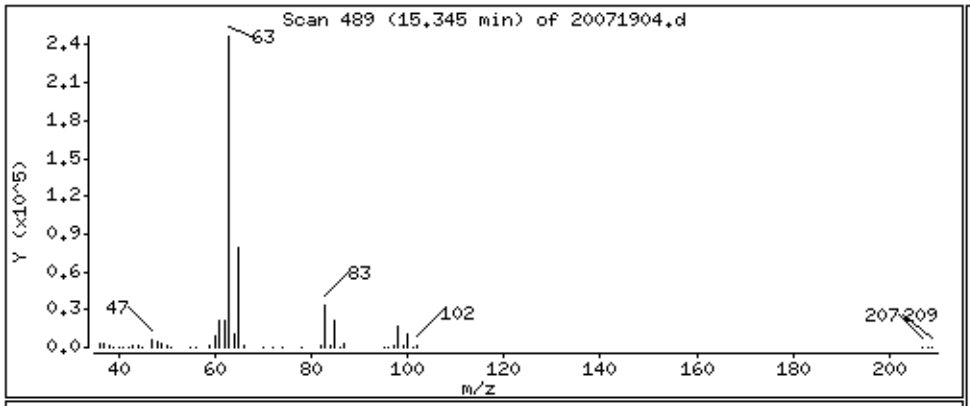
Operator: ef

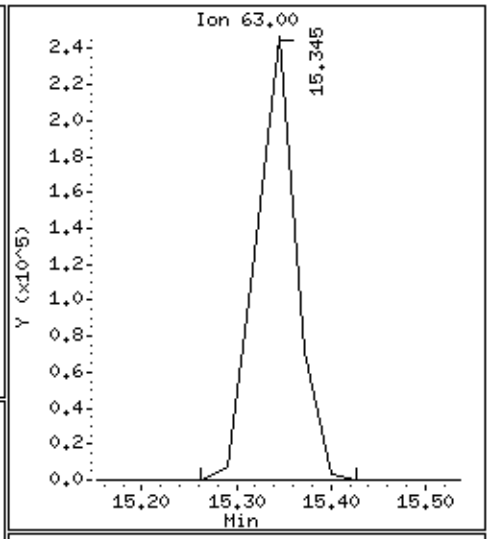
Column phase: RTX-624

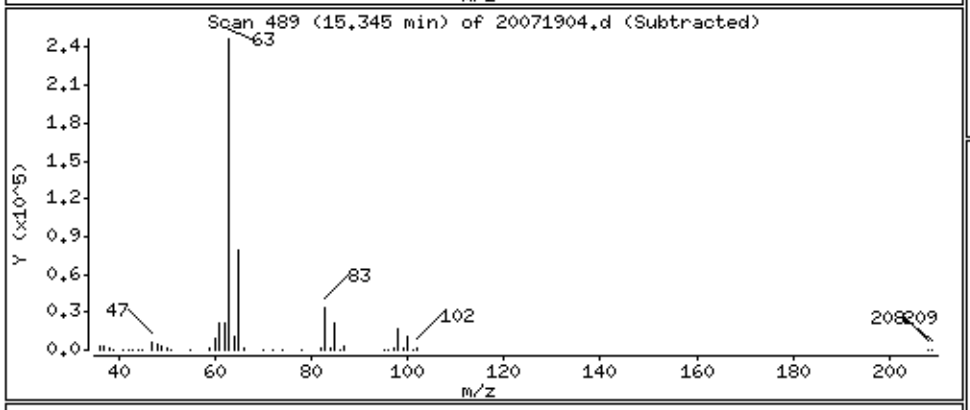
Column diameter: 0.32

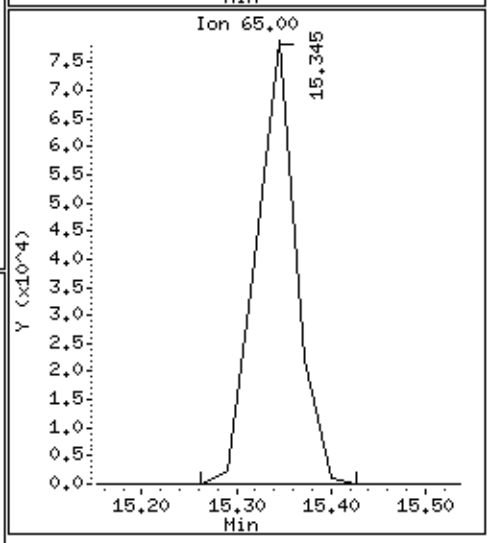
82 1,1-Dichloroethane

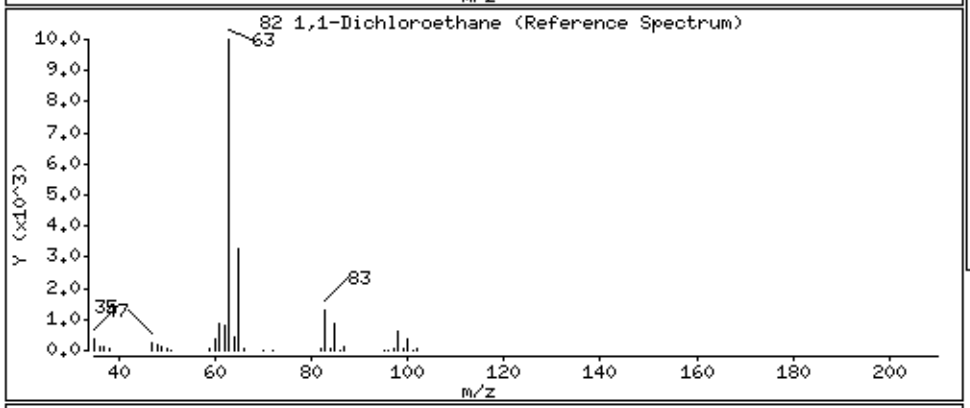
Concentration: 10.330 PPBV

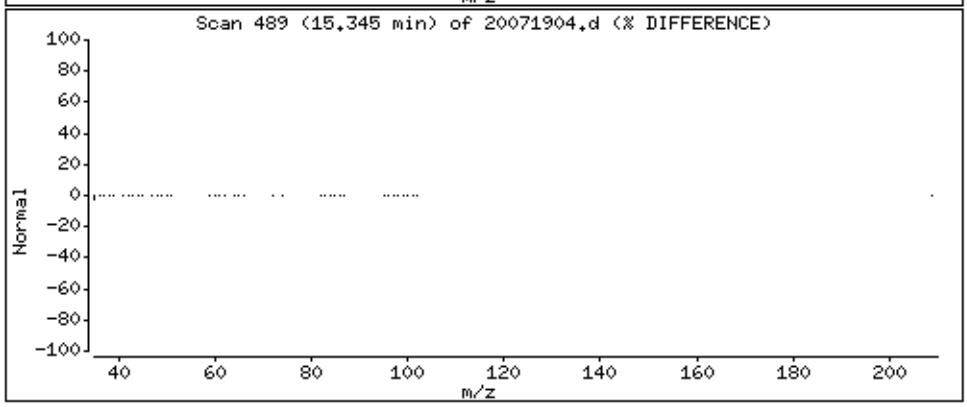












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

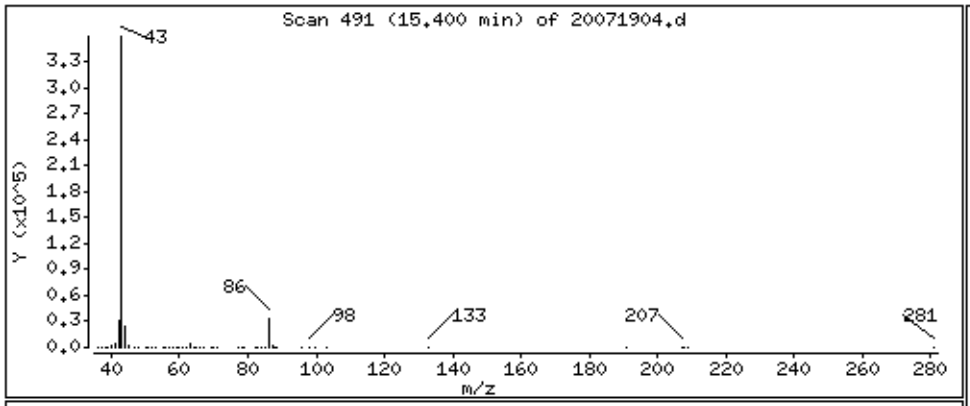
Operator: ef

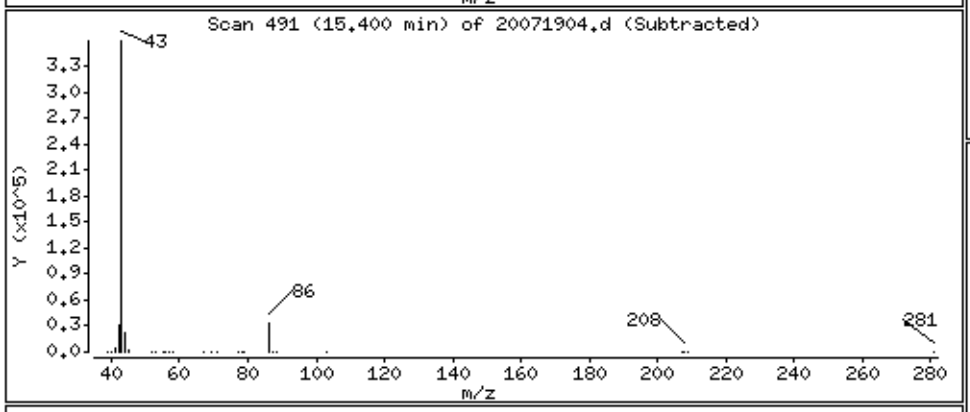
Column phase: RTX-624

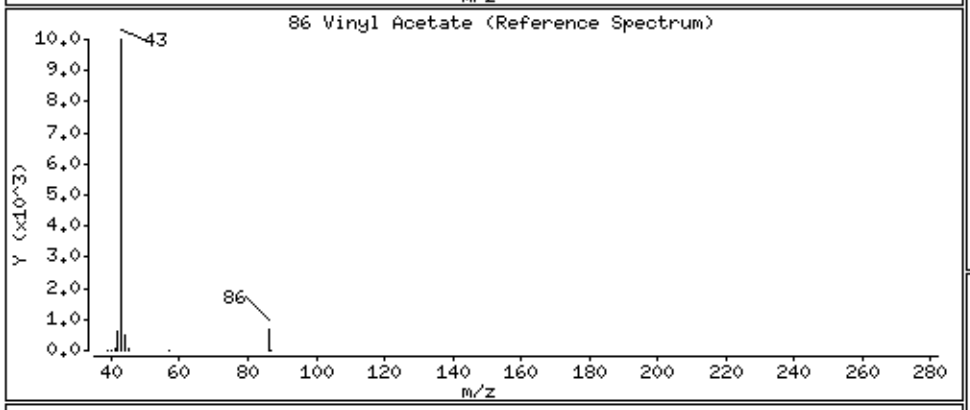
Column diameter: 0.32

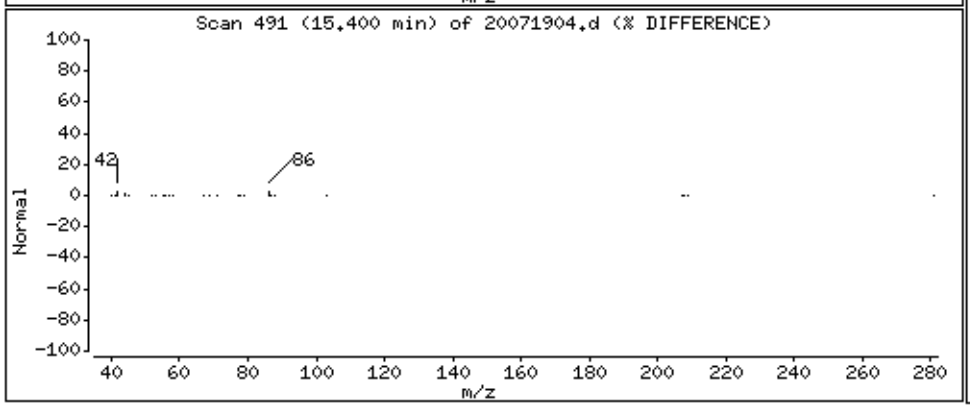
86 Vinyl Acetate

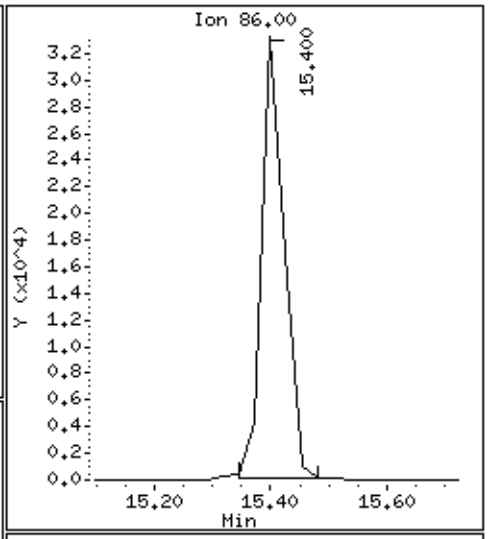
Concentration: 9.898 PPBV

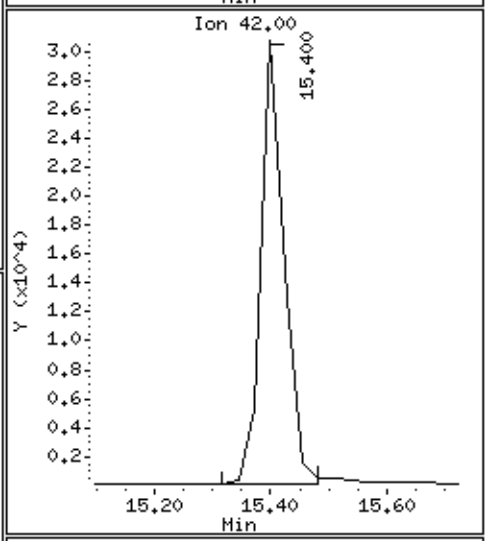


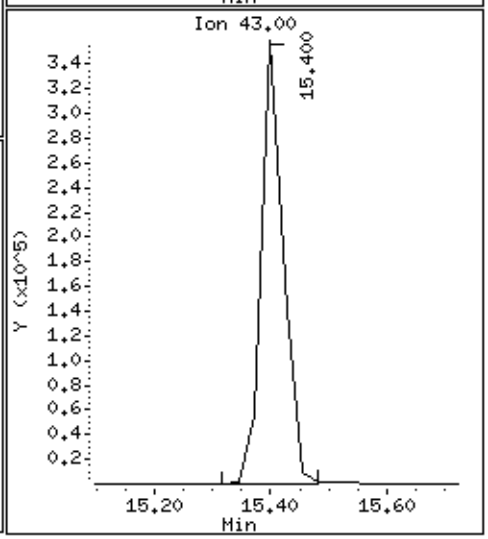












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

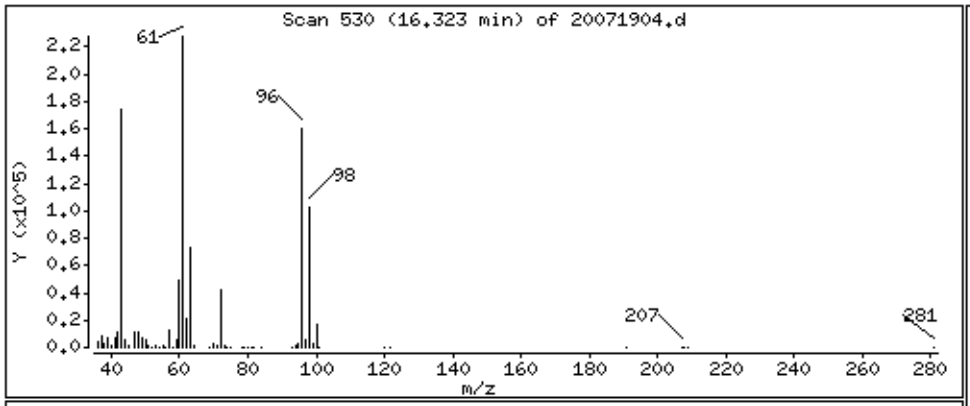
Operator: ef

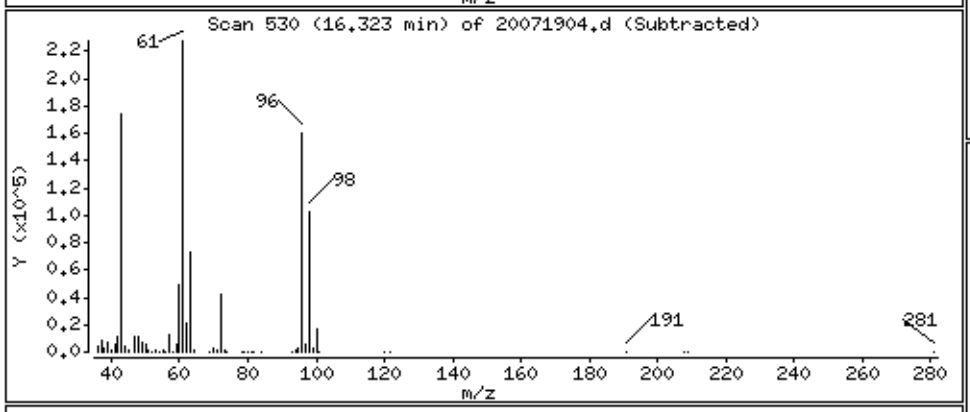
Column phase: RTX-624

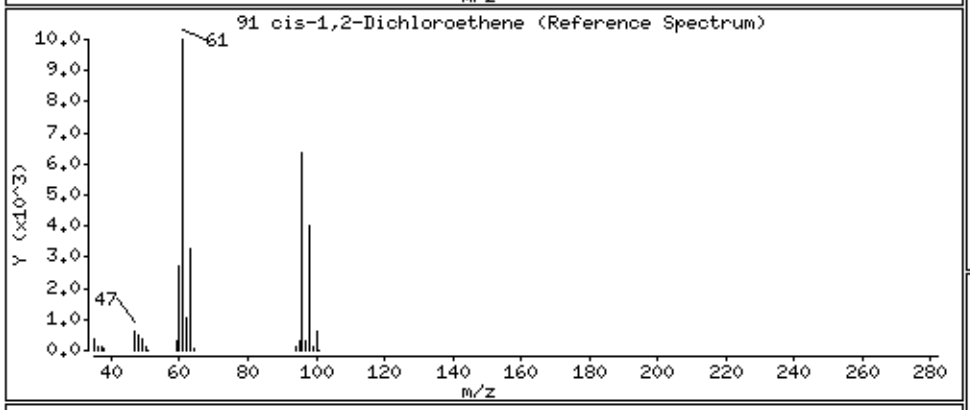
Column diameter: 0.32

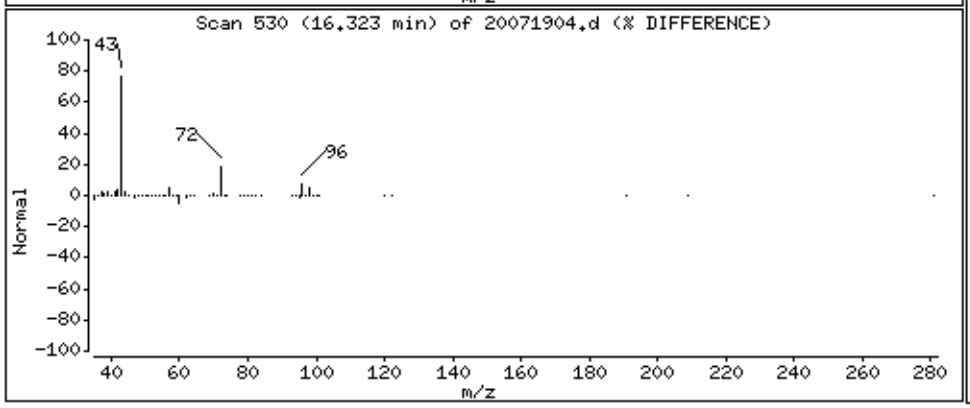
91 cis-1,2-Dichloroethene

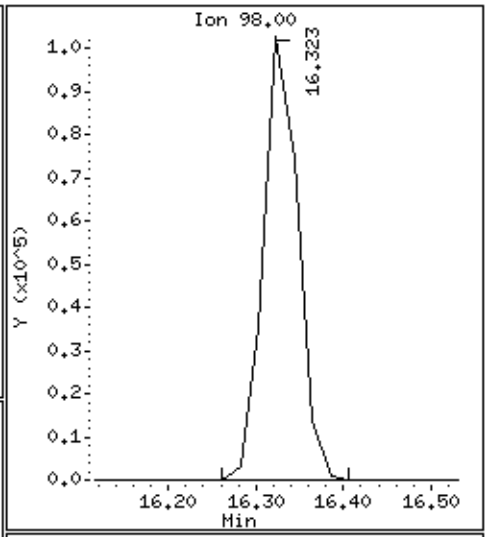
Concentration: 11.010 PPBV

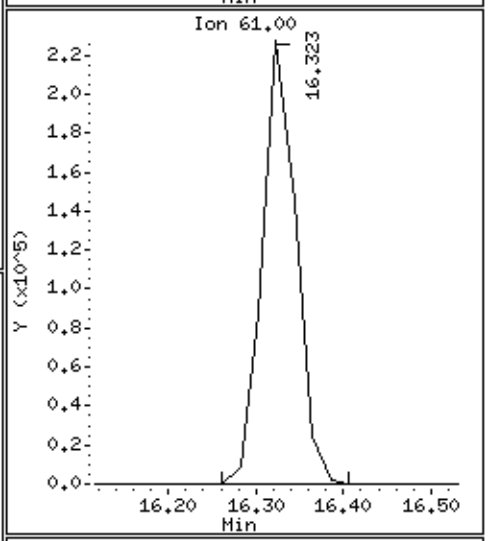


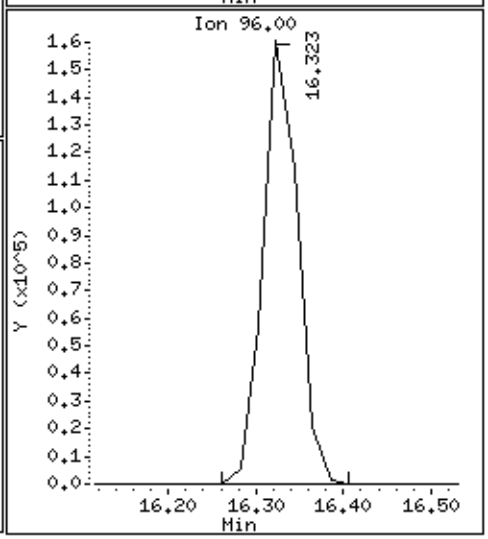












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

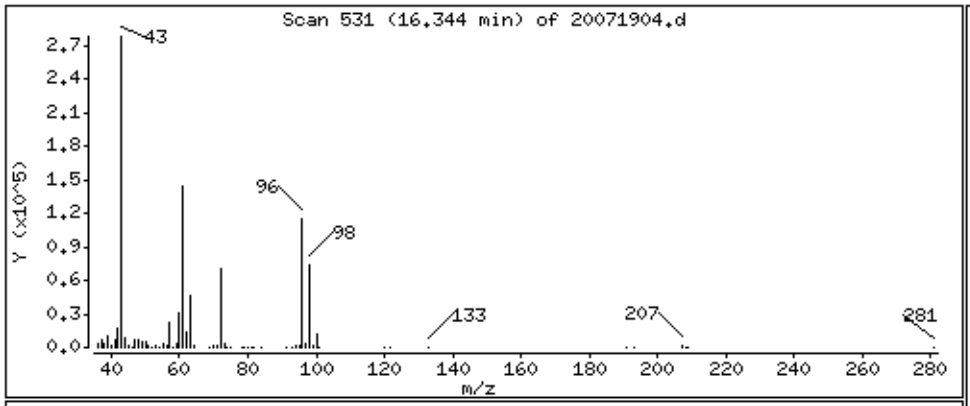
Operator: ef

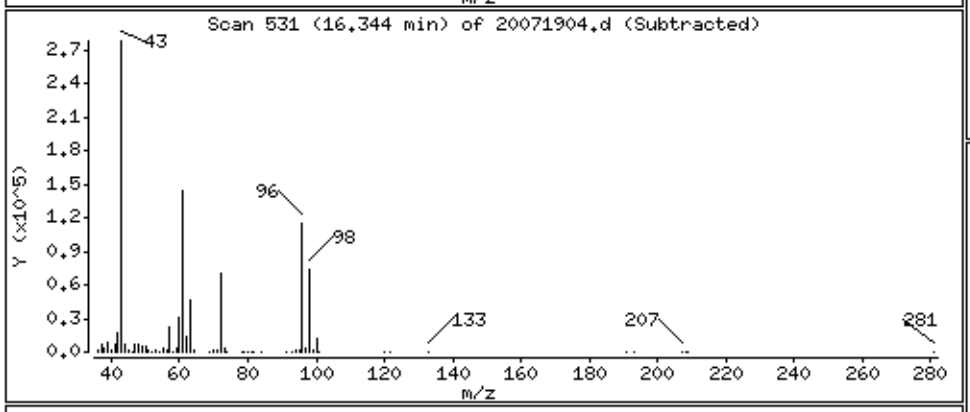
Column phase: RTX-624

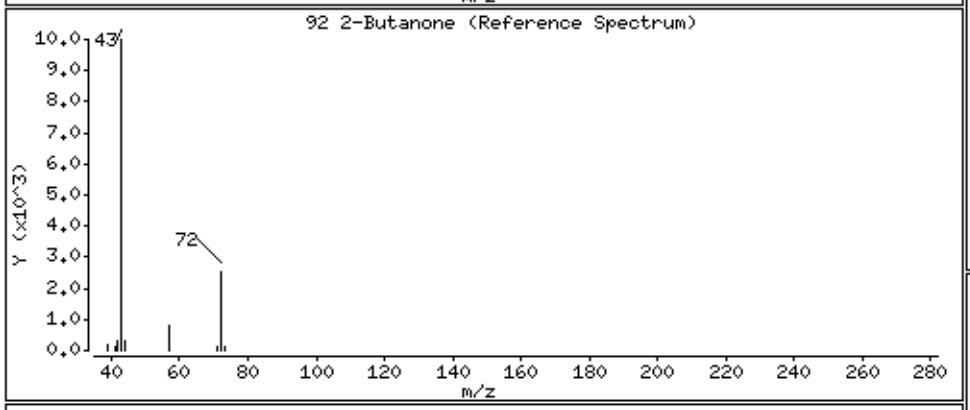
Column diameter: 0.32

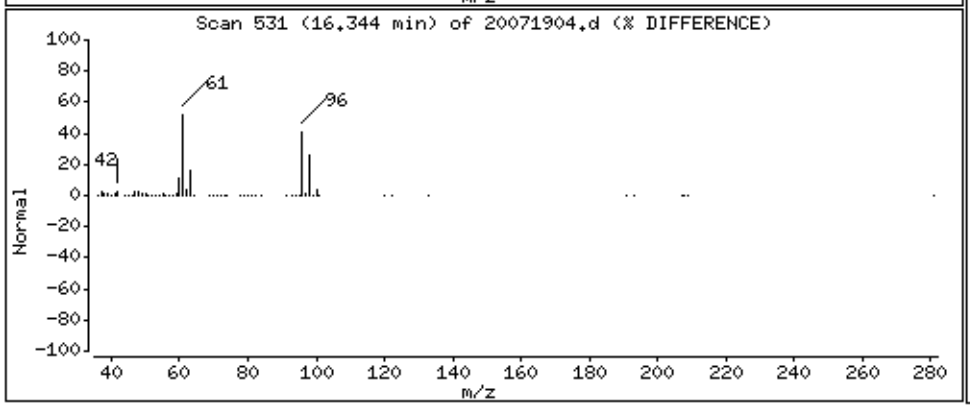
92 2-Butanone

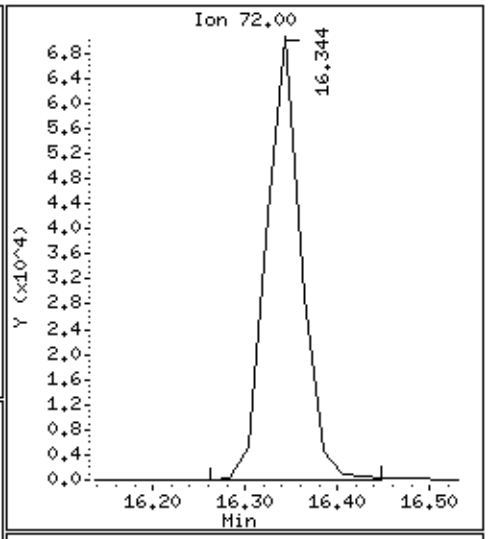
Concentration: 10.375 PPBV

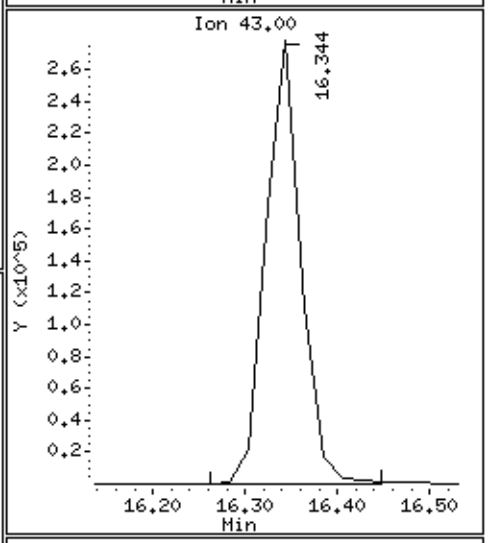


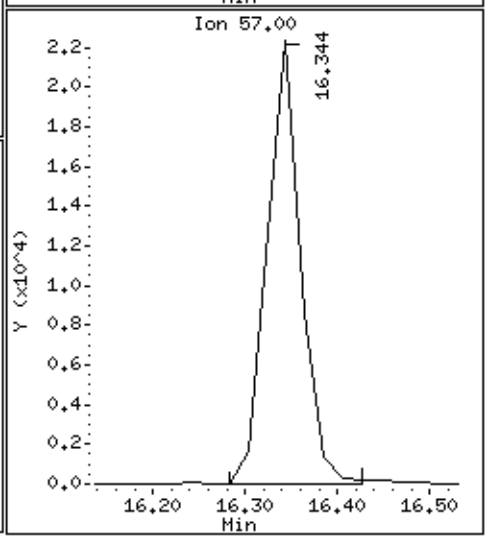












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

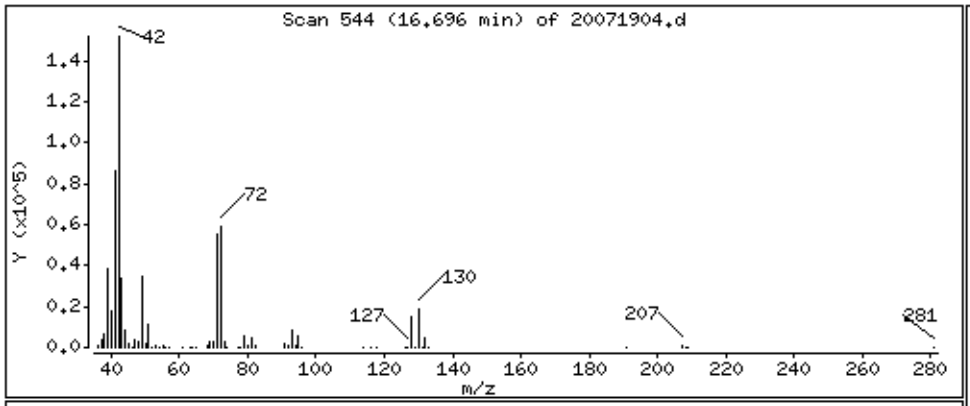
Operator: ef

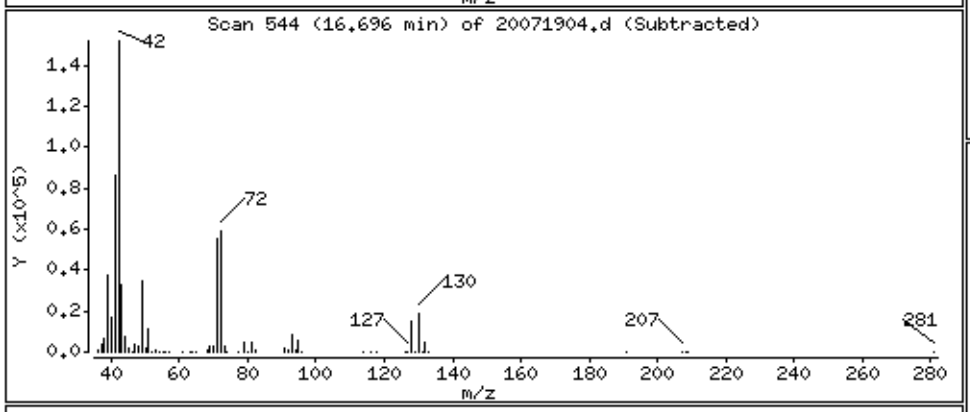
Column phase: RTX-624

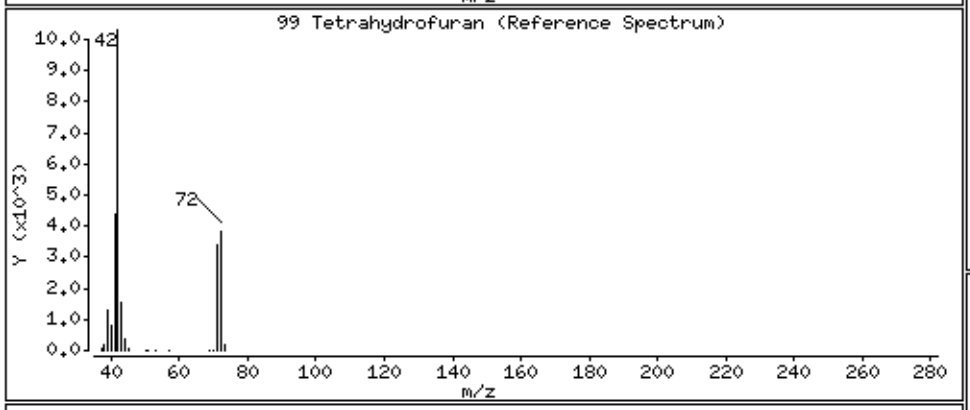
Column diameter: 0.32

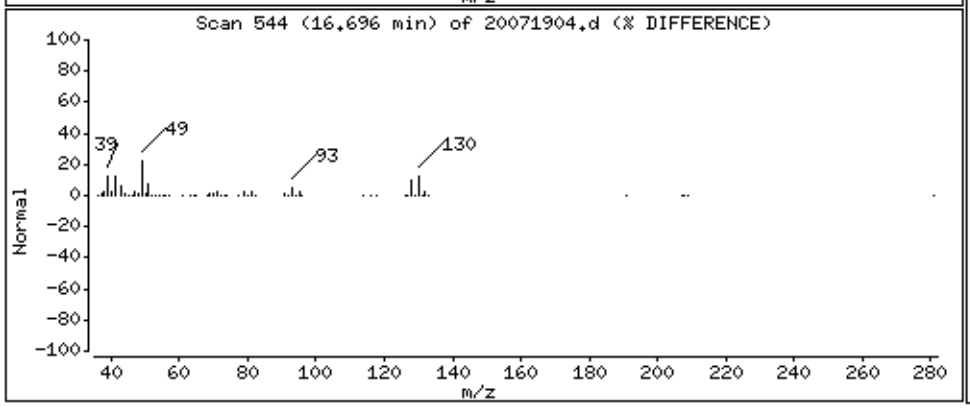
99 Tetrahydrofuran

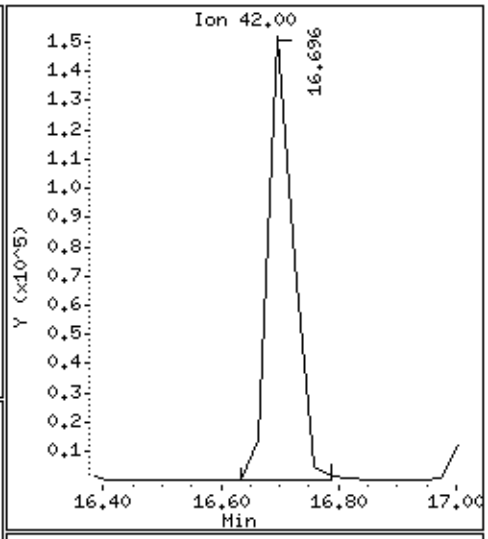
Concentration: 10.586 PPBV

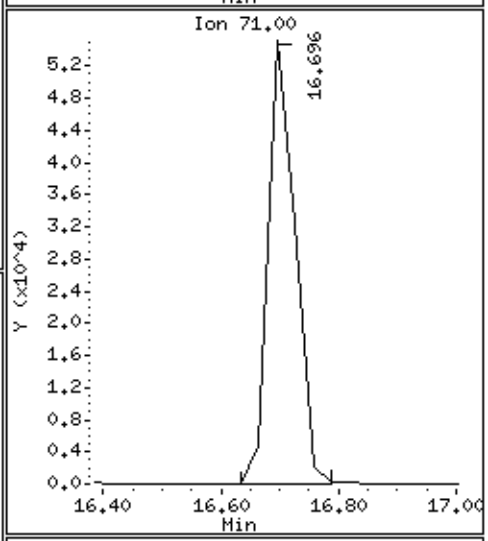


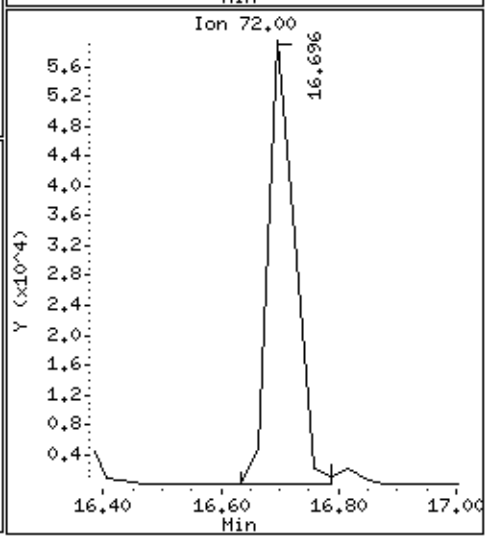












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

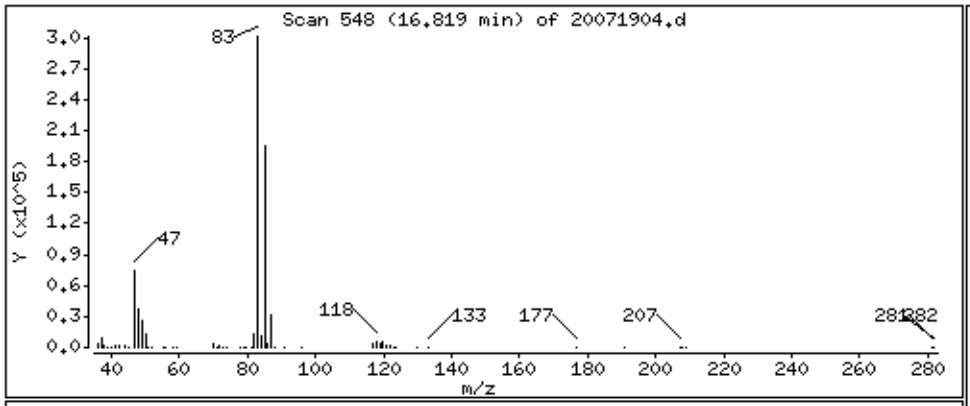
Operator: ef

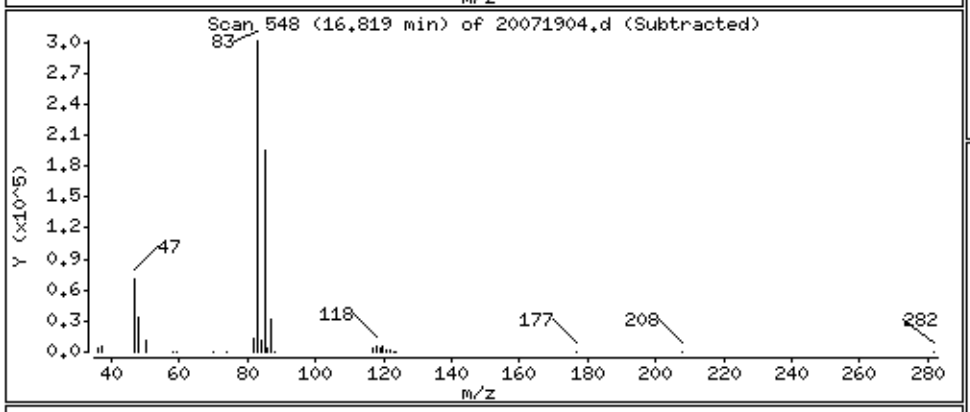
Column phase: RTX-624

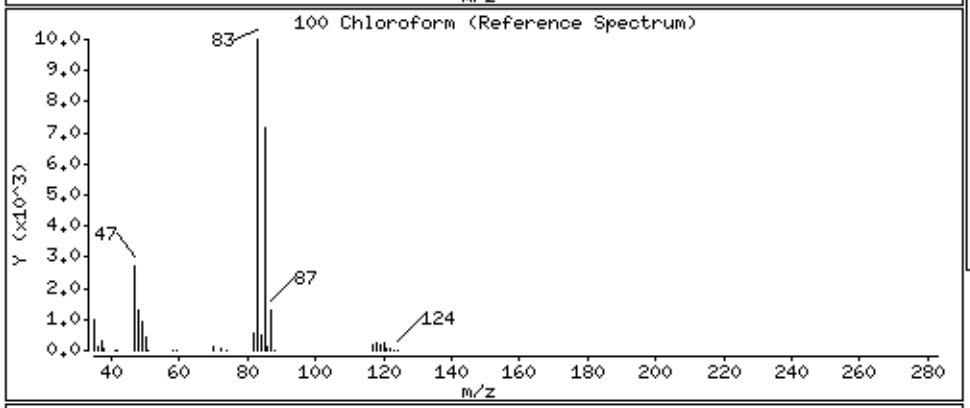
Column diameter: 0.32

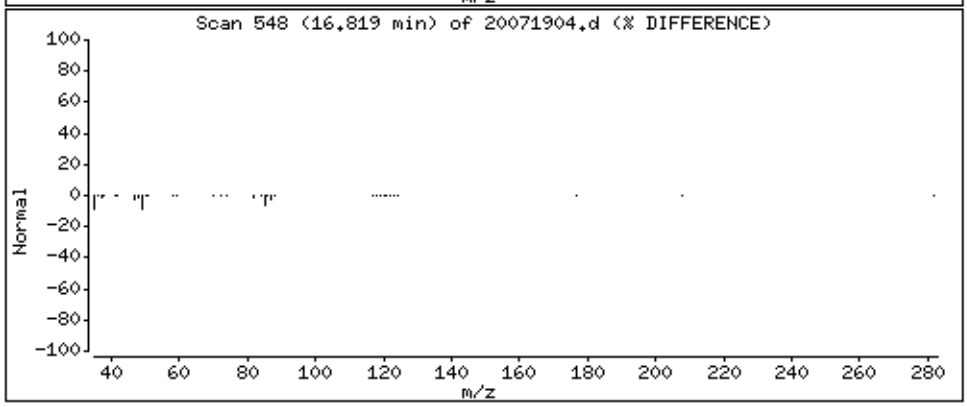
100 Chloroform

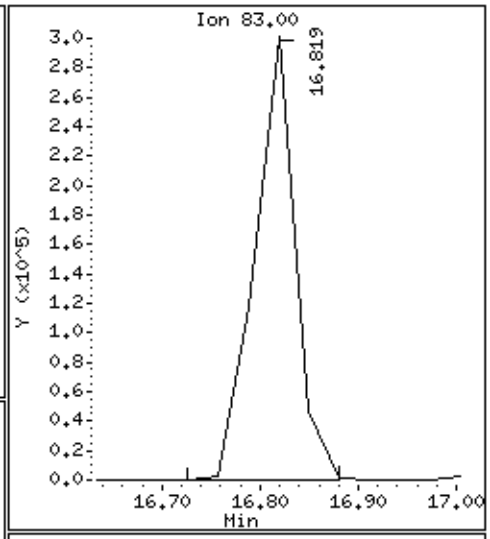
Concentration: 10.762 PPBV

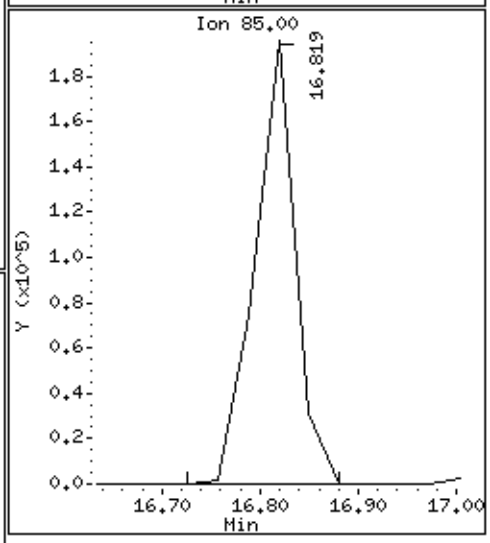












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

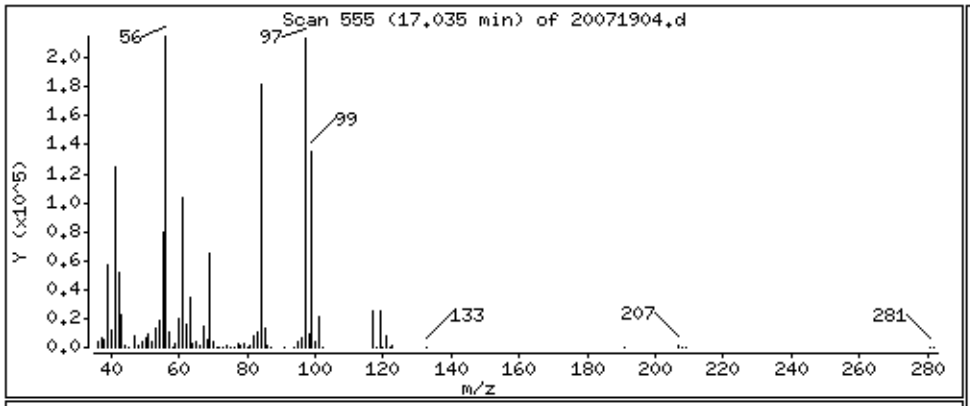
Operator: ef

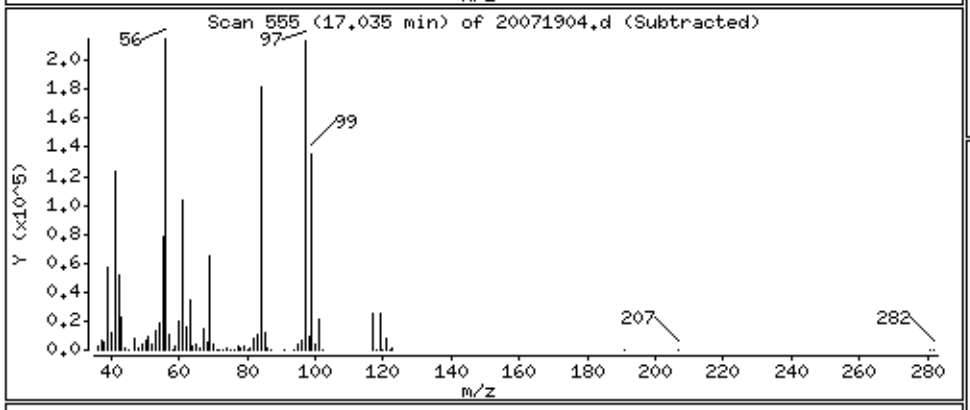
Column phase: RTX-624

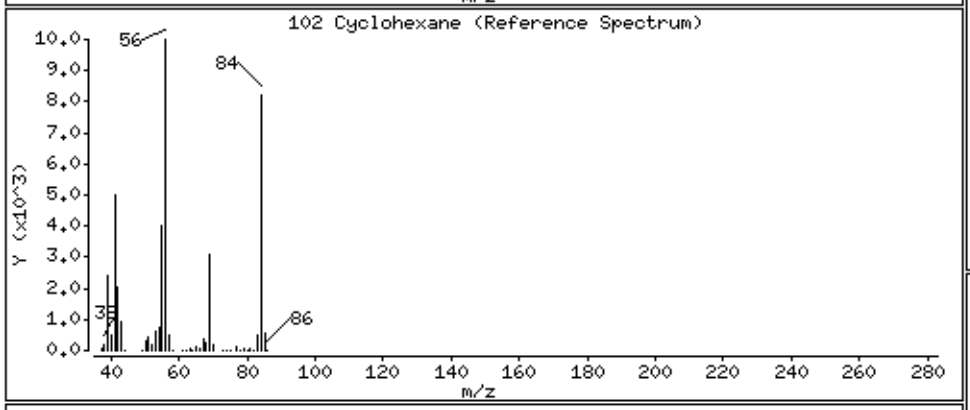
Column diameter: 0.32

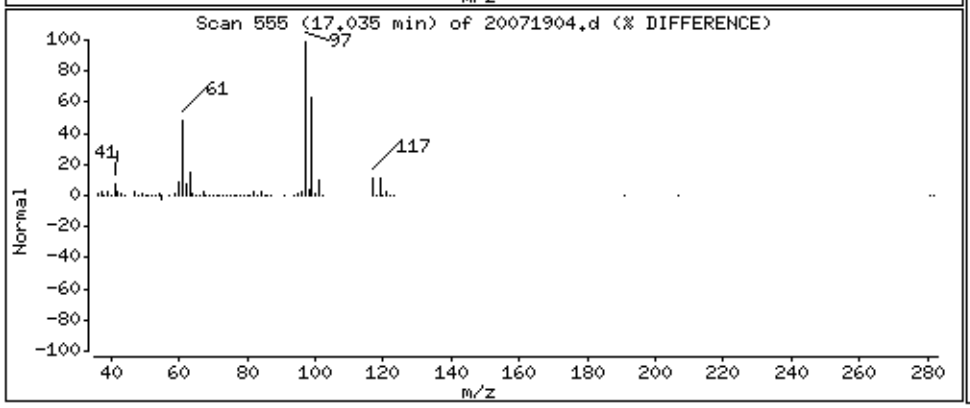
102 Cyclohexane

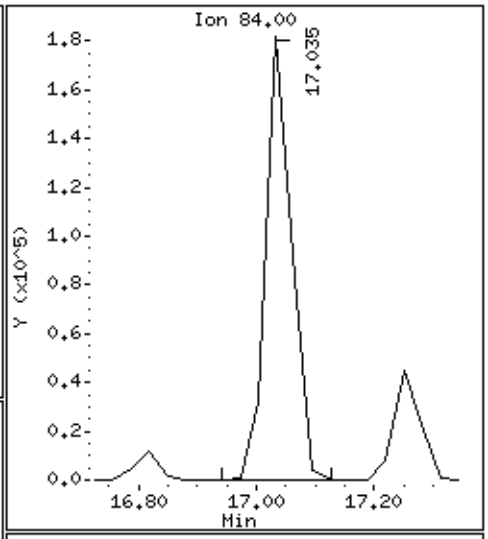
Concentration: 10.072 PPBV

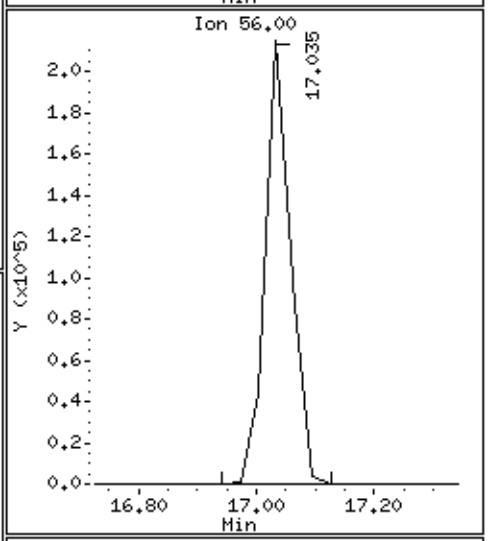


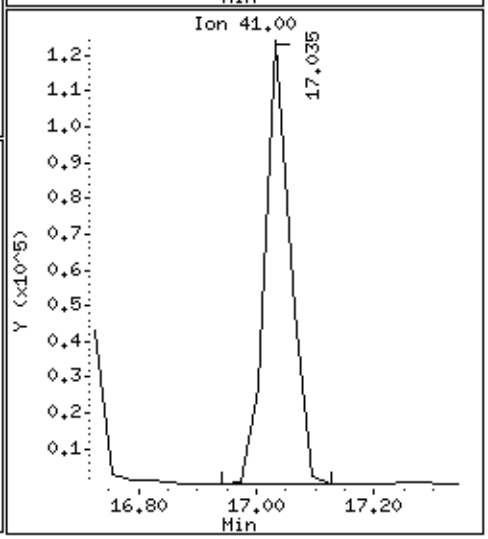












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

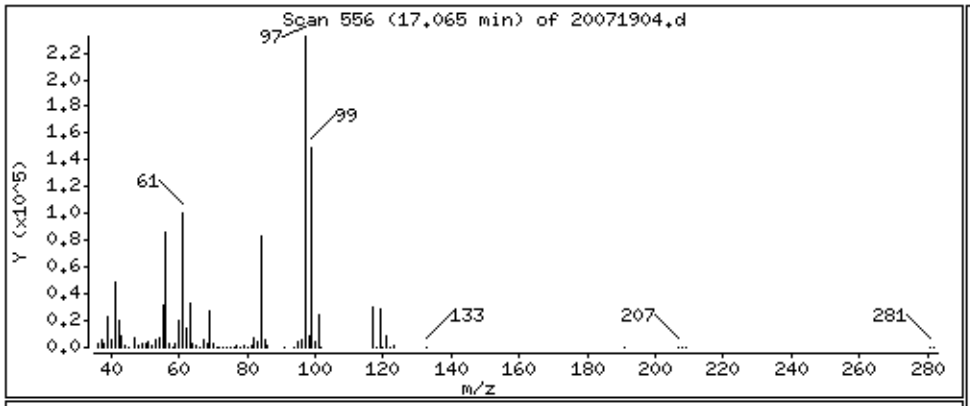
Operator: ef

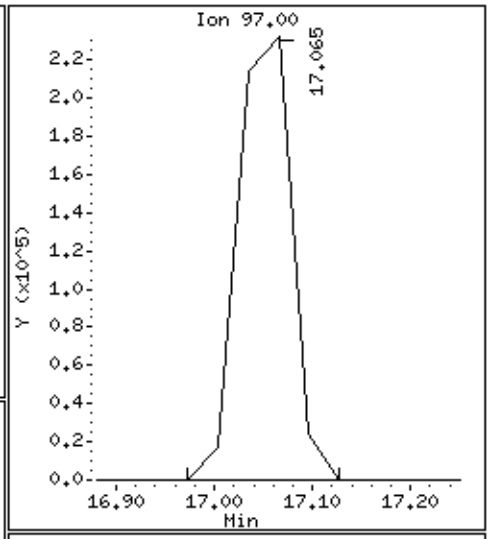
Column phase: RTX-624

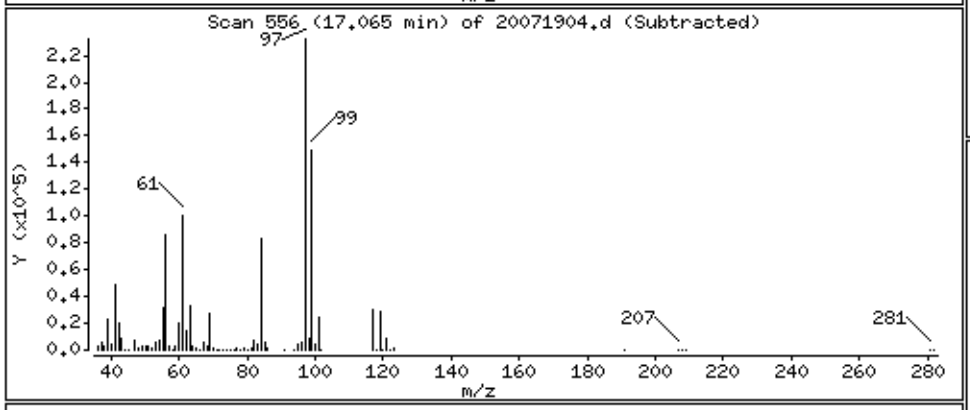
Column diameter: 0.32

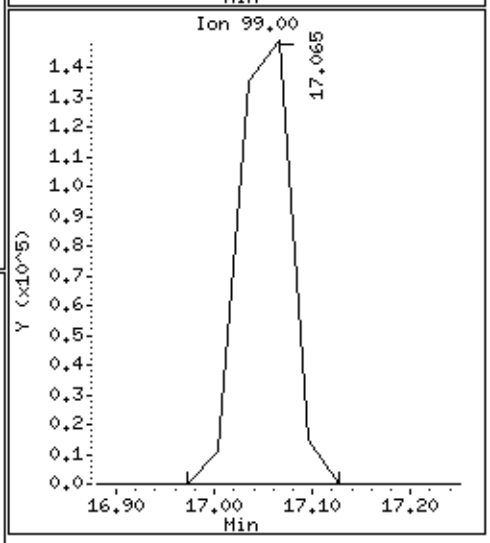
103 1,1,1-Trichloroethane

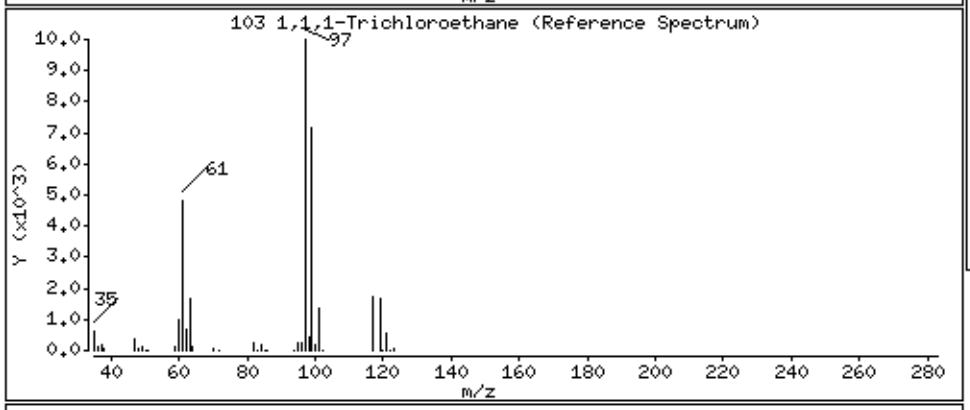
Concentration: 10.758 PPBV

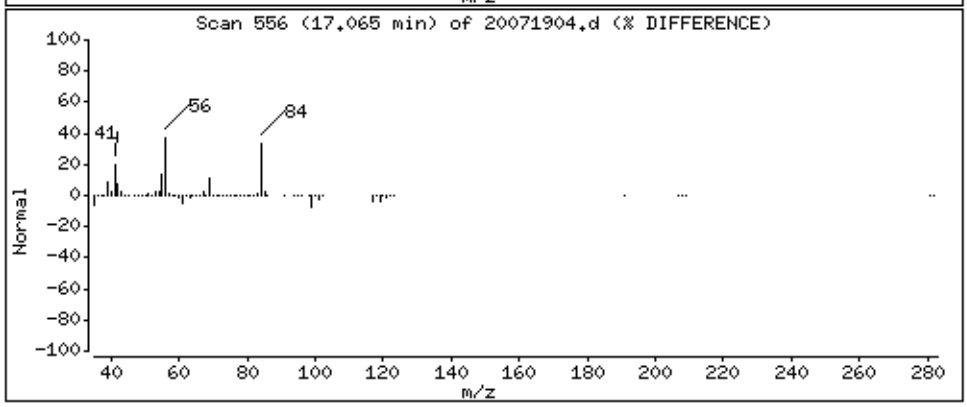












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

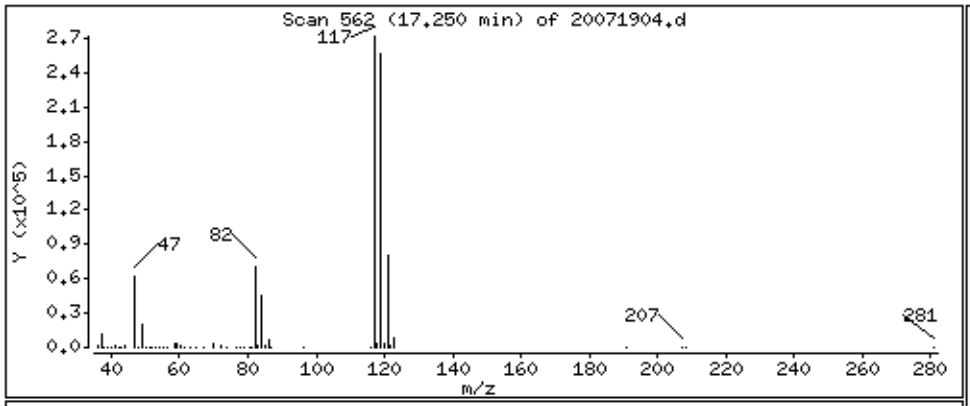
Operator: ef

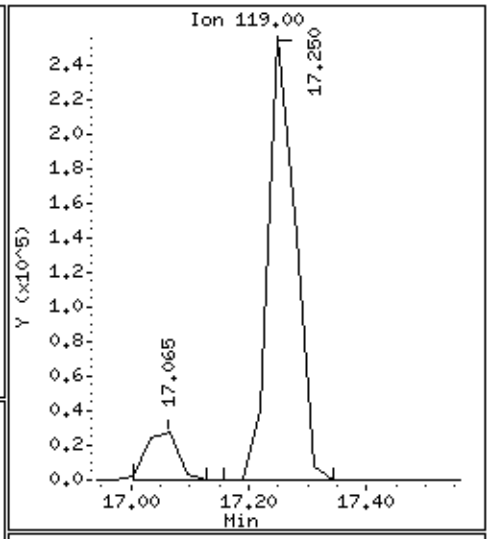
Column phase: RTX-624

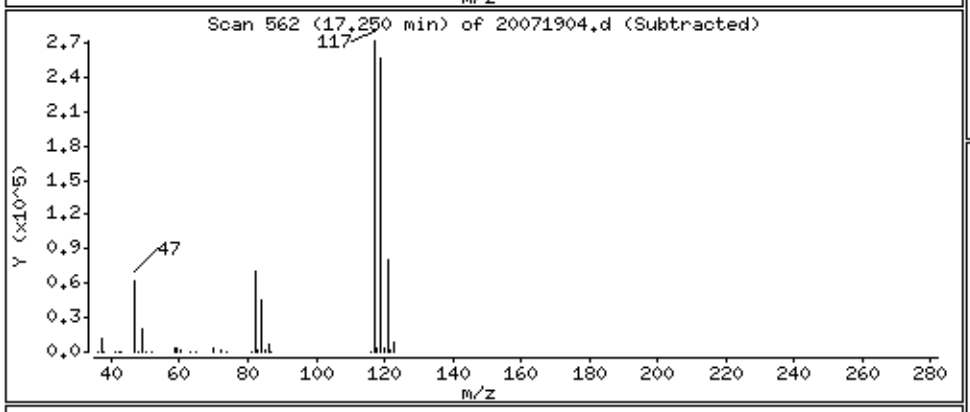
Column diameter: 0.32

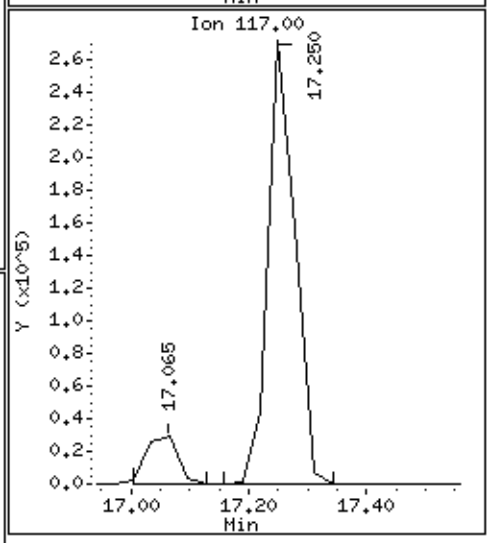
106 Carbon Tetrachloride

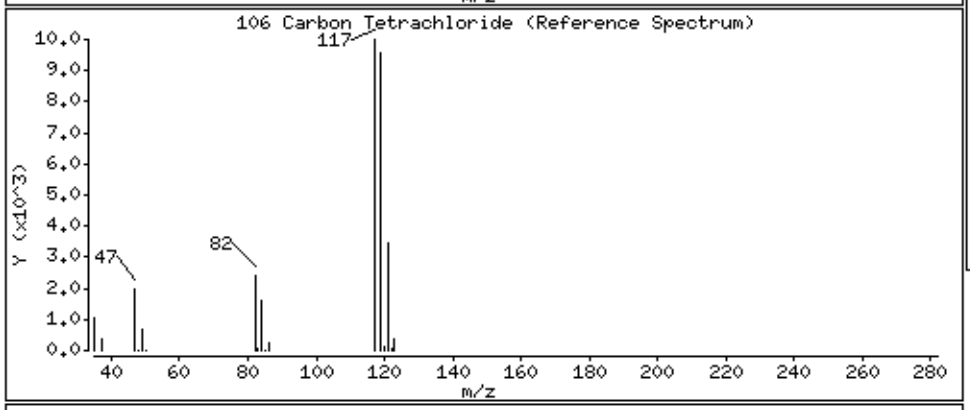
Concentration: 11.860 PPBV

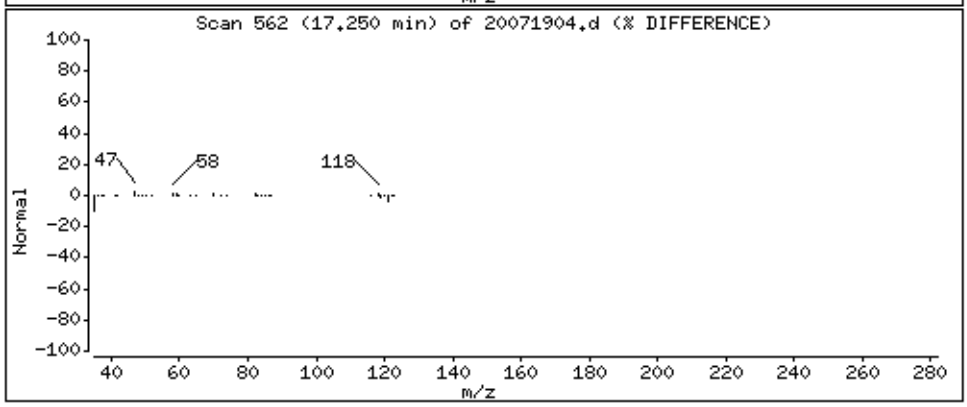












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

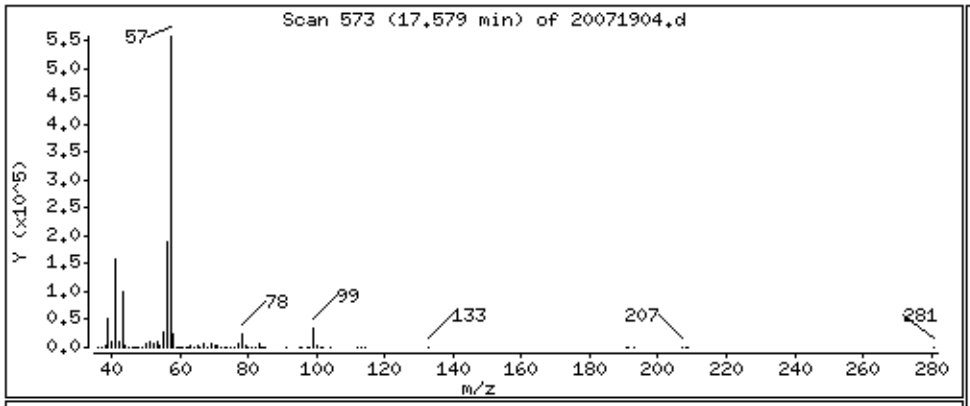
Operator: ef

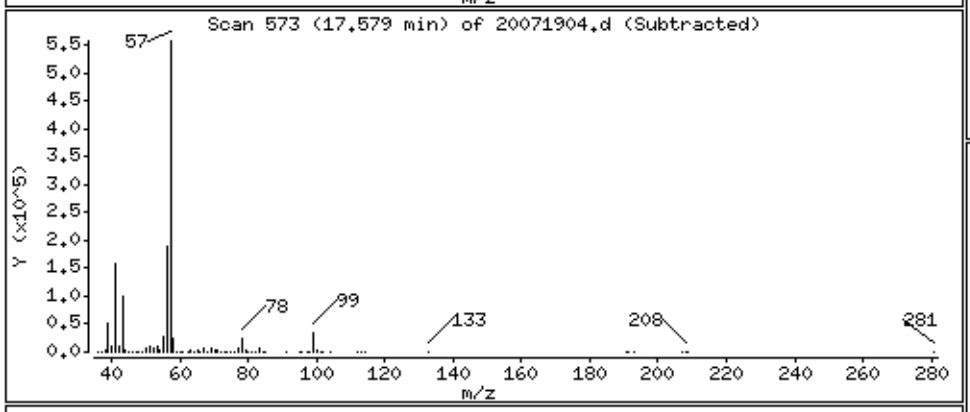
Column phase: RTX-624

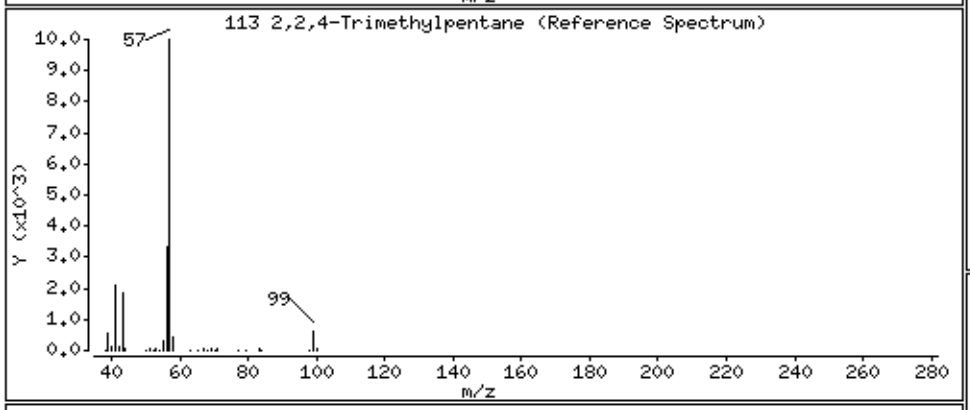
Column diameter: 0.32

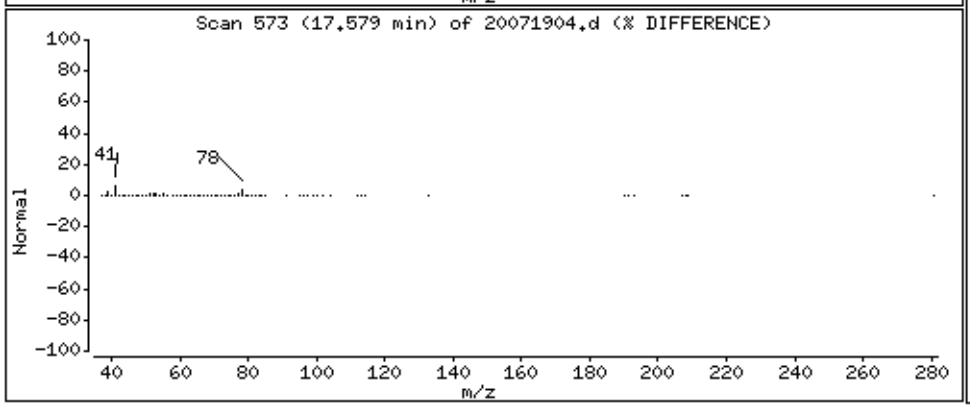
113 2,2,4-Trimethylpentane

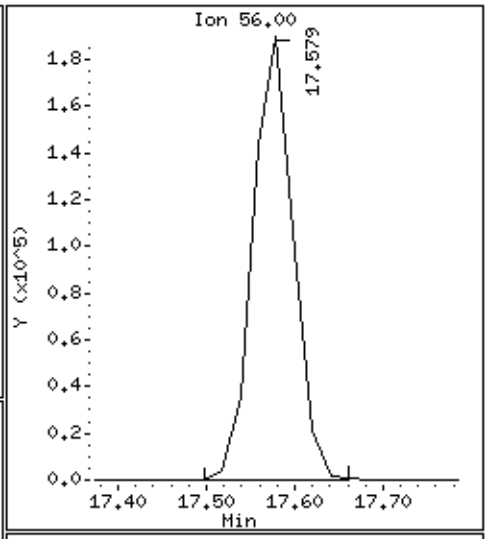
Concentration: 10.816 PPBV

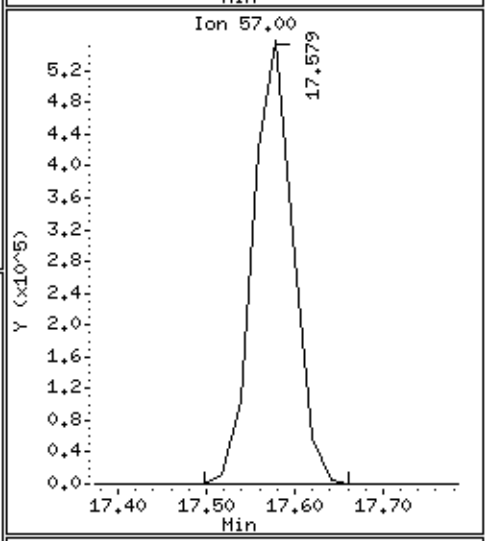


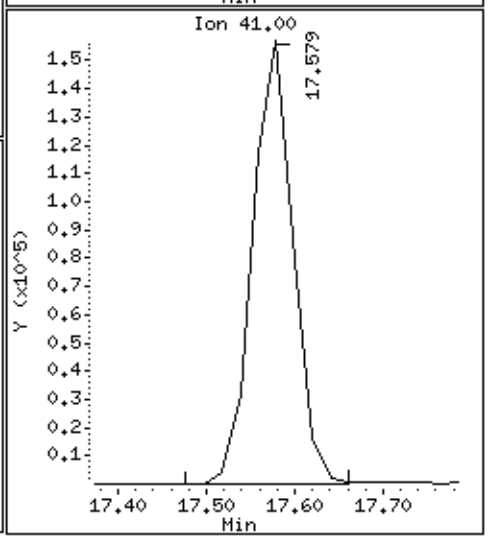












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

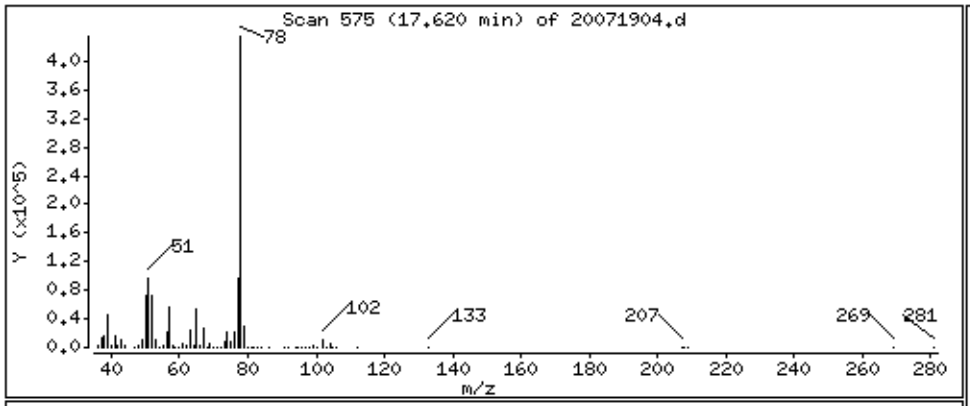
Operator: ef

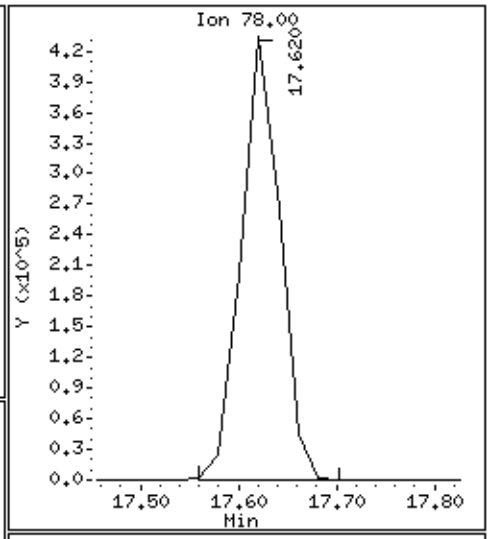
Column phase: RTX-624

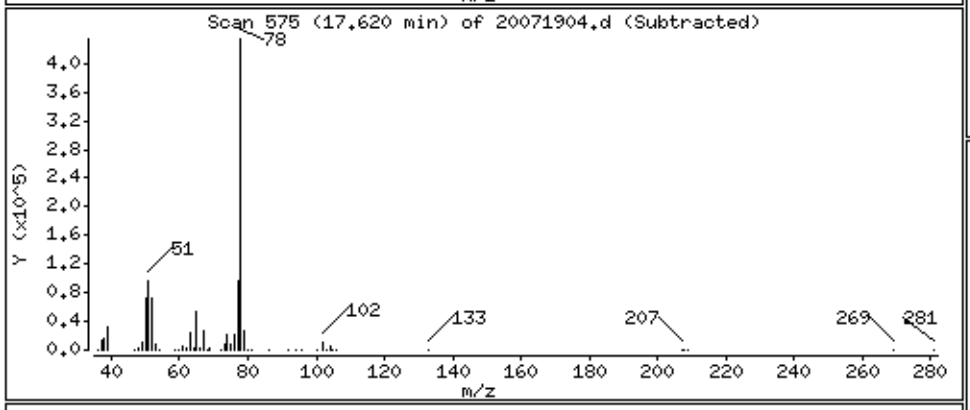
Column diameter: 0.32

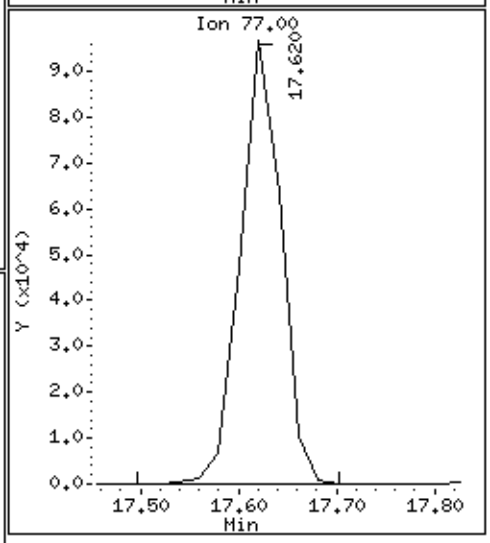
116 Benzene

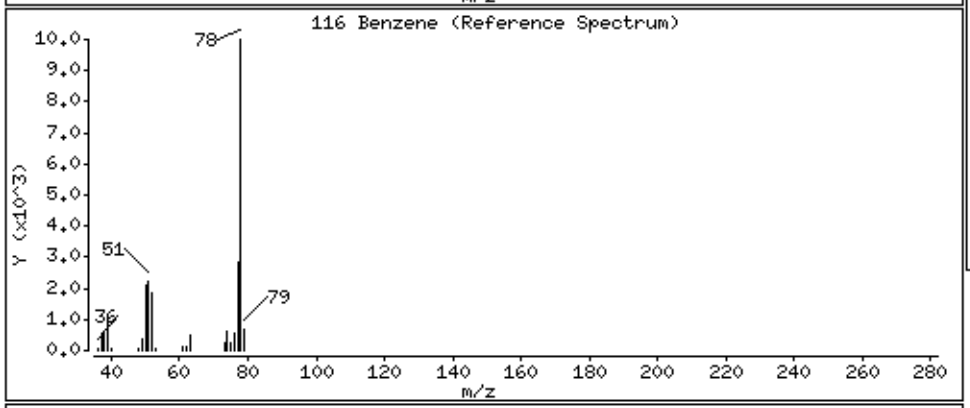
Concentration: 11.193 PPBV

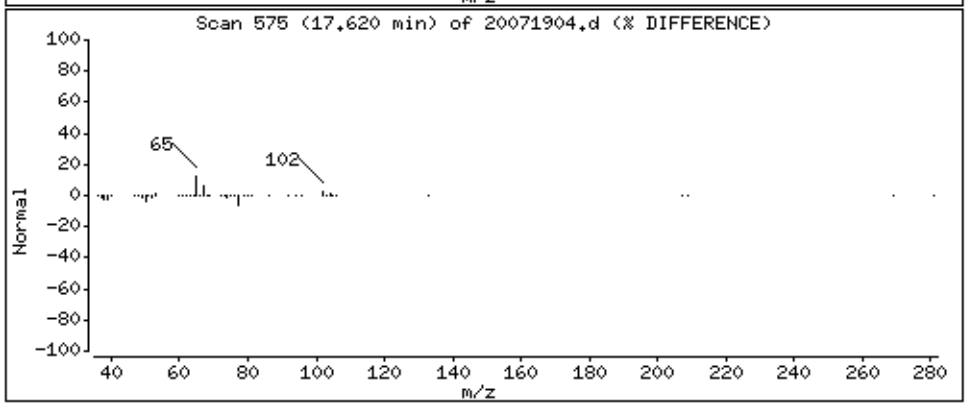












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

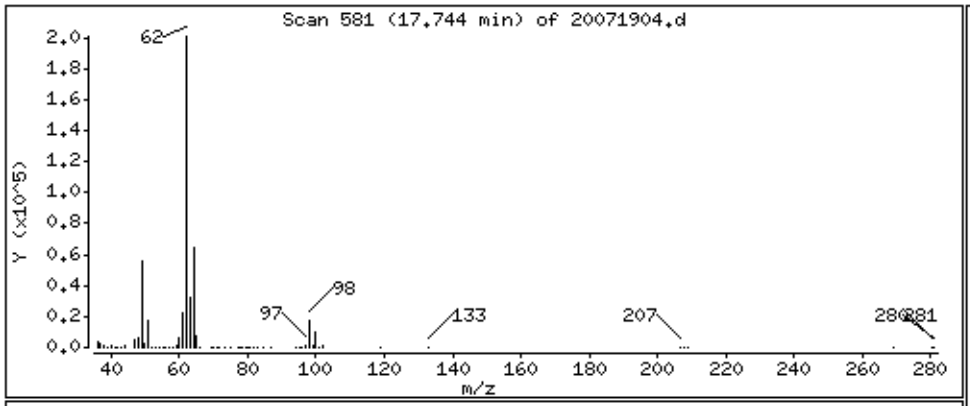
Operator: ef

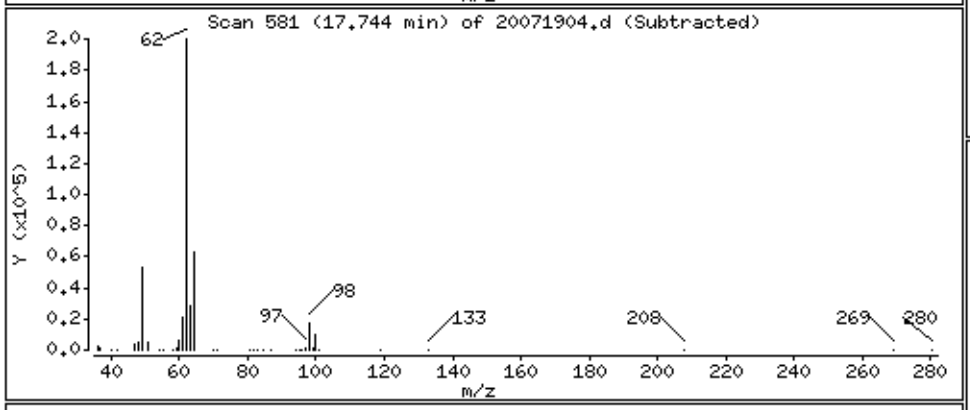
Column phase: RTX-624

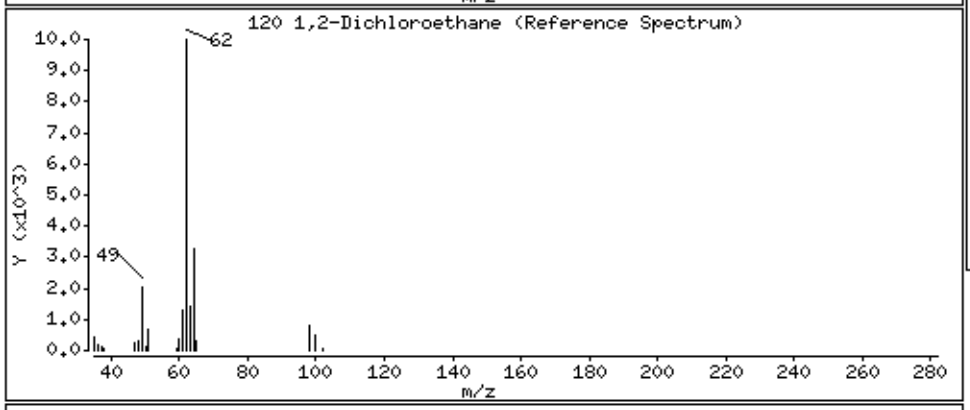
Column diameter: 0.32

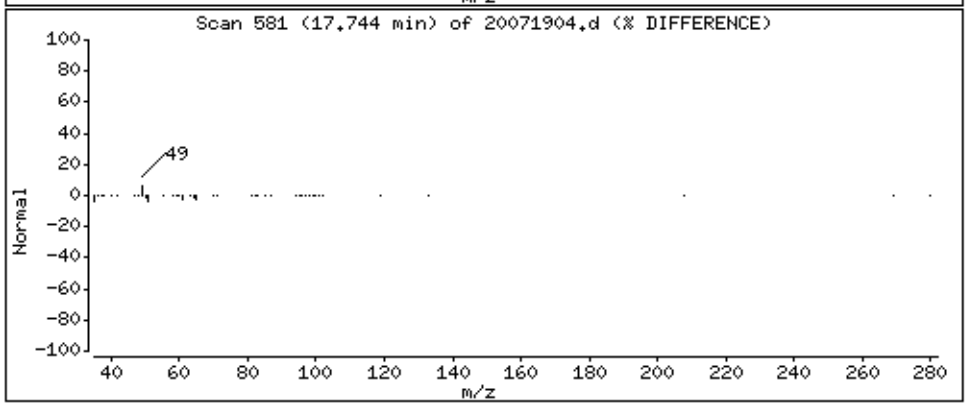
120 1,2-Dichloroethane

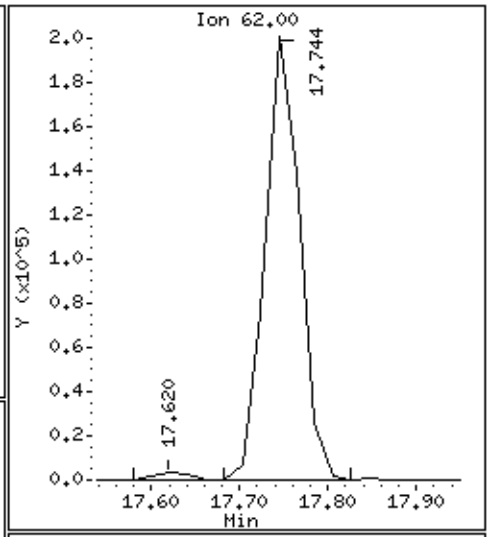
Concentration: 11.761 PPBV

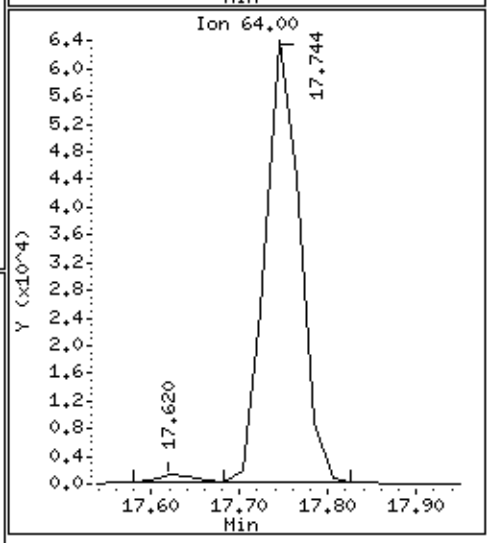












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

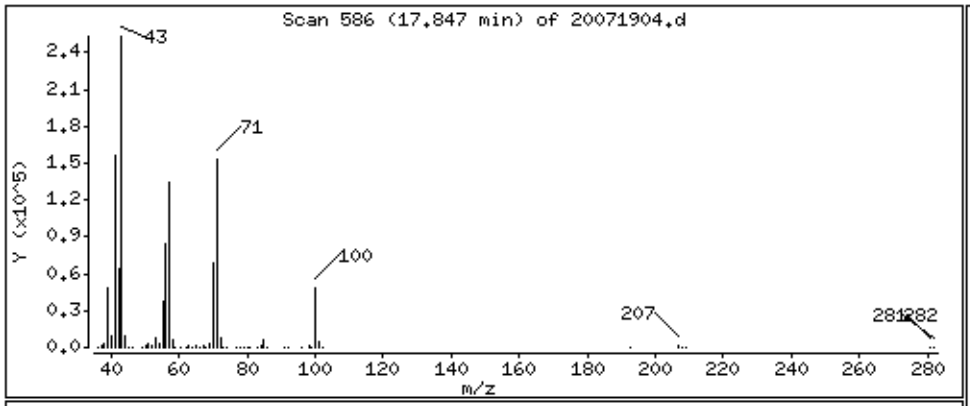
Operator: ef

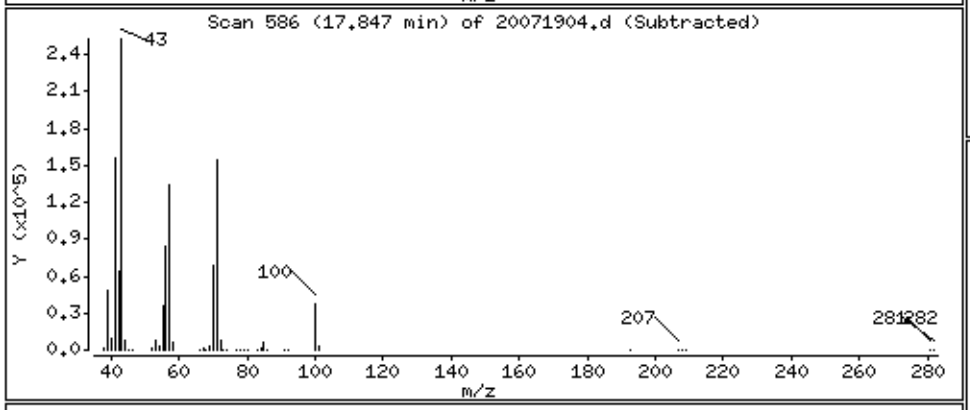
Column phase: RTX-624

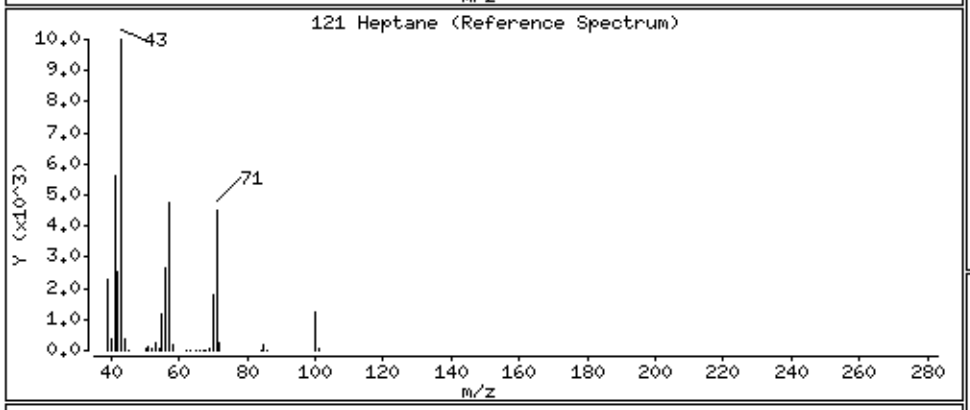
Column diameter: 0.32

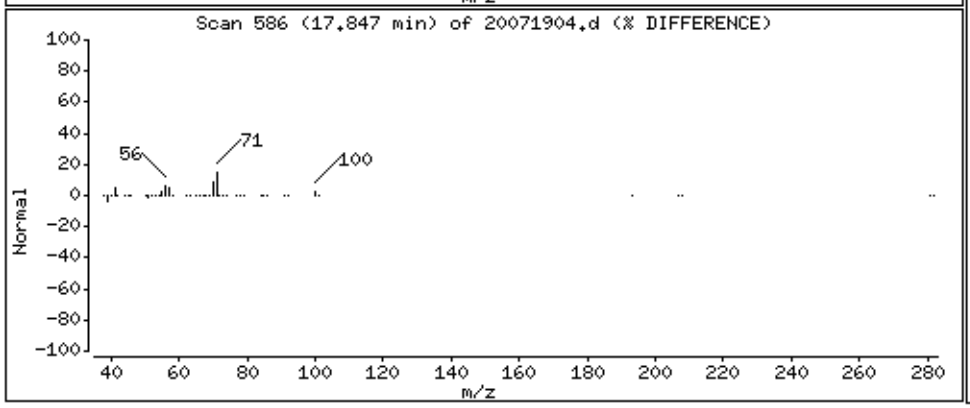
121 Heptane

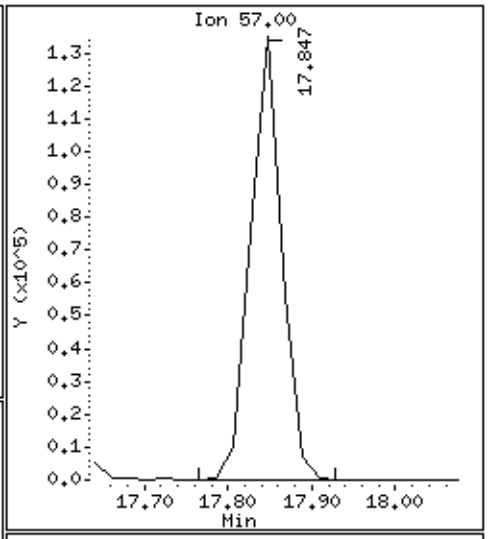
Concentration: 11.988 PPBV

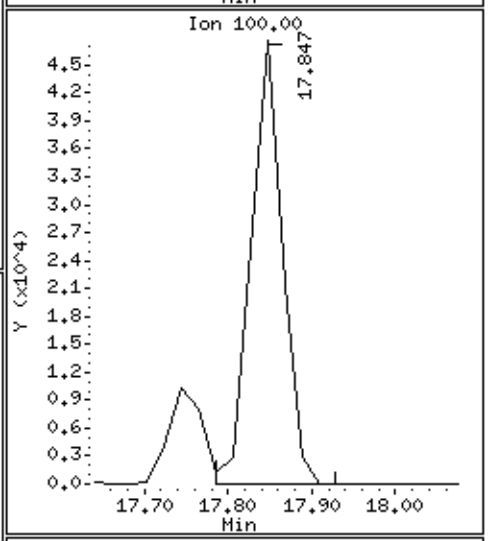


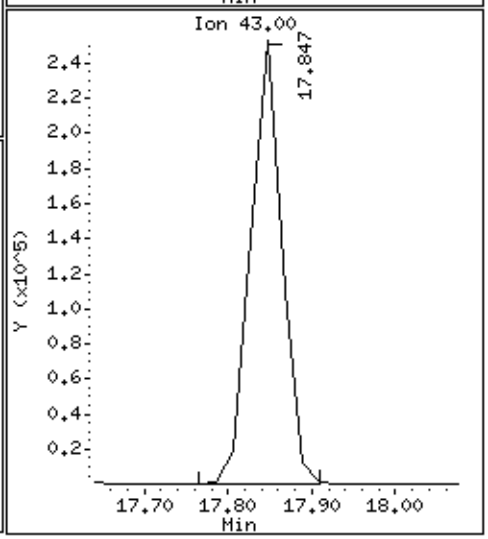












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

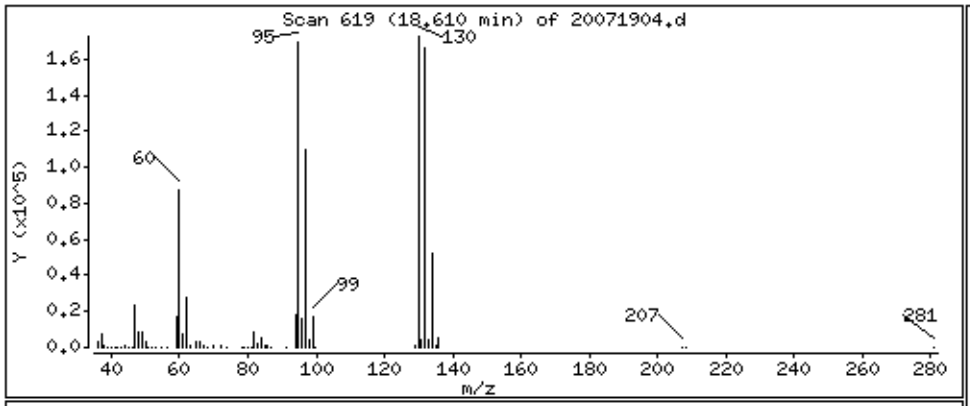
Operator: ef

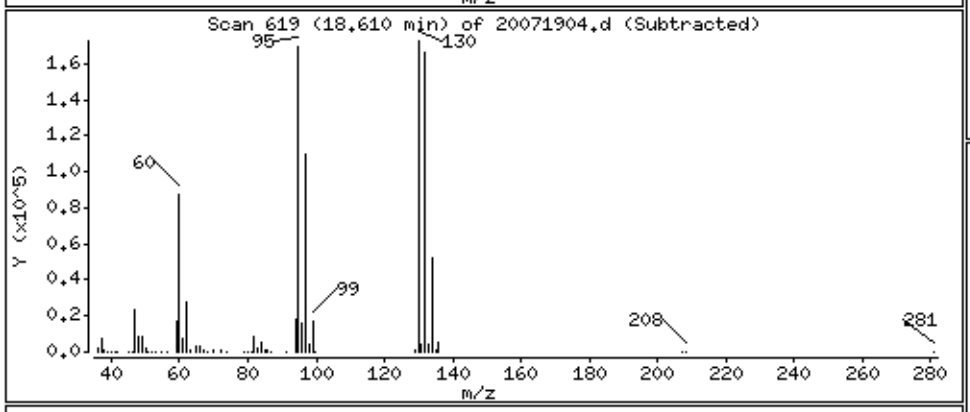
Column phase: RTX-624

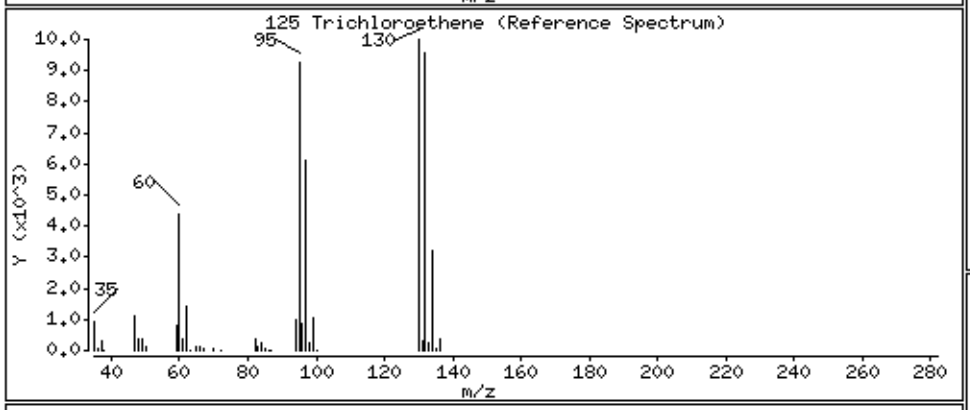
Column diameter: 0.32

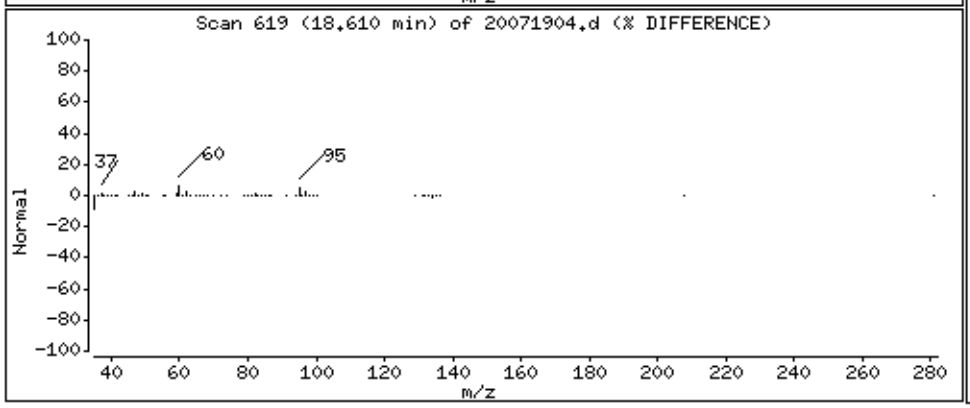
125 Trichloroethene

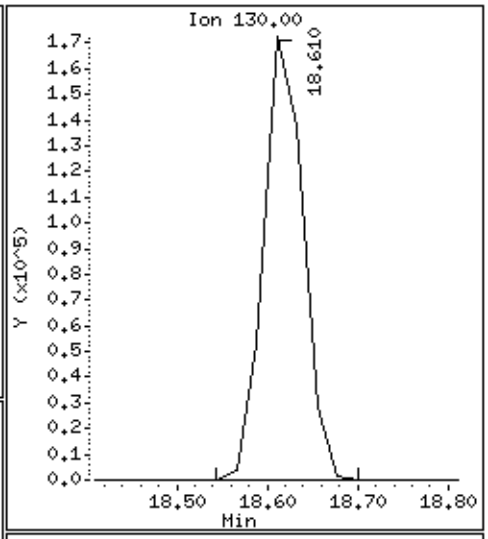
Concentration: 10.829 PPBV

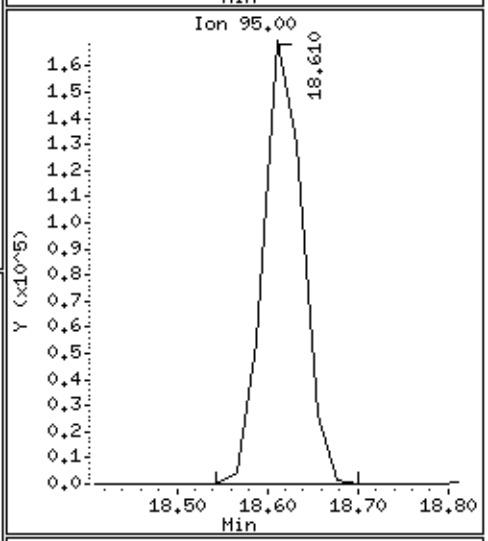


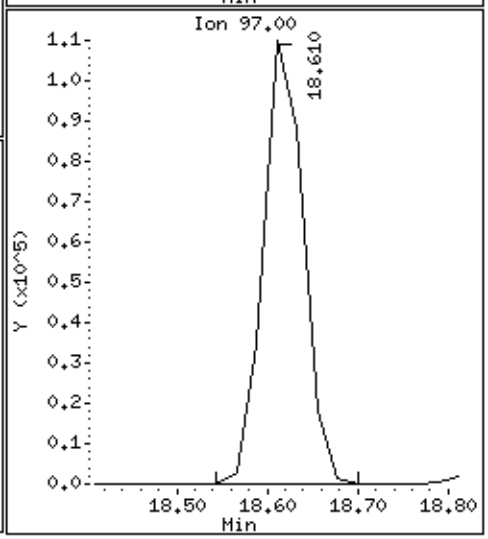












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

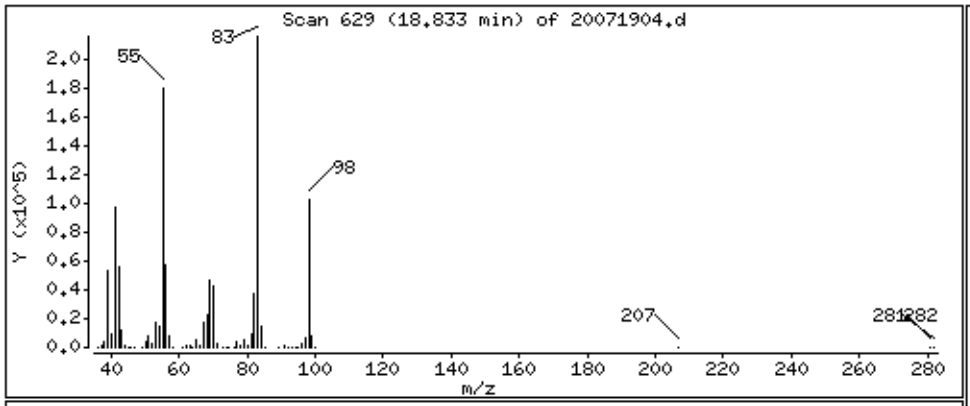
Operator: ef

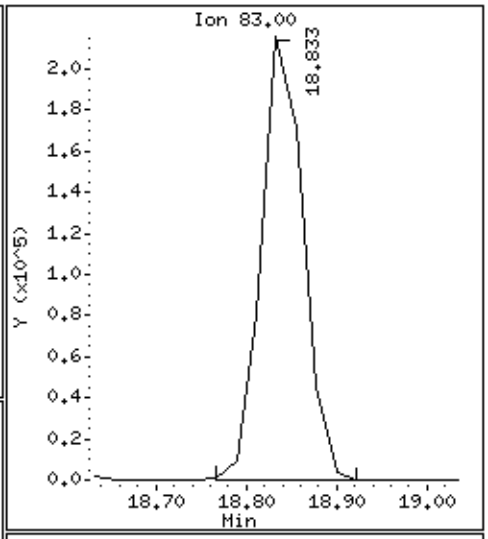
Column phase: RTX-624

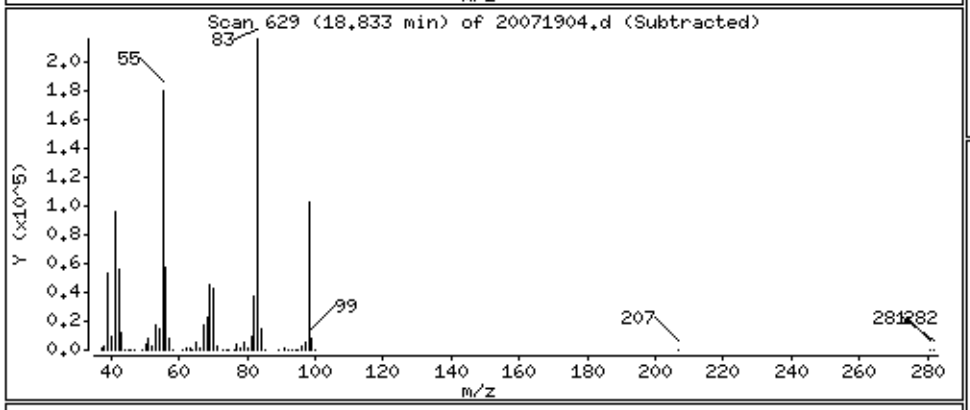
Column diameter: 0.32

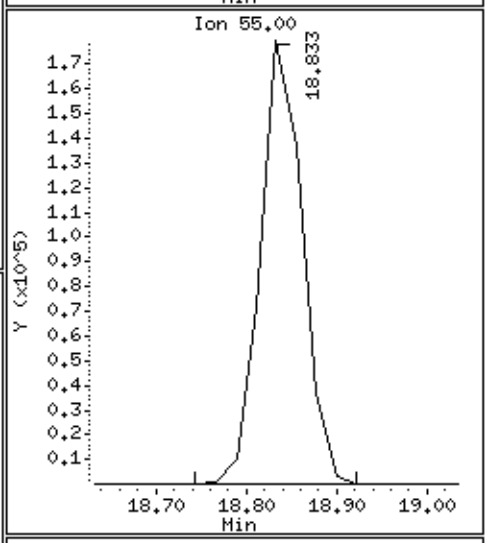
127 Methylcyclohexane

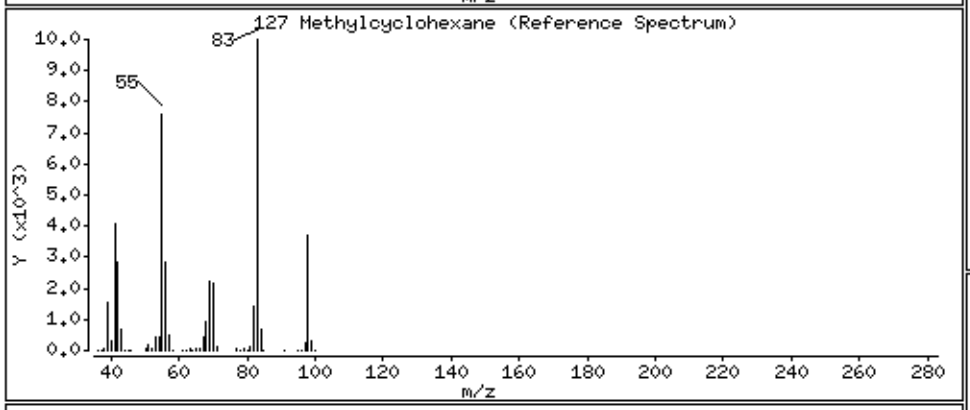
Concentration: 11.257 PPBV

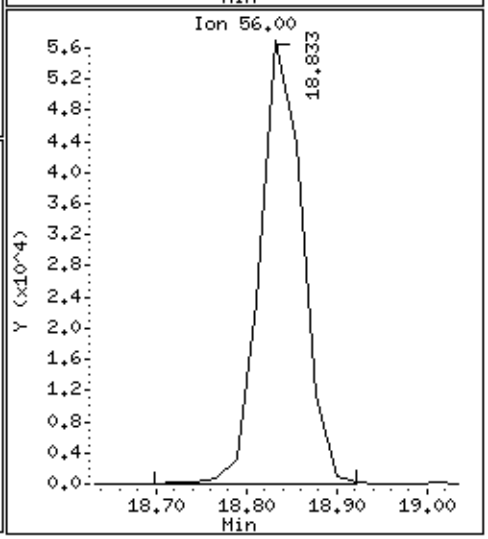


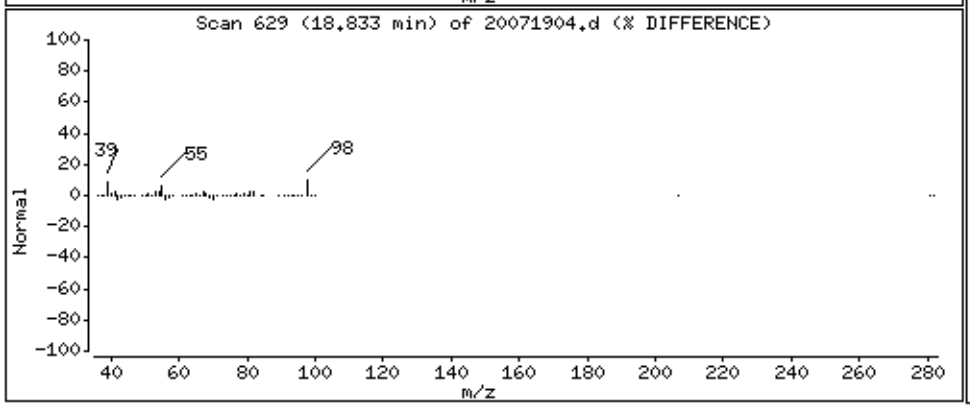












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

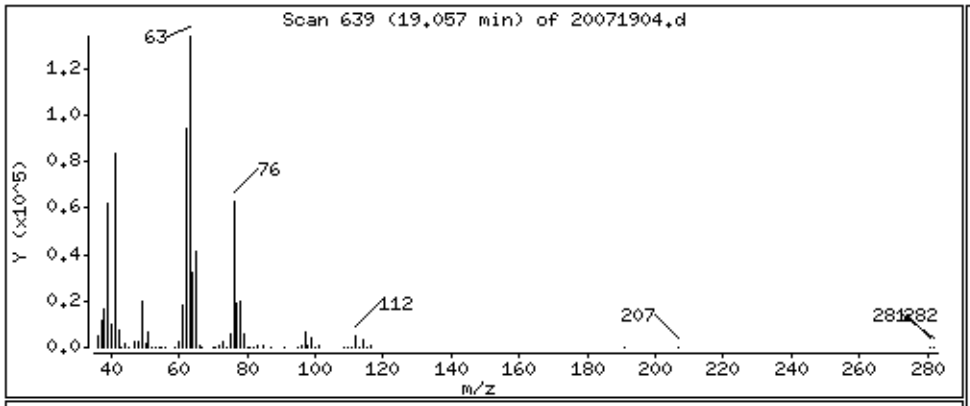
Operator: ef

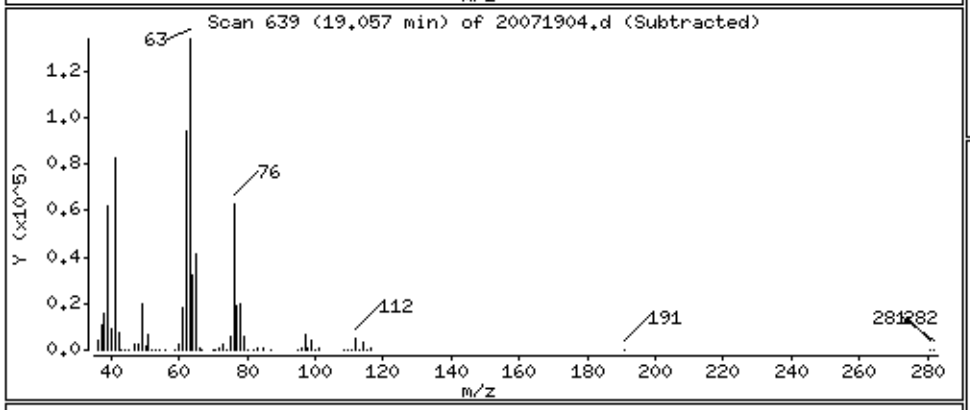
Column phase: RTX-624

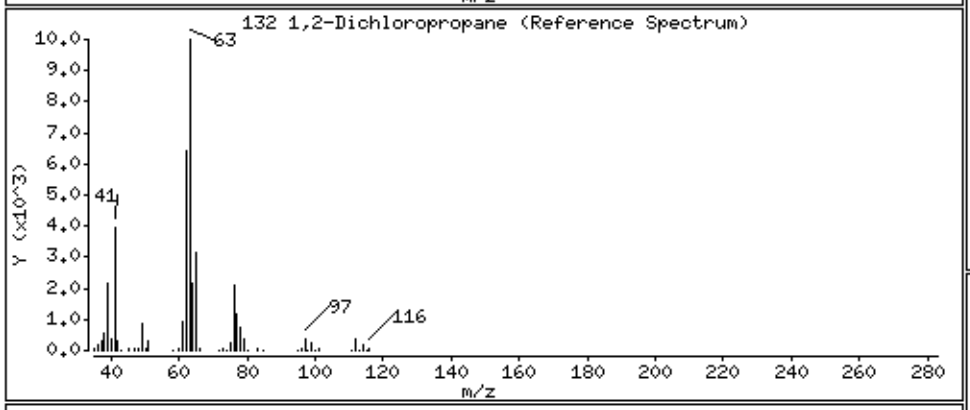
Column diameter: 0.32

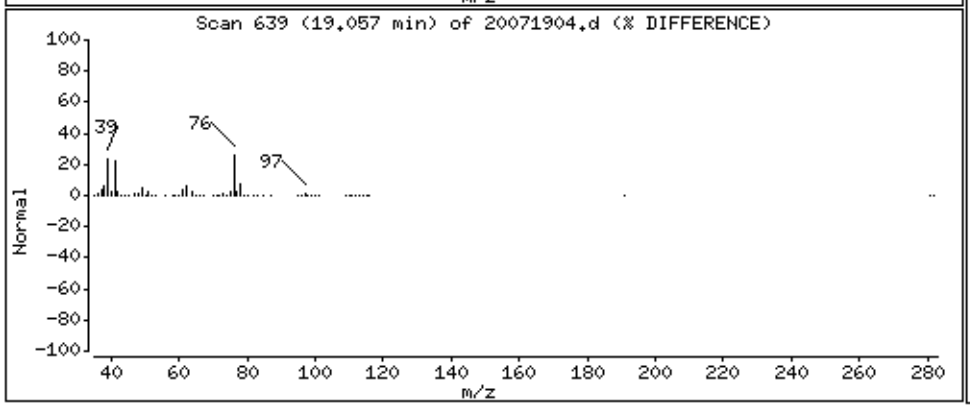
132 1,2-Dichloropropane

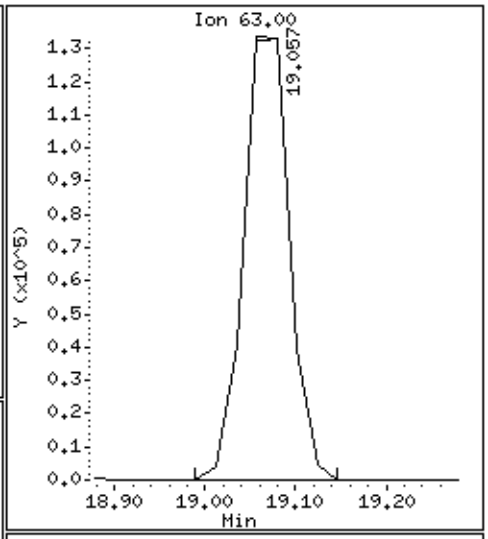
Concentration: 11.559 PPBV

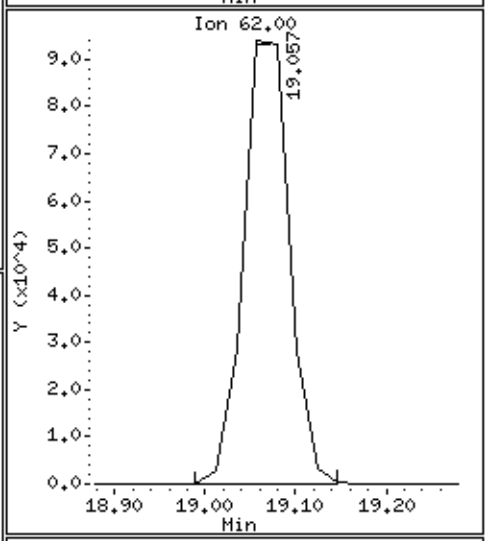


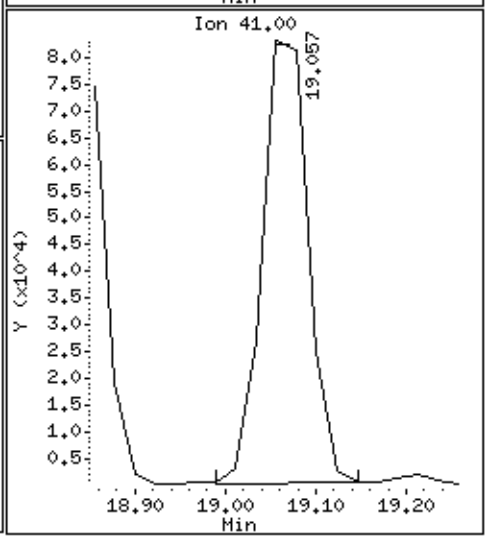












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

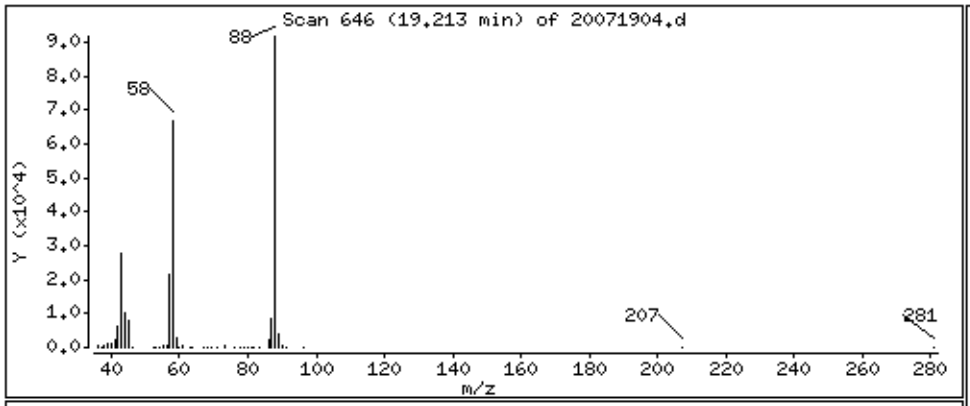
Operator: ef

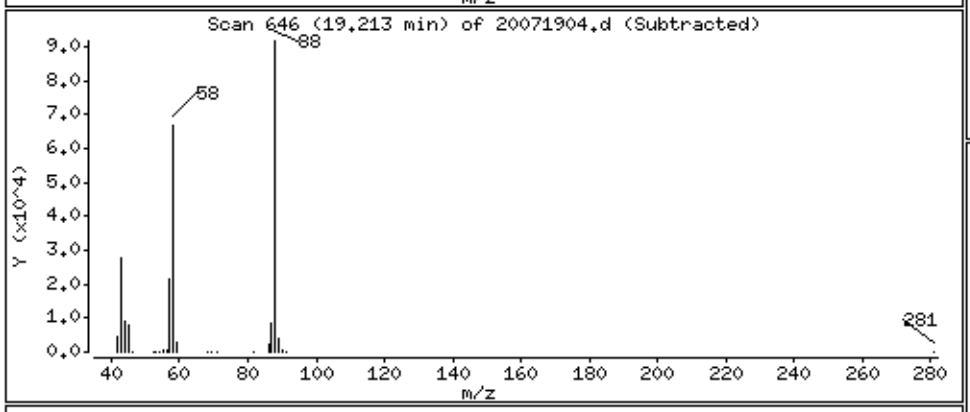
Column phase: RTX-624

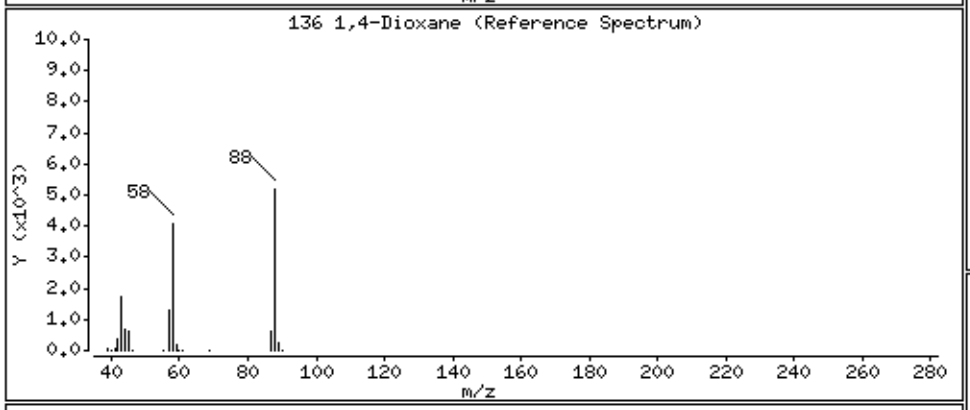
Column diameter: 0.32

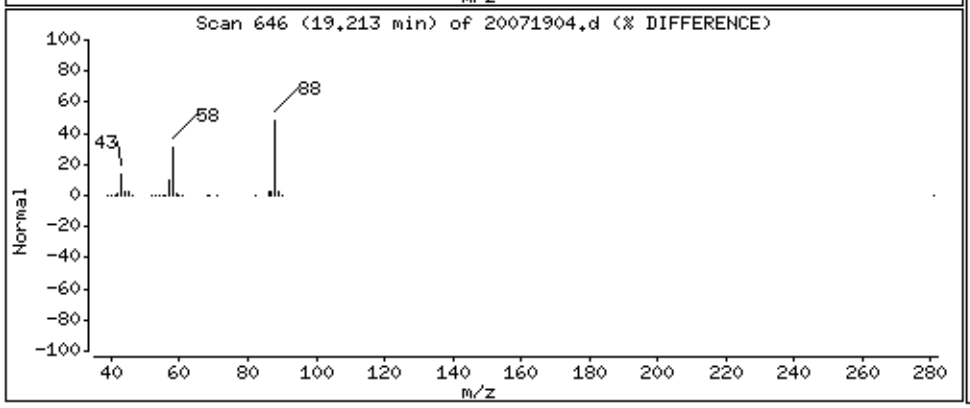
136 1,4-Dioxane

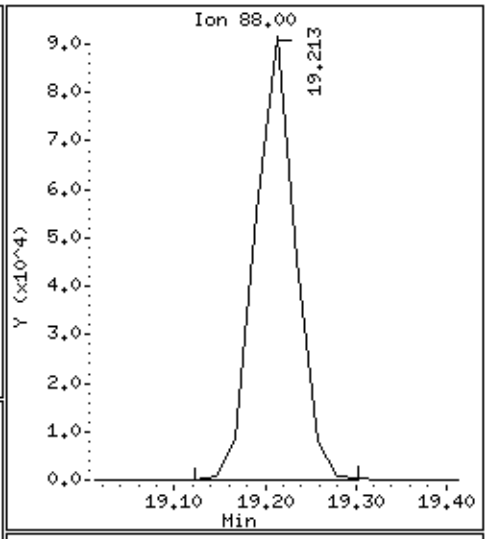
Concentration: 10.454 PPBV

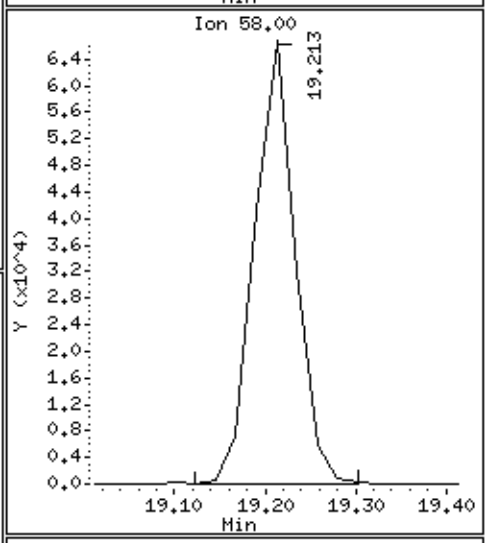


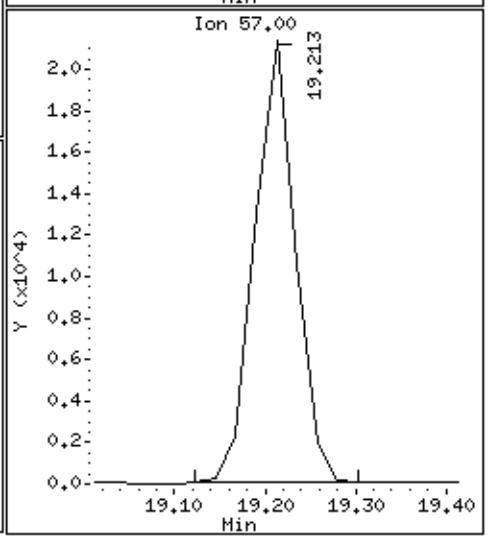












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

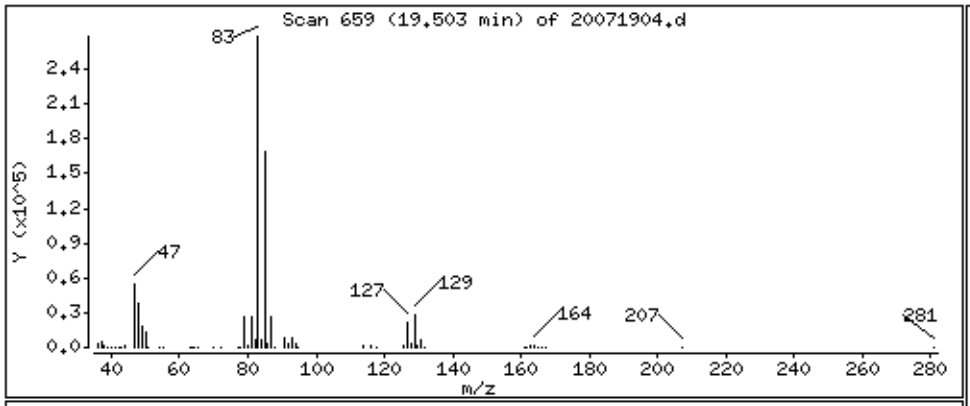
Operator: ef

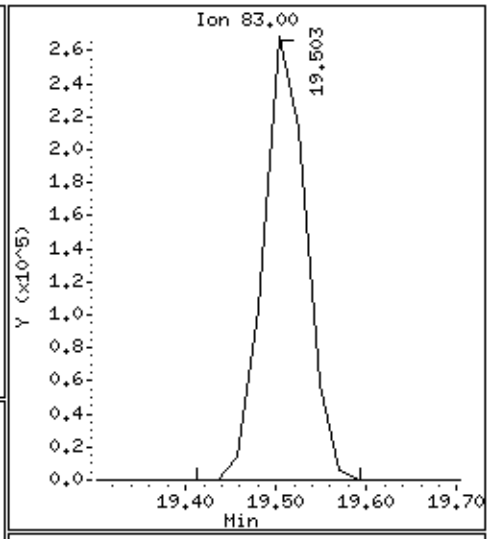
Column phase: RTX-624

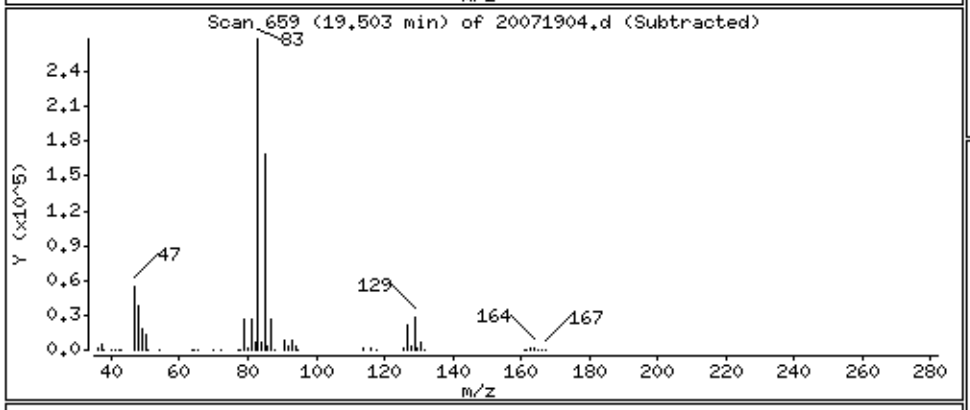
Column diameter: 0.32

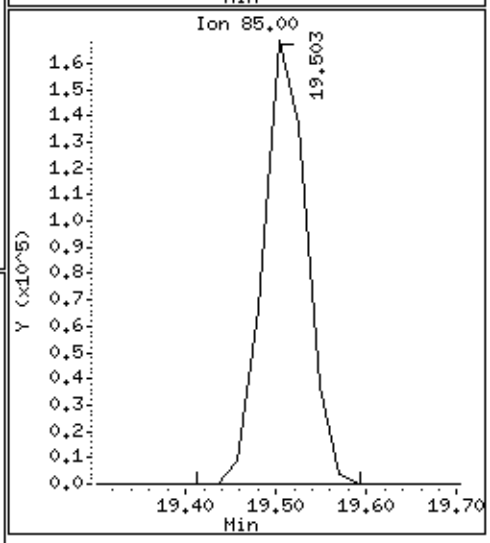
138 Bromodichloromethane

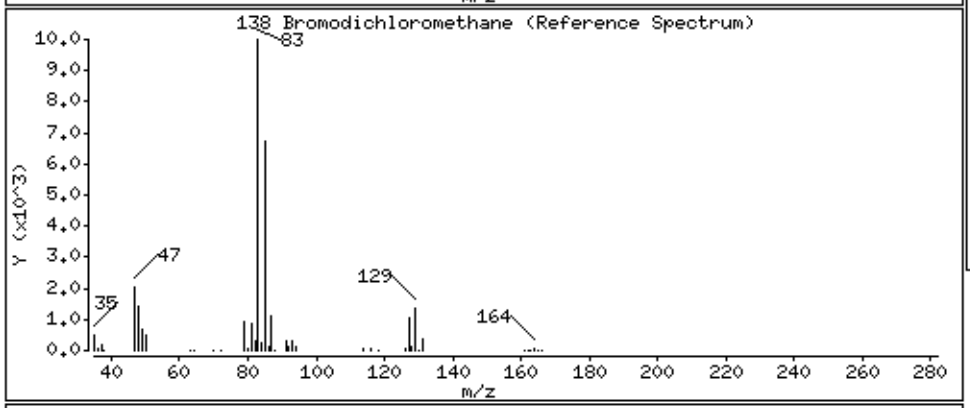
Concentration: 12.226 PPBV

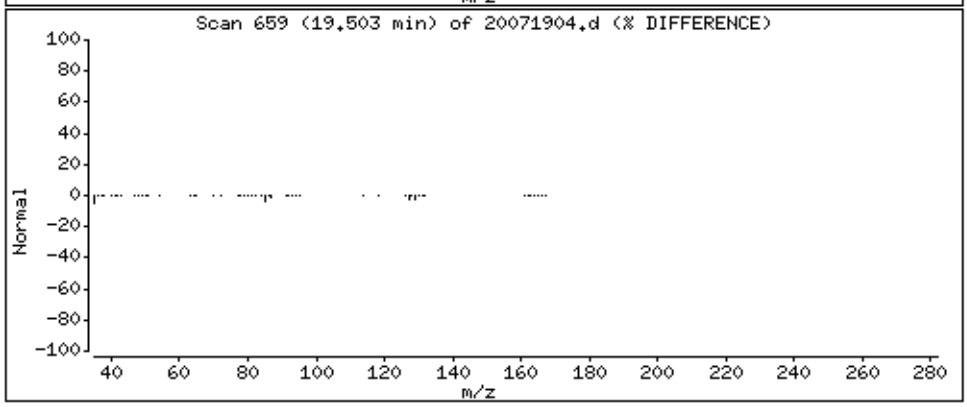












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

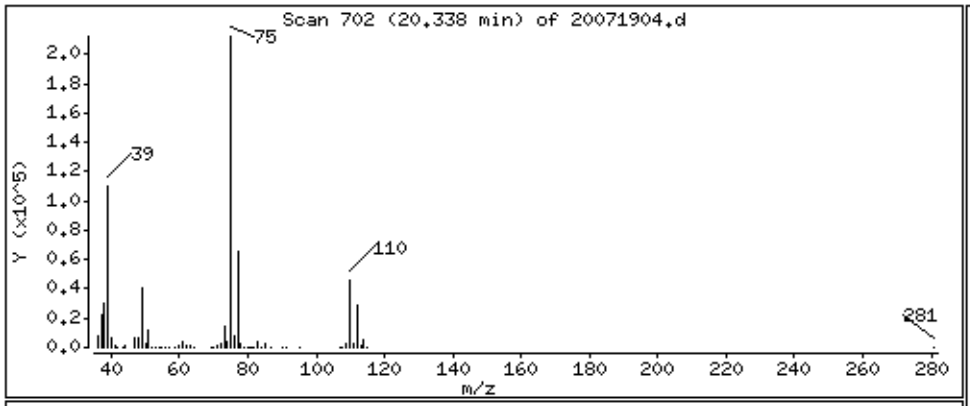
Operator: ef

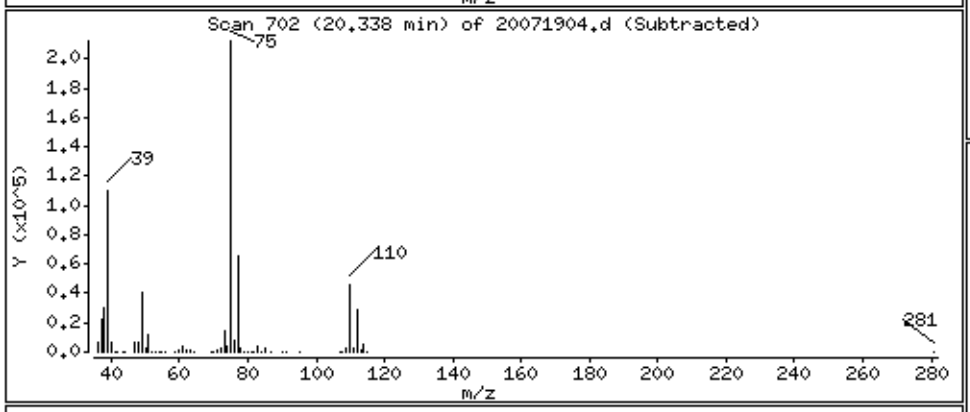
Column phase: RTX-624

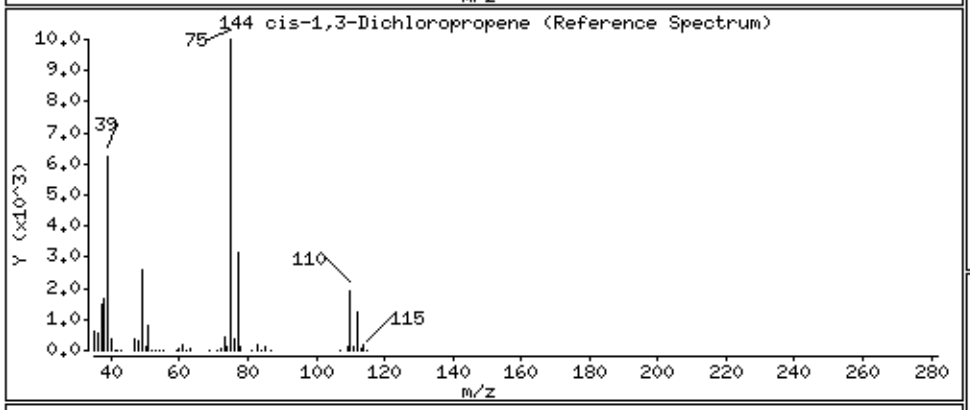
Column diameter: 0.32

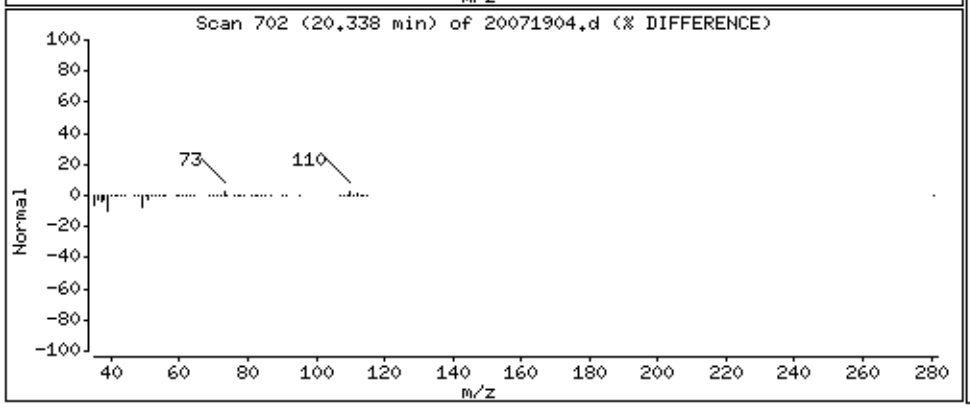
144 cis-1,3-Dichloropropene

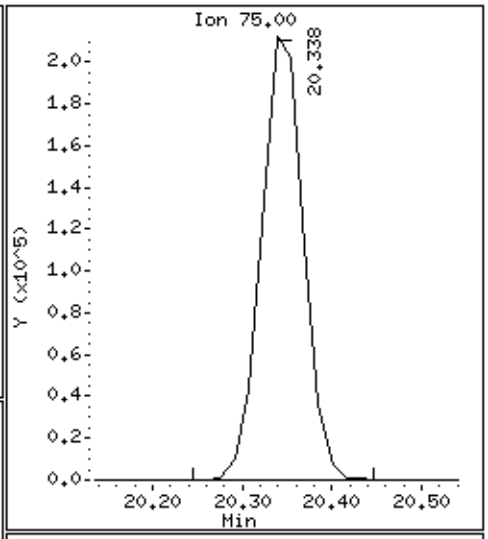
Concentration: 10.930 PPBV

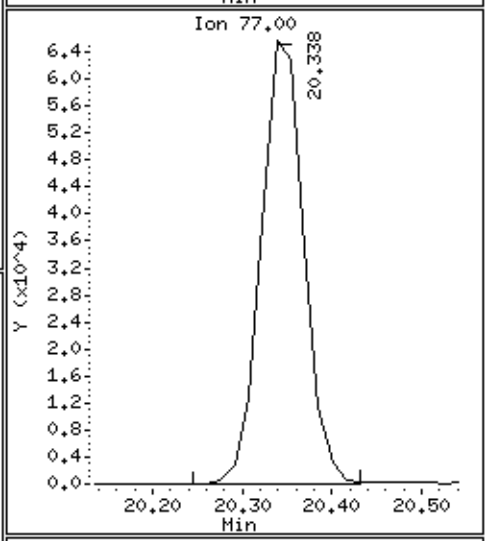


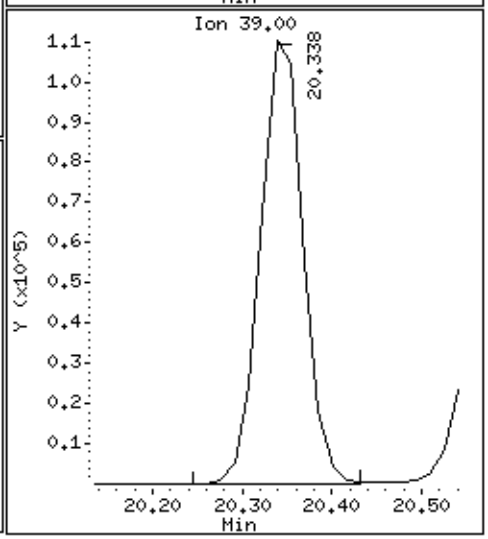












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

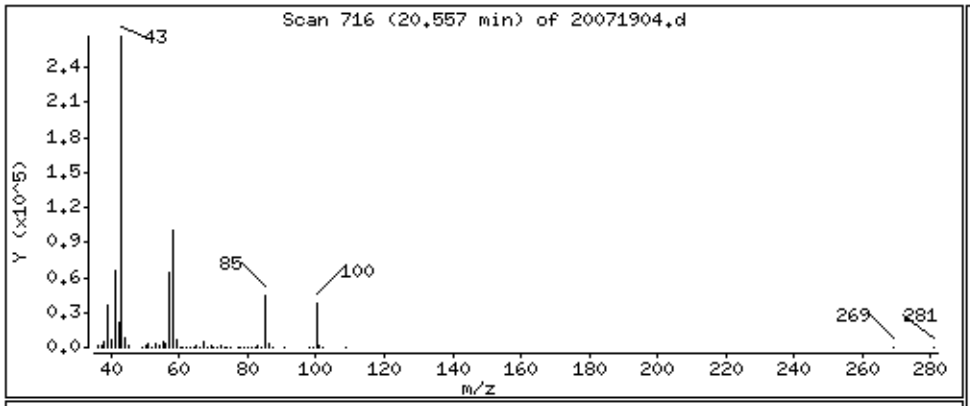
Operator: ef

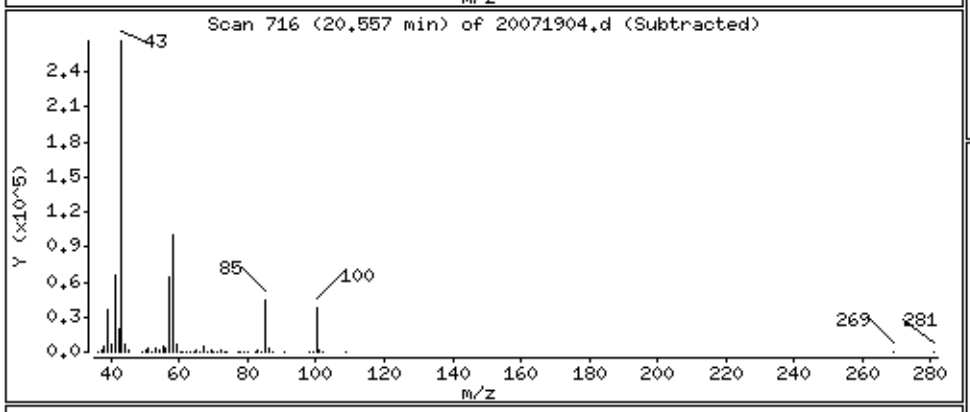
Column phase: RTX-624

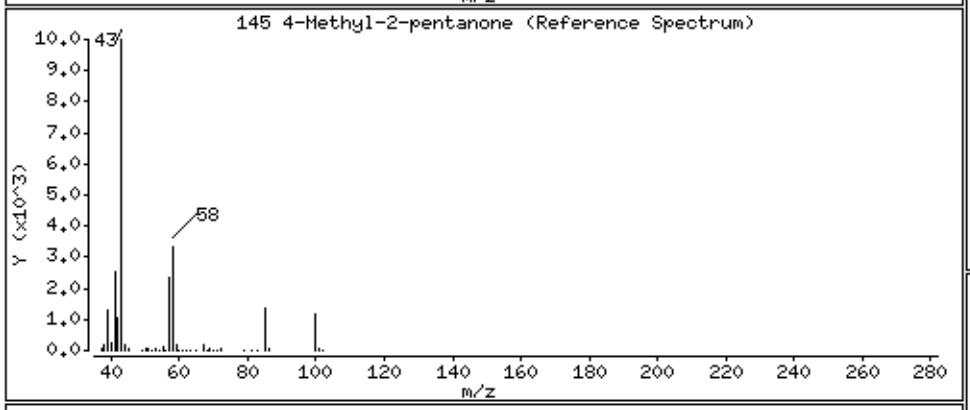
Column diameter: 0.32

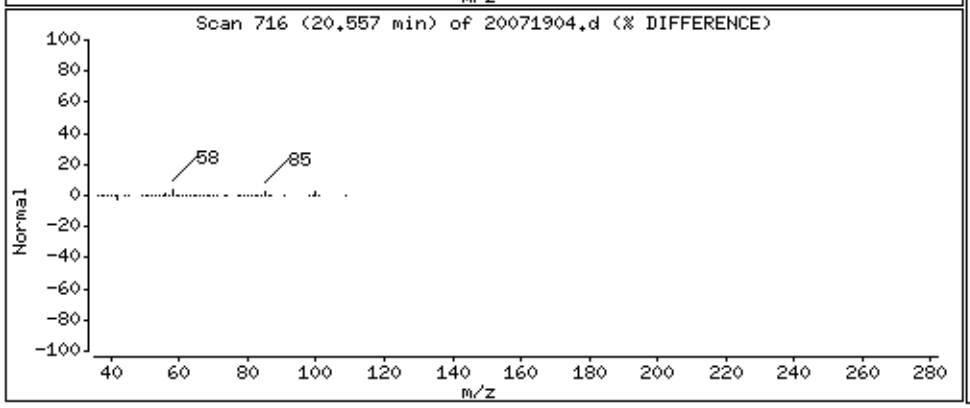
145 4-Methyl-2-pentanone

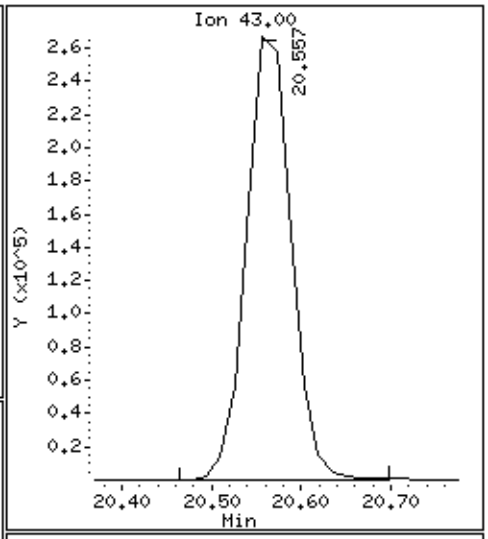
Concentration: 12.656 PPBV

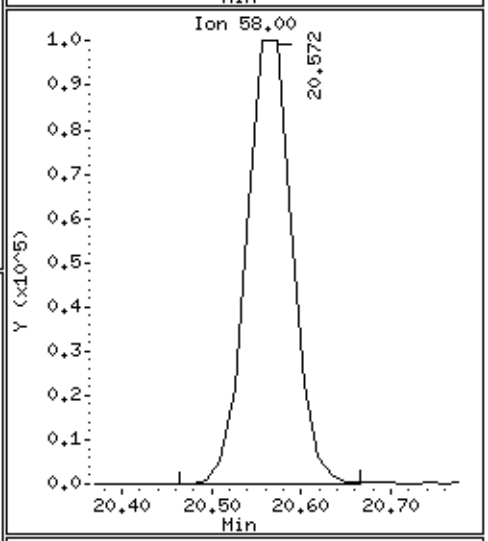


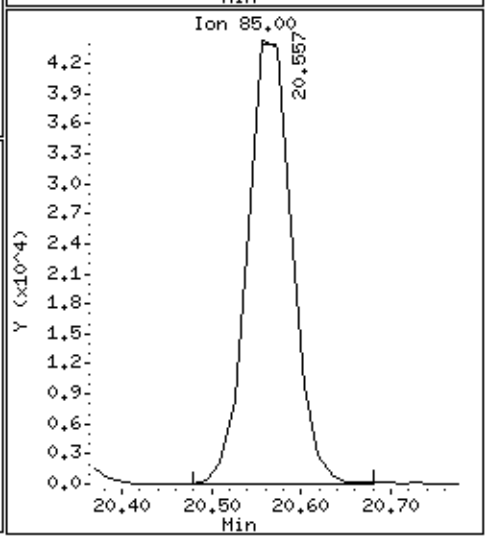












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

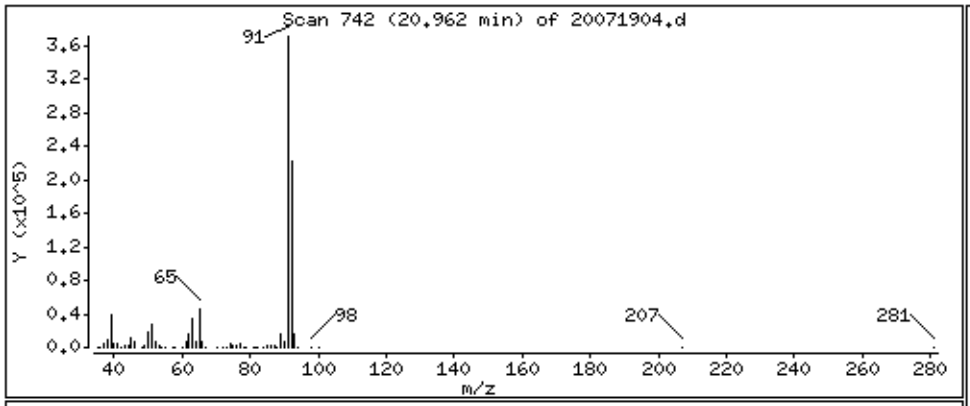
Operator: ef

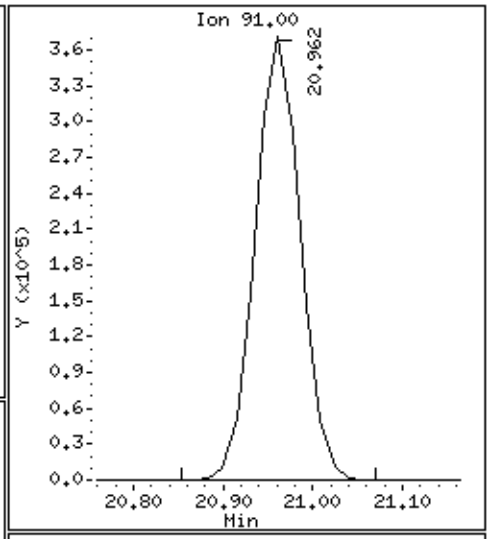
Column phase: RTX-624

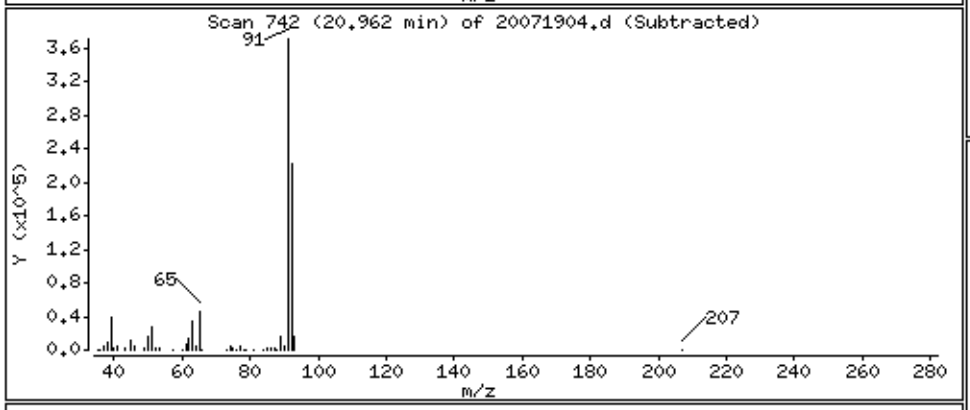
Column diameter: 0.32

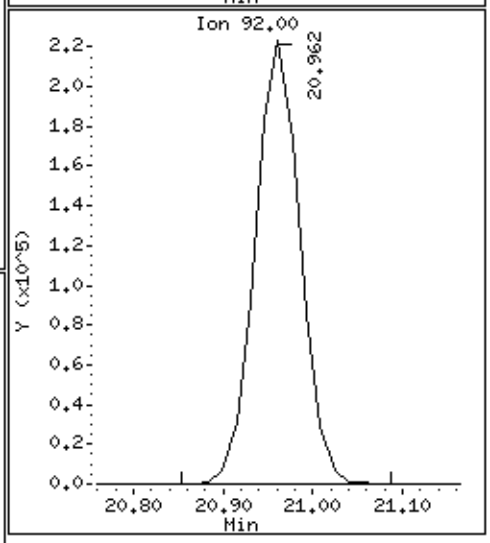
147 Toluene

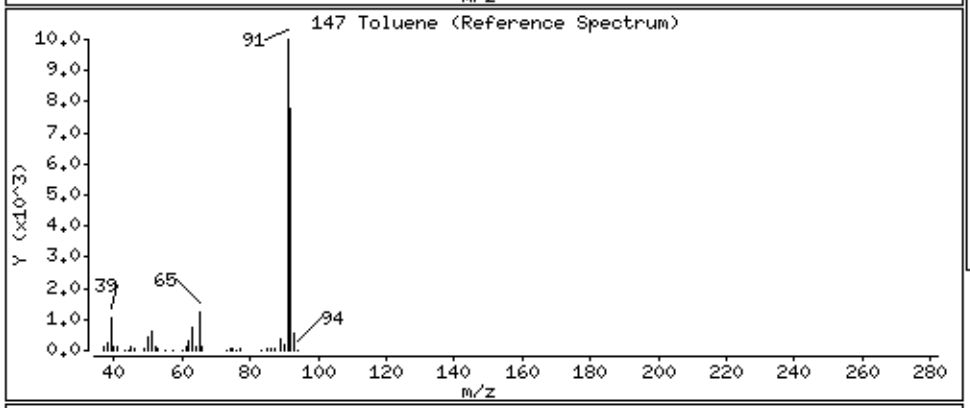
Concentration: 11.361 PPBV

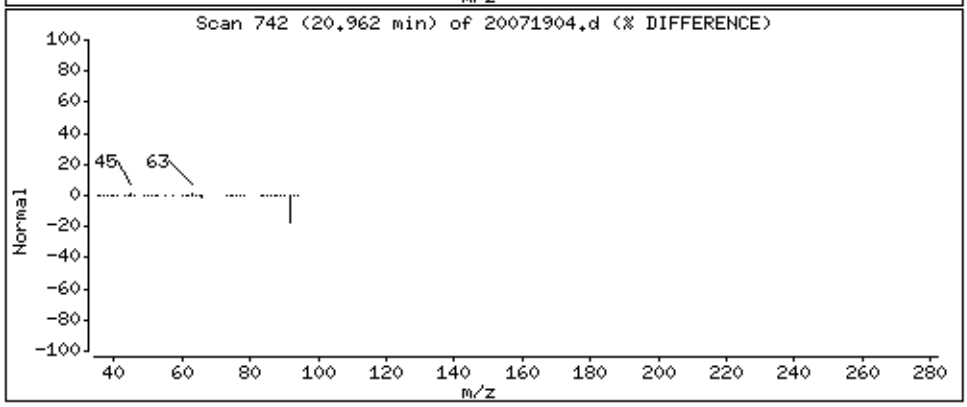












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

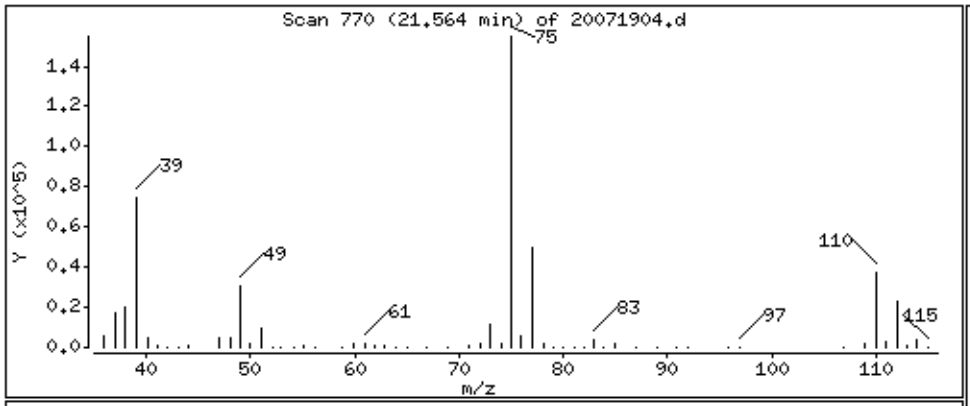
Operator: ef

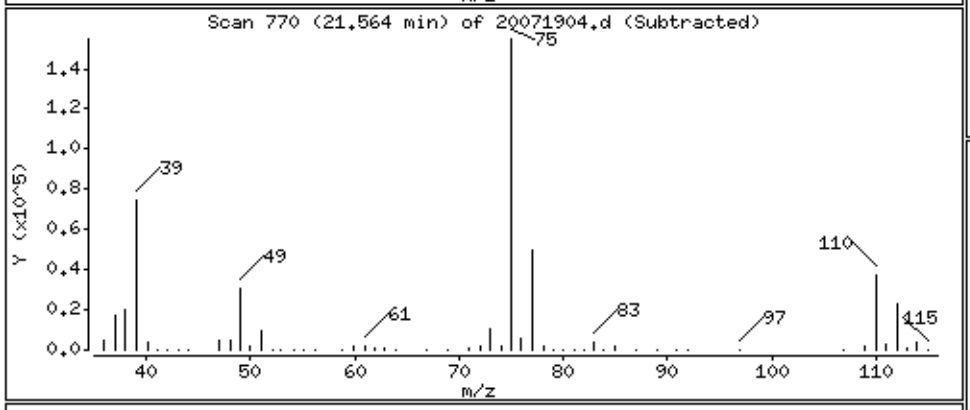
Column phase: RTX-624

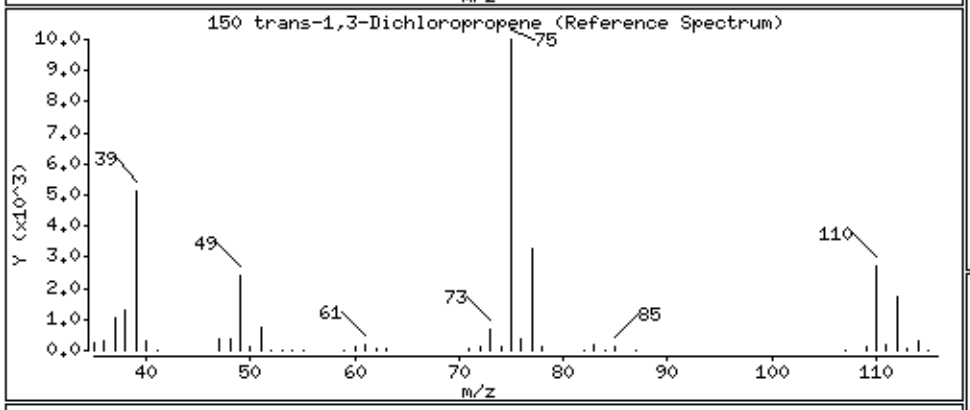
Column diameter: 0.32

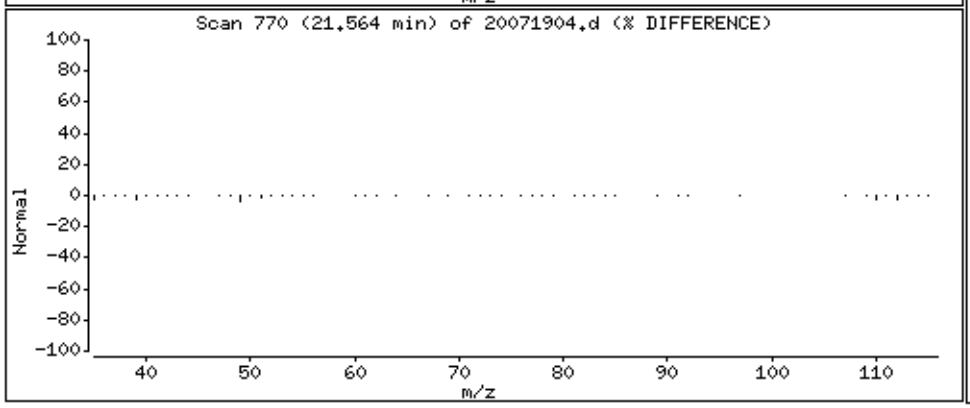
150 trans-1,3-Dichloropropene

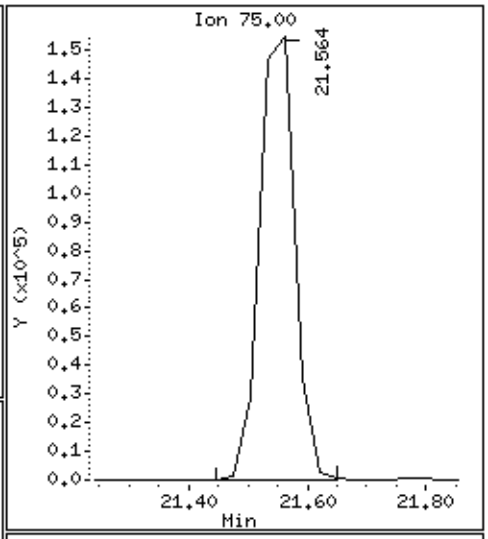
Concentration: 11.805 PPBV

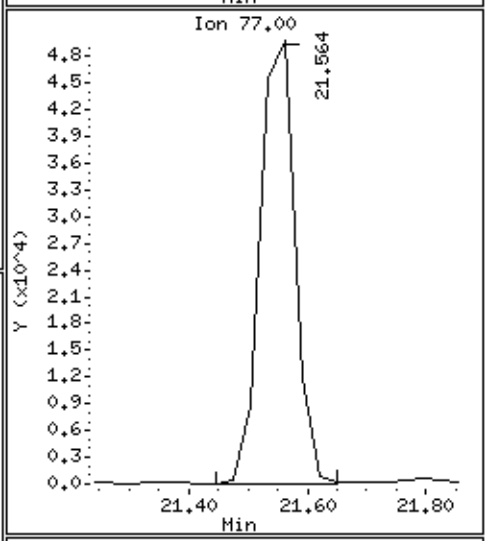


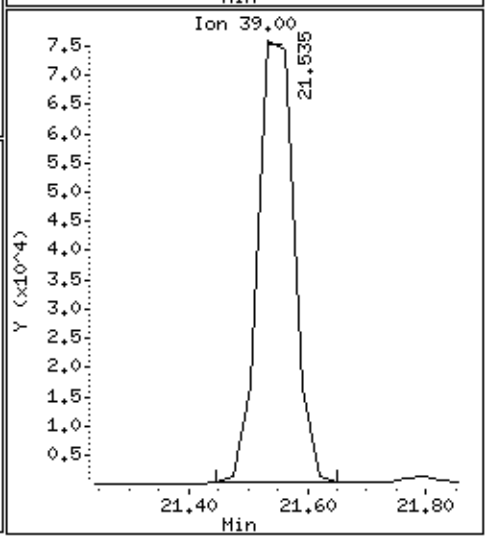












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

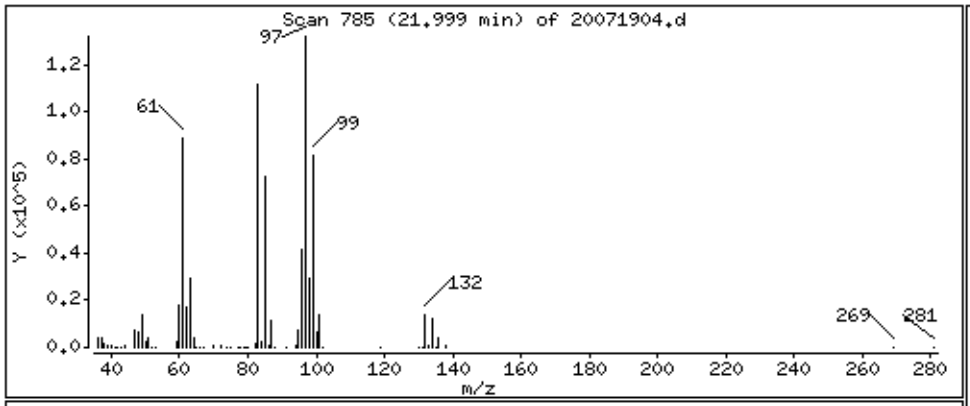
Operator: ef

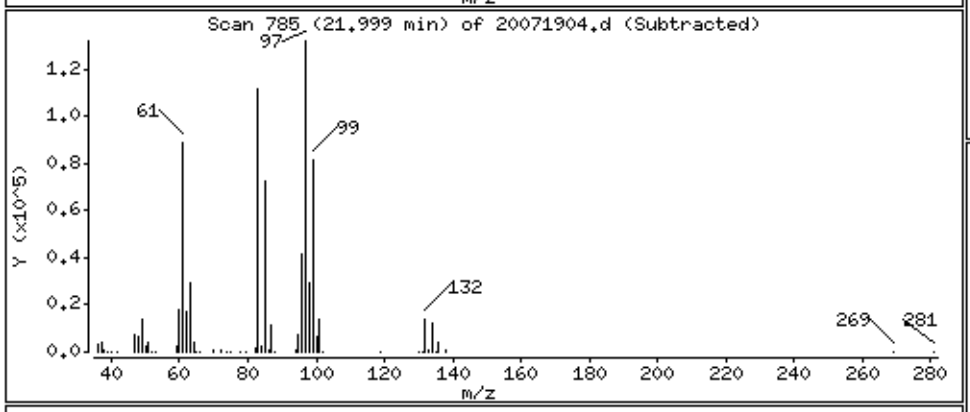
Column phase: RTX-624

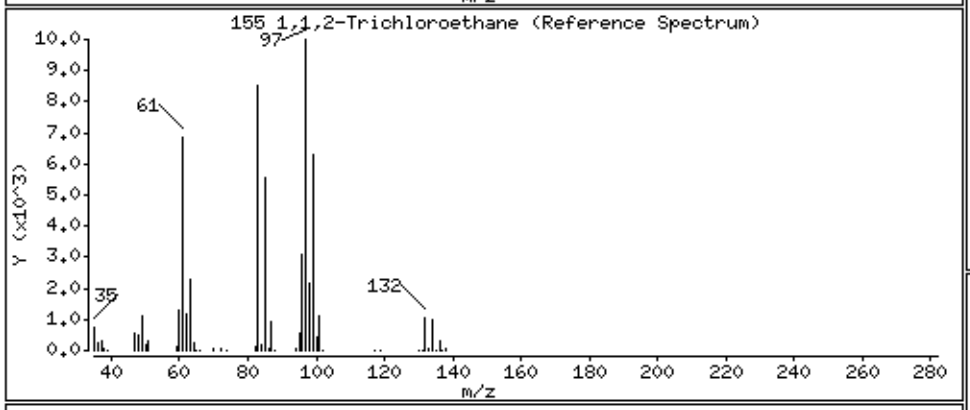
Column diameter: 0.32

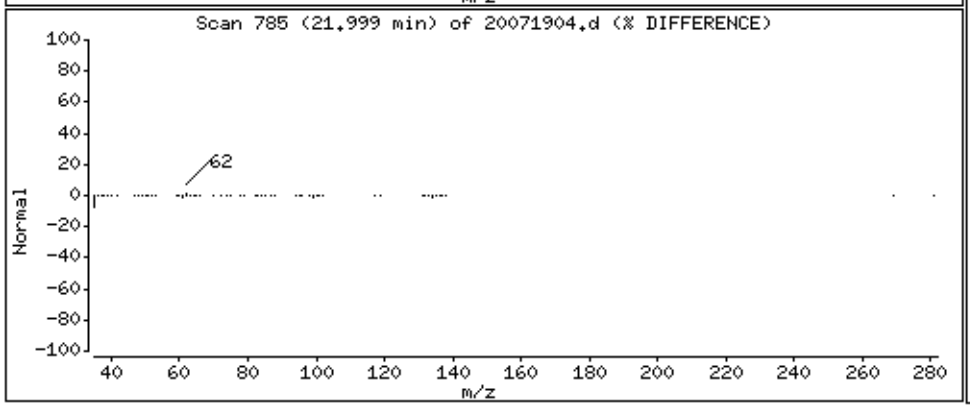
155 1,1,2-Trichloroethane

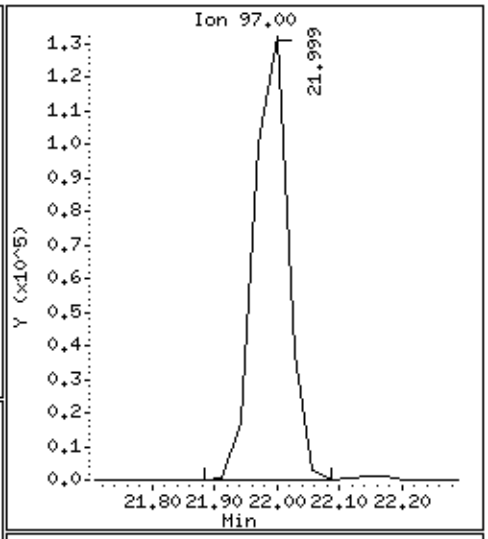
Concentration: 10.635 PPBV

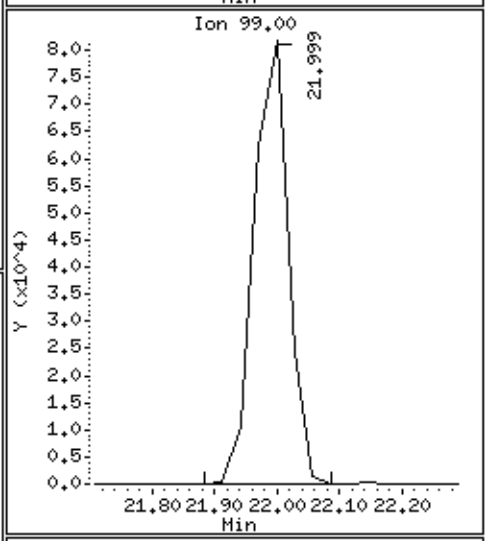


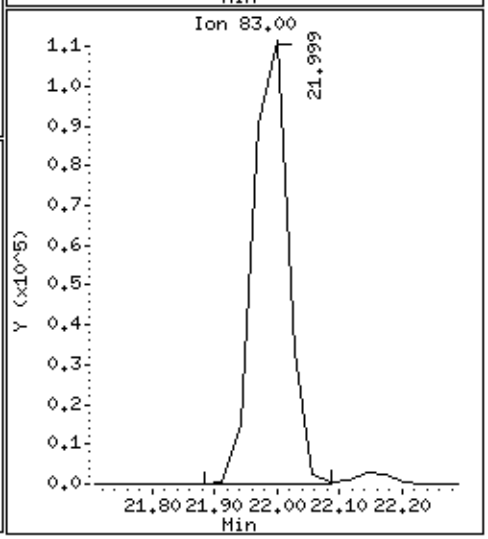












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

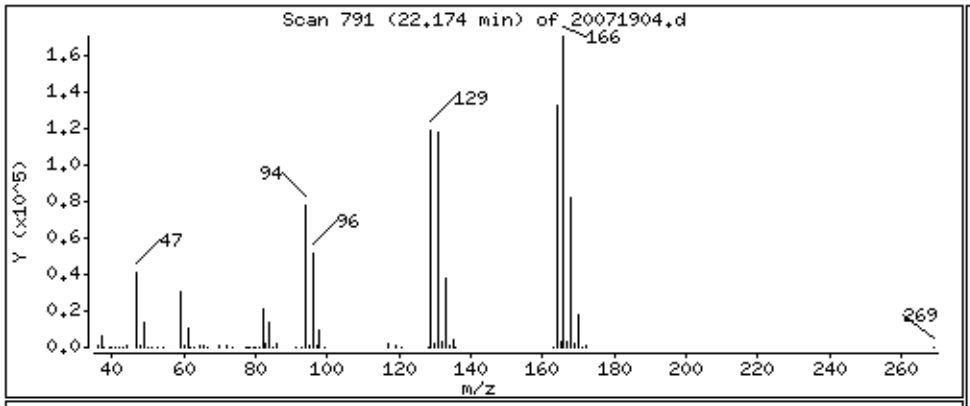
Operator: ef

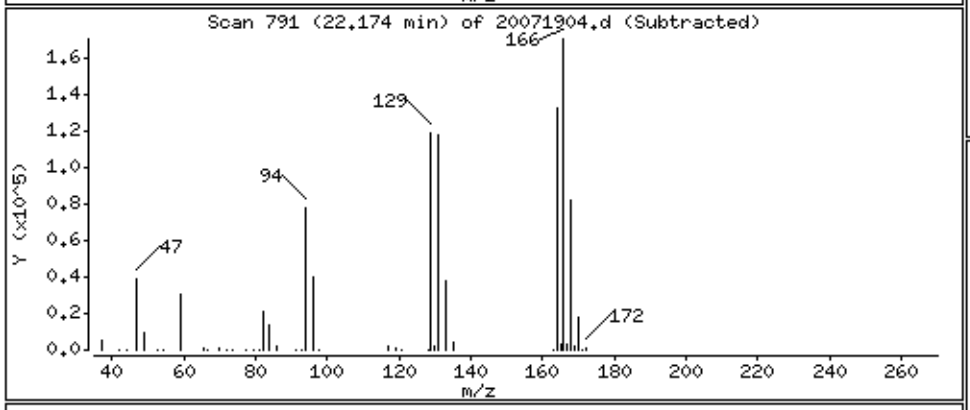
Column phase: RTX-624

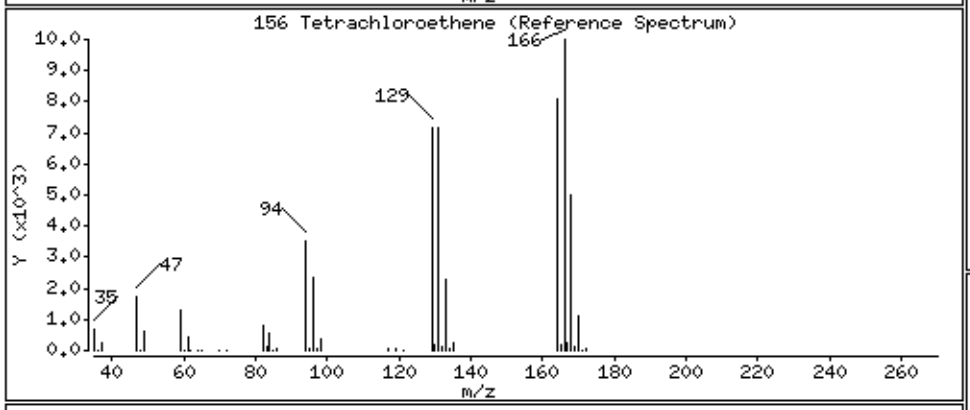
Column diameter: 0.32

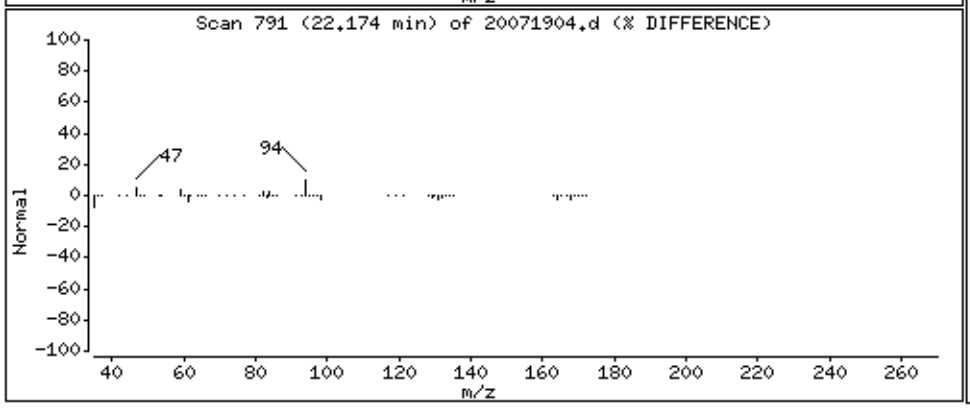
156 Tetrachloroethene

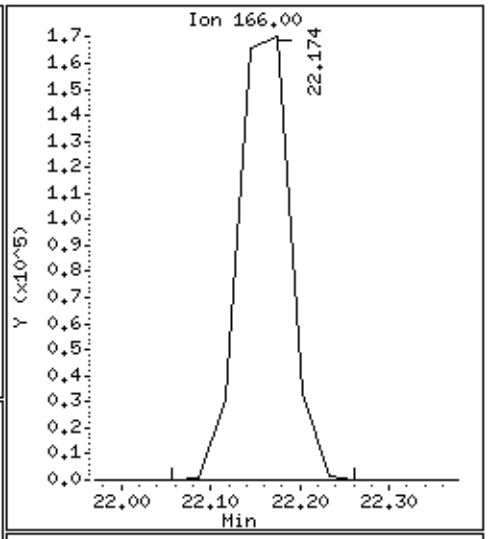
Concentration: 10.415 PPBV

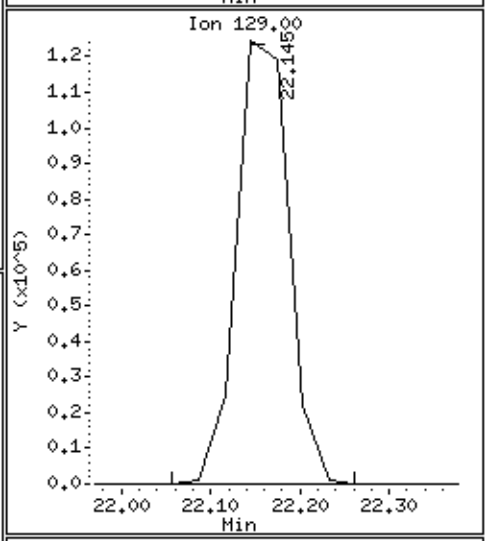


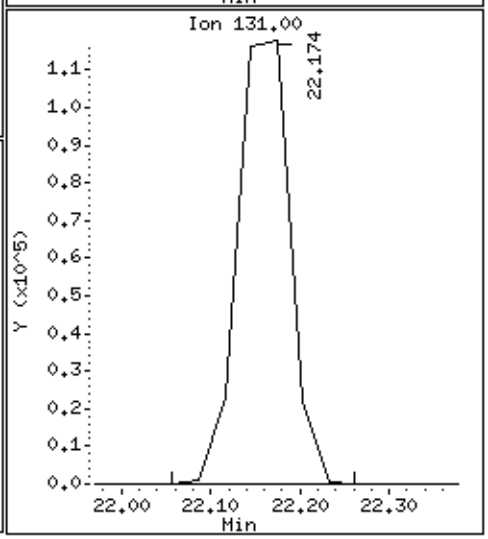












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

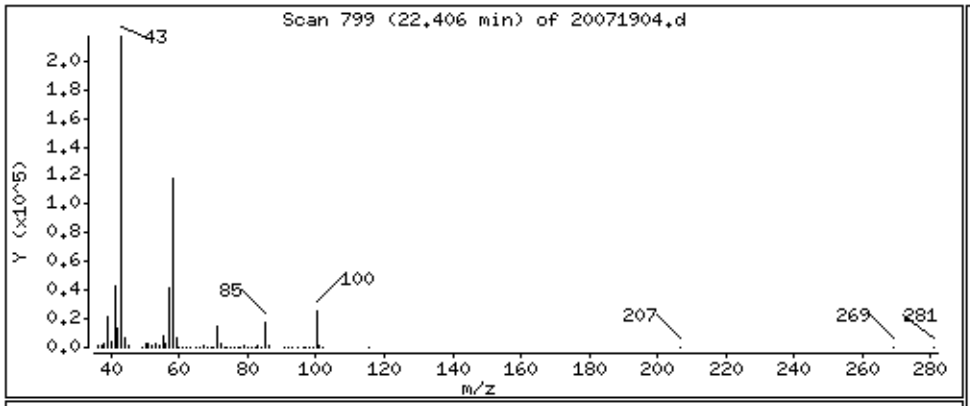
Operator: ef

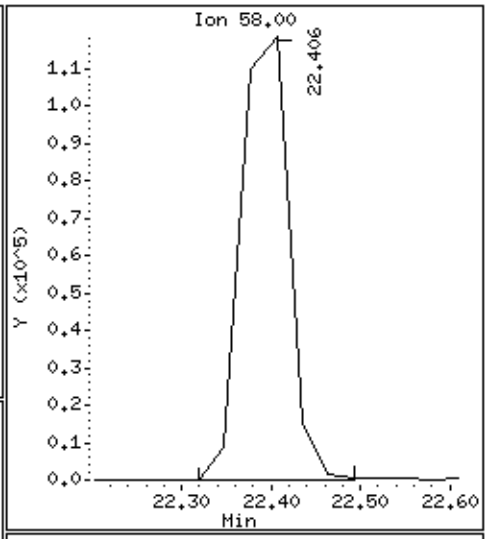
Column phase: RTX-624

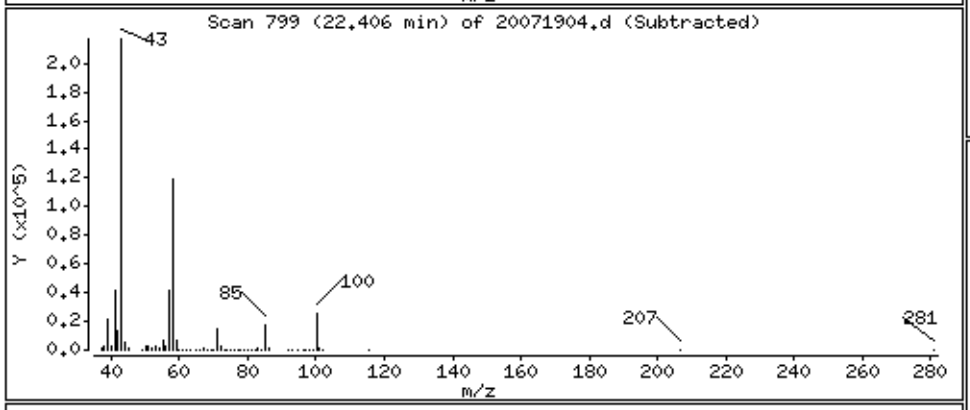
Column diameter: 0.32

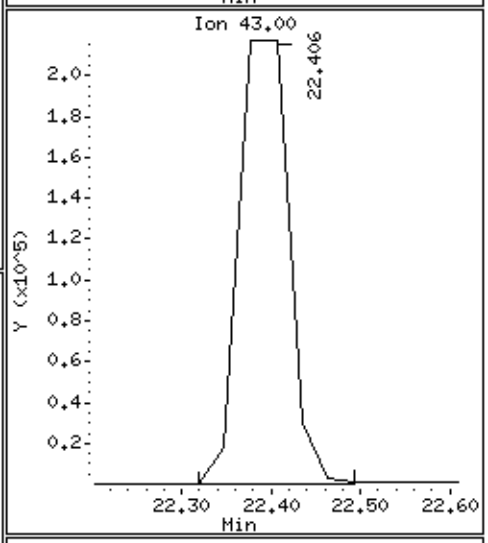
158 2-Hexanone

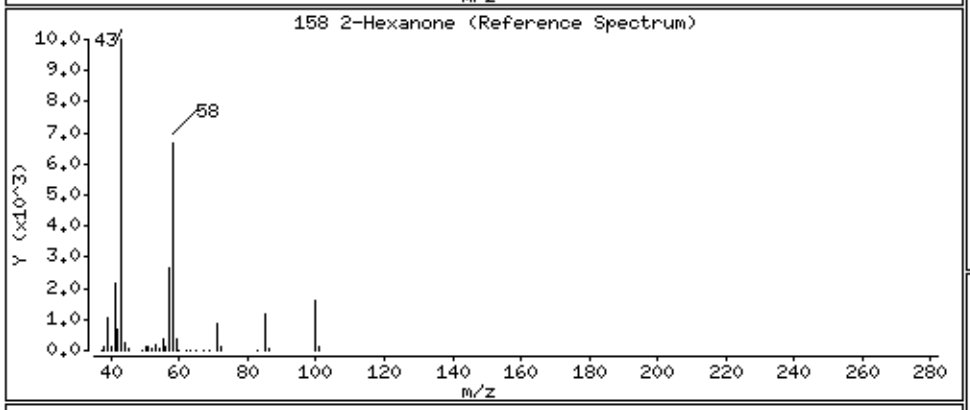
Concentration: 11.330 PPBV

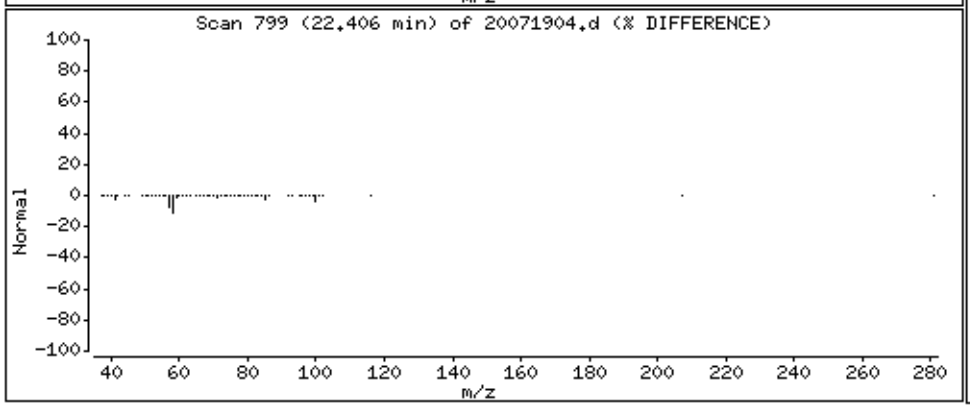


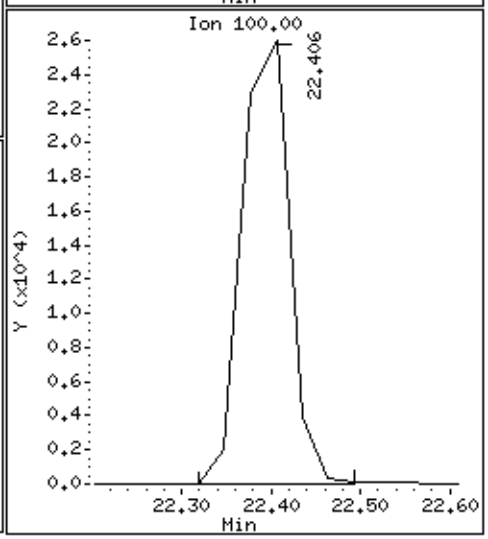












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

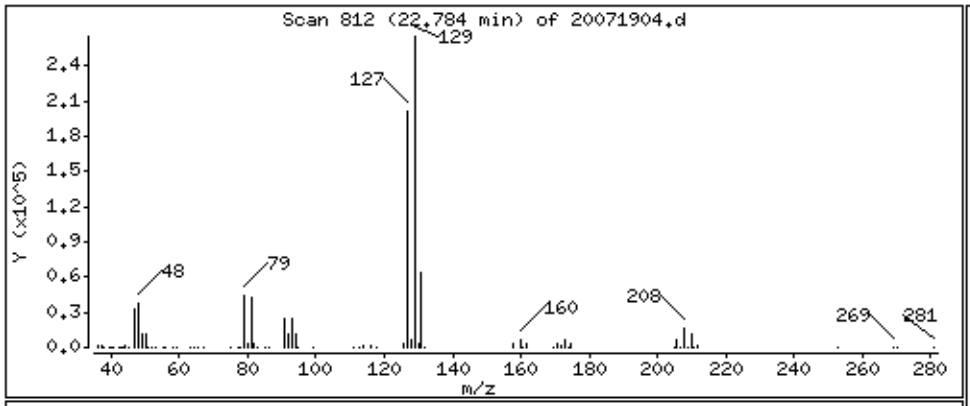
Operator: ef

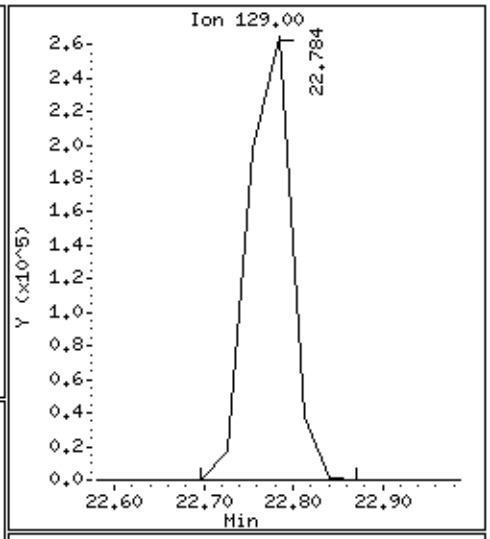
Column phase: RTX-624

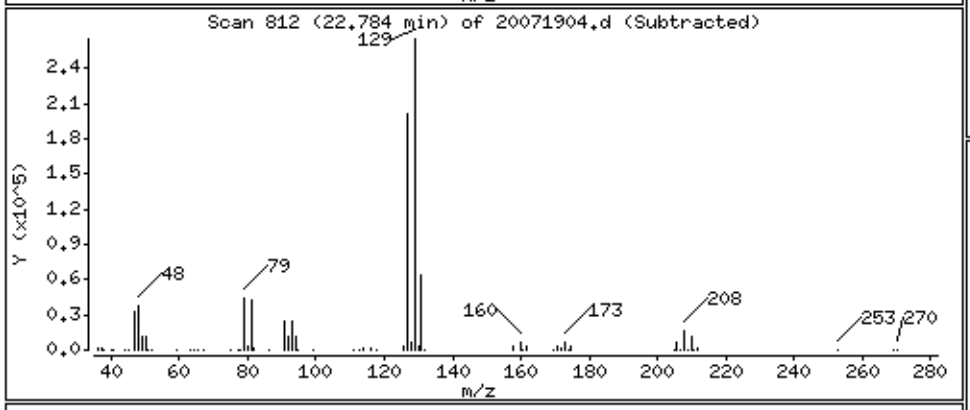
Column diameter: 0.32

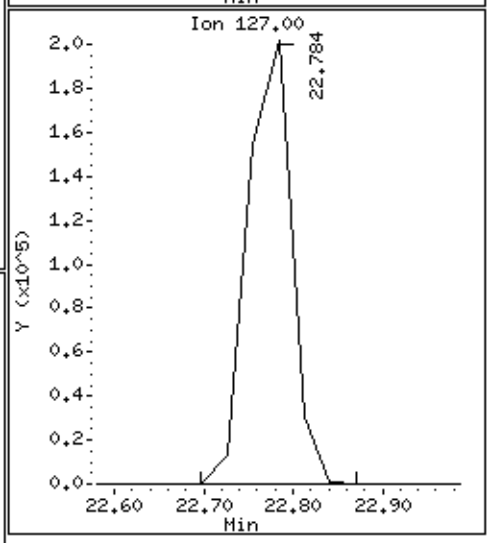
160 Dibromochloromethane

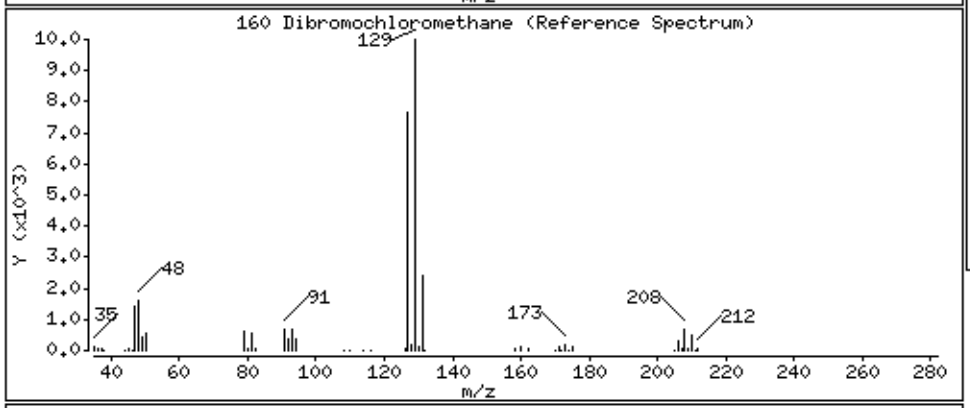
Concentration: 12.600 PPBV

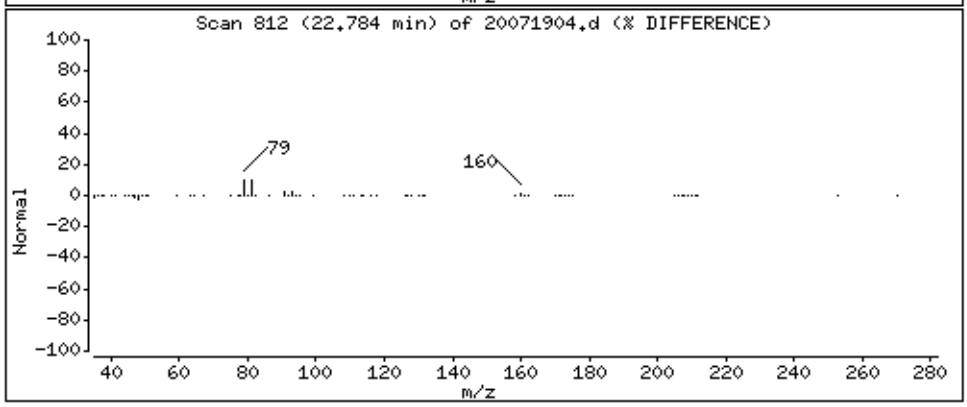












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

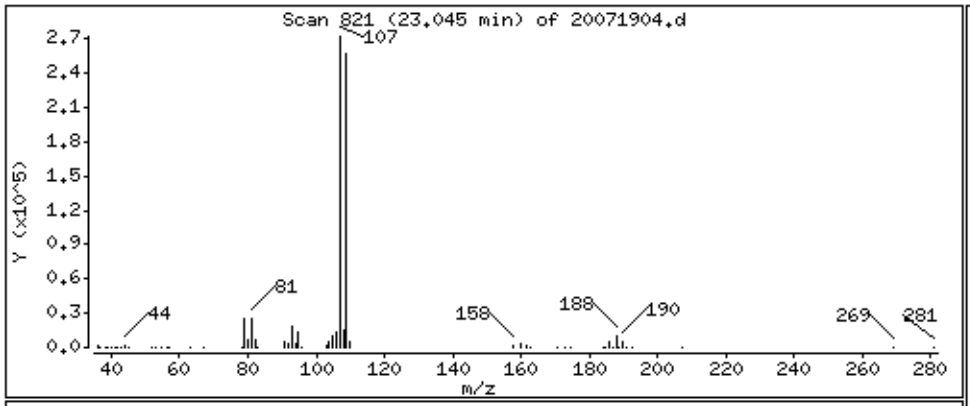
Operator: ef

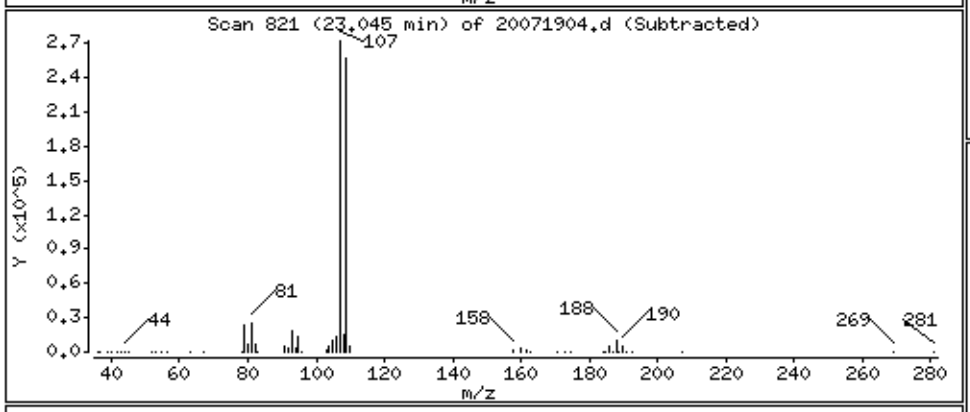
Column phase: RTX-624

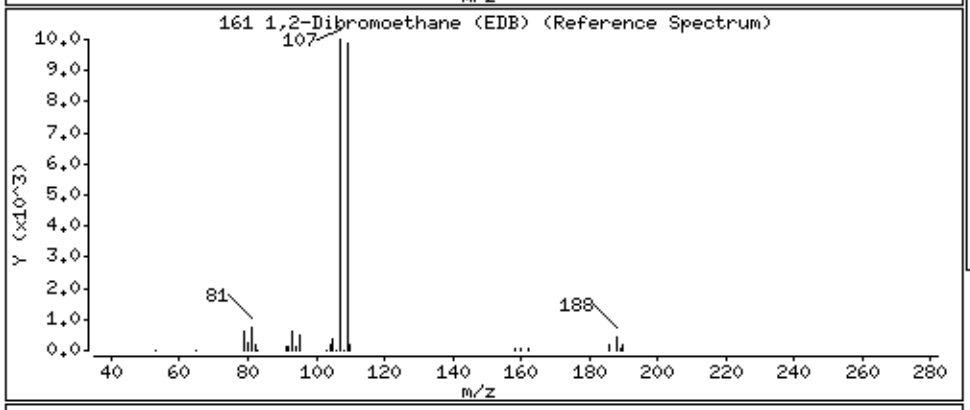
Column diameter: 0.32

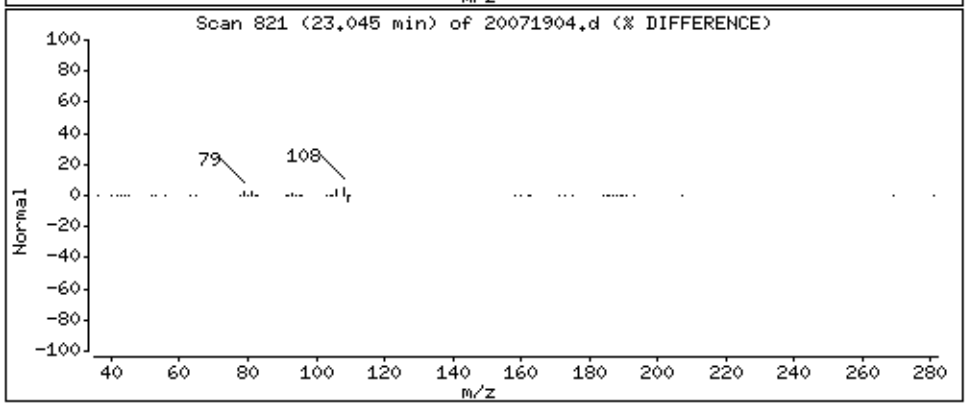
161 1,2-Dibromoethane (EDB)

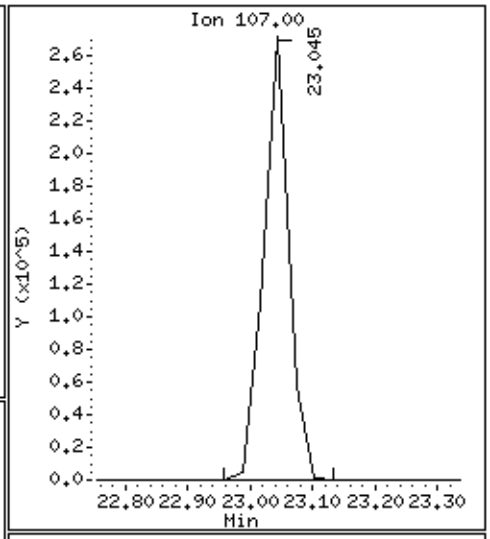
Concentration: 11.112 PPBV

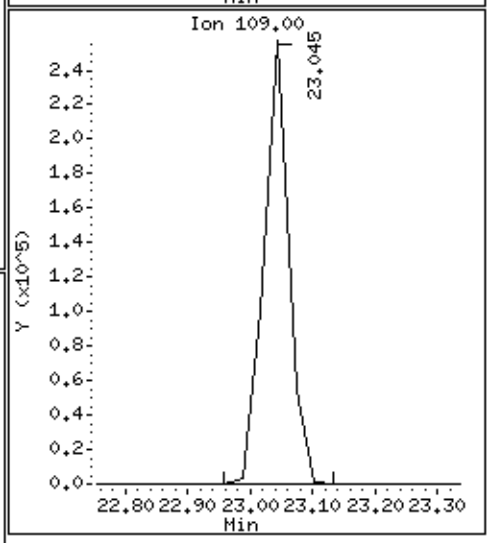












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

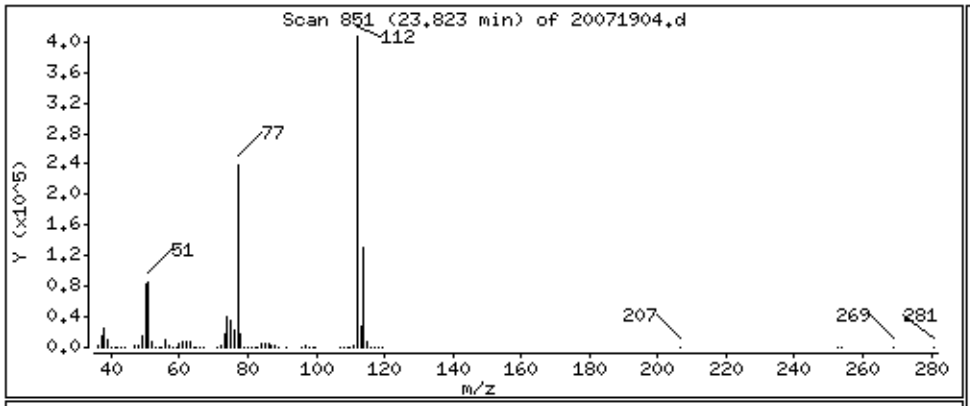
Operator: ef

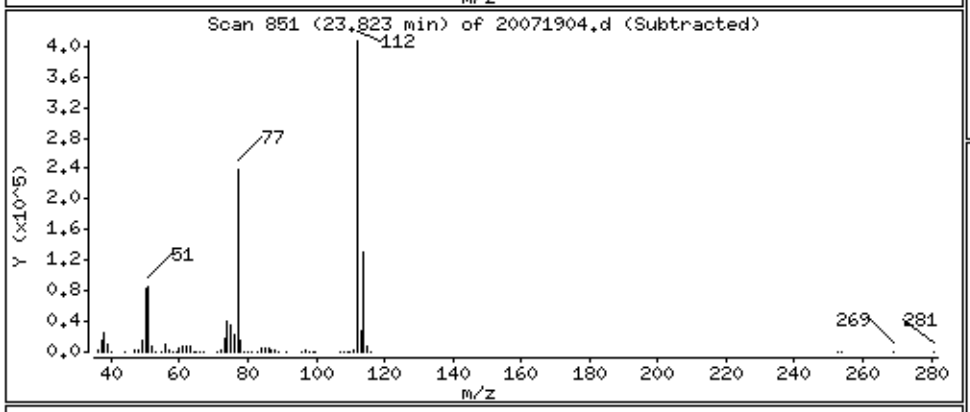
Column phase: RTX-624

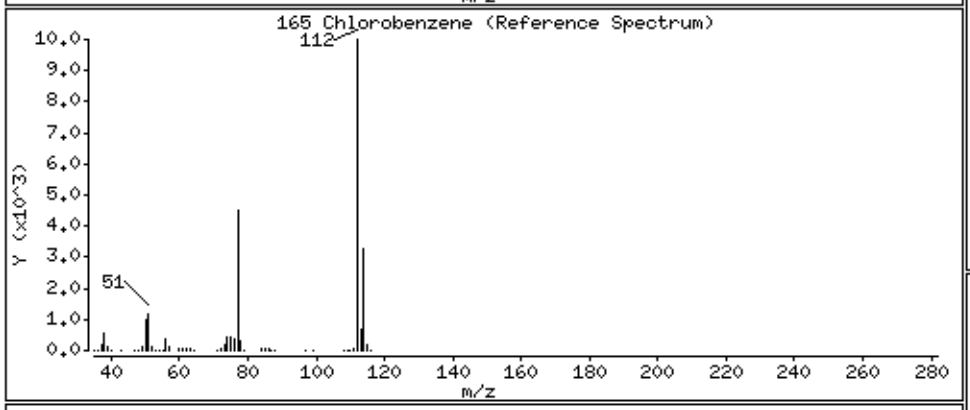
Column diameter: 0.32

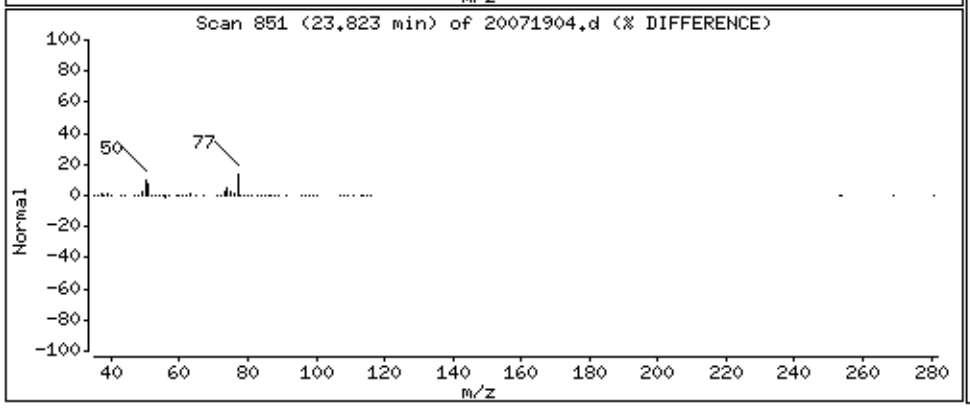
165 Chlorobenzene

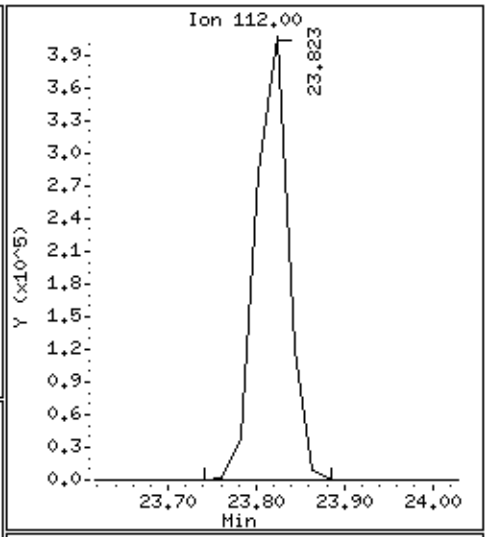
Concentration: 10.650 PPBV

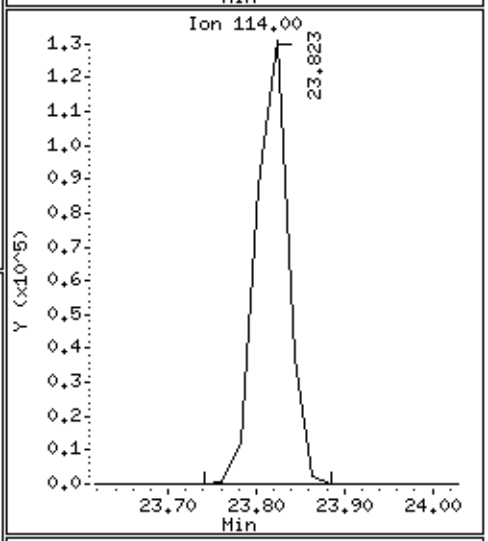


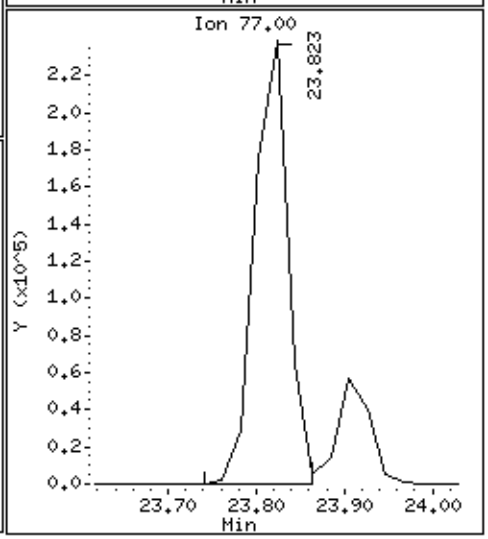












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

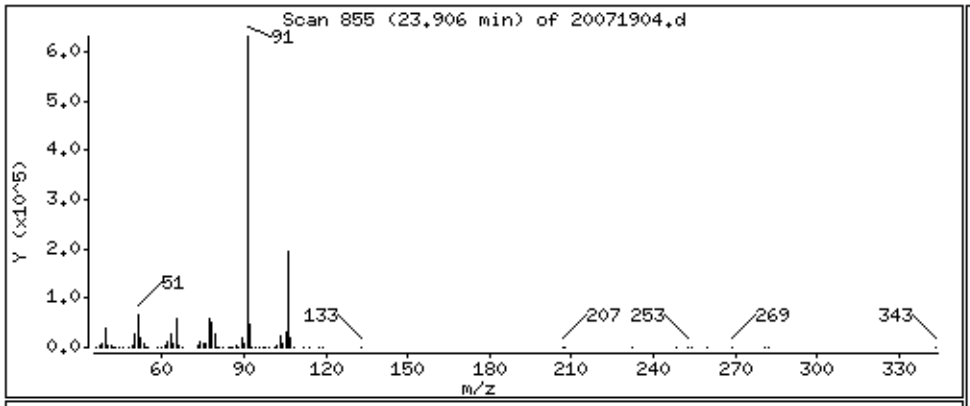
Operator: ef

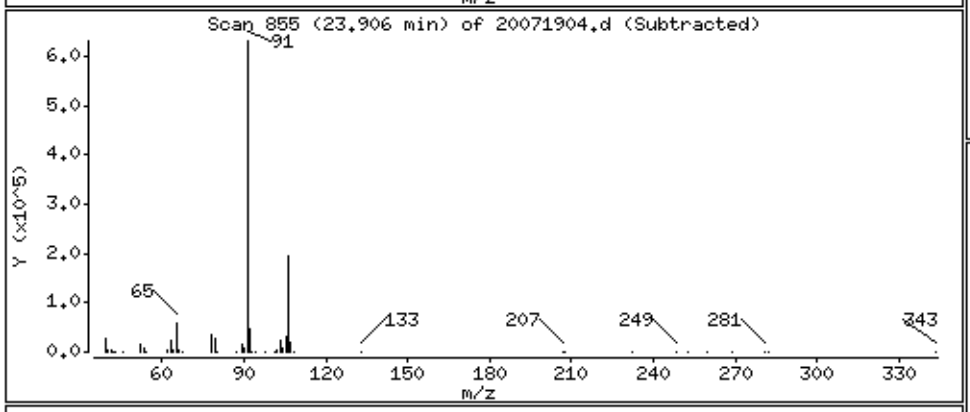
Column phase: RTX-624

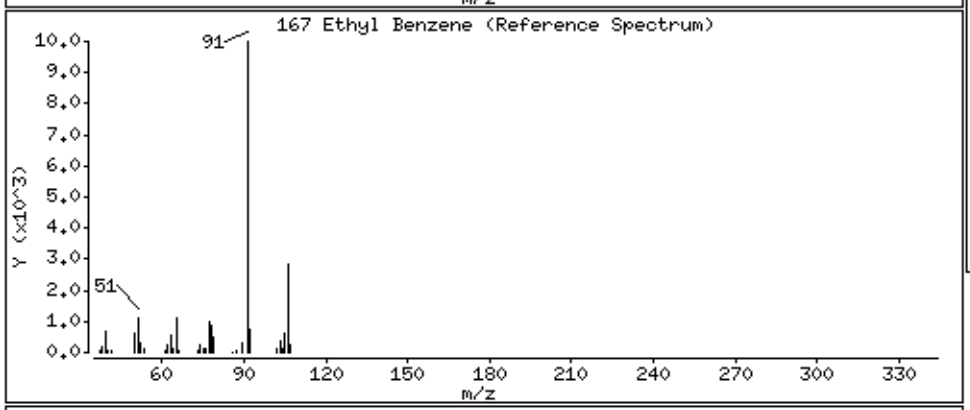
Column diameter: 0.32

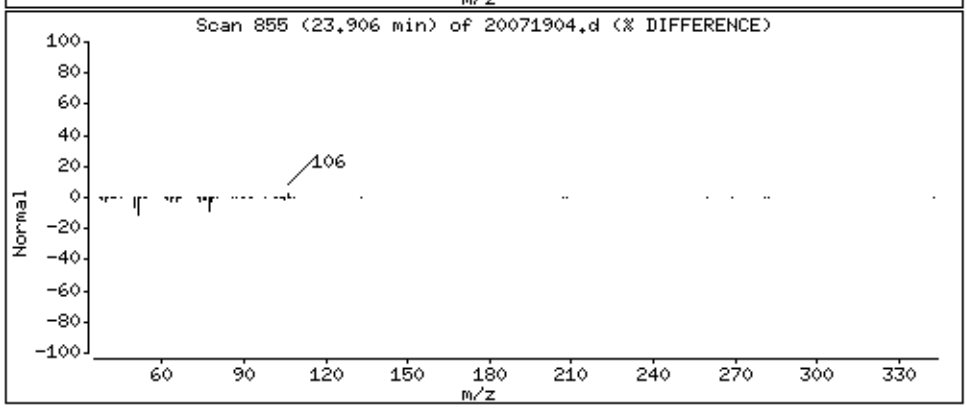
167 Ethyl Benzene

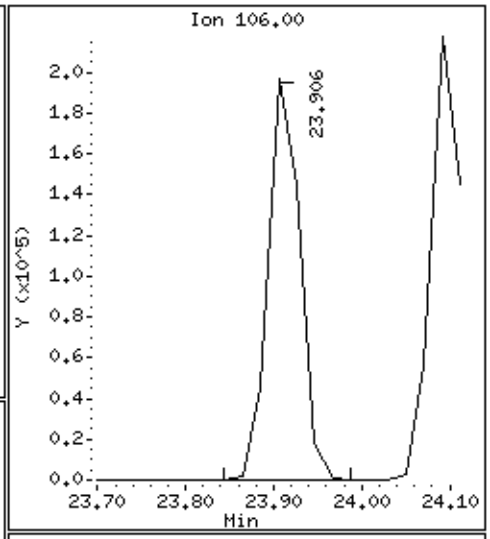
Concentration: 11.033 PPBV

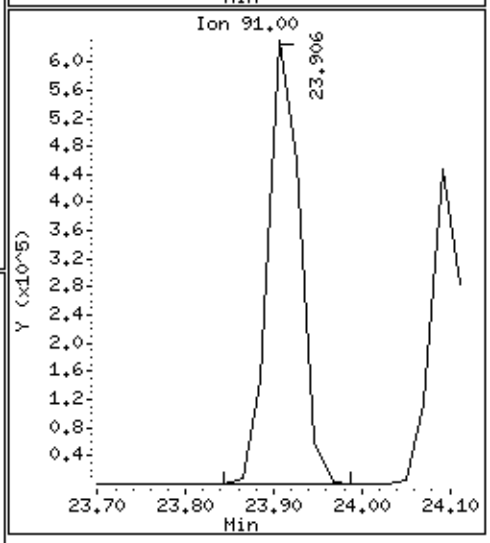












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

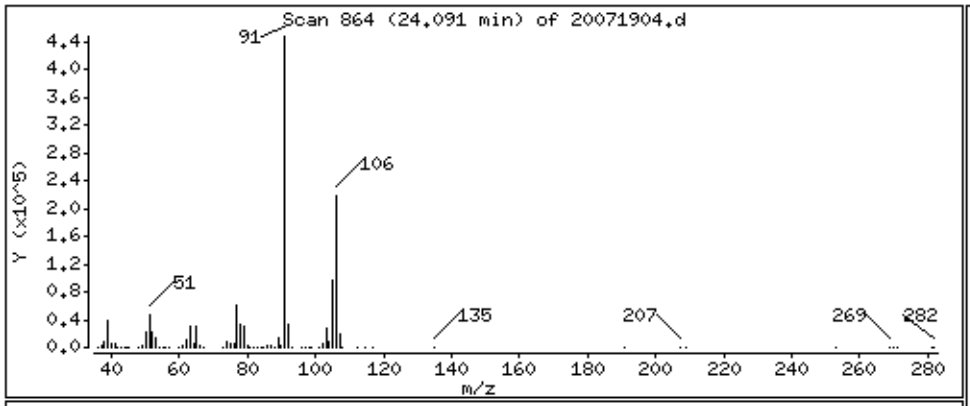
Operator: ef

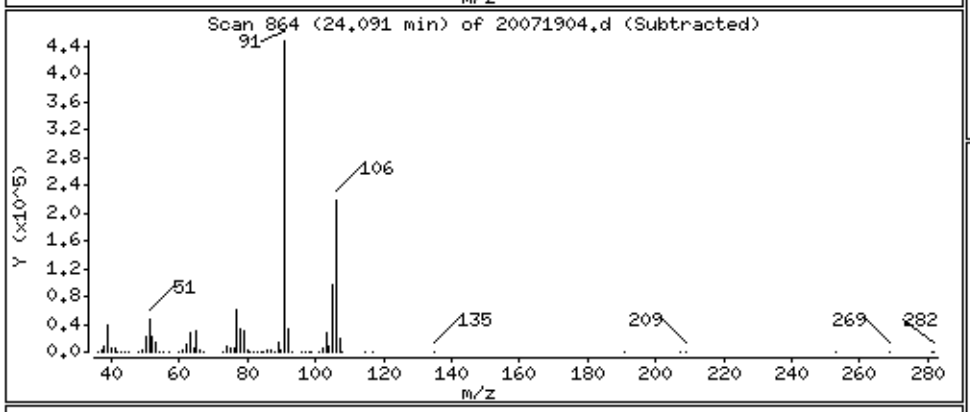
Column phase: RTX-624

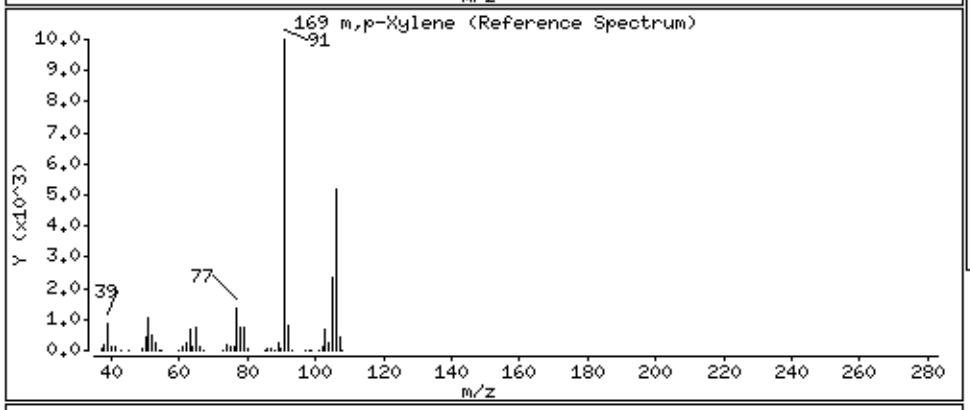
Column diameter: 0.32

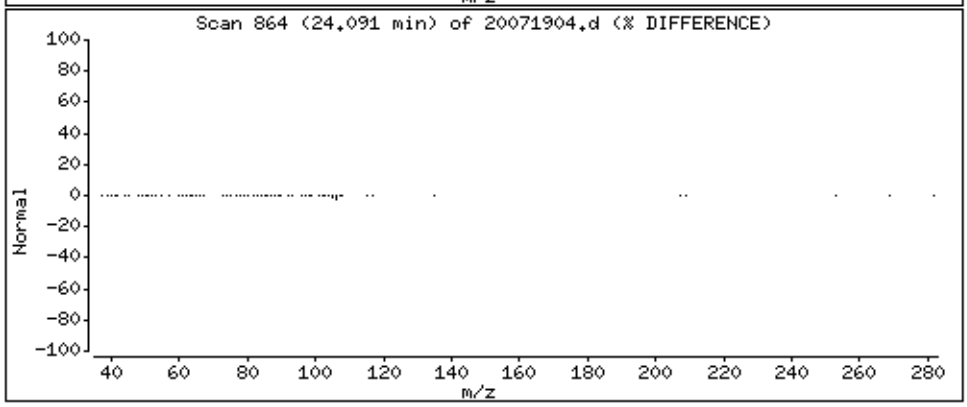
169 m,p-Xylene

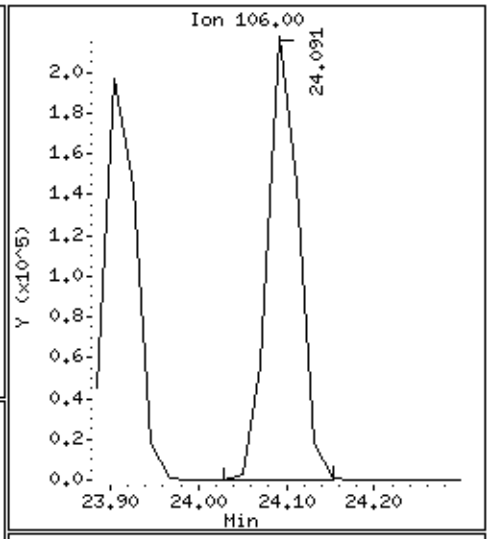
Concentration: 11.127 PPBV

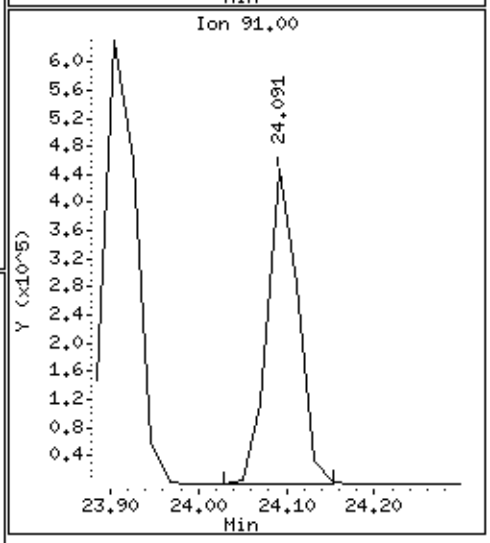












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

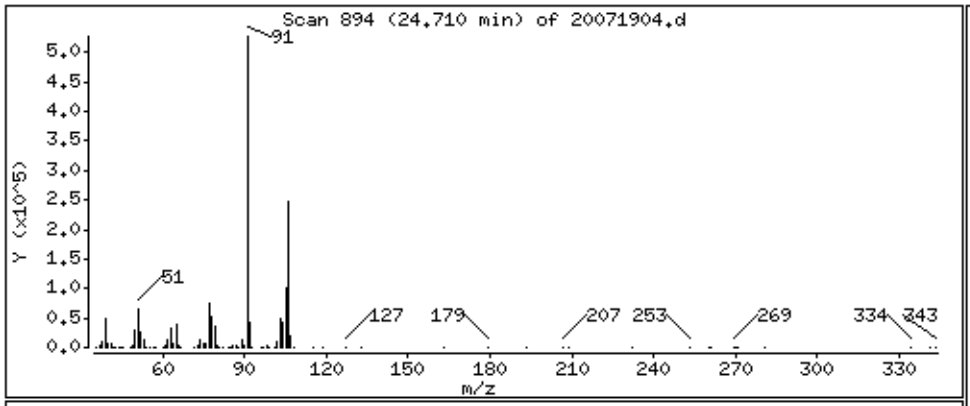
Operator: ef

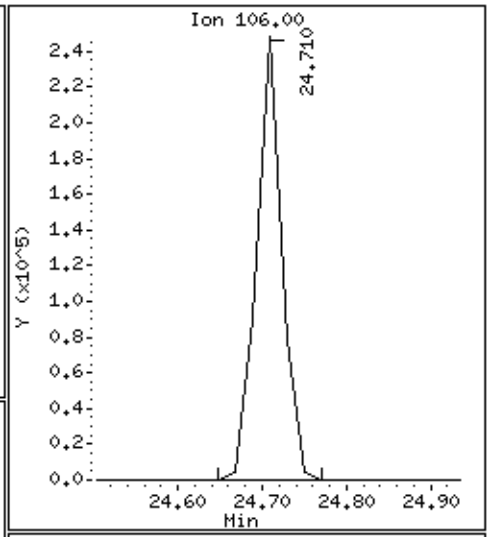
Column phase: RTX-624

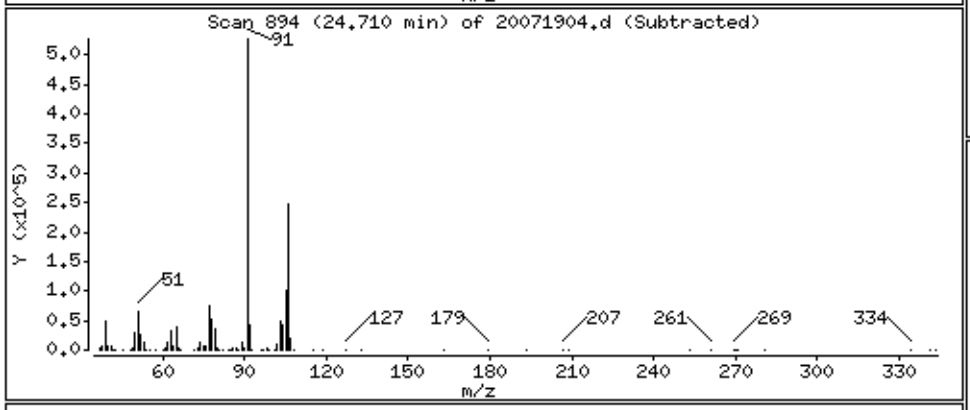
Column diameter: 0.32

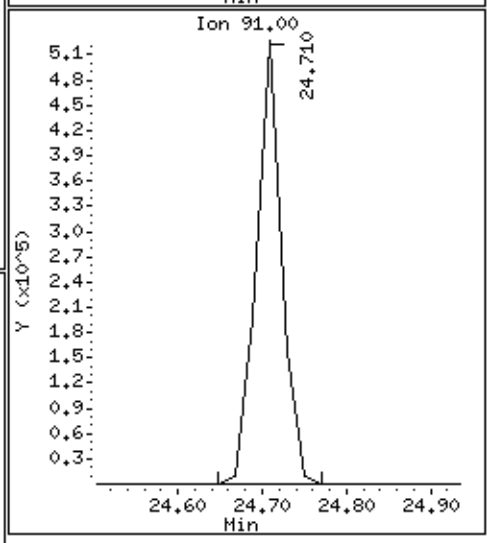
171 o-Xylene

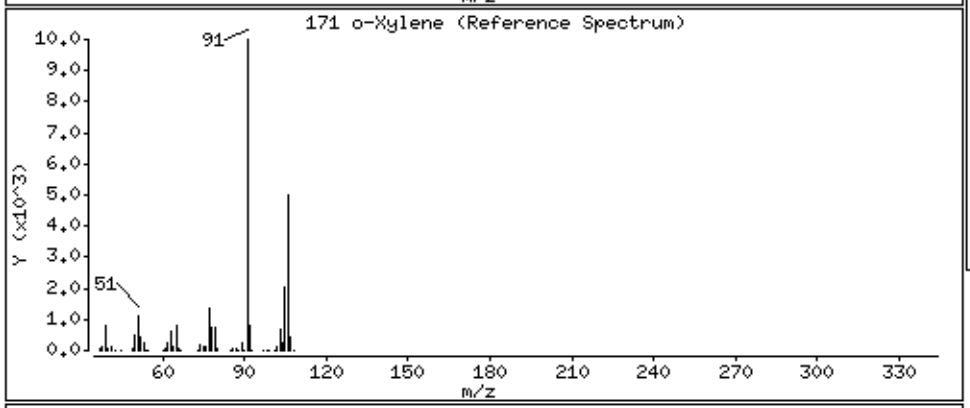
Concentration: 11.373 PPBV

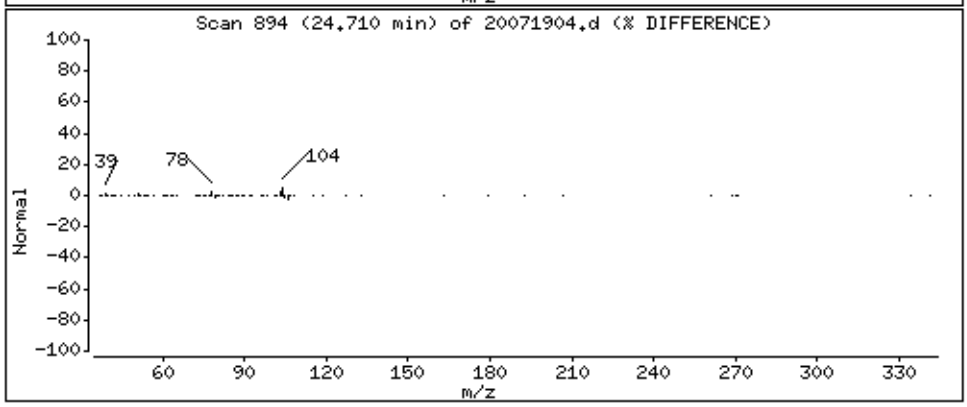












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

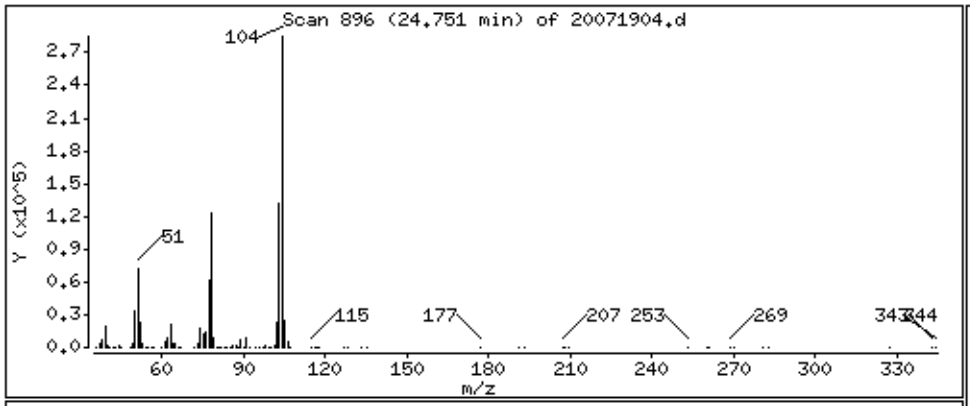
Operator: ef

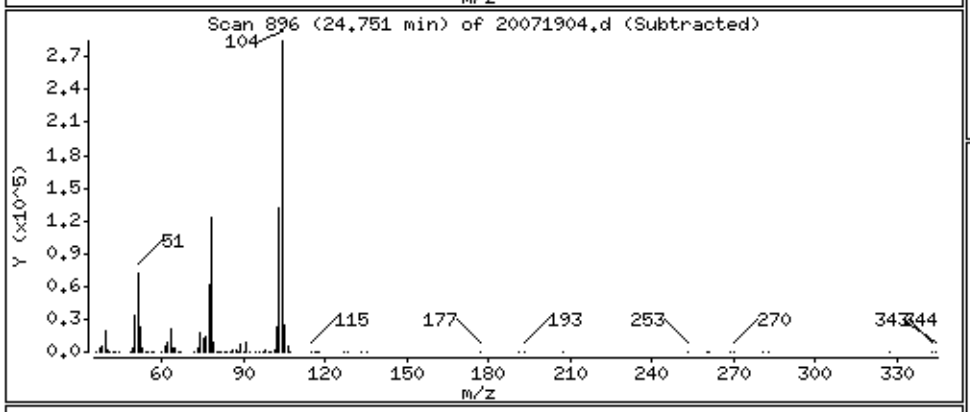
Column phase: RTX-624

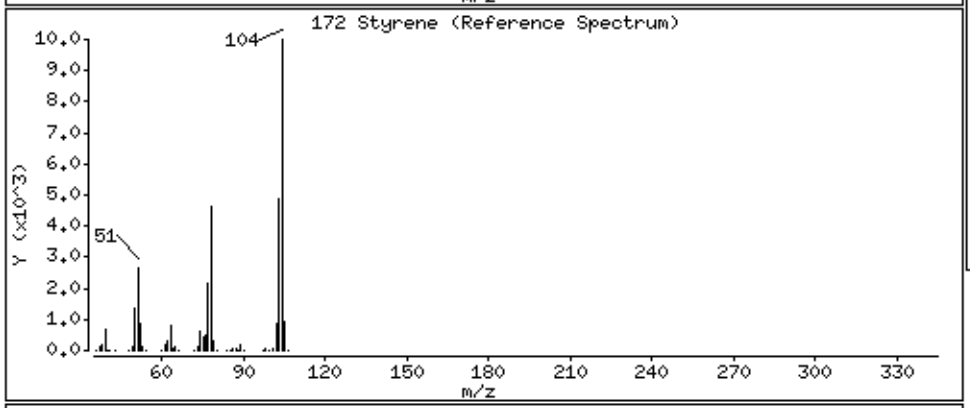
Column diameter: 0.32

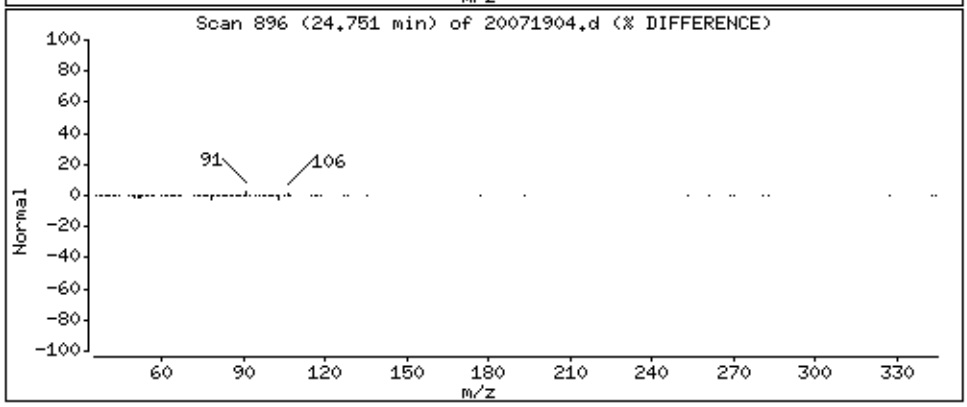
172 Styrene

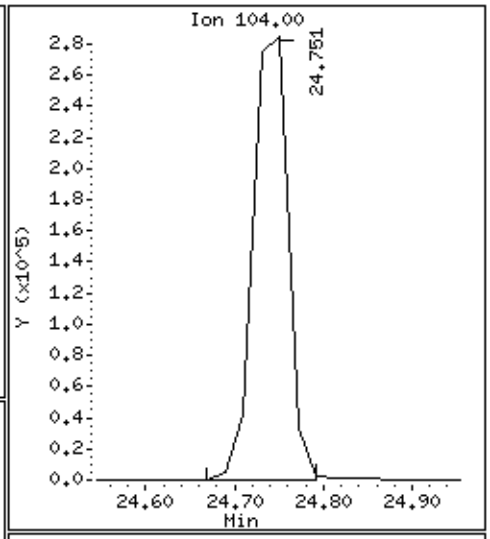
Concentration: 12.026 PPBV

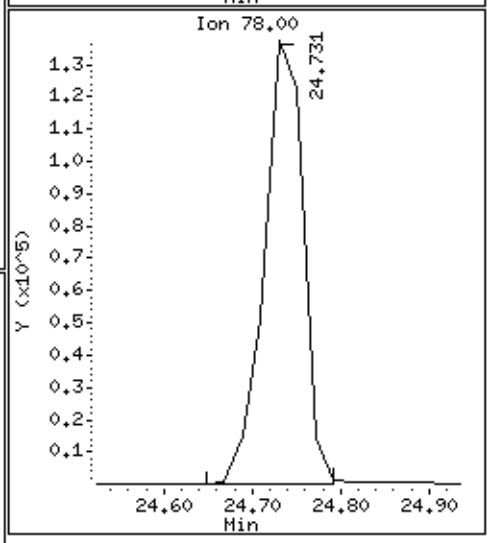












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

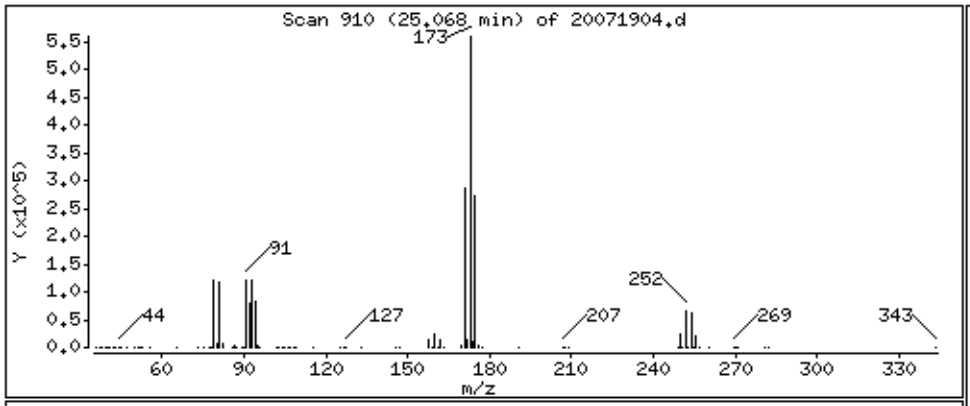
Operator: ef

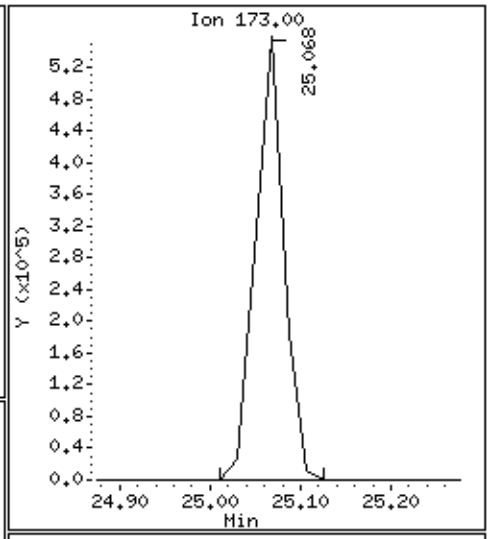
Column phase: RTX-624

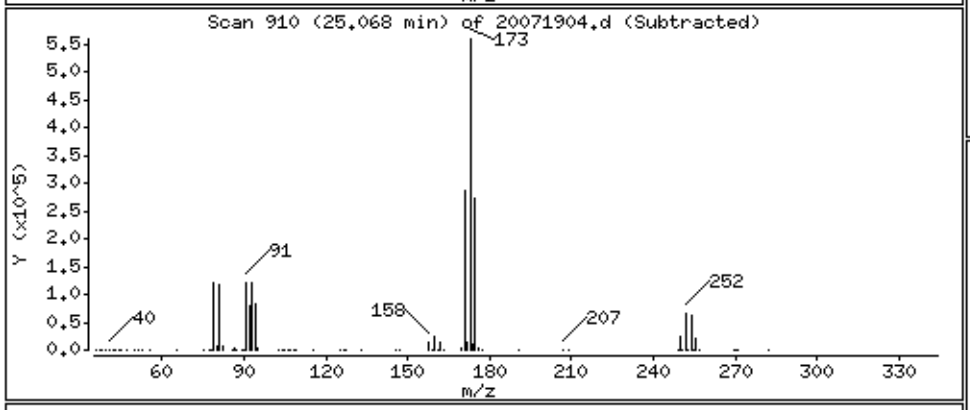
Column diameter: 0.32

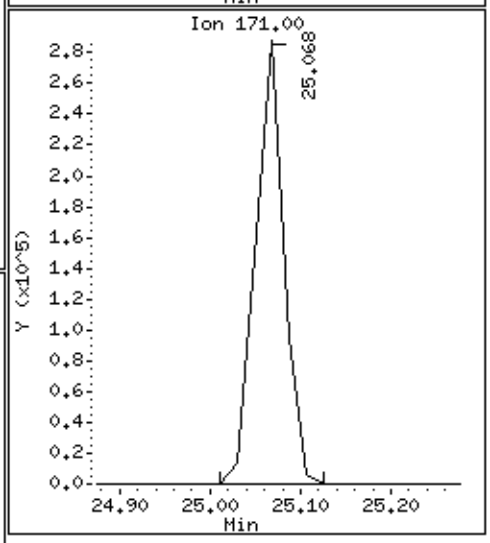
174 Bromoform

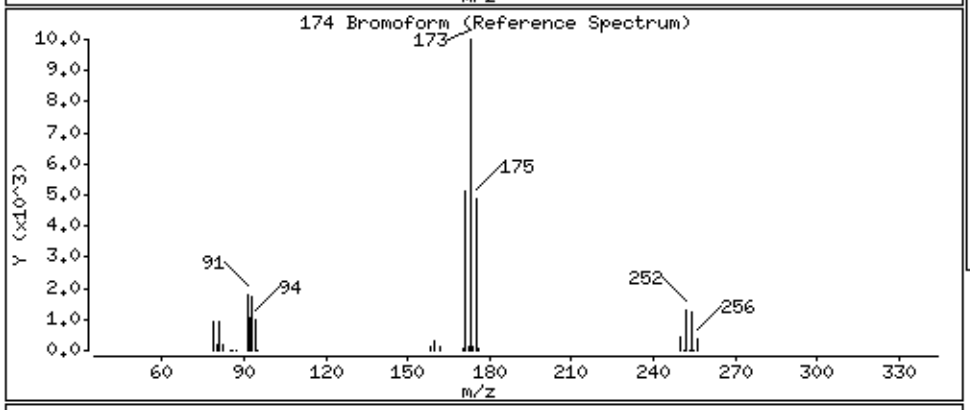
Concentration: 17.196 PPBV

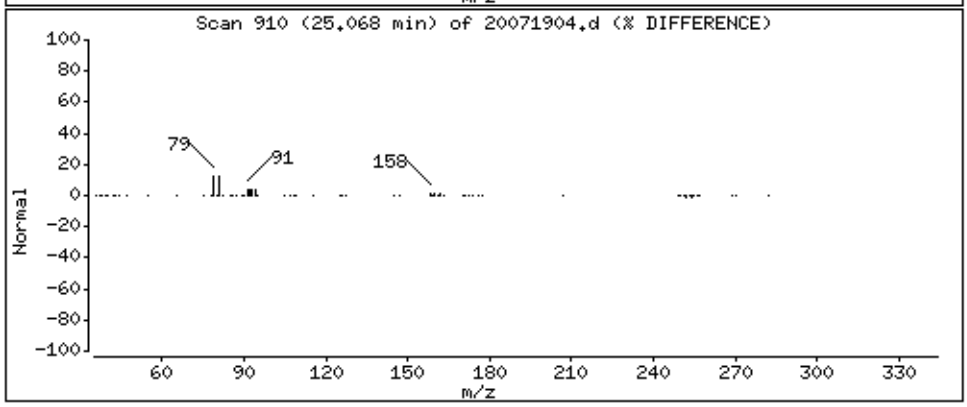












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

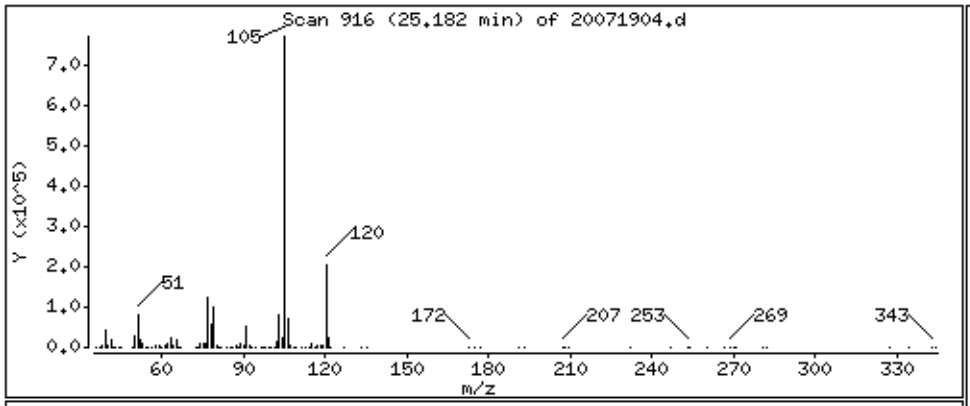
Operator: ef

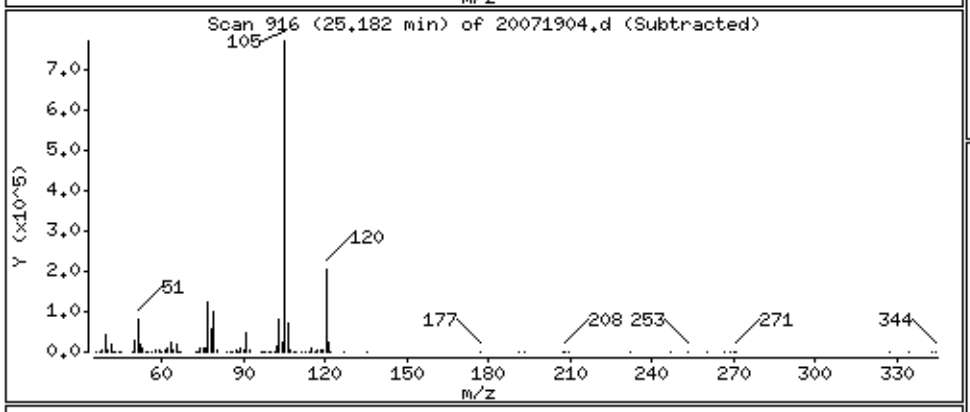
Column phase: RTX-624

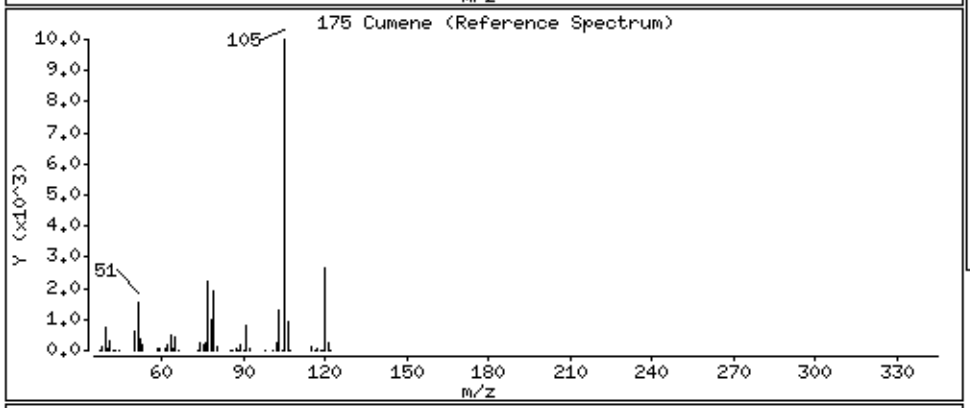
Column diameter: 0.32

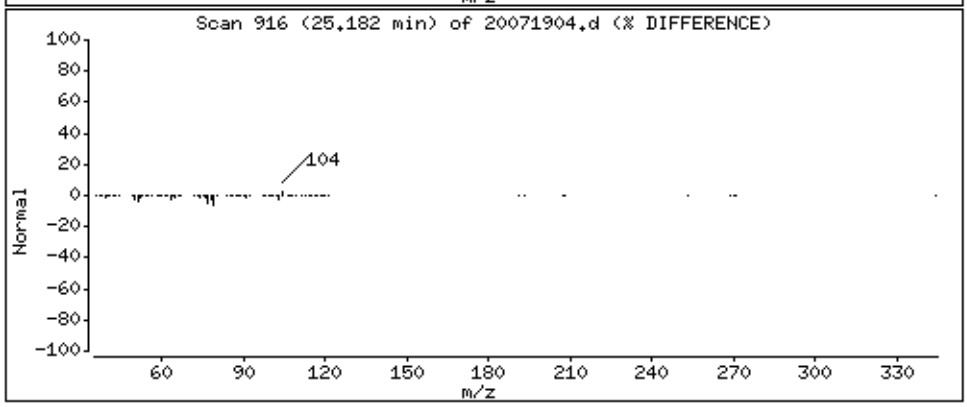
175 Cumene

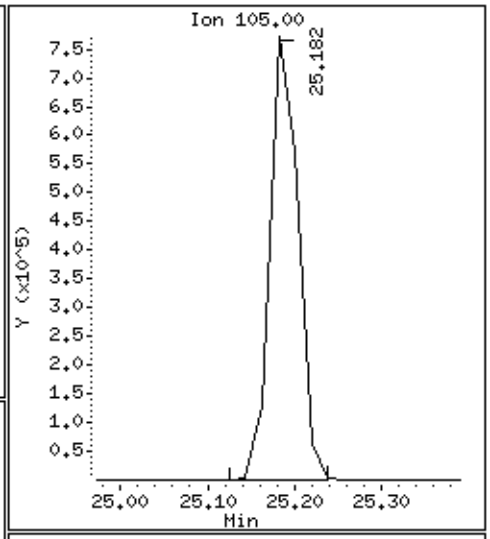
Concentration: 11.699 PPBV

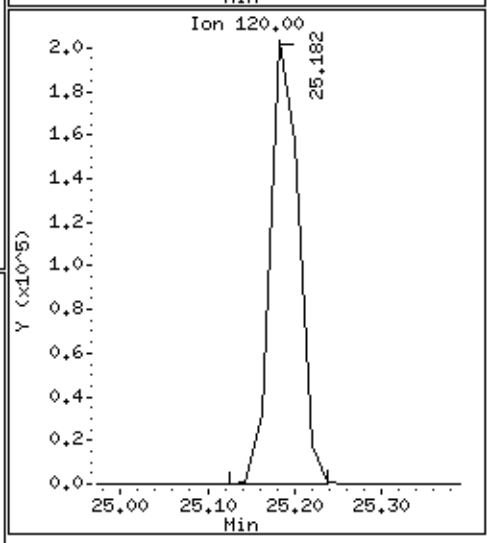












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

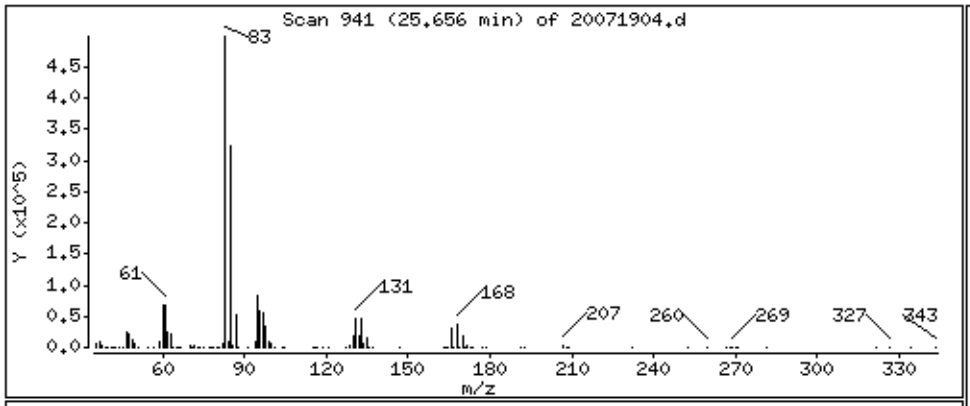
Operator: ef

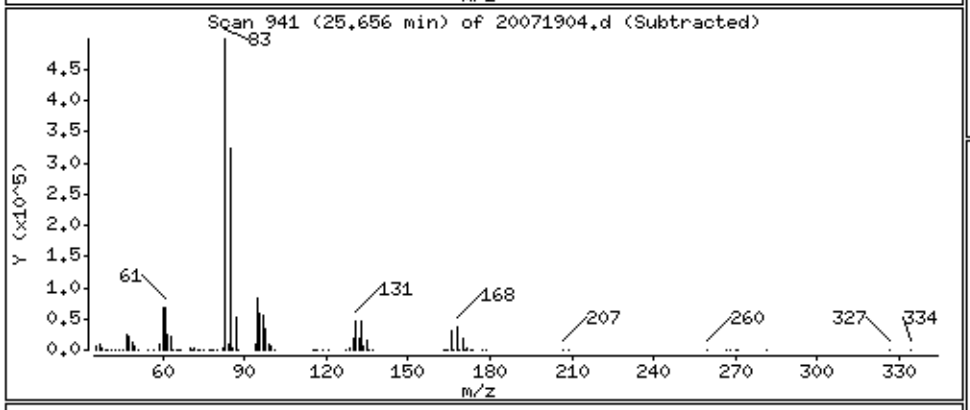
Column phase: RTX-624

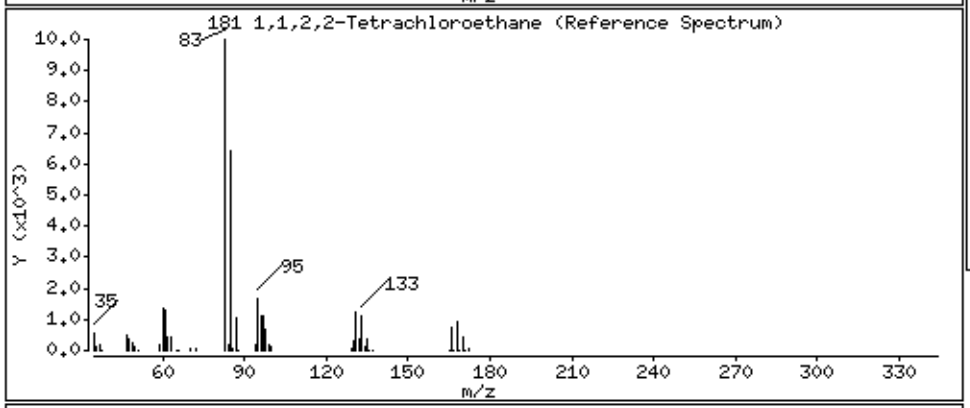
Column diameter: 0.32

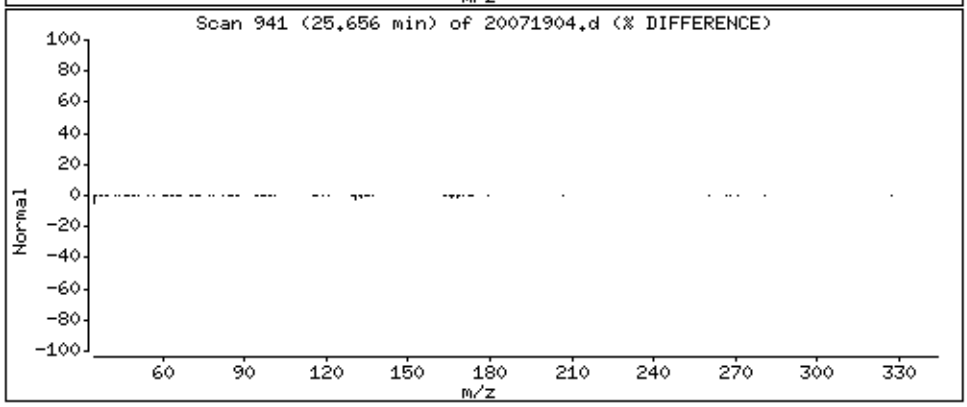
181 1,1,2,2-Tetrachloroethane

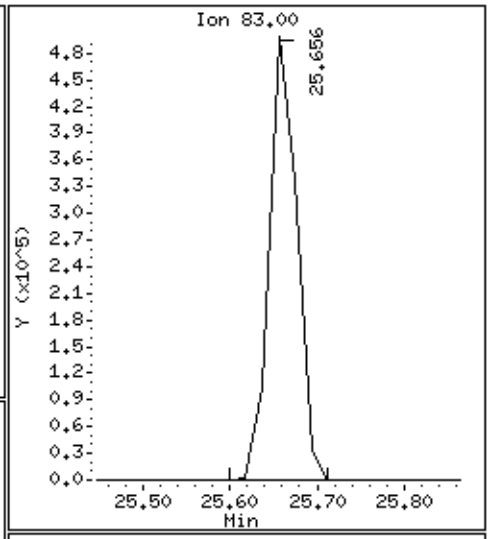
Concentration: 11.882 PPBV

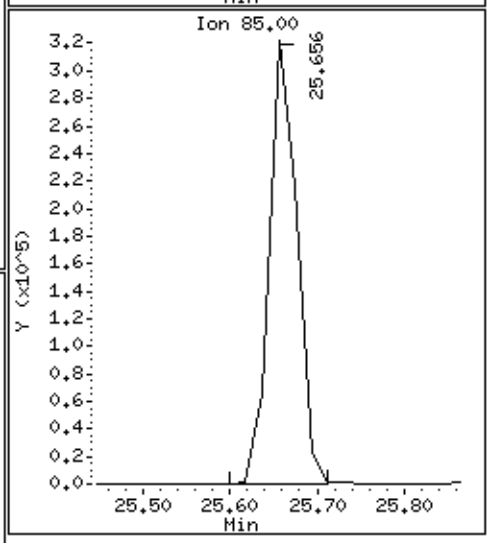












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

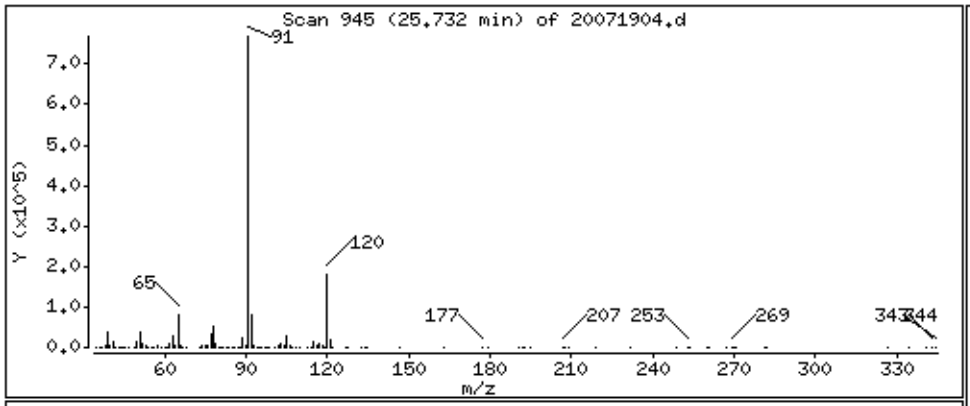
Operator: ef

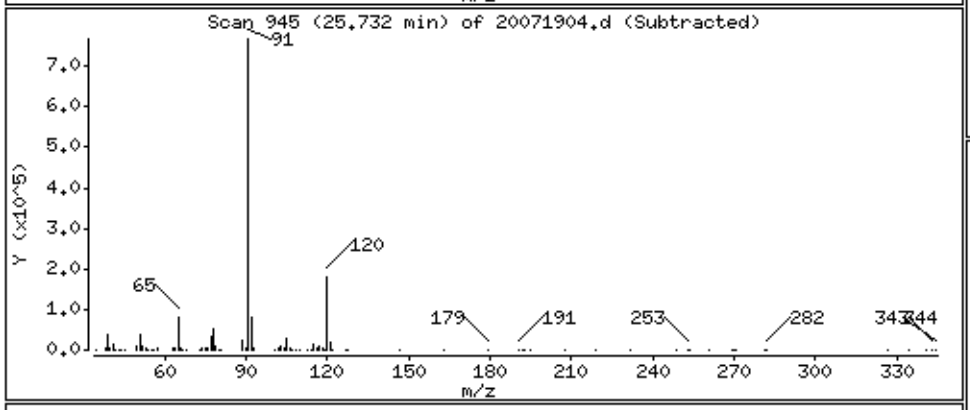
Column phase: RTX-624

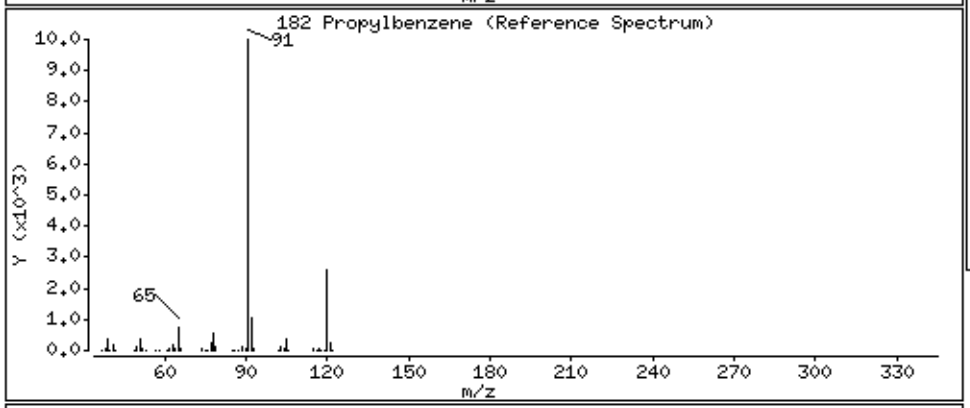
Column diameter: 0.32

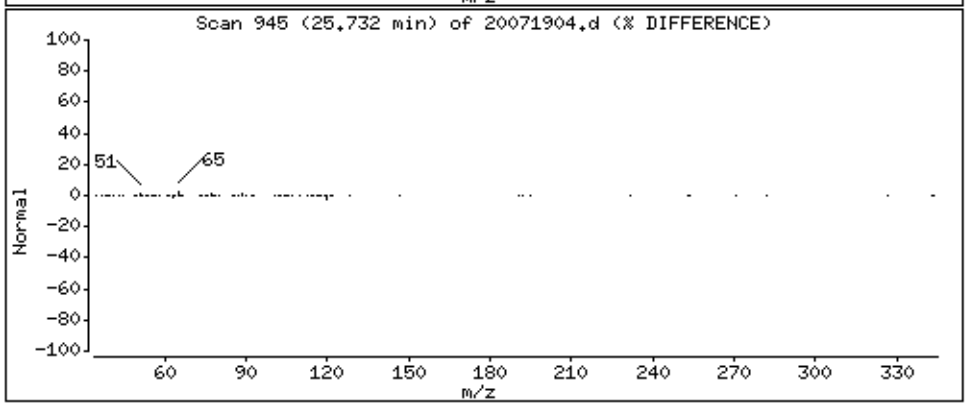
182 Propylbenzene

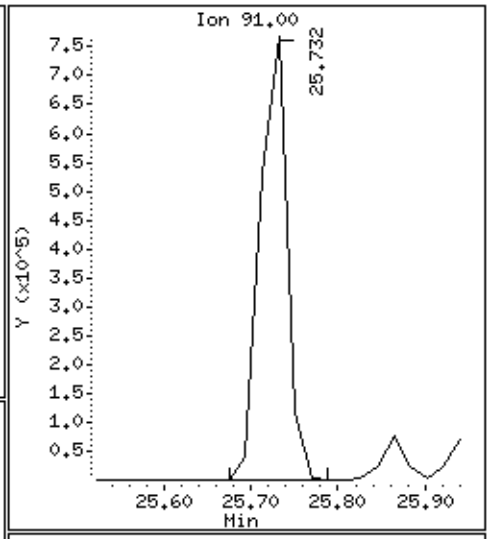
Concentration: 11.161 PPBV

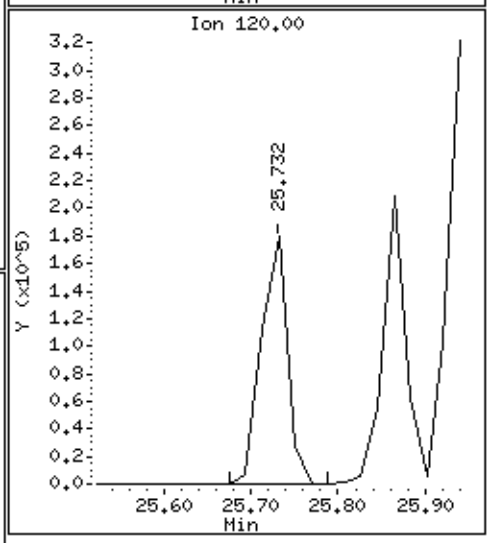












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

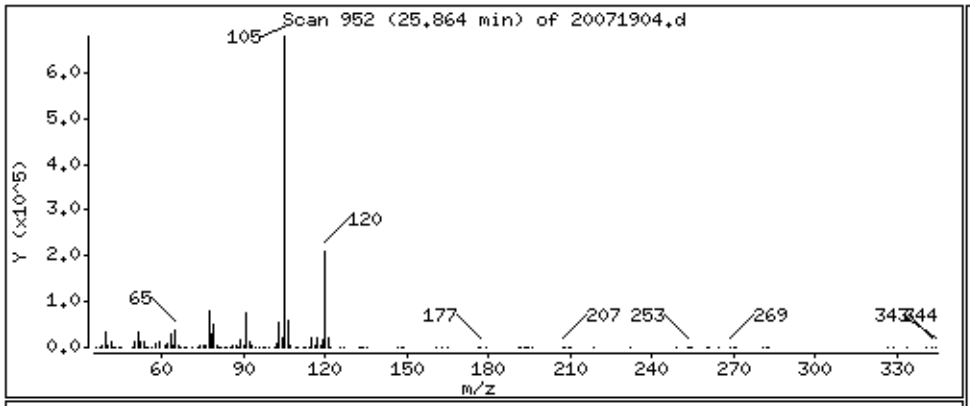
Operator: ef

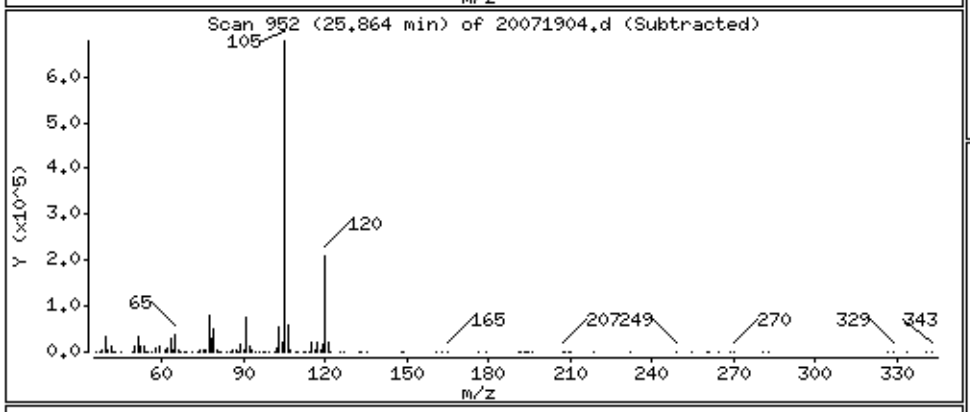
Column phase: RTX-624

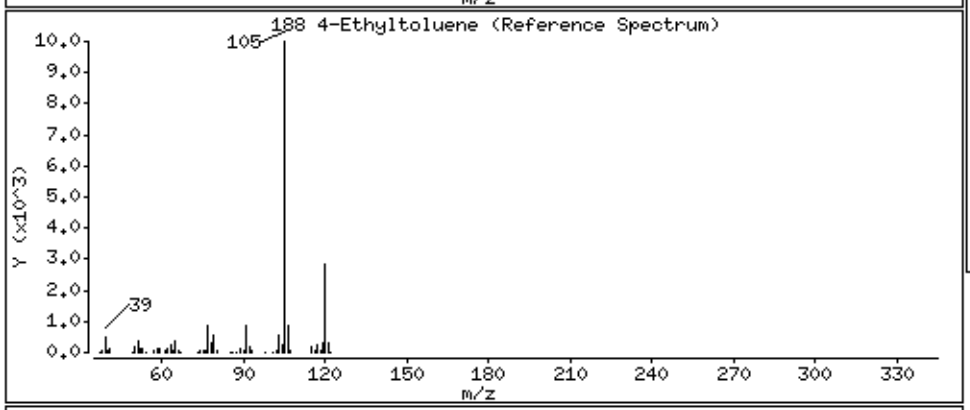
Column diameter: 0.32

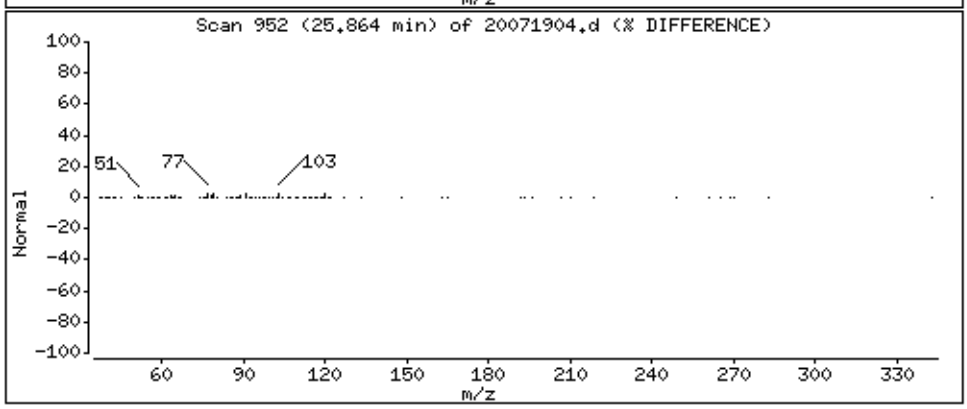
188 4-Ethyltoluene

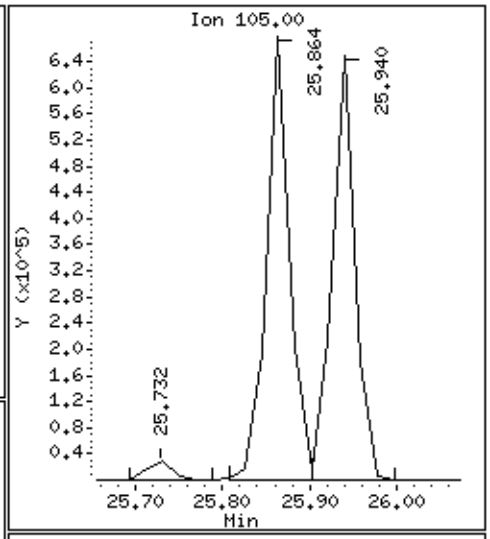
Concentration: 10.071 PPBV

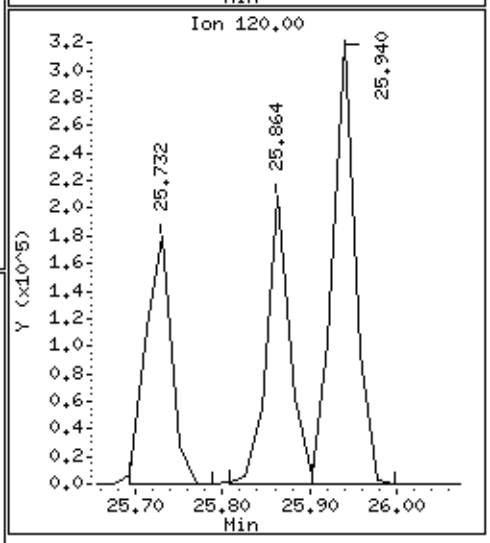












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

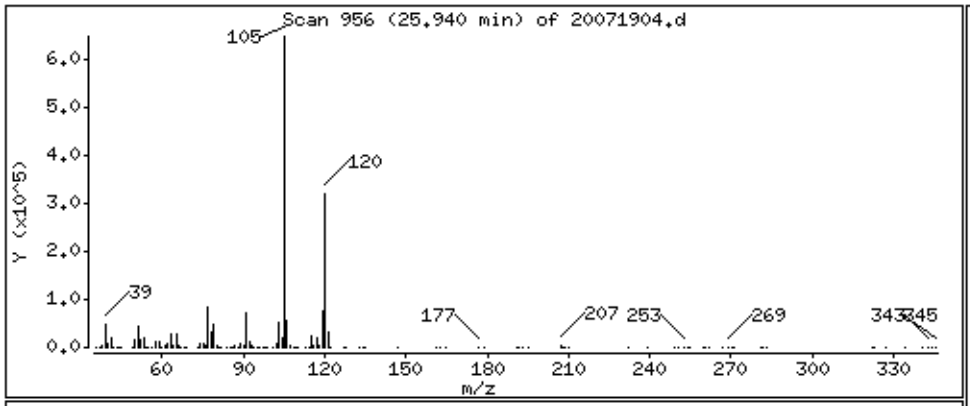
Operator: ef

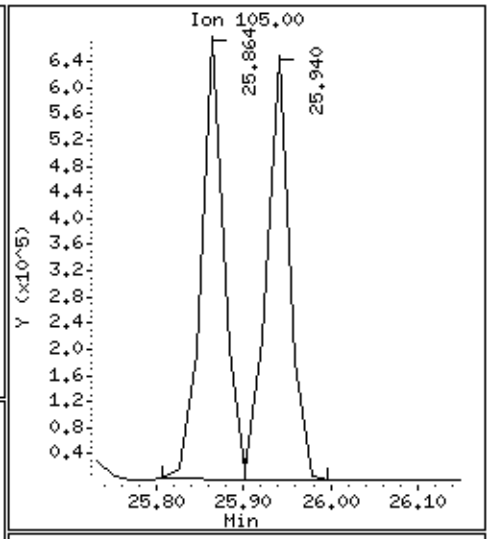
Column phase: RTX-624

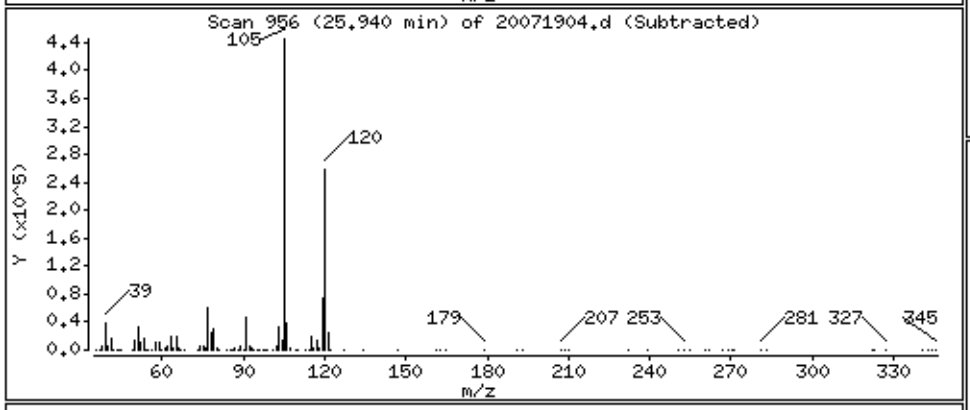
Column diameter: 0.32

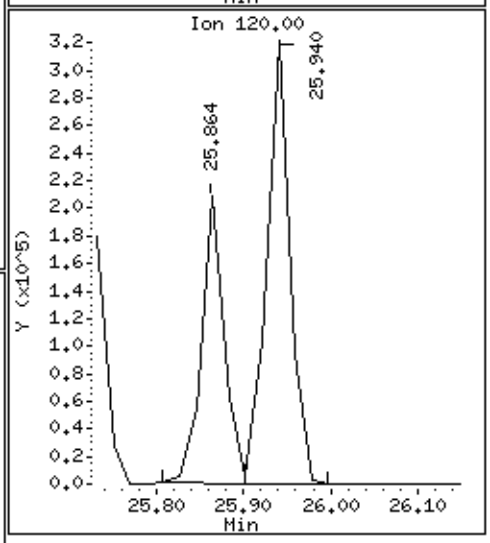
190 1,3,5-Trimethylbenzene

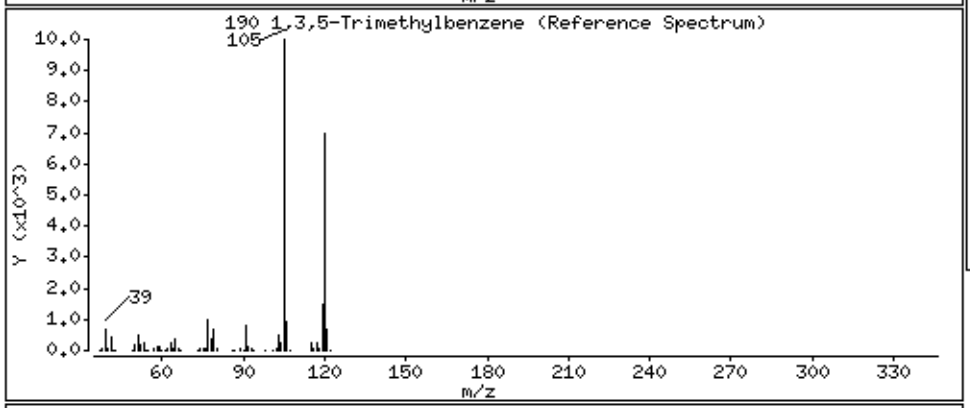
Concentration: 11.421 PPBV

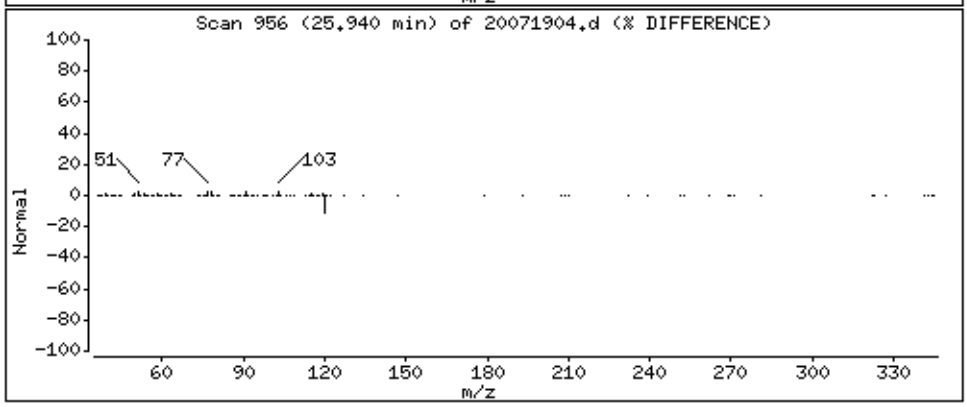












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

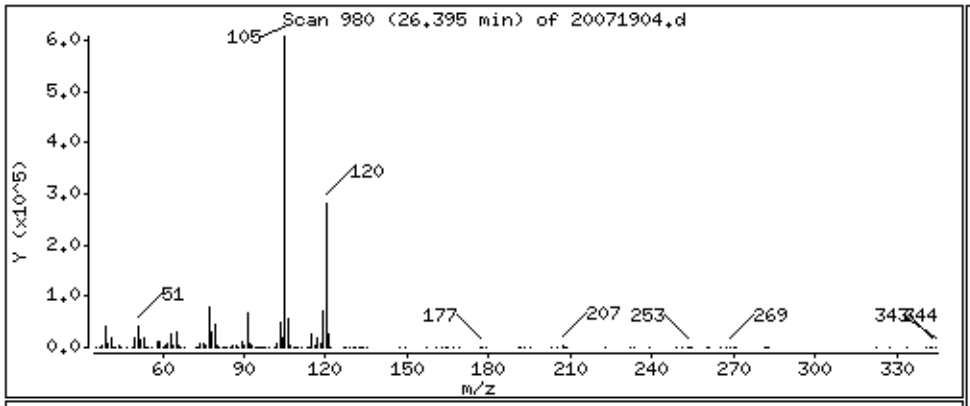
Operator: ef

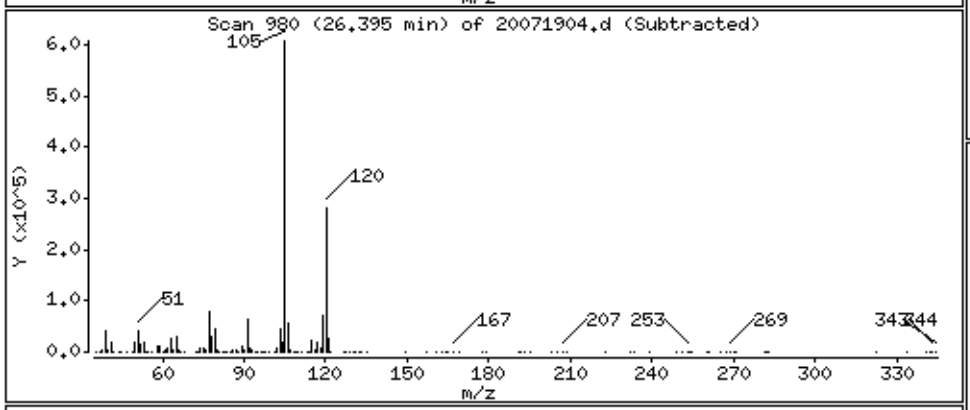
Column phase: RTX-624

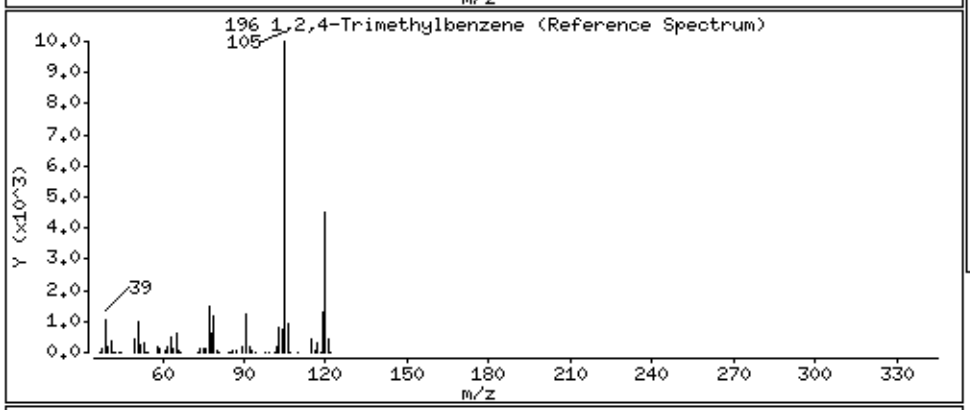
Column diameter: 0.32

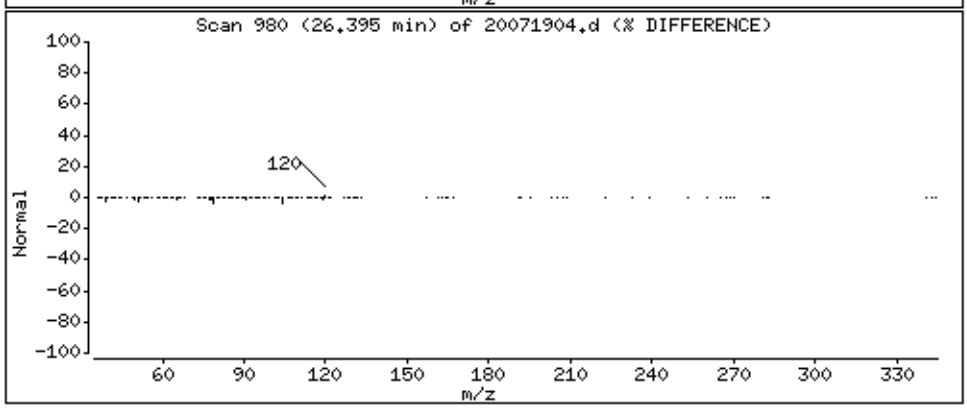
196 1,2,4-Trimethylbenzene

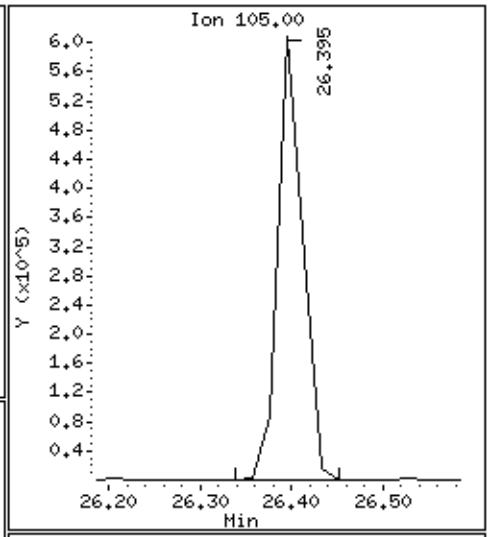
Concentration: 10.937 PPBV

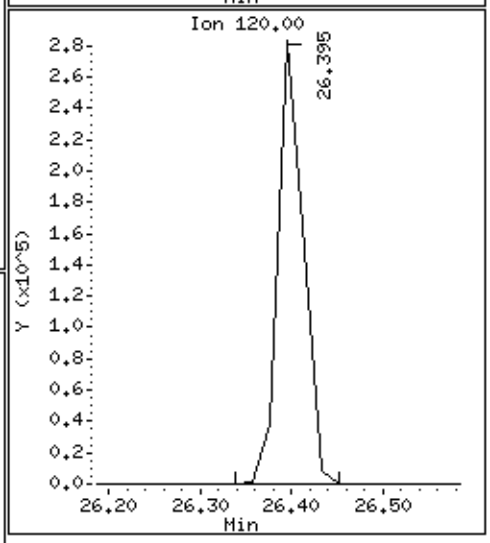












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

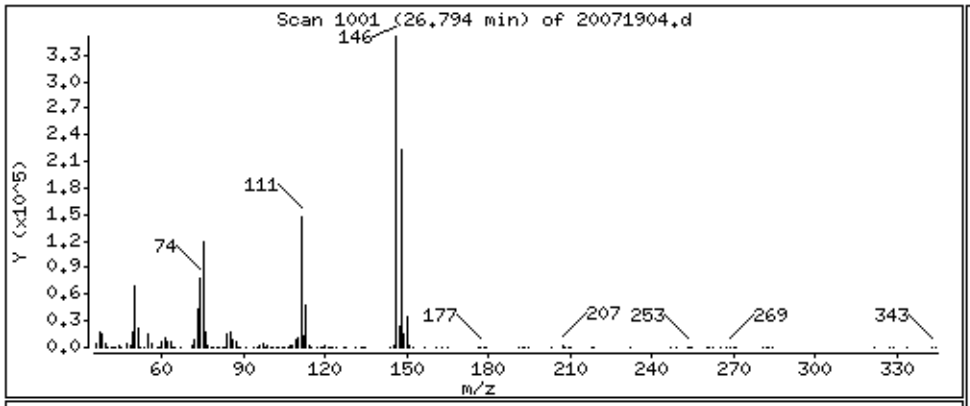
Operator: ef

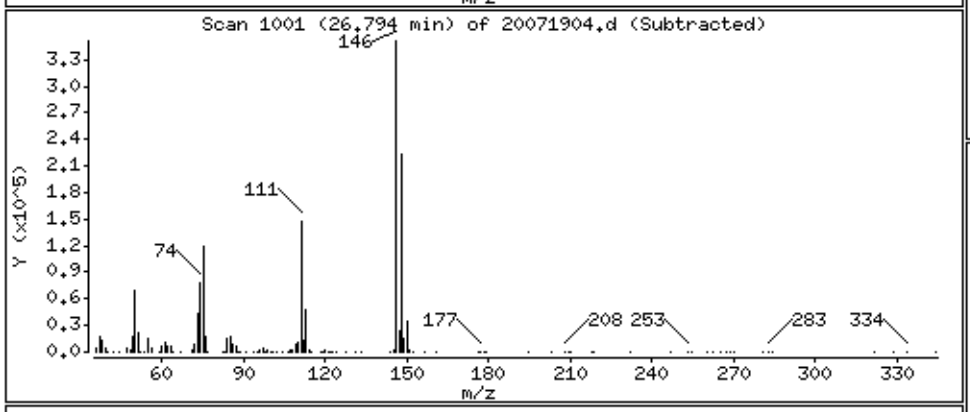
Column phase: RTX-624

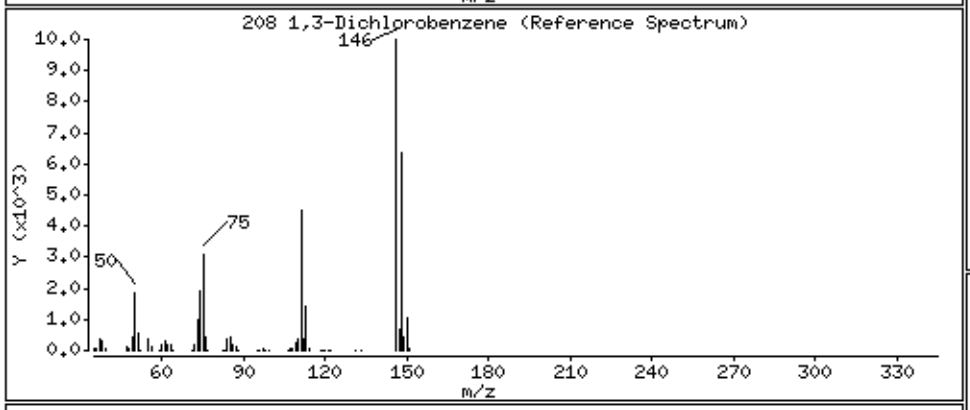
Column diameter: 0.32

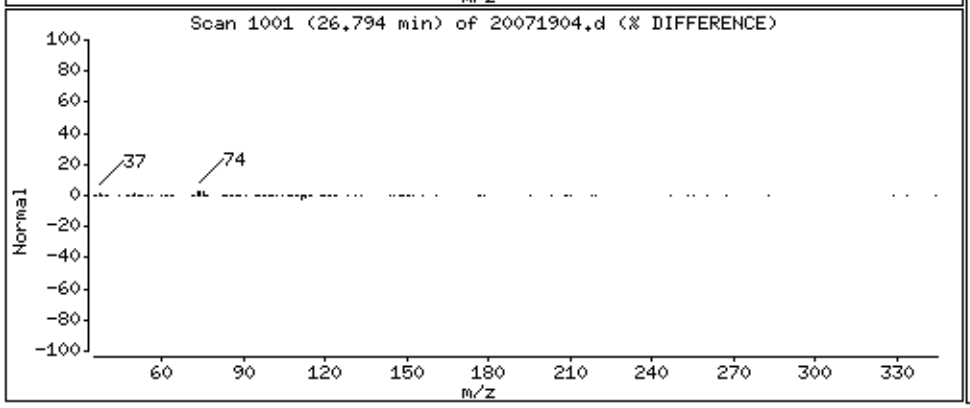
208 1,3-Dichlorobenzene

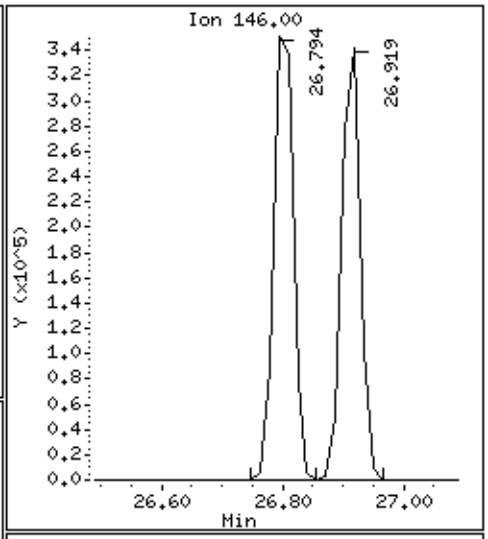
Concentration: 10.315 PPBV

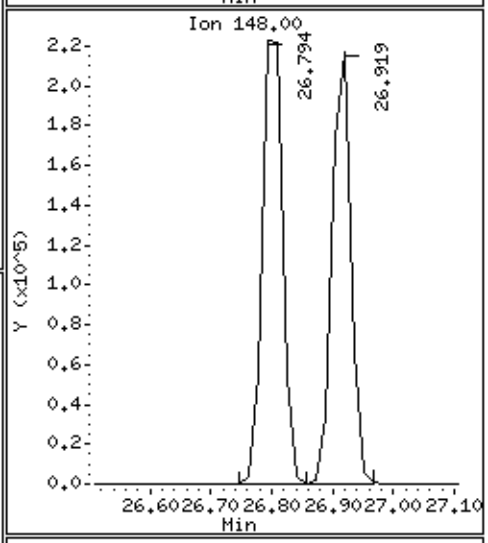


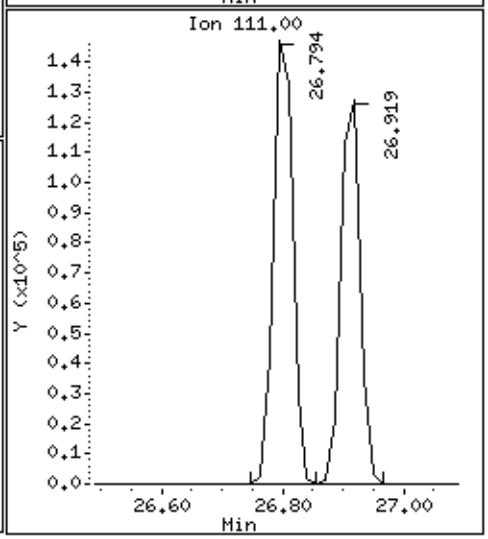












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

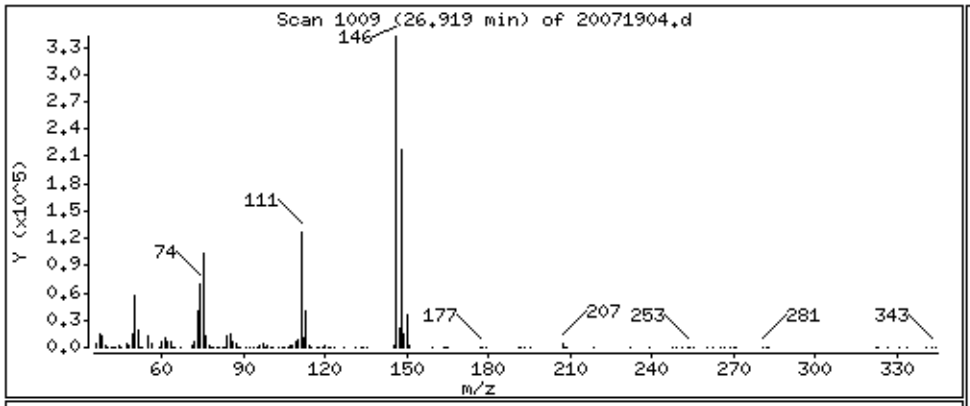
Operator: ef

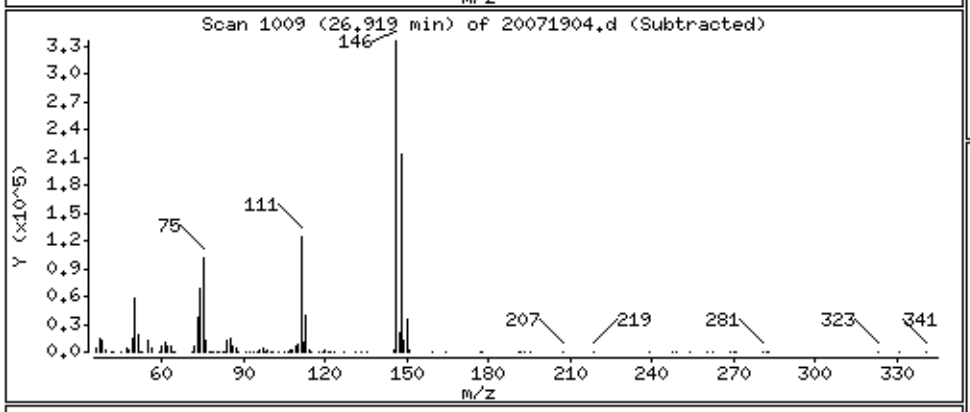
Column phase: RTX-624

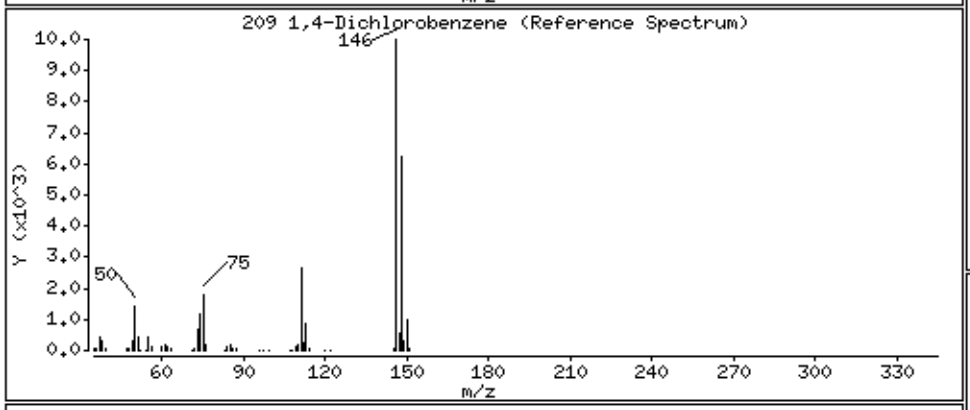
Column diameter: 0.32

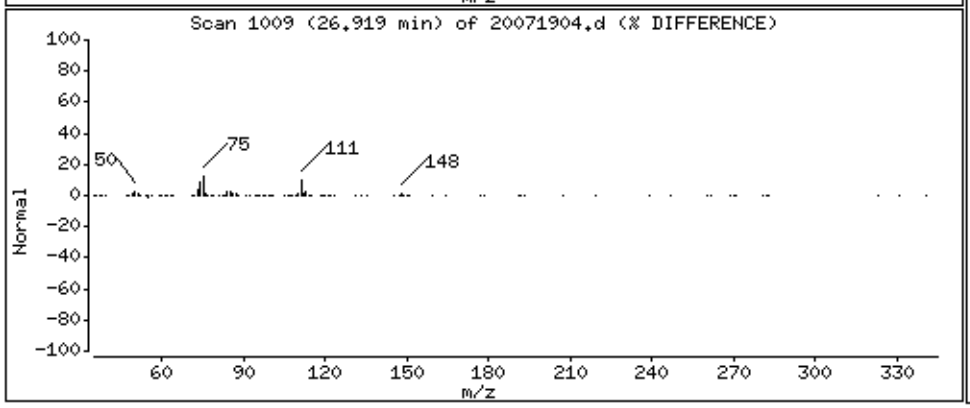
209 1,4-Dichlorobenzene

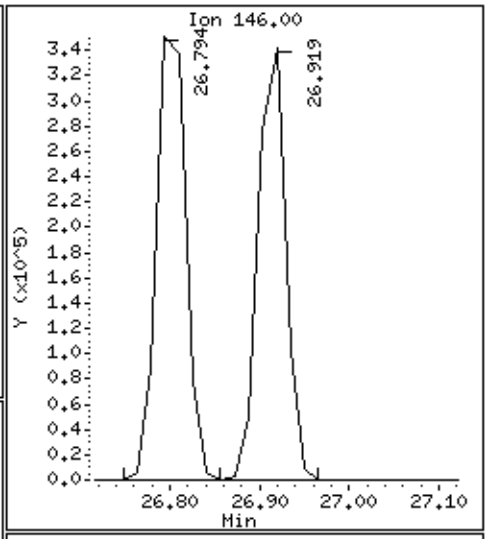
Concentration: 9.887 PPBV

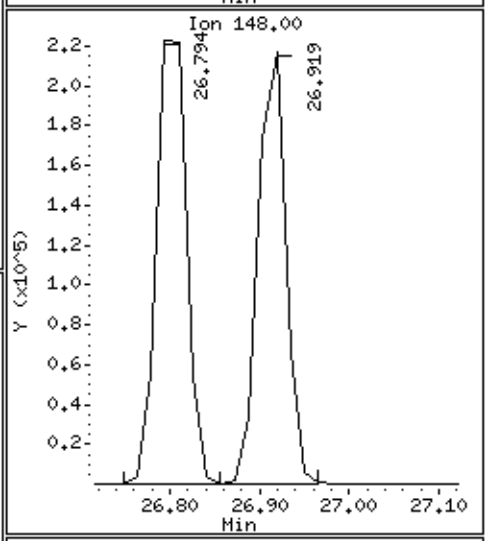


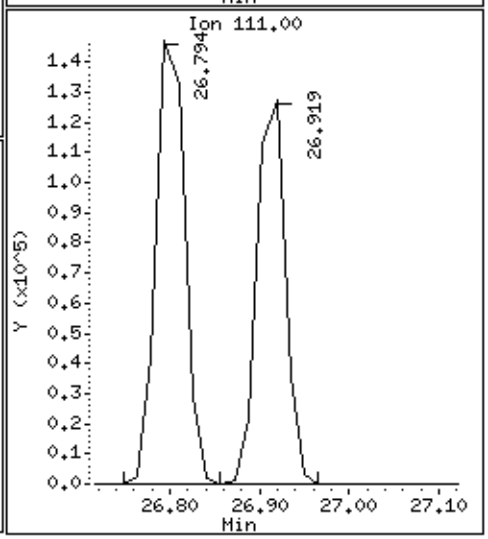












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

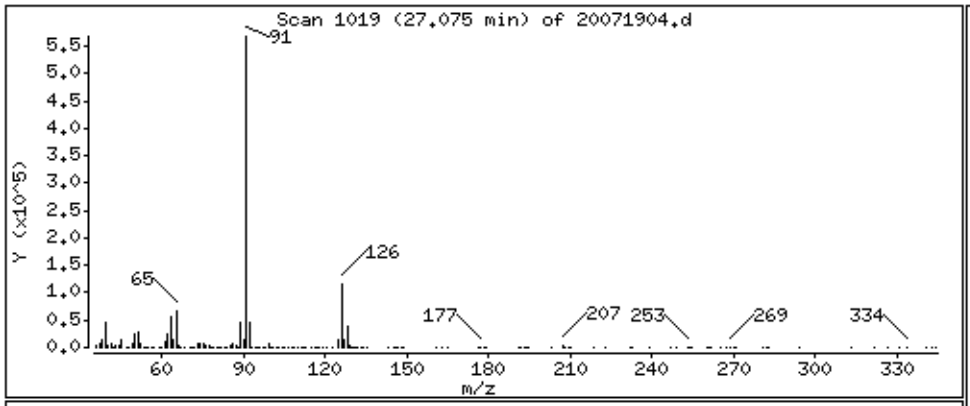
Operator: ef

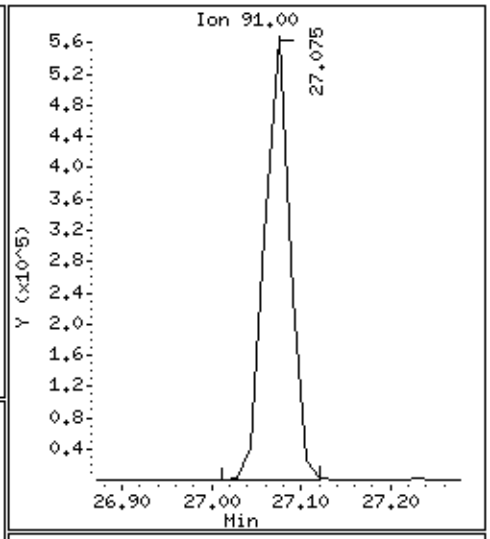
Column phase: RTX-624

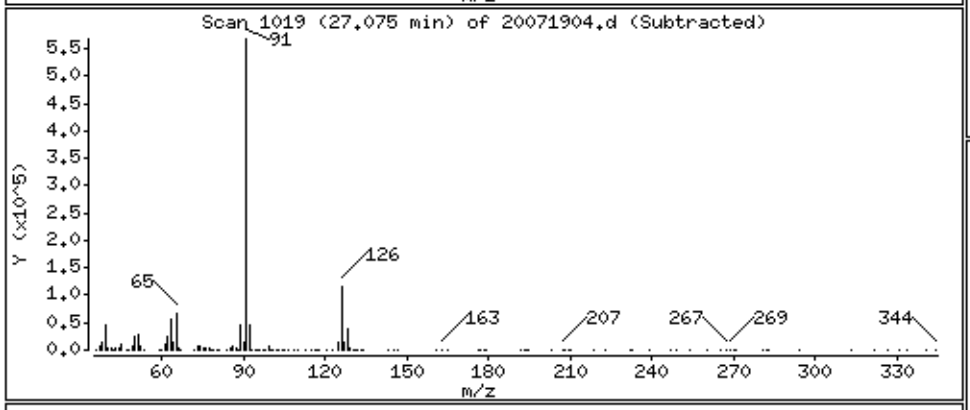
Column diameter: 0.32

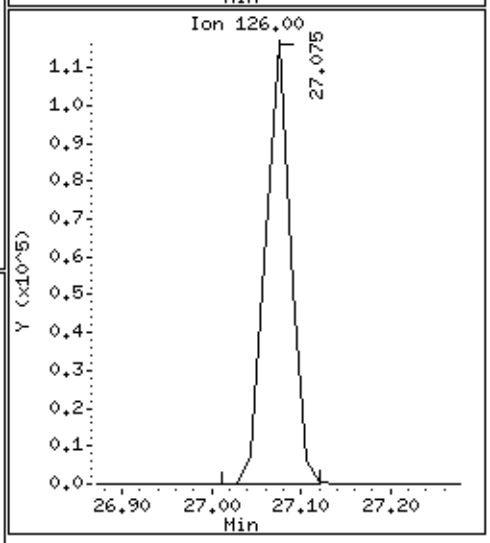
212 alpha-Chlorotoluene

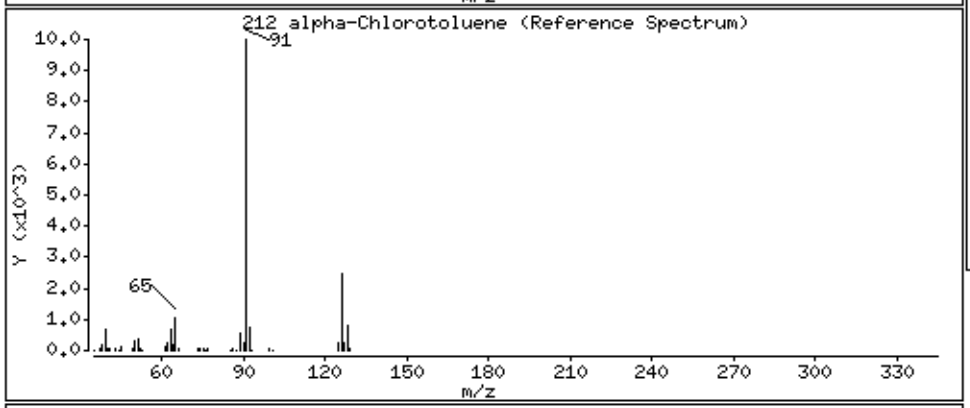
Concentration: 13.643 PPBV

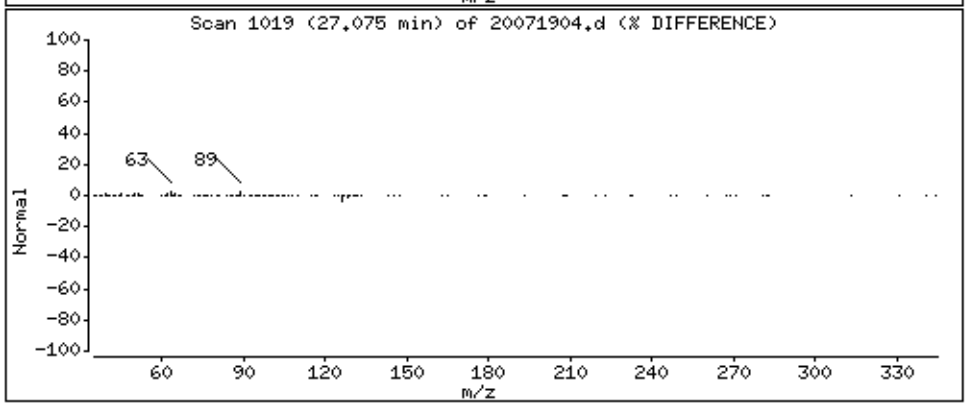












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

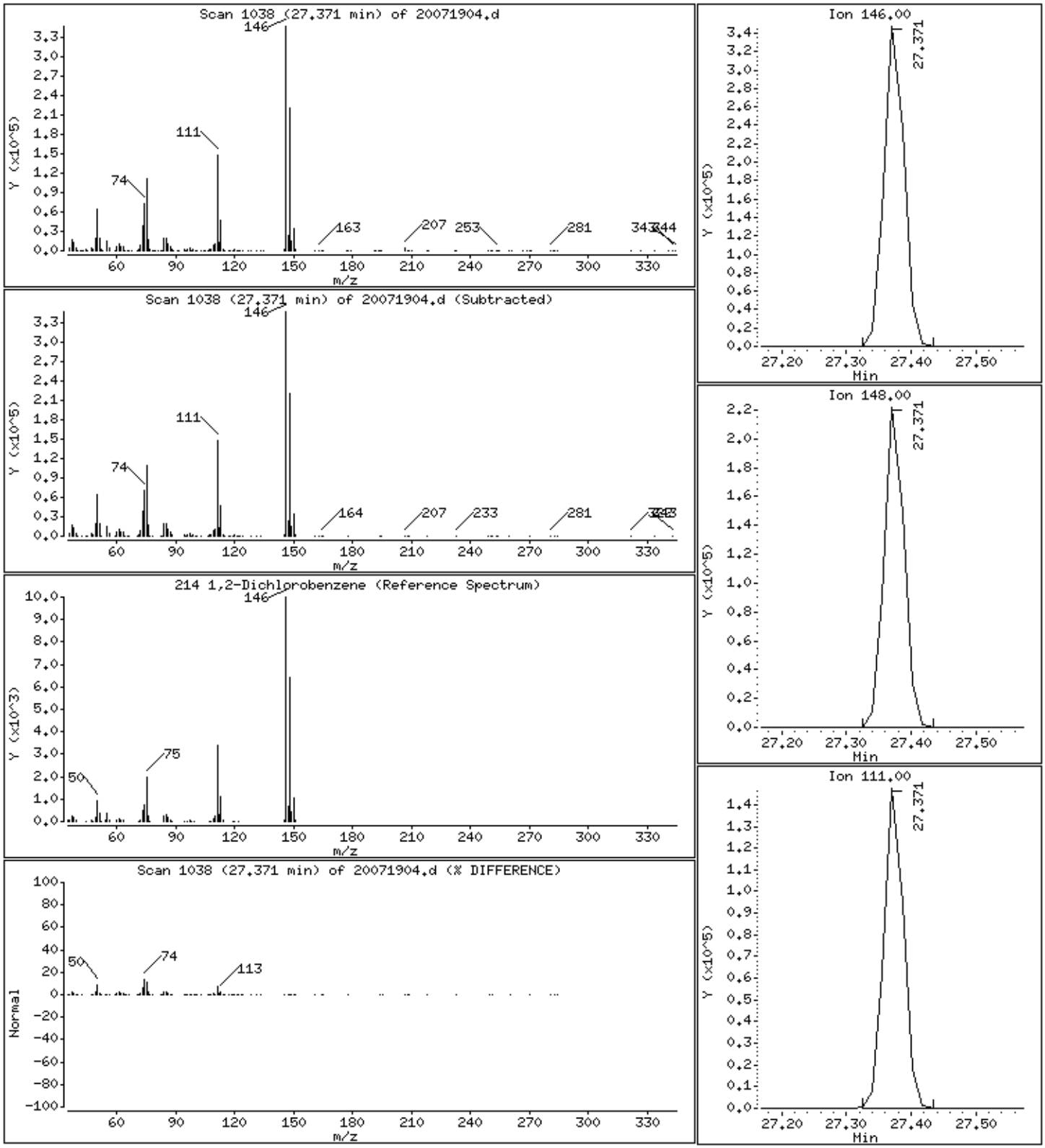
Operator: ef

Column phase: RTX-624

Column diameter: 0.32

214 1,2-Dichlorobenzene

Concentration: 10.515 PPBV



Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

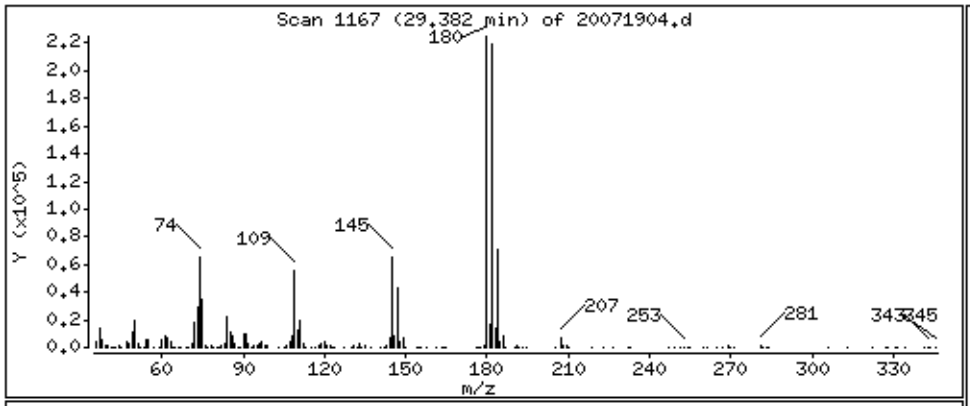
Operator: ef

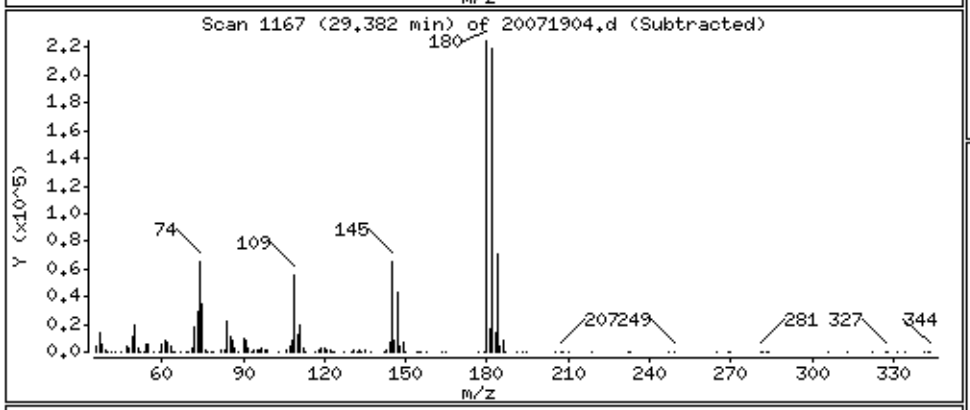
Column phase: RTX-624

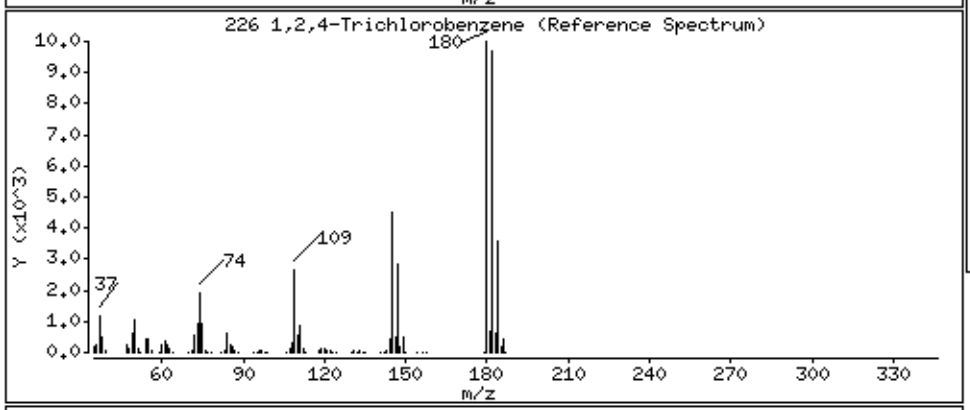
Column diameter: 0.32

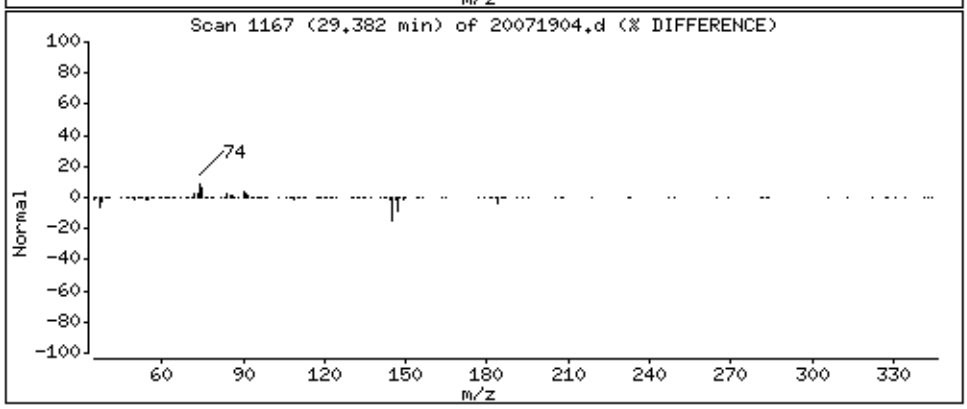
226 1,2,4-Trichlorobenzene

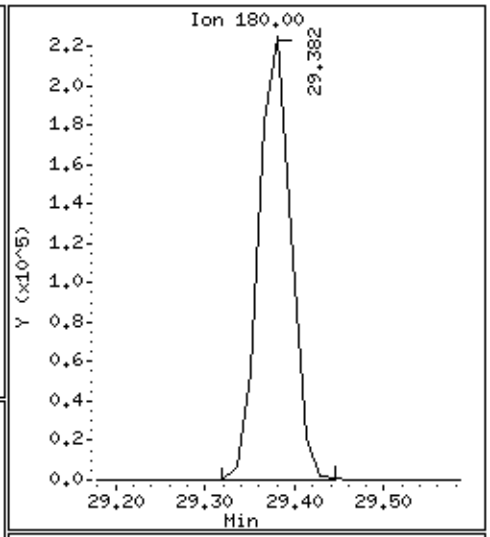
Concentration: 8.639 PPBV

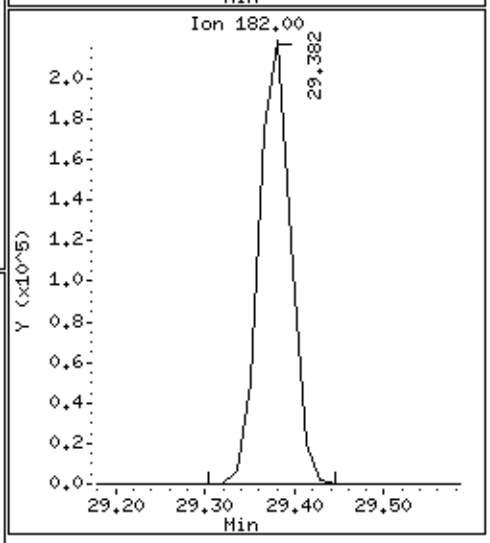












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

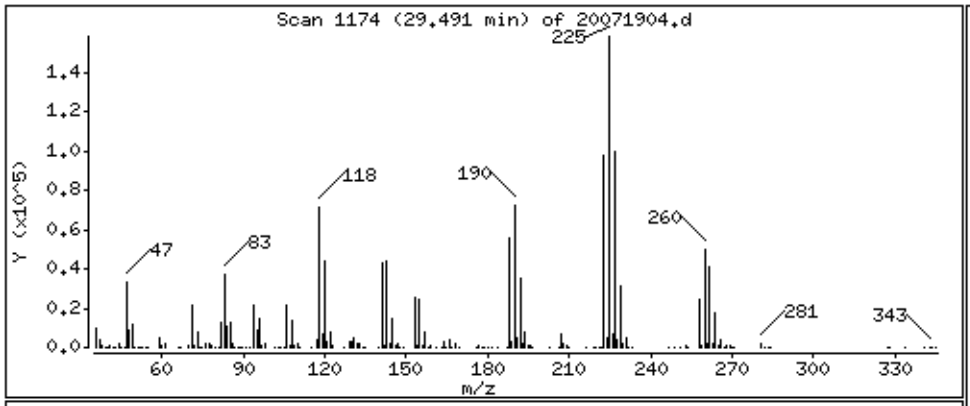
Operator: ef

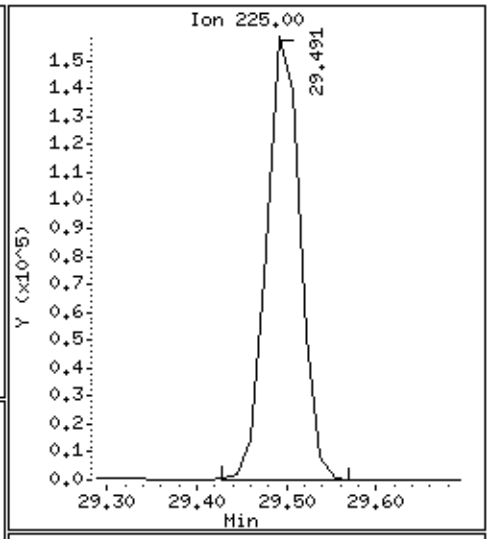
Column phase: RTX-624

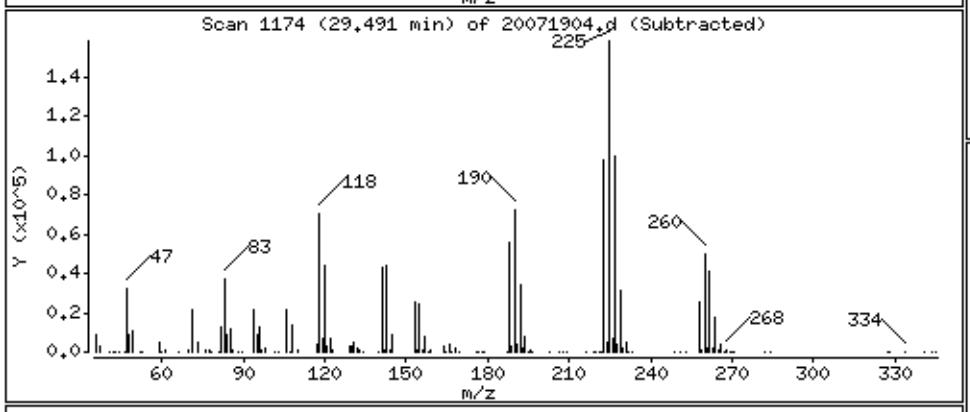
Column diameter: 0.32

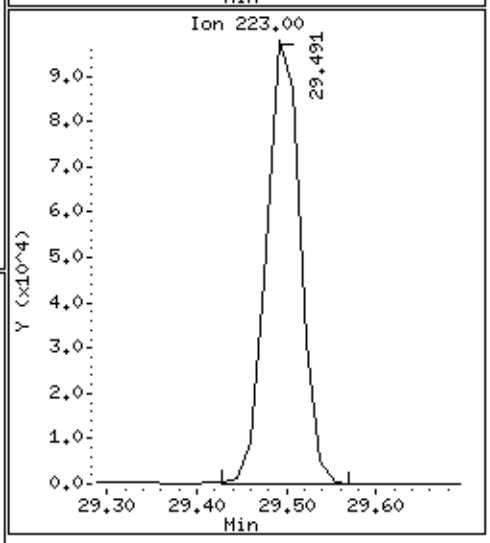
227 Hexachlorobutadiene

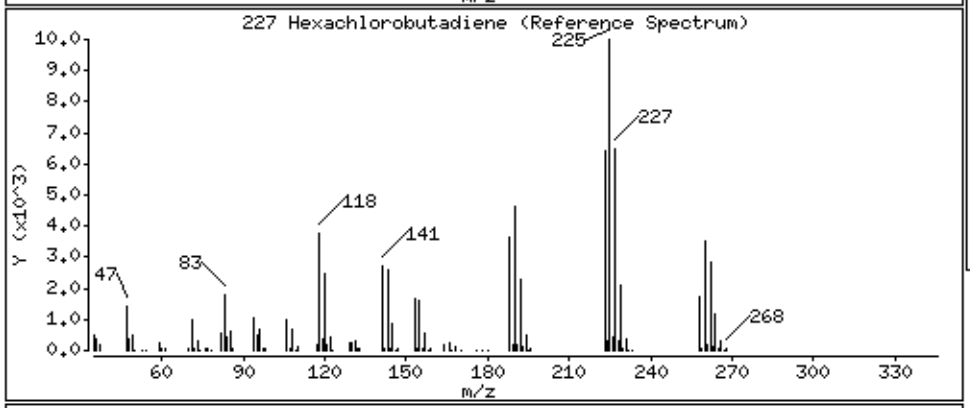
Concentration: 8.351 PPBV

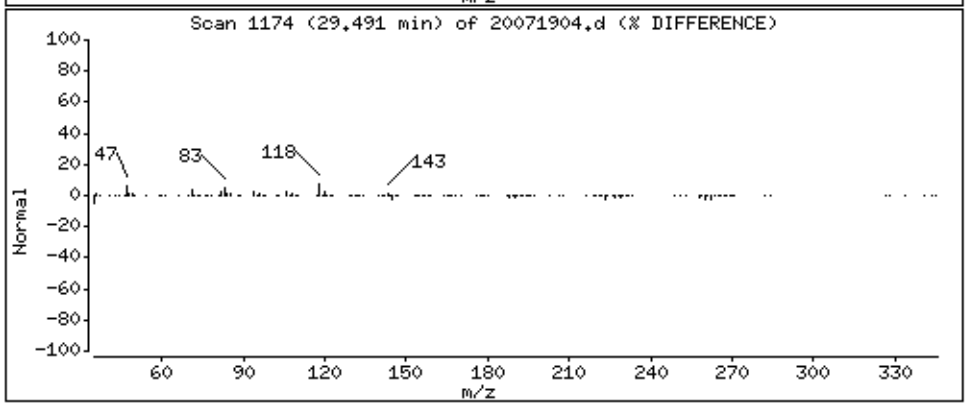












Data File: /chem/msd20.i/19Jul2016.b/20071904.d

Date : 19-JUL-2016 09:24

Client ID: LCSD

Instrument: msd20.i

Sample Info: 50mL# 2789-168

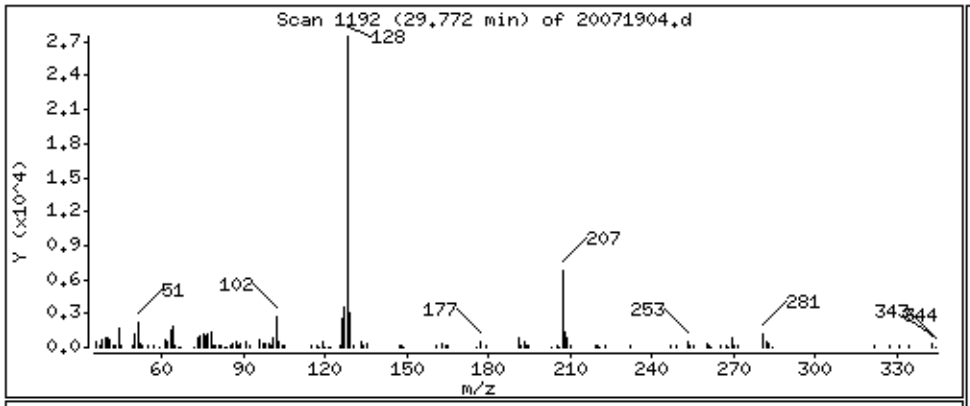
Operator: ef

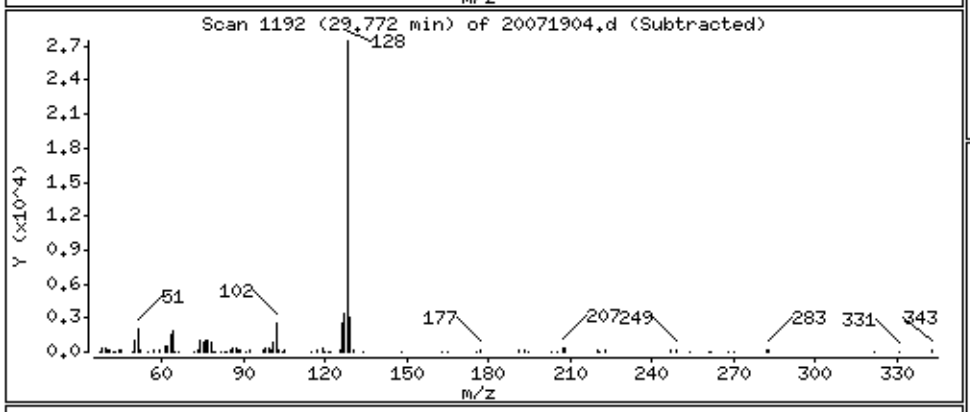
Column phase: RTX-624

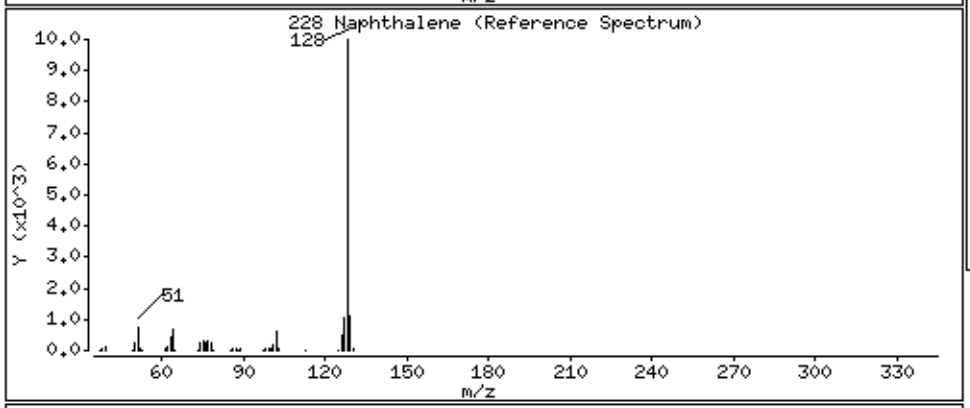
Column diameter: 0.32

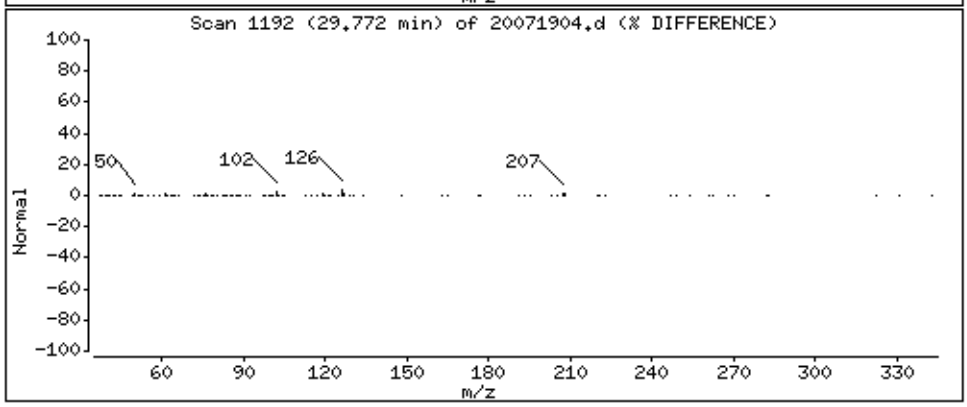
228 Naphthalene

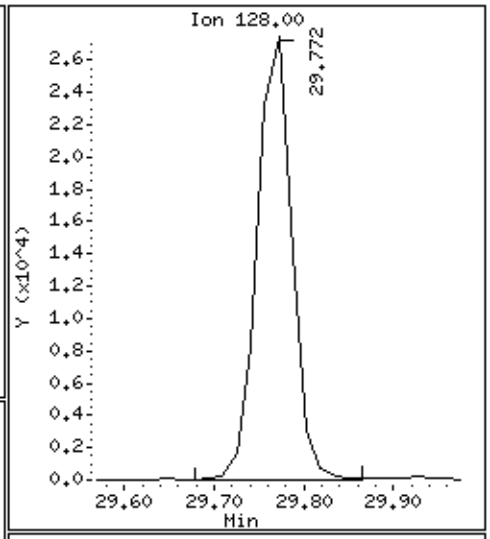
Concentration: 0.8336 PPBV

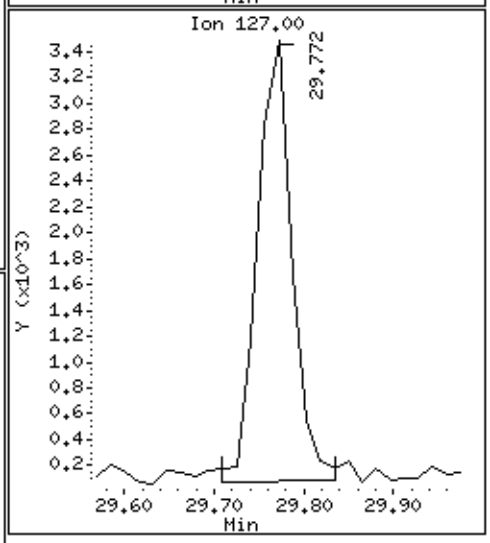












Eurofins Air Toxics, Inc. **MSD-20** **Logbook #2796**

0624 of 0668

BFB Verification of 176/174 m/z Ratio: (241792/246912) x100 =	97.93%
Method Name: 2016L0624A/2016S0624A	

IS/S Std. #: 2789-222		Exp. Date: 10/14/16	
BCM	LL: 115886	SIM:	118493
1,4-DFB	406375		422143
CB-d5	363299		379511

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

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	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	20071901	BFB Tune Check	2299-1484	50 ng	2.0 µl	1.00	SU	7/19/16	0705	SU/SK	
2	✓	02	CCV (50 ppbv)	2789-179	10.0 ppbv	50 ml	1.00	SU		0730	SK	LL: 3 out SIM: 0 out Exp. 9/6/16
3	✓	03	LCS (50 ppbv)	2789-168	10 ppbv	50 ml	1.00	SK		0846	SK	LL: 2 out SIM: 0 out Exp. 9/9/16
4	✓	04	LCS (50 ppbv)	2789-168	10 ppbv	50 ml	1.00	SK		0924	SK	Exp. 9/16/16
5	✗	05	LAB BLANK	96107	Humid	250 ml	1.00	SK		~~1110~~ 1025	SK	
6	✓	06	LAB BLANK	35248	Humid	250 ml	1.00	SK		1104	SK	
7	✓	07	1607259-03A	356604	2.4" Hg · 15.1 psi	250 ml	2.21	SK		1208	SK	
8	✓	08	1 -04A	37788	2.0" Hg · 15.0 psi	250 ml	2.17	SK		1247	SK	
9	✓	09	1607235 -01A	33531	5.5" Hg · 5.1 psi	250 ml	1.65	SK		1337	GH	
10	✓	10	-02A	620015	6.7" Hg · 4.8 psi	250 ml	1.71	SK		1424	GH	
11	✓	11	-03A	620587	5.1" Hg · 5.0 psi	250 ml	1.61	SK		1511	GH	
12	✓	12	-04A	20562	4.9" Hg - 5.2 psi	250 ml	1.60	GH		1550	GH	
13	✓	13	-05A	31146	5.4" Hg - 5 psi	250 ml	1.67	GH		1629	GH	
14	✓	14	-06A	21011	5.5" Hg - 5.7 psi	250 ml	1.66	GH		1709	GH	
15	✓	15	-14A	12947	4.7" Hg - 5 psi	250 ml	1.59	GH		1800	GH	
16		16	1607259A -04A	37788	2.0" Hg - 15 psi	250 ml	2.17	GH				
17									GH 7/19/16			

Reviewed

7/19/16
Date

Eurofins Air Toxics Inc.

Data file : /chem/msd20.i/24Jun2016.b/20062401.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 24-JUN-2016 09:36
Operator : sab Inst ID: msd20.i
Smp Info : 2.0uL# 2299-1276 ; BFB Tune Check
Misc Info : 50ng
Comment :
Method : /chem/msd20.i/24Jun2016.b/bfb60.m
Meth Date : 23-Feb-2015 08:54 efinn 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	
6.376	6.640	-0.264	95	613994			100.00- 100.00	100.00
6.376	6.640	-0.264	50	117327			8.00- 40.00	19.11
6.376	6.640	-0.264	75	309524			30.00- 66.00	50.41
6.376	6.640	-0.264	96	42035			5.00- 9.00	6.85
6.376	6.640	-0.264	173	2735			0.00- 1.99	0.56
6.376	6.640	-0.264	174	491818			50.00- 120.00	80.10
6.376	6.640	-0.264	175	35162			4.00- 9.00	7.15
6.376	6.640	-0.264	176	475286			93.00- 101.00	96.64
6.376	6.640	-0.264	177	31344			5.00- 9.00	6.59

Data File: /chem/msd20.i/24Jun2016.b/20062401.d

Date : 24-JUN-2016 09:36

Client ID: BFB

Instrument: msd20.i

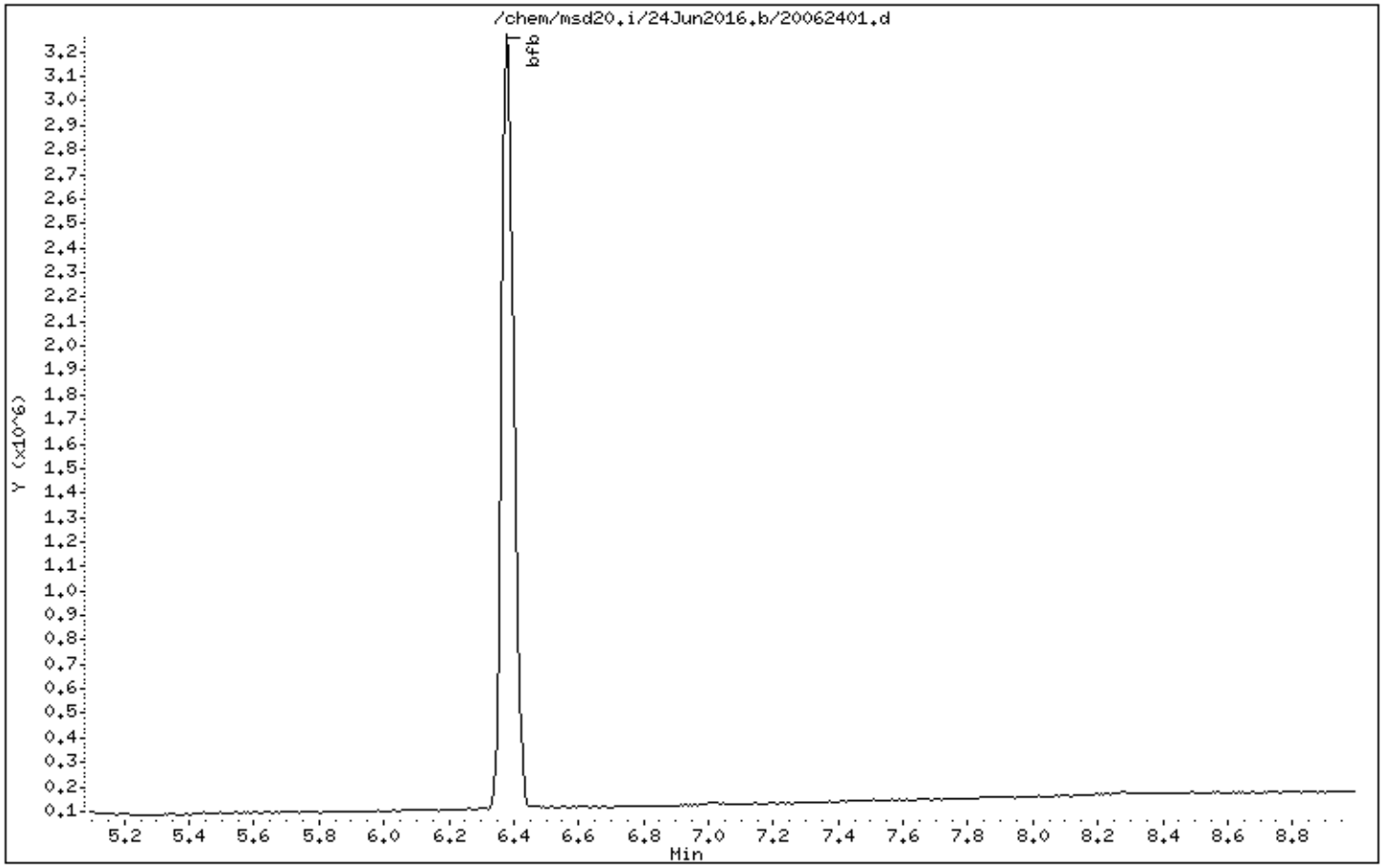
Sample Info: 2.0uL# 2299-1276 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00



Data File: /chem/msd20.i/24Jun2016.b/20062401.d

Date : 24-JUN-2016 09:36

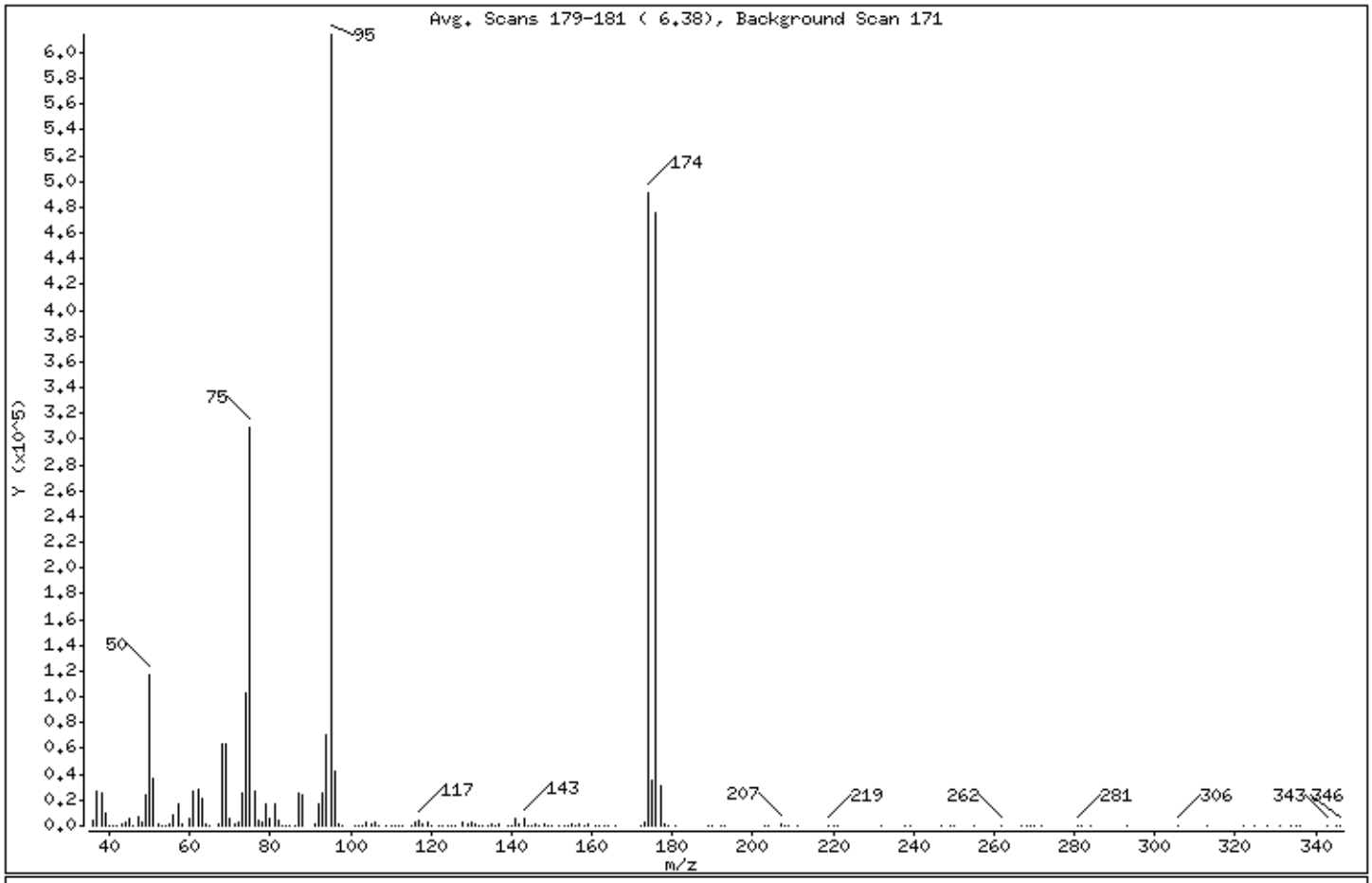
Client ID: BFB Instrument: msd20.i

Sample Info: 2.0uL# 2299-1276 ; BFB Tune Check

Volume Injected (uL): 1.0 Operator: sab

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.11
75	30.00 - 66.00% of mass 95	50.41
96	5.00 - 9.00% of mass 95	6.85
173	Less than 1.99% of mass 174	0.45 (0.56)
174	50.00 - 120.00% of mass 95	80.10
175	4.00 - 9.00% of mass 174	5.73 (7.15)
176	93.00 - 101.00% of mass 174	77.41 (96.64)
177	5.00 - 9.00% of mass 176	5.10 (6.59)

Data File: /chem/msd20.i/24Jun2016.b/20062401.d

Date : 24-JUN-2016 09:36

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1276 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00

Data File: 20062401.d
Spectrum: Avg. Scans 179-181 (6.38), Background Scan 171
Location of Maximum: 95.00
Number of points: 168

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4867	81.00	17256	132.00	206	193.00	285
37.00	27176	82.00	3797	133.00	307	203.00	35
38.00	24800	83.00	513	134.00	123	204.00	54
39.00	10036	84.00	113	135.00	1028	207.00	1445
40.00	317	85.00	463	136.00	203	208.00	129
41.00	518	86.00	593	137.00	1203	209.00	462
42.00	227	87.00	25224	139.00	191	211.00	124
43.00	1125	88.00	24168	140.00	397	219.00	183
44.00	3448	91.00	1915	141.00	6111	220.00	130
45.00	5177	92.00	17048	142.00	762	221.00	2
46.00	466	93.00	25200	143.00	6193	232.00	155
47.00	7573	94.00	70752	144.00	385	238.00	53
48.00	3281	95.00	613952	145.00	377	239.00	52
49.00	24288	96.00	42032	146.00	856	247.00	43
50.00	117320	97.00	1561	147.00	554	249.00	291
51.00	36600	98.00	118	148.00	1391	250.00	28
52.00	1528	101.00	60	149.00	268	255.00	171
53.00	276	102.00	299	150.00	675	262.00	338
54.00	61	103.00	280	152.00	299	267.00	211
55.00	1575	104.00	2536	153.00	485	268.00	67
56.00	8733	105.00	781	154.00	383	269.00	173
57.00	17480	106.00	2685	155.00	1424	270.00	211
58.00	799	107.00	657	156.00	93	272.00	104
60.00	5376	109.00	58	157.00	1090	281.00	467
61.00	27408	110.00	420	158.00	444	282.00	310
62.00	27584	111.00	588	159.00	774	284.00	60
63.00	21032	112.00	523	161.00	553	293.00	35
64.00	1923	113.00	663	162.00	200	306.00	225
65.00	361	115.00	634	163.00	122	313.00	116
67.00	1500	116.00	2183	164.00	12	322.00	33
68.00	62856	117.00	3664	166.00	107	325.00	54
69.00	63744	118.00	2074	172.00	393	328.00	40
70.00	5135	119.00	3382	173.00	2735	331.00	9
71.00	718	120.00	259	174.00	491776	334.00	337
72.00	3120	122.00	230	175.00	35160	335.00	47

Data File: /chem/msd20.i/24Jun2016.b/20062401.d

Date : 24-JUN-2016 09:36

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1276 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00

Data File: 20062401.d
Spectrum: Avg. Scans 179-181 (6.38), Background Scan 171
Location of Maximum: 95.00
Number of points: 168

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	25504	123.00	264	176.00	475264	336.00	107
74.00	102552	124.00	352	177.00	31344	343.00	376
75.00	309504	125.00	280	178.00	809	345.00	37
76.00	26600	126.00	220	179.00	170	346.00	66
77.00	3633	128.00	2241	181.00	129		
78.00	2214	129.00	1066	189.00	16		
79.00	16840	130.00	2128	190.00	69		
80.00	4985	131.00	855	192.00	122		

Eurofins Air Toxics Inc.

Data file : /chem/msd20.i/27Jun2016.b/20062701.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 27-JUN-2016 09:34
Operator : ef Inst ID: msd20.i
Smp Info : 2.0uL# 2299-1484 ; BFB Tune Check
Misc Info : 50ng
Comment :
Method : /chem/msd20.i/27Jun2016.b/bfb60.m
Meth Date : 23-Feb-2015 08:54 efinn 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	
6.376	6.640	-0.264	95	570474			100.00- 100.00	100.00
6.376	6.640	-0.264	50	105042			8.00- 40.00	18.41
6.376	6.640	-0.264	75	282109			30.00- 66.00	49.45
6.376	6.640	-0.264	96	39338			5.00- 9.00	6.90
6.376	6.640	-0.264	173	2688			0.00- 1.99	0.56
6.376	6.640	-0.264	174	477568			50.00- 120.00	83.71
6.376	6.640	-0.264	175	33189			4.00- 9.00	6.95
6.376	6.640	-0.264	176	462941			93.00- 101.00	96.94
6.376	6.640	-0.264	177	29776			5.00- 9.00	6.43

Data File: /chem/msd20.i/27Jun2016.b/20062701.d

Date : 27-JUN-2016 09:34

Client ID: BFB

Instrument: msd20.i

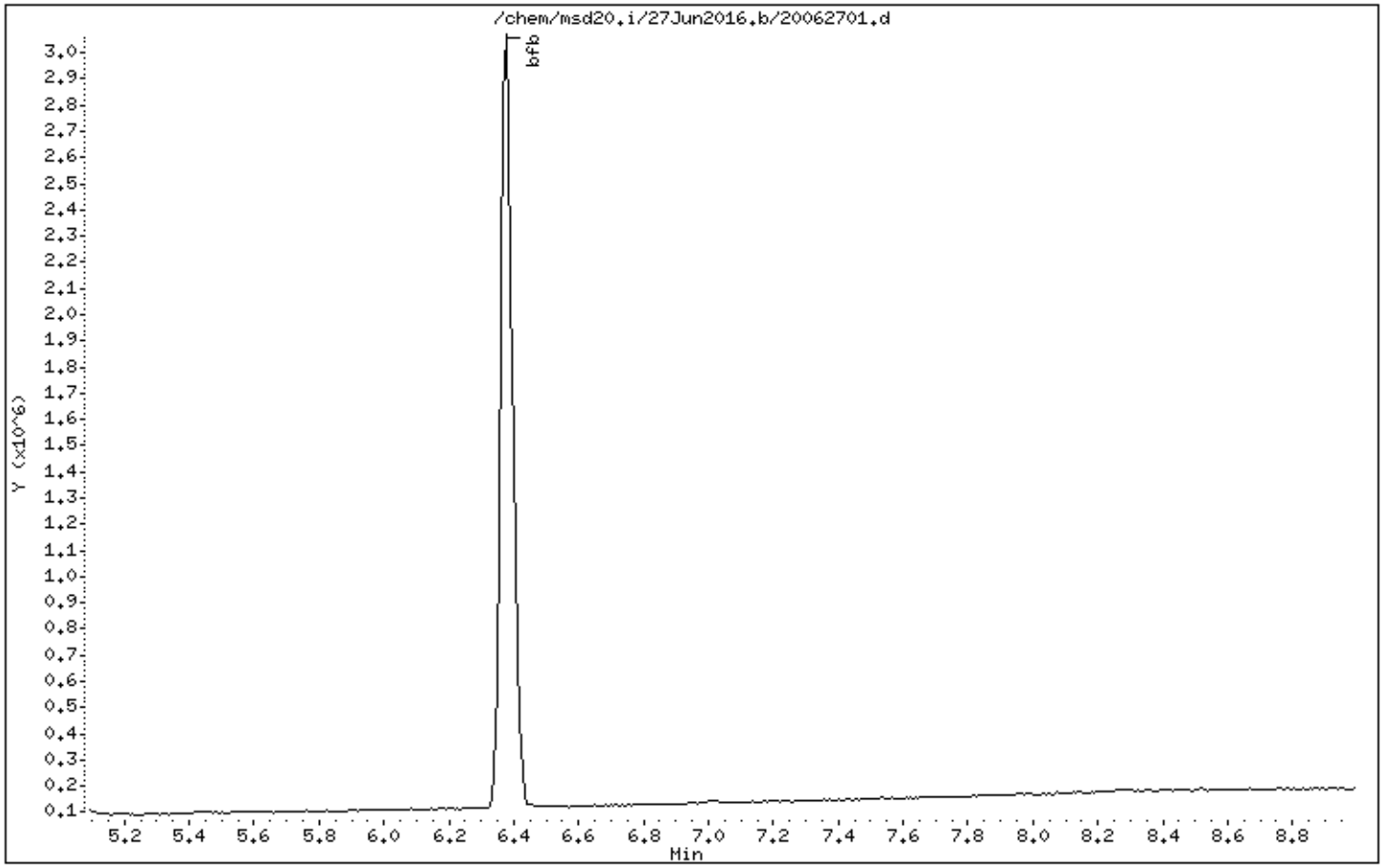
Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: ef

Column phase:

Column diameter: 2.00



Data File: /chem/msd20.i/27Jun2016.b/20062701.d

Date : 27-JUN-2016 09:34

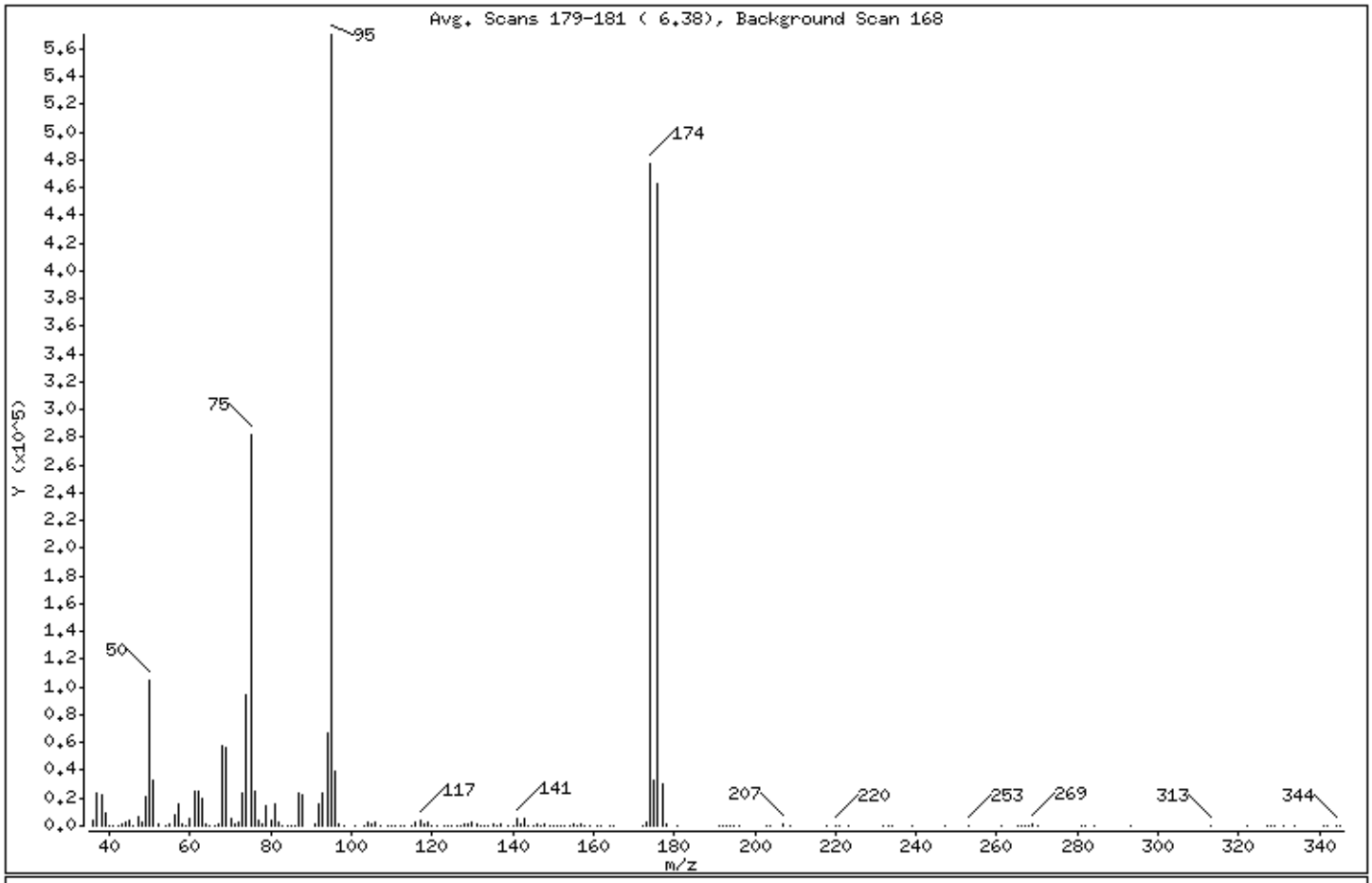
Client ID: BFB Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0 Operator: ef

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	18.41
75	30.00 - 66.00% of mass 95	49.45
96	5.00 - 9.00% of mass 95	6.90
173	Less than 1.99% of mass 174	0.47 (0.56)
174	50.00 - 120.00% of mass 95	83.71
175	4.00 - 9.00% of mass 174	5.82 (6.95)
176	93.00 - 101.00% of mass 174	81.15 (96.94)
177	5.00 - 9.00% of mass 176	5.22 (6.43)

Data File: /chem/msd20.i/27Jun2016.b/20062701.d

Date : 27-JUN-2016 09:34

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: ef

Column phase:

Column diameter: 2.00

Data File: 20062701.d
Spectrum: Avg. Scans 179-181 (6.38), Background Scan 168
Location of Maximum: 95.00
Number of points: 168

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4272	80.00	4480	131.00	720	194.00	24
37.00	24232	81.00	15606	132.00	10	195.00	119
38.00	21904	82.00	3118	133.00	249	196.00	52
39.00	8665	83.00	462	134.00	88	203.00	3
40.00	33	84.00	178	135.00	1119	204.00	54
41.00	221	85.00	399	136.00	174	207.00	1589
42.00	164	86.00	589	137.00	1160	209.00	280
43.00	1046	87.00	23232	139.00	189	218.00	45
44.00	2726	88.00	22864	140.00	420	220.00	180
45.00	4440	91.00	1848	141.00	5624	221.00	20
46.00	342	92.00	15620	142.00	779	223.00	29
47.00	6630	93.00	23320	143.00	5294	232.00	18
48.00	3038	94.00	66232	144.00	464	233.00	48
49.00	21304	95.00	570432	145.00	394	234.00	128
50.00	105040	96.00	39336	146.00	890	239.00	16
51.00	33208	97.00	1822	147.00	631	247.00	40
52.00	1339	98.00	67	148.00	1547	253.00	332
54.00	53	101.00	53	149.00	455	261.00	108
55.00	1488	103.00	295	150.00	521	265.00	44
56.00	8010	104.00	2395	151.00	137	266.00	29
57.00	15764	105.00	782	152.00	281	267.00	33
58.00	709	106.00	2555	153.00	374	268.00	83
59.00	225	107.00	565	154.00	410	269.00	702
60.00	4687	109.00	81	155.00	1355	270.00	300
61.00	24928	110.00	191	156.00	304	281.00	156
62.00	24840	111.00	569	157.00	884	282.00	453
63.00	19056	112.00	432	158.00	195	284.00	57
64.00	1634	113.00	512	159.00	598	293.00	13
65.00	288	115.00	371	161.00	582	313.00	50
66.00	58	116.00	2051	162.00	135	322.00	235
67.00	1146	117.00	3474	164.00	116	327.00	31
68.00	57216	118.00	1867	165.00	155	328.00	124
69.00	56920	119.00	2664	172.00	225	329.00	192
70.00	4635	120.00	64	173.00	2688	331.00	62
71.00	782	121.00	260	174.00	477568	334.00	72

Data File: /chem/msd20.i/27Jun2016.b/20062701.d

Date : 27-JUN-2016 09:34

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: ef

Column phase:

Column diameter: 2.00

Data File: 20062701.d
Spectrum: Avg. Scans 179-181 (6.38), Background Scan 168
Location of Maximum: 95.00
Number of points: 168

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	2716	123.00	235	175.00	33184	341.00	234
73.00	23232	124.00	307	176.00	462912	342.00	155
74.00	94256	125.00	221	177.00	29776	344.00	321
75.00	282048	126.00	206	178.00	789	345.00	163
76.00	24520	127.00	380	181.00	221		
77.00	3294	128.00	1942	191.00	45		
78.00	1722	129.00	1064	192.00	84		
79.00	14587	130.00	2015	193.00	481		

Eurofins Air Toxics Inc.

Data file : /chem/msd20.i/18Jul2016.b/20071801.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 18-JUL-2016 07:00
Operator : su Inst ID: msd20.i
Smp Info : 2.0uL# 2299-1484 ; BFB Tune Check
Misc Info : 50ng
Comment :
Method : /chem/msd20.i/18Jul2016.b/bfb60.m
Meth Date : 23-Feb-2015 08:54 efinn 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

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	
6.383	6.640	-0.257	95	454826			100.00- 100.00	100.00
6.383	6.640	-0.257	50	94316			8.00- 40.00	20.74
6.383	6.640	-0.257	75	241179			30.00- 66.00	53.03
6.383	6.640	-0.257	96	31387			5.00- 9.00	6.90
6.383	6.640	-0.257	173	2161			0.00- 1.99	0.61
6.383	6.640	-0.257	174	354965			50.00- 120.00	78.04
6.383	6.640	-0.257	175	25128			4.00- 9.00	7.08
6.383	6.640	-0.257	176	341623			93.00- 101.00	96.24
6.383	6.640	-0.257	177	23156			5.00- 9.00	6.78

Data File: /chem/msd20.i/18Jul2016.b/20071801.d

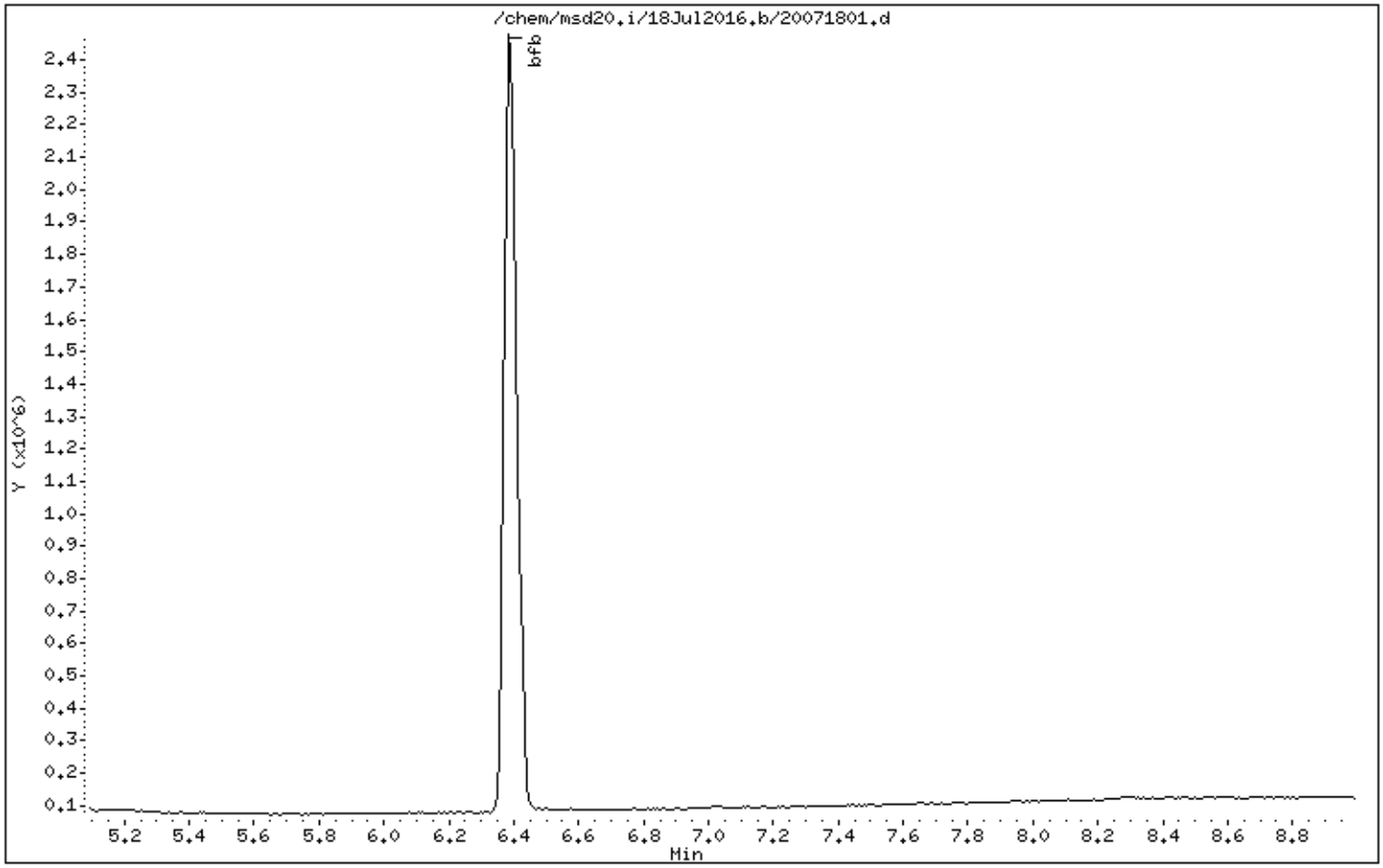
Date : 18-JUL-2016 07:00

Client ID: BFB Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0 Operator: su

Column phase: Column diameter: 2.00



Data File: /chem/msd20.i/18Jul2016.b/20071801.d

Date : 18-JUL-2016 07:00

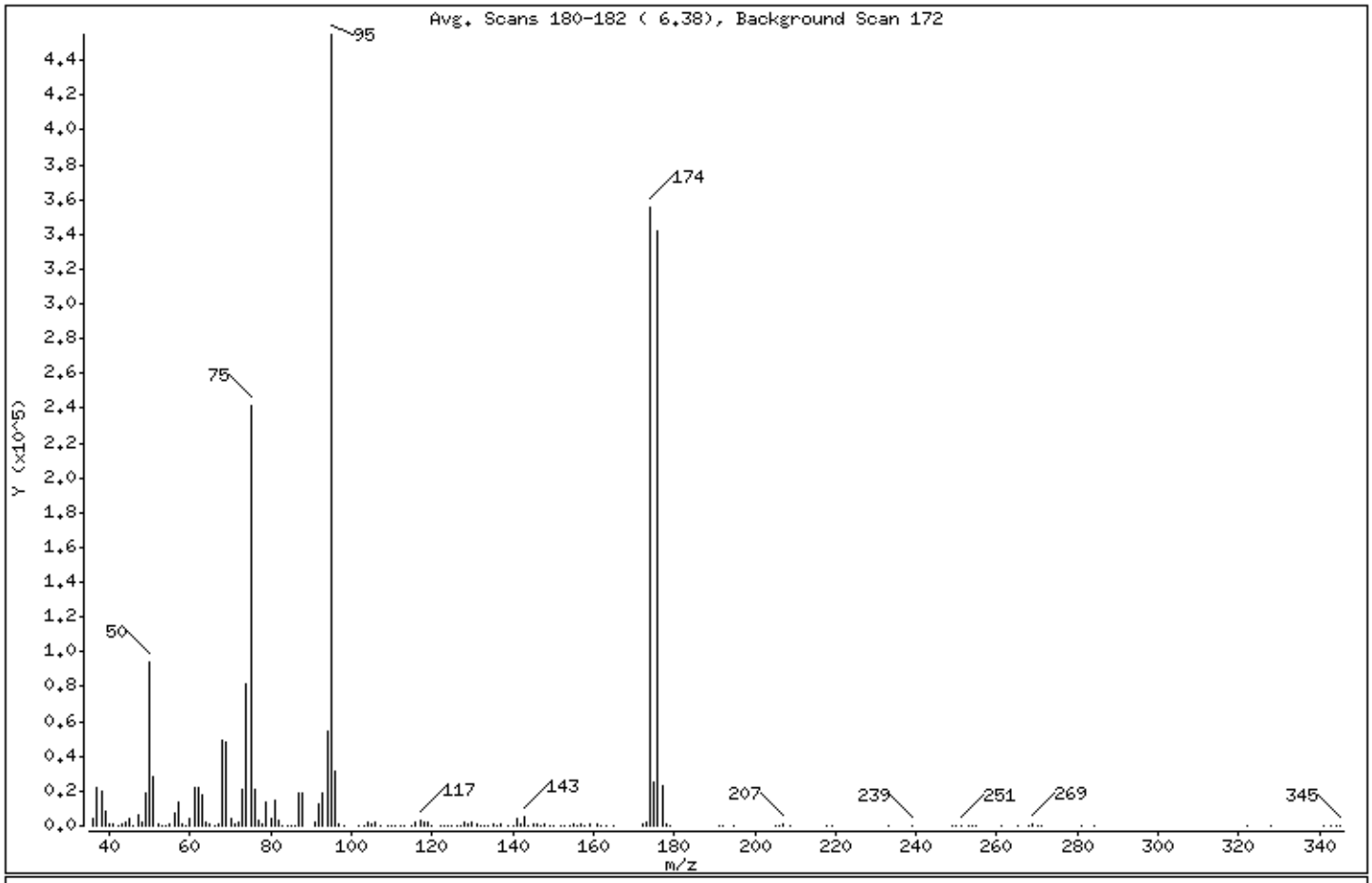
Client ID: BFB Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0 Operator: su

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.74
75	30.00 - 66.00% of mass 95	53.03
96	5.00 - 9.00% of mass 95	6.90
173	Less than 1.99% of mass 174	0.48 (0.61)
174	50.00 - 120.00% of mass 95	78.04
175	4.00 - 9.00% of mass 174	5.52 (7.08)
176	93.00 - 101.00% of mass 174	75.11 (96.24)
177	5.00 - 9.00% of mass 176	5.09 (6.78)

Data File: /chem/msd20.i/18Jul2016.b/20071801.d

Date : 18-JUL-2016 07:00

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: su

Column phase:

Column diameter: 2.00

Data File: 20071801.d
Spectrum: Avg. Scans 180-182 (6.38), Background Scan 172
Location of Maximum: 95.00
Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3888	76.00	20808	124.00	303	174.00	354944
37.00	22224	77.00	3298	125.00	324	175.00	25128
38.00	20064	78.00	1396	126.00	277	176.00	341568
39.00	8181	79.00	13700	127.00	189	177.00	23152
40.00	593	80.00	4205	128.00	1769	178.00	677
41.00	643	81.00	14346	129.00	831	179.00	44
42.00	183	82.00	3332	130.00	1676	191.00	313
43.00	1276	83.00	388	131.00	738	192.00	194
44.00	2069	84.00	213	132.00	216	195.00	284
45.00	4266	85.00	323	133.00	454	205.00	44
46.00	422	86.00	472	134.00	294	206.00	190
47.00	5789	87.00	19248	135.00	751	207.00	920
48.00	2472	88.00	18664	136.00	193	209.00	413
49.00	19144	91.00	1753	137.00	761	218.00	114
50.00	94312	92.00	13037	139.00	103	219.00	31
51.00	28512	93.00	19328	140.00	308	233.00	166
52.00	1369	94.00	54720	141.00	4669	239.00	188
53.00	170	95.00	454784	142.00	576	249.00	122
54.00	196	96.00	31384	143.00	4899	250.00	68
55.00	1267	97.00	1186	144.00	320	251.00	288
56.00	7444	98.00	60	145.00	548	253.00	127
57.00	13836	102.00	115	146.00	603	254.00	124
58.00	581	103.00	150	147.00	459	255.00	170
59.00	90	104.00	1928	148.00	1049	261.00	17
60.00	4319	105.00	600	149.00	242	265.00	124
61.00	21560	106.00	1973	150.00	519	268.00	130
62.00	22008	107.00	501	152.00	246	269.00	753
63.00	17416	109.00	179	153.00	344	270.00	189
64.00	1661	110.00	347	154.00	355	271.00	129
65.00	732	111.00	474	155.00	1004	281.00	150
66.00	121	112.00	330	156.00	508	284.00	60
67.00	1258	113.00	449	157.00	738	322.00	174
68.00	49136	115.00	492	158.00	463	328.00	121
69.00	48560	116.00	1831	159.00	564	341.00	16
70.00	4262	117.00	2658	161.00	691	343.00	145

Data File: /chem/msd20.i/18Jul2016.b/20071801.d

Date : 18-JUL-2016 07:00

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: su

Column phase:

Column diameter: 2.00

Data File: 20071801.d
Spectrum: Avg. Scans 180-182 (6.38), Background Scan 172
Location of Maximum: 95.00
Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	552	118.00	2095	162.00	185	344.00	22
72.00	2503	119.00	2452	163.00	259	345.00	220
73.00	20904	120.00	266	165.00	161		
74.00	81408	122.00	63	172.00	1036		
75.00	241152	123.00	138	173.00	2161		

Eurofins Air Toxics Inc.

Data file : /chem/msd20.i/19Jul2016.b/20071901.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 19-JUL-2016 07:05
Operator : su Inst ID: msd20.i
Smp Info : 2.0uL# 2299-1484 ; BFB Tune Check
Misc Info : 50ng
Comment :
Method : /chem/msd20.i/19Jul2016.b/bfb60.m
Meth Date : 23-Feb-2015 08:54 efinn 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	
6.383	6.640	-0.257	95	319594			100.00- 100.00	100.00
6.383	6.640	-0.257	50	66286			8.00- 40.00	20.74
6.383	6.640	-0.257	75	167938			30.00- 66.00	52.55
6.383	6.640	-0.257	96	22156			5.00- 9.00	6.93
6.383	6.640	-0.257	173	1646			0.00- 1.99	0.67
6.383	6.640	-0.257	174	246912			50.00- 120.00	77.26
6.383	6.640	-0.257	175	18448			4.00- 9.00	7.47
6.383	6.640	-0.257	176	241813			93.00- 101.00	97.93
6.383	6.640	-0.257	177	15778			5.00- 9.00	6.52

Data File: /chem/msd20.i/19Jul2016.b/20071901.d

Date : 19-JUL-2016 07:05

Client ID: BFB

Instrument: msd20.i

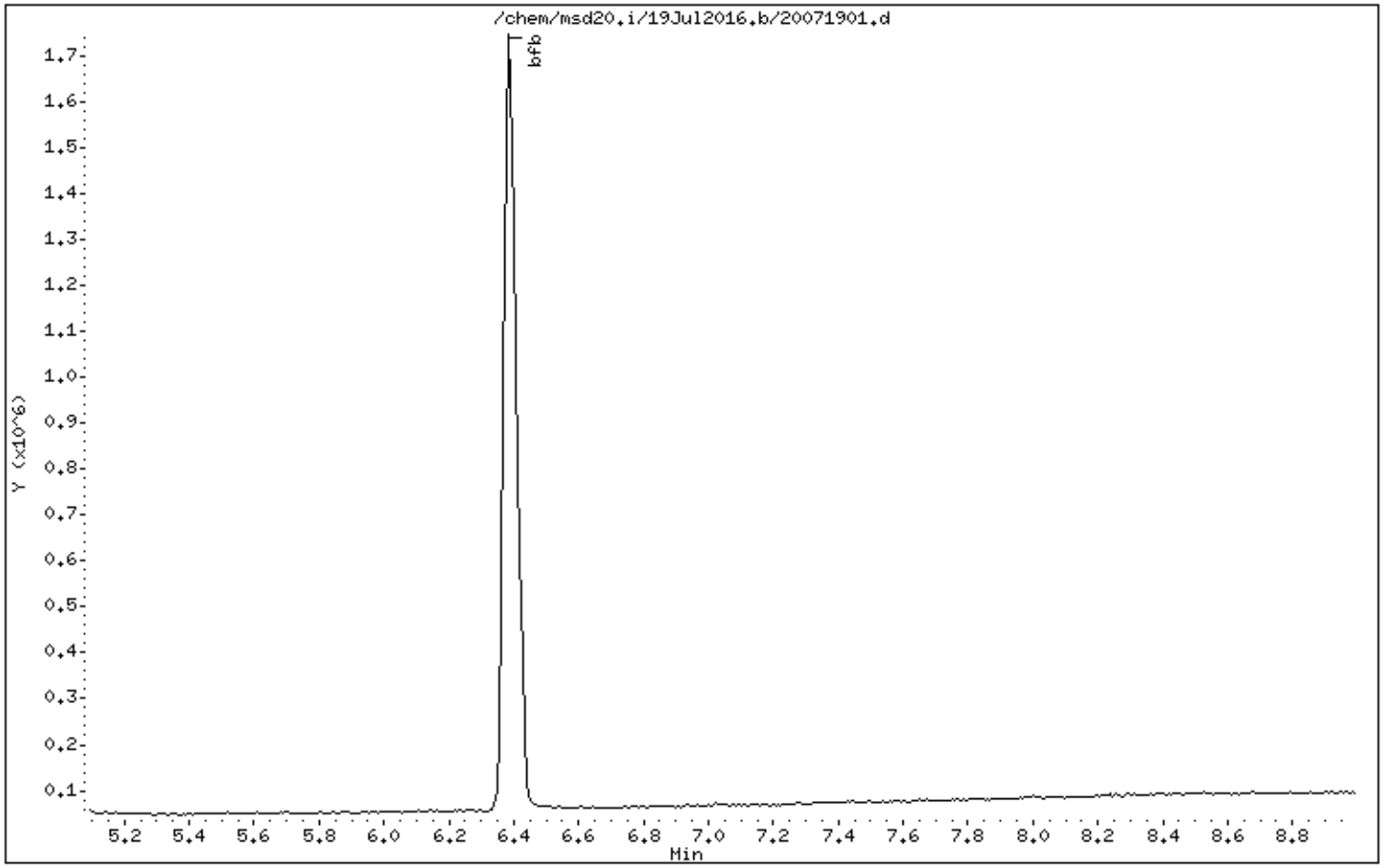
Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: su

Column phase:

Column diameter: 2.00



Data File: /chem/msd20.i/19Jul2016.b/20071901.d

Date : 19-JUL-2016 07:05

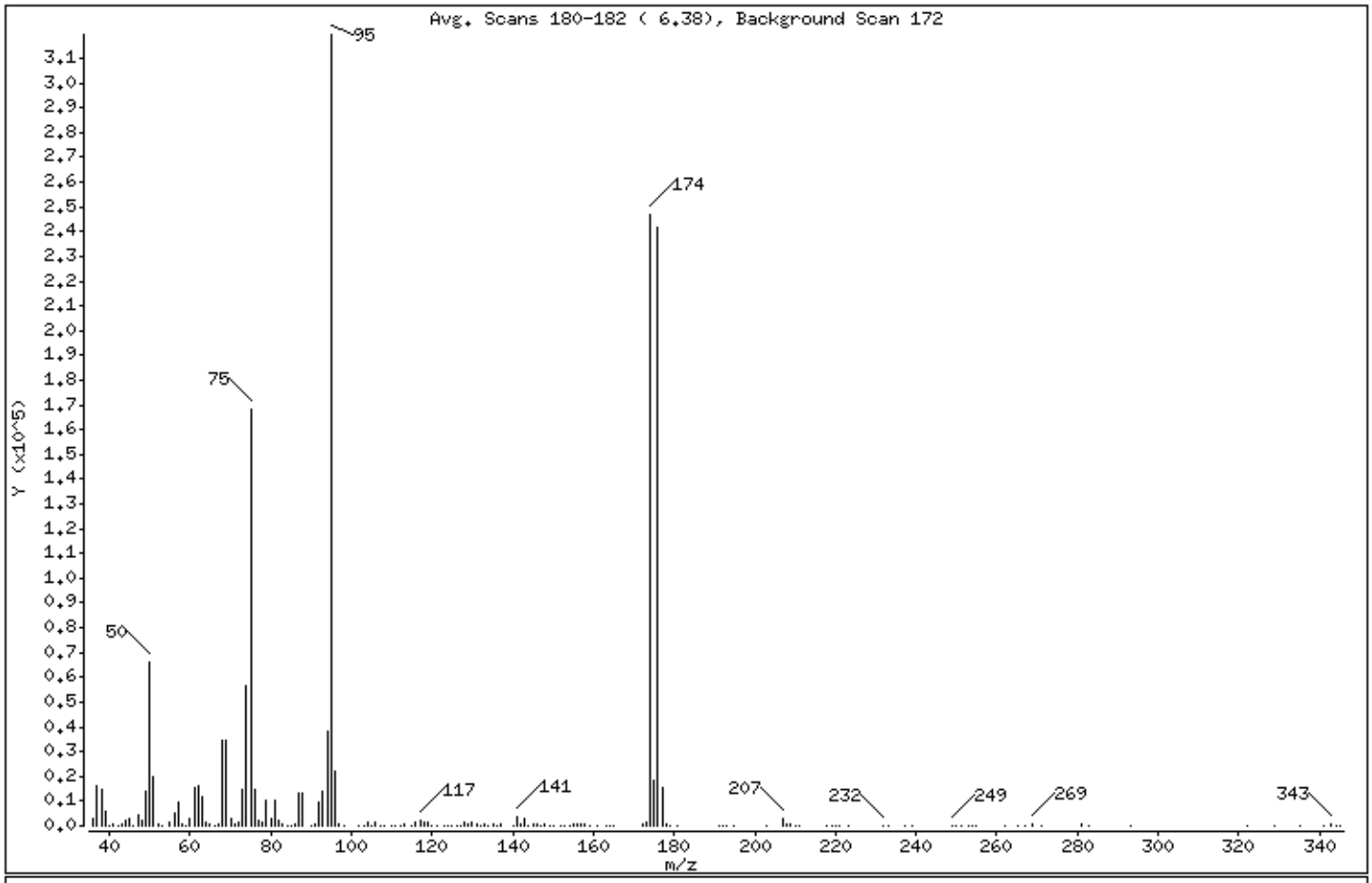
Client ID: BFB Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0 Operator: su

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.74
75	30.00 - 66.00% of mass 95	52.55
96	5.00 - 9.00% of mass 95	6.93
173	Less than 1.99% of mass 174	0.52 (0.67)
174	50.00 - 120.00% of mass 95	77.26
175	4.00 - 9.00% of mass 174	5.77 (7.47)
176	93.00 - 101.00% of mass 174	75.66 (97.93)
177	5.00 - 9.00% of mass 176	4.94 (6.52)

Data File: /chem/msd20.i/19Jul2016.b/20071901.d

Date : 19-JUL-2016 07:05

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: su

Column phase:

Column diameter: 2.00

Data File: 20071901.d
Spectrum: Avg. Scans 180-182 (6.38), Background Scan 172
Location of Maximum: 95.00
Number of points: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2945	79.00	10039	128.00	1232	191.00	301
37.00	16087	80.00	2892	129.00	605	192.00	19
38.00	14968	81.00	10197	130.00	1255	193.00	269
39.00	5711	82.00	2258	131.00	499	195.00	54
40.00	143	83.00	492	132.00	113	203.00	65
41.00	566	84.00	65	133.00	609	207.00	2733
42.00	158	85.00	350	134.00	108	208.00	743
43.00	688	86.00	395	135.00	690	209.00	430
44.00	1886	87.00	12948	136.00	205	210.00	91
45.00	3033	88.00	13045	137.00	615	211.00	53
46.00	306	90.00	53	140.00	157	218.00	67
47.00	4234	91.00	1013	141.00	3369	219.00	36
48.00	1940	92.00	9391	142.00	465	220.00	53
49.00	13597	93.00	13887	143.00	3277	221.00	67
50.00	66280	94.00	38176	144.00	215	223.00	63
51.00	20040	95.00	319552	145.00	475	232.00	234
52.00	1000	96.00	22152	146.00	507	233.00	62
53.00	303	97.00	973	147.00	57	237.00	52
55.00	1221	98.00	105	148.00	723	239.00	56
56.00	4824	102.00	50	149.00	183	249.00	143
57.00	9702	103.00	205	150.00	364	250.00	124
58.00	426	104.00	1723	152.00	115	251.00	34
59.00	163	105.00	330	153.00	245	253.00	20
60.00	2899	106.00	1474	154.00	245	254.00	35
61.00	15640	107.00	331	155.00	818	255.00	94
62.00	15855	108.00	126	156.00	485	262.00	56
63.00	12077	110.00	328	157.00	539	265.00	137
64.00	1273	111.00	345	158.00	400	267.00	64
65.00	811	112.00	320	159.00	356	269.00	1076
66.00	170	113.00	419	161.00	157	271.00	23
67.00	1015	115.00	289	163.00	52	281.00	997
68.00	34616	116.00	1401	164.00	132	283.00	189
69.00	34640	117.00	2194	165.00	18	293.00	52
70.00	3012	118.00	1269	172.00	833	322.00	124
71.00	456	119.00	1785	173.00	1646	329.00	63

Data File: /chem/msd20.i/19Jul2016.b/20071901.d

Date : 19-JUL-2016 07:05

Client ID: BFB

Instrument: msd20.i

Sample Info: 2.0uL# 2299-1484 ; BFB Tune Check

Volume Injected (uL): 1.0

Operator: su

Column phase:

Column diameter: 2.00

Data File: 20071901.d
Spectrum: Avg. Scans 180-182 (6.38), Background Scan 172
Location of Maximum: 95.00
Number of points: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1836	120.00	131	174.00	246912	335.00	53
73.00	14492	121.00	128	175.00	18448	341.00	37
74.00	56232	123.00	146	176.00	241792	343.00	385
75.00	167936	124.00	224	177.00	15778	344.00	229
76.00	14507	125.00	242	178.00	545	345.00	126
77.00	2394	126.00	198	179.00	346		
78.00	1162	127.00	145	181.00	53		

Shipping/ Receiving Documents

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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

eurofins | Air Toxics

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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Terry Taylor
Collected by: (Print and Sign) R. O'Reilly, D. Lindstrand, T. Taylor
Company: AMAI Email: ttaylor@amaiconsult.com
Address: 2800 Westchester Ave City: Purchase State: NY Zip: 10577
Phone: 914-251-0400 x309 Fax: 914-251-1286

Project Info:
P.O. #
Project # Building 18 V1
Project Name

Turn Around Time:
☒ Normal
☒ Rush *
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	B18IA-1 ~~(070816)~~	33531	7/9/16	1902	TO-15	-30"+	-6.5"		
02A	B18IA-2 ~~(070816)~~	6L0015	7/9/16	1849	TO-15	-30"+	-7"		
03A	B18IA-3 ~~(070816)~~	0174	7/9/16	1827	TO-15	-30"+	-5.5"		
04A	B18IA-4 ~~(070816)~~	12082	7/9/16	1835	TO-15	-30"+	-5"		
05A	B18IA-5 ~~(070816)~~	31146	7/9/16	1844	TO-15	-30"+	-6.5"		
06A	B18IA-1D ~~(070816)~~	21011	7/9/16	1902	TO-15	-30"+	-6.5"		
	~~B18AA-070816 (070816)~~	~~31346~~	~~7/9/16~~	~~1912~~	~~TO-15~~	~~30"+~~	~~"~~		
	* B30IA-1 (070816) *	0152	7/9/16	1812	TO-15	-30"+	-6.5"		
	B18SS-1 ~~(070816)~~	36376	7/10/16	1800	TO-15	-28"	-5"		
	B18SS-2 ~~(070816)~~	3043	7/10/16	1937	TO-15	-30"	-5"		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	07-13-16 1?0	Fed EX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		[signature] EATL	7/14/16 10:20
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
* Sample B30IA-1 (070816) a 24-hour TAT is requested, All other samples are a Normal TAT. Report Results to MDL

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		N/A	good	Yes No (None)	1607235

Form 1293 rev.11

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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Terry Taylor
Collected by: (Print and Sign) Richard O'Reilly, Dave Lindstrand, Terry Taylor
Company: AMAI Email: ttaylor@amaiconsult.com
Address: 2800 Westchester Ave City: Purchase State: NY Zip: 10577
Phone: 914-251-0400 x309 Fax: 914-251-1286

Project Info:
P.O. #:
Project #: Building 18 V1
Project Name:

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
	B18SS-3 (~~071016~~)	8031	7/12/16	1849	TO-15	-28"	-5"		
	B18SS-4 (~~071016~~)	1025	7/12/16	1850	TO-15	-23"	-5"		
	B18SS-5 (~~071016~~)	36525	7/12/16	1801	TO-15	-30"	-5"		
	B18SS-1D (~~071016~~) 30832	~~3051~~	7/12/16	1759	TO-15	-21"	-5"		
1GN	B18AA-071216	12947	7/12/16	1408	TO-15	-30"	-5"		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	07-13-16 1700	FedEx	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		[signature] EATL	7/14/16 10:20
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		N/A	good	Yes No None	1607235

Form 1293 rev.11

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SAMPLE RECEIPT SUMMARY

WORKORDER 1607235D

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: 07/27/16
Date Completed: 7/27/16
Date Received: 7/14/16
PO#:
Project#: Building 18 VI

Total $: $ 980.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B18IA-1	Modified TO-15	7/9/2016	5.5 "Hg	$135.00
02A	B18IA-2	Modified TO-15	7/9/2016	6.7 "Hg	$135.00
03A	B18IA-3	Modified TO-15	7/9/2016	5.1 "Hg	$135.00
04A	B18IA-4	Modified TO-15	7/9/2016	4.7 "Hg	$135.00
05A	B18IA-5	Modified TO-15	7/9/2016	5.9 "Hg	$135.00
06A	B18IA-1D	Modified TO-15	7/9/2016	5.5 "Hg	$135.00
14A	B18AA-071216	Modified TO-15	7/12/2016	4.7 "Hg	$135.00
15A	Lab Blank	Modified TO-15	NA	NA	$0.00
16A	CCV	Modified TO-15	NA	NA	$0.00
17A	LCS	Modified TO-15	NA	NA	$0.00
17AA	LCSD	Modified TO-15	NA	NA	$0.00

Misc. ChargeseCVP (7) @ $5.00 each. $35.00

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: JCW **Project ID:**19256 **PM**: BSW **Date:** 7/14/2016 **Discrepancy Type:** ☒ **1.** ☐ **2.** ☐ **3.**

Workorder(s) affected:1607235D **Sample(s) affected:** 14A

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) 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.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: _____ Date: _____

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.

1.6. ☐ COC improperly relinquished / received.

1.7. ☒ Sample tags / can numbers do not match the COC.

1.8. ☐ Sample date ☐ error / ☐ missing on COC but noted on sample tag (check one).

1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).

1.10. ☐ ID-none on the sample Tag/Blank.

1.11. ☐ Other (describe below).

Describe the Discrepancy: 1.7: Sample ID discrepancy, ID on COC used.

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 (time for sulfur) 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. ☐ Tedlar Bag for Sulfur analysis has metal fitting.

2.11. ☐ Environmental Supply Company valves.

2.12. ☐ Sorbent samples-sampling volume was not provided.

2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.

2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):

- ☐ Canister failed leak check on two manifolds, after fitting replaced.
- ☐ Canister valve was open.
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed.
- ☐ Sample cannot be analyzed.

2.15. ☐ 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.

2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).

2.17. ☐ Canister Trip Blank received at low vacuum (<25"Hg).

2.18. ☐ 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).

2.19. ☐ Flow Controller RPD of = 20% was not met.

2.20. ☐ 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. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☐ Other (describe below).

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

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☐ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☐ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:_____ Person notified: _____ Date: _____

☐ Waiting for Client Reply

Comments: _____

_____

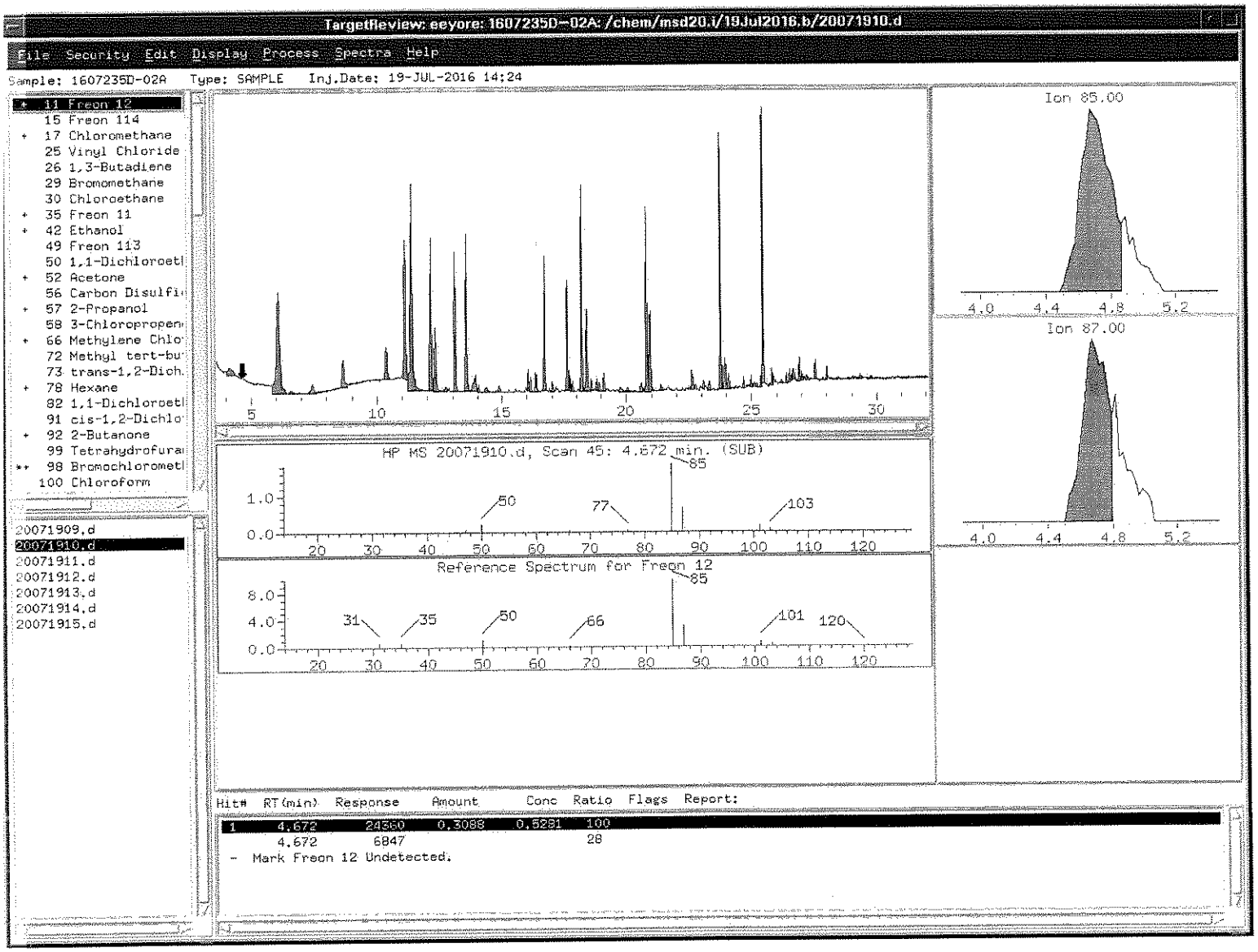
☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☐ _____

☐ **Additional notifications attached.**

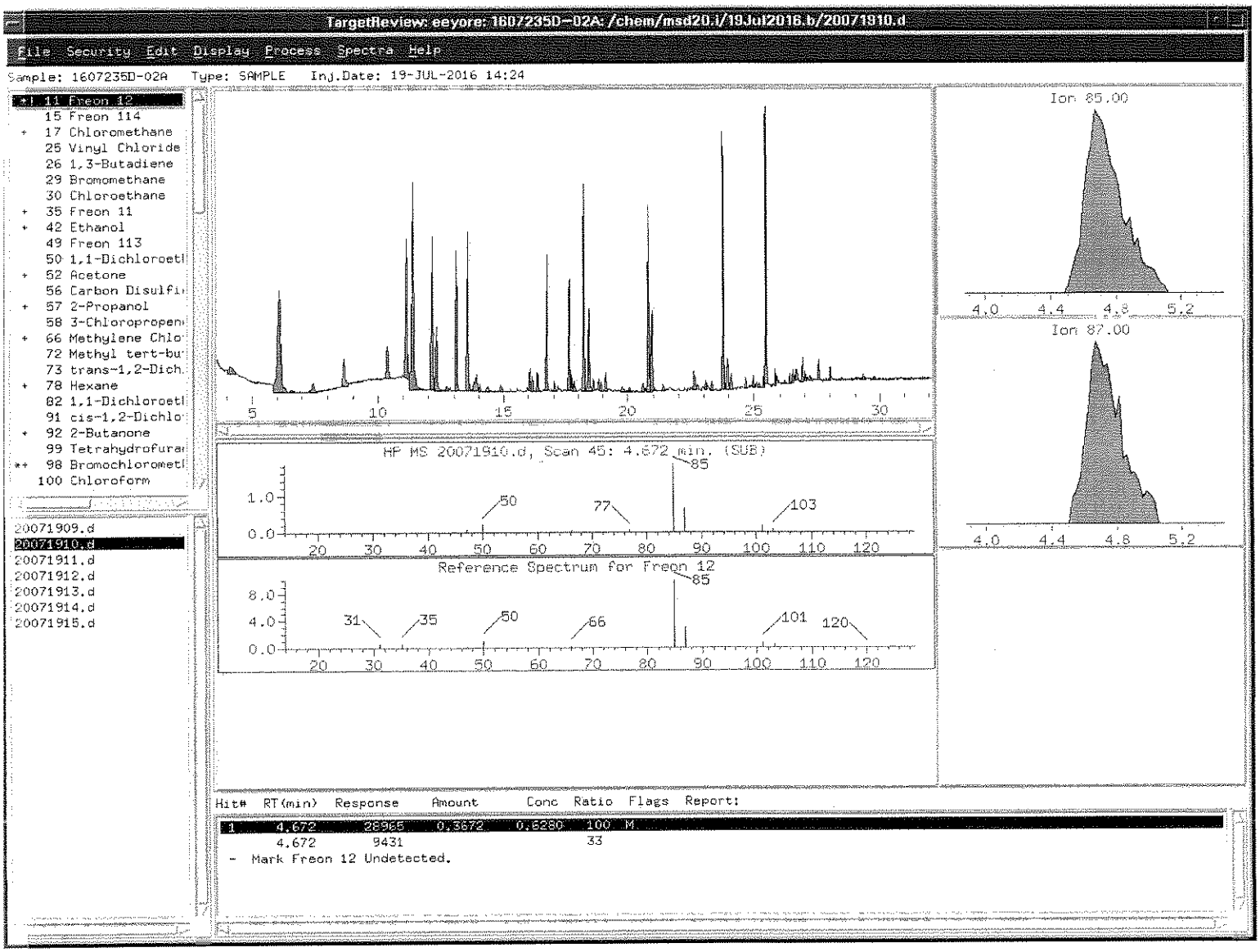
Additional Comments:

_____

Other Records

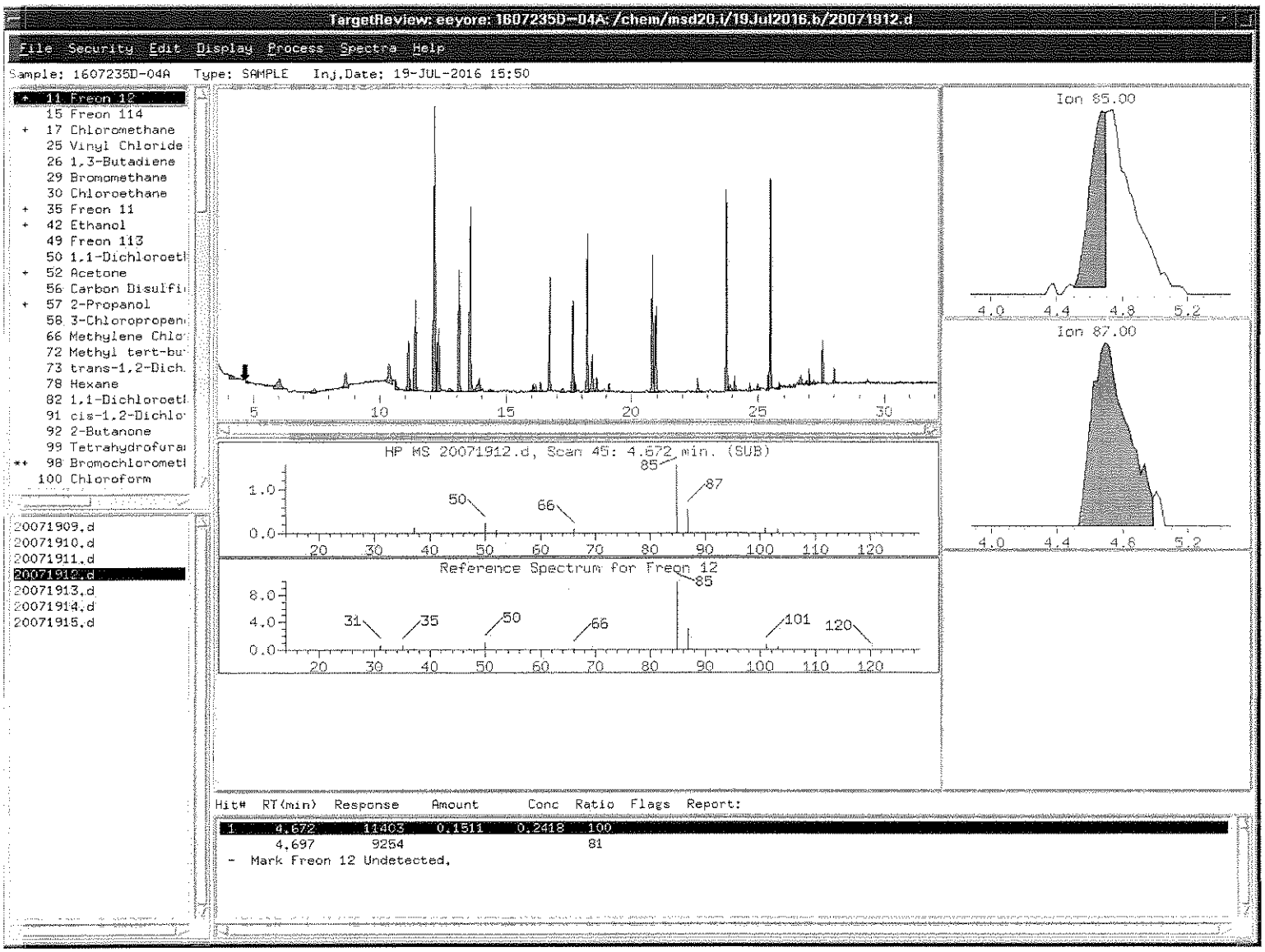

TargetReview: eeyore: 1607235D-02A: /chem/msd20.i/19Jul2016.b/20071910.d
File Security Edit Display Process Spectra Help
Sample: 1607235D-02A Type: SAMPLE Inj.Date: 19-JUL-2016 14:24
* 11 Freon 12
15 Freon 114
+ 17 Chloromethane
25 Vinyl Chloride
26 1,3-Butadiene
29 Bromomethane
30 Chloroethane
+ 35 Freon 11
+ 42 Ethanol
49 Freon 113
50 1,1-Dichloroetl
+ 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-Dichloroetl
91 cis-1,2-Dichlo
+ 92 2-Butanone
99 Tetrahydrofura
** 98 Bromochlorometl
100 Chloroform
20071909.d
20071910.d
20071911.d
20071912.d
20071913.d
20071914.d
20071915.d
Ion 85.00
Ion 87.00
HP MS 20071910.d, Scan 45: 4.672 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 4.672 24350 0.3088 0.5281 100
4.672 6847 28
- Mark Freon 12 Undetected.

Before

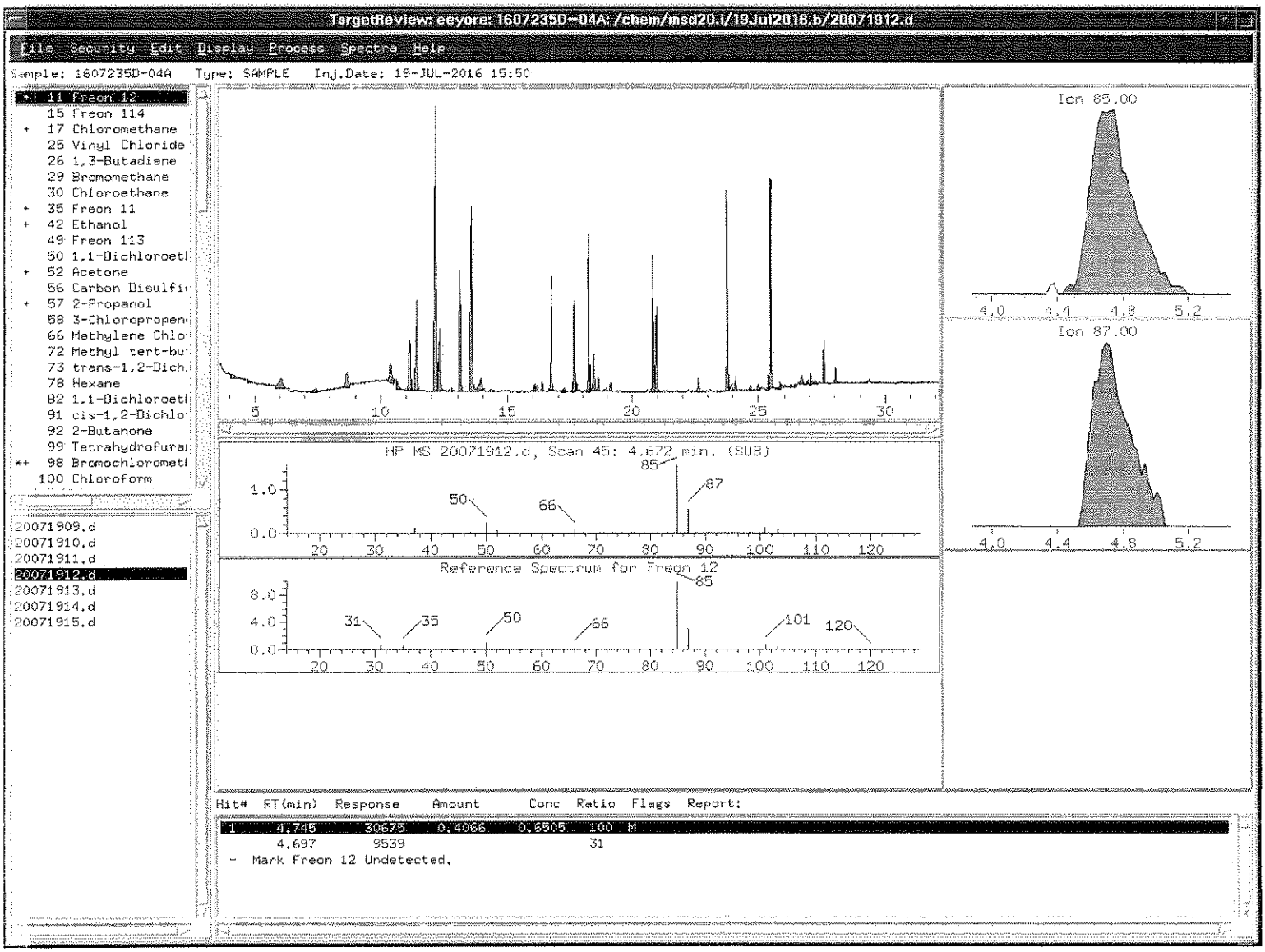


After 8S 7/27/16

ect Baseline	X 8S 7/27/16
Peak	
Merge Peak	✓
n in	
nge Parameter	
stem Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

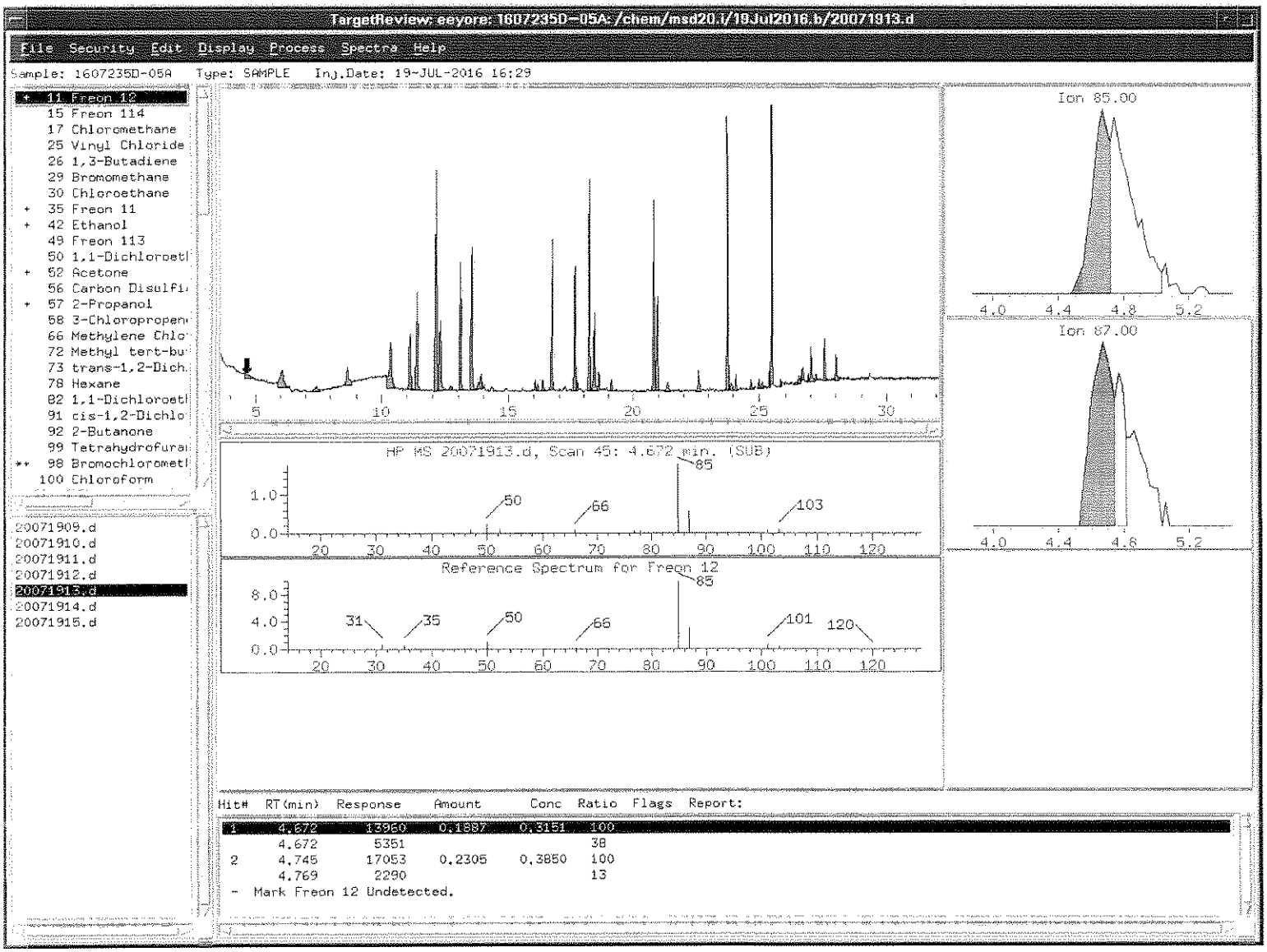

TargetReview: eeyore: 1607235D-04A: /chem/msd20.i/19Jul2016.b/20071912.d
File Security Edit Display Process Spectra Help
Sample: 1607235D-04A Type: SAMPLE Inj.Date: 19-JUL-2016 15:50
* 11 Freon 12
15 Freon 114
+ 17 Chloromethane
25 Vinyl Chloride
26 1,3-Butadiene
29 Bromomethane
30 Chloroethane
+ 35 Freon 11
+ 42 Ethanol
49 Freon 113
50 1,1-Dichloroeth
+ 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-Dichloroeth
91 cis-1,2-Dichlo
92 2-Butanone
99 Tetrahydrofura
** 98 Bromochlorometh
100 Chloroform
20071909.d
20071910.d
20071911.d
20071912.d
20071913.d
20071914.d
20071915.d
Ion 85.00
Ion 87.00
HP MS 20071912.d, Scan 45: 4.672 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 4.672 11403 0.1511 0.2418 100
4.697 9254 81
- Mark Freon 12 Undetected.

Before

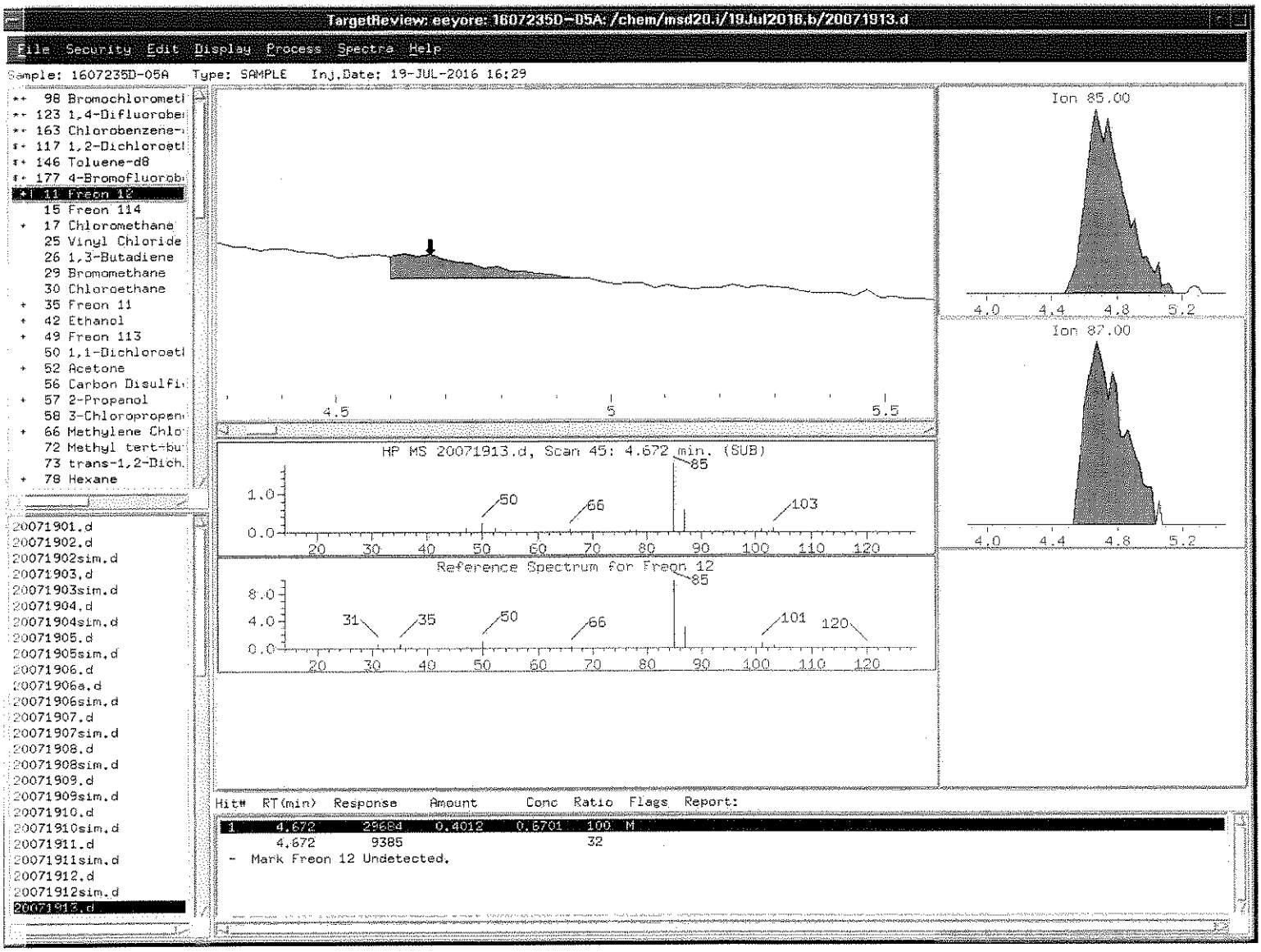


After 8S 7/27/16

Correct Baseline	
Split Peak	X 8S 7/27/16
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	


TargetReview: eeyore: 1607235D-05A: /chem/msd20.i/19Jul2016.b/20071913.d
File Security Edit Display Process Spectra Help
Sample: 1607235D-05A Type: SAMPLE Inj.Date: 19-JUL-2016 16:29
* 11 Freon 12
15 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-Dichloroetl
+ 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-Dichloroetl
91 cis-1,2-Dichlo
92 2-Butanone
99 Tetrahydrofura
** 98 Bromochlorometl
100 Chloroform
20071909.d
20071910.d
20071911.d
20071912.d
20071913.d
20071914.d
20071915.d
Ion 85.00
Ion 87.00
HP MS 20071913.d, Scan 45: 4.672 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 4.672 13960 0.1887 0.3151 100
4.672 5351 38
2 4.745 17053 0.2305 0.3850 100
4.769 2290 13
- Mark Freon 12 Undetected.

Before



After 83 7/27/16

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

TargetReview: eeyore: 1607235D-05A: /chem/msd20.i/19Jul2016.b/20071913.d

File Security Edit Display Process Spectra Help

Sample: 1607235D-05A Type: SAMPLE Inj.Date: 19-JUL-2016 16:29

98 Bromochlorometh
123 1,4-Difluorobe
163 Chlorobenzene-
117 1,2-Dichloroeth
146 Toluene-d8
177 4-Bromofluorob
11 Freon 12
15 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-Dichloroeth
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

20071901.d
20071902.d
20071902sim.d
20071903.d
20071903sim.d
20071904.d
20071904sim.d
20071905.d
20071905sim.d
20071906.d
20071906a.d
20071906sim.d
20071907.d
20071907sim.d
20071908.d
20071908sim.d
20071909.d
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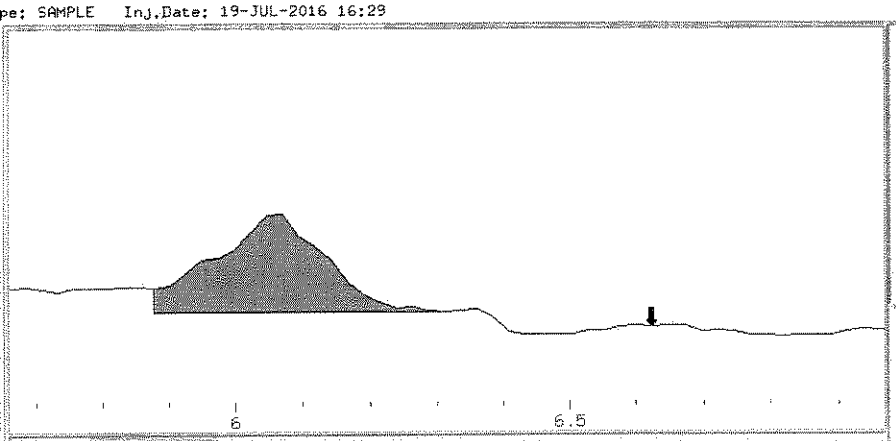
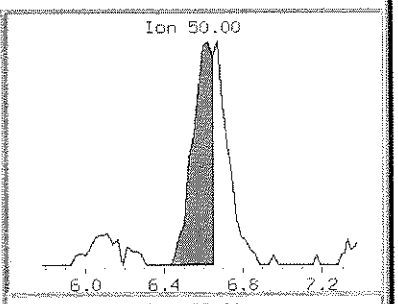
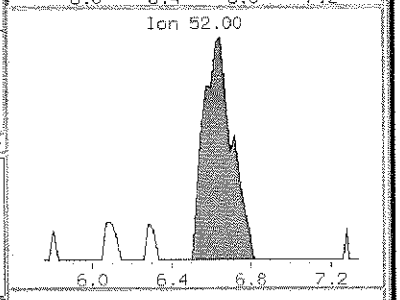
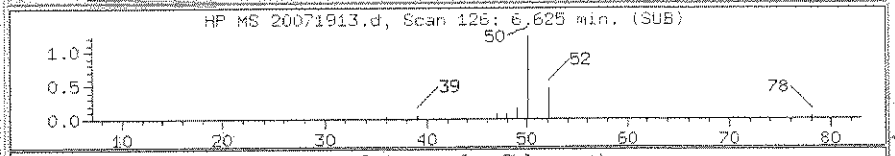
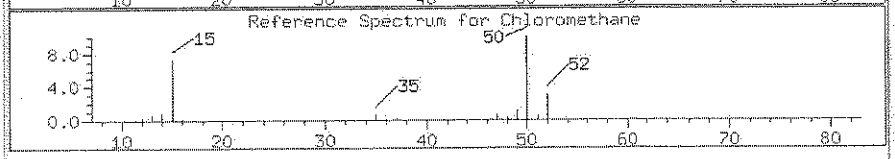
20071911.d
20071911sim.d
20071912.d
20071912sim.d
20071913.d







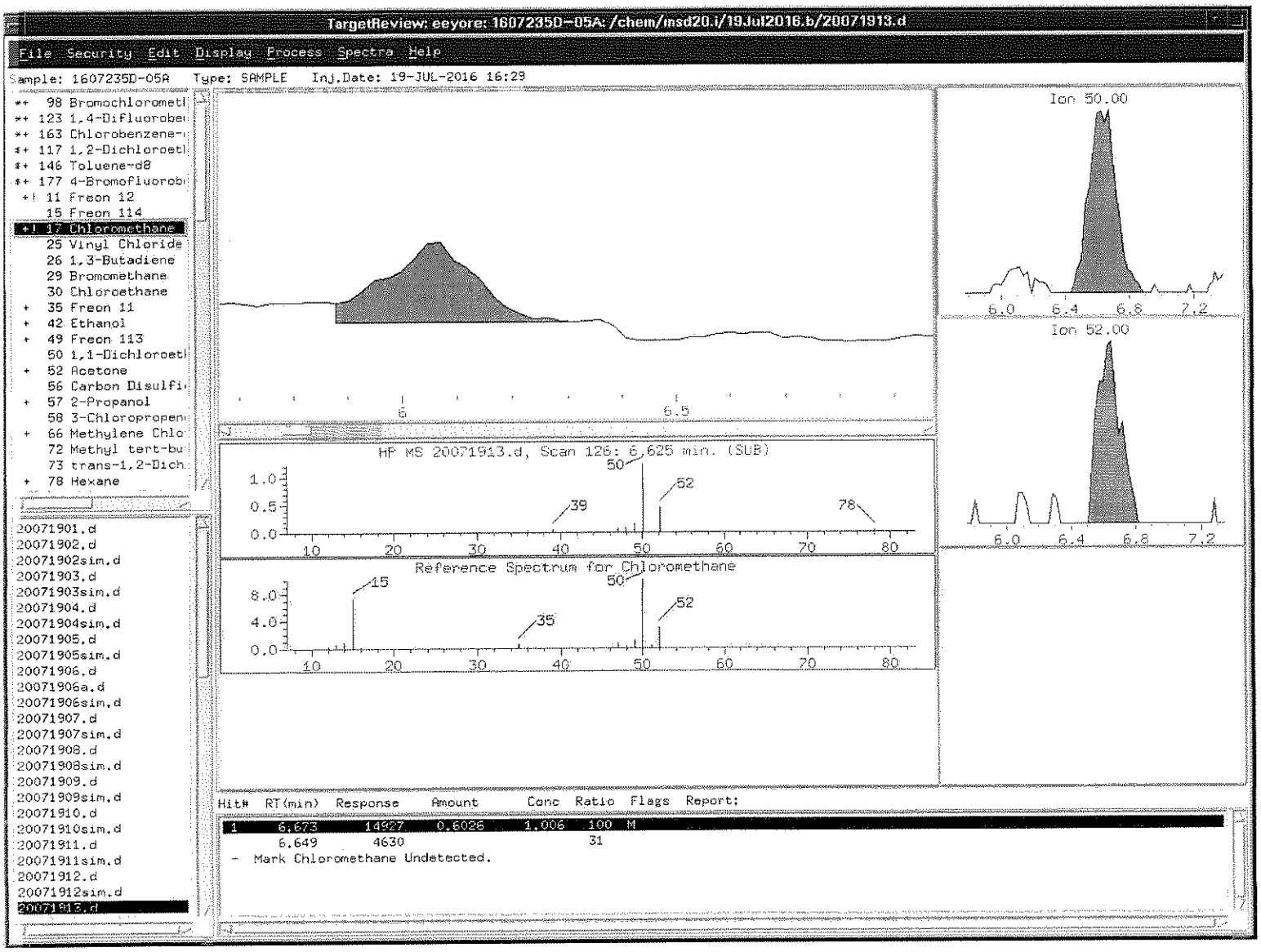




Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	6.625	9182	0.3707	0.6190	100	a	
	6.649	4630			50		

- Mark Chloromethane Undetected.

Before



After 8S 7/27/16

Correct Baseline	
Split Peak	
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 # 1607285D	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: SS MS10 7/19/16	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:

1 flag to MDL. 3 out in ccv, 2 out in ccb.

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: GH 7/19/16	A2:	A3:	A4:
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
✓				NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓					12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks, samples following bad loads on CIAAs have been verified (system blks, confirmation runs).				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes:

OIA-CCB, IMA=low load OIA-CCB1 - F Dckg

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/Instrument/Date	D1: SS 7/27/16	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: 5 Flag MDL; QC exceedances

A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
		Initials/Date: SS 8/3/16	3rd Tier: (needed only for DOD or per client request)	
✓		Sample Discrepancy Report (SDR) complete and approved (if applicable)		
✓		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

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

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

Additional Comments:

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

Workorder # :				Reason for Reissue:
W	T	3T	Q	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				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