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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15

INVENTORY SHEET

Work Order #: 1605308D

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Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	5/25/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1605308D

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 #**	
DATE RECEIVED:	05/18/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	05/19/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B7IA-1	Modified TO-15	5.5 "Hg	5 psi
03A	B7IA-2	Modified TO-15	10.6 "Hg	5 psi
07A	B7IA-6	Modified TO-15	14.9 "Hg	5.1 psi
08A	Lab Blank	Modified TO-15	NA	NA
09A	CCV	Modified TO-15	NA	NA
10A	LCS	Modified TO-15	NA	NA
10AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 05/19/16

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

LABORATORY NARRATIVE
Modified TO-15
Anderson Mulholland & Associates, Inc.
Workorder# 1605308D

Three 6 Liter Summa Canister (100% Certified) samples were received on May 18, 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 B7IA-1 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample(s).

Analytical Notes

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.

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.

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
B7IA-1	1605308D-01A	5/14/2016	5/18/2016	NA	4	5/18/2016	NA	Good
B7IA-2	1605308D-03A	5/14/2016	5/18/2016	NA	4	5/18/2016	NA	Good
B7IA-6	1605308D-07A	5/14/2016	5/18/2016	NA	4	5/18/2016	NA	Good
Lab Blank	1605308D-08A	NA	NA	NA	NA	5/18/2016	NA	Good
CCV	1605308D-09A	NA	NA	NA	NA	5/18/2016	NA	Good
LCS	1605308D-10A	NA	NA	NA	NA	5/18/2016	NA	Good
LCSD	1605308D-10AA	NA	NA	NA	NA	5/18/2016	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: B7IA-1

Lab ID#: 1605308D-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Chloromethane	0.82	0.68 J	1.7	1.4 J
Freon 11	0.16	10	0.92	58
Ethanol	0.82	13	1.5	25
Freon 113	0.16	0.079 J	1.2	0.60 J
Acetone	0.82	8.9	1.9	21
2-Propanol	0.82	5.6	2.0	14
Carbon Disulfide	0.82	0.58 J	2.6	1.8 J
Methylene Chloride	0.33	0.089 J	1.1	0.31 J
2-Butanone (Methyl Ethyl Ketone)	0.82	1.0	2.4	3.0
Chloroform	0.16	0.095 J	0.80	0.46 J
Carbon Tetrachloride	0.16	0.070 J	1.0	0.44 J
Benzene	0.16	0.090 J	0.52	0.29 J
4-Methyl-2-pentanone	0.16	0.090 J	0.67	0.37 J
Toluene	0.16	0.65	0.62	2.5
2-Hexanone	0.82	0.16 J	3.4	0.64 J
m,p-Xylene	0.16	0.10 J	0.71	0.44 J
o-Xylene	0.16	0.055 J	0.71	0.24 J
Styrene	0.16	0.067 J	0.70	0.28 J
4-Ethyltoluene	0.16	0.030 J	0.81	0.14 J

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Client Sample ID: B7IA-1

Lab ID#: 1605308D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051817**	**Date of Collection:**	**5/14/16 8:11:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**5/18/16 08:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	0.68 J	1.7	1.4 J
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	10	0.92	58
Ethanol	0.82	13	1.5	25
Freon 113	0.16	0.079 J	1.2	0.60 J
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	8.9	1.9	21
2-Propanol	0.82	5.6	2.0	14
Carbon Disulfide	0.82	0.58 J	2.6	1.8 J
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.089 J	1.1	0.31 J
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.0	2.4	3.0
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected UJ	2.4	Not Detected UJ
Chloroform	0.16	0.095 J	0.80	0.46 J
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	0.070 J	1.0	0.44 J
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.090 J	0.52	0.29 J
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	0.090 J	0.67	0.37 J
Toluene	0.16	0.65	0.62	2.5
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	0.16 J	3.4	0.64 J

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Client Sample ID: B7IA-1

Lab ID#: 1605308D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051817**	**Date of Collection:**	**5/14/16 8:11:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**5/18/16 08:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	0.10 J	0.71	0.44 J
o-Xylene	0.16	0.055 J	0.71	0.24 J
Styrene	0.16	0.067 J	0.70	0.28 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	0.030 J	0.81	0.14 J
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected UJ	0.81	Not Detected UJ
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected
Naphthalene	0.82	Not Detected	4.3	Not Detected

J = Estimated value.
UJ = Analyte associated with low bias in the CCV.
Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051817.d
Lab Smp Id: 1605308D-01A
Inj Date : 18-MAY-2016 20:59
Operator : ea Inst ID: msde.i
Smp Info : 250mL#O0355
Misc Info : 5.5"hg-5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: TO15NMDL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
11 Freon 12						CAS #: 75-71-8		
5.196	5.220	(0.338)	85	27944	0.24593	0.4033	80.00- 120.00	100.00
5.220	5.196	(0.339)	87	8245			2.00- 62.00	29.51
17 Chloromethane						CAS #: 74-87-3		
6.932	6.932	(0.450)	50	8890	0.41235	0.6762	80.00- 120.00	100.00(a)
6.956	6.932	(0.452)	52	3936			5.50- 65.50	44.28
35 Freon 11						CAS #: 75-69-4		
10.747	10.747	(0.698)	101	773242	6.31986	10.364	80.00- 120.00	100.00
10.747	10.747	(0.698)	103	515889			37.17- 97.17	66.72
42 Ethanol						CAS #: 64-17-5		
11.680	11.661	(0.759)	45	70955	8.00328	13.125	80.00- 120.00	100.00
11.680	11.680	(0.759)	46	27457			6.61- 66.61	38.70
11.680	11.661	(0.759)	43	18166			0.00- 54.66	25.60
49 Freon 113						CAS #: 76-13-1		
12.061	12.080	(0.784)	151	4404	0.04803	0.07877	80.00- 120.00	100.00(a)
12.080	12.080	(0.785)	153	2099			33.64- 93.64	47.67

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

   49 Freon 113 (continued)
 12.080  12.080 (0.785)   101      2819                    80.40- 140.40    64.01
-------------------------------------------------------------------------------
   52 Acetone                                      CAS #: 67-64-1
 12.366  12.366 (0.803)    58     81034 5.41993    8.889  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    265627                   321.47- 381.47   327.80
-------------------------------------------------------------------------------
   56 Carbon Disulfide                             CAS #: 75-15-0
 12.442  12.442 (0.808)    76     40629 0.35654   0.5847  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                   CAS #: 67-63-0
 12.728  12.709 (0.827)    45    156270 3.41673    5.603  80.00- 120.00   100.00
 12.728  12.709 (0.827)    43     40774                     0.00-  54.09    26.09
 12.728  12.709 (0.827)    59      8074                     0.00-  34.43     5.17
-------------------------------------------------------------------------------
   66 Methylene Chloride                           CAS #: 75-09-2
 13.149  13.149 (0.854)    84      1940 0.05415  0.08881  80.00- 120.00   100.00(a)
 13.149  13.149 (0.854)    49      2340                    63.99- 123.99   120.63
  0.000  13.149 (0.000)    51         0                     0.29-  60.29     0.00
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     11144 0.61879    1.015  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     36582                   262.26- 322.26   328.27
 15.047  15.047 (0.978)    57      3654                     0.00-  55.71    32.79
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    135096 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105375                   52.25- 112.25    78.00
 15.391  15.391 (1.000)    49     98034                   89.81- 149.81    72.57
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83      5664 0.05807  0.09523  80.00- 120.00   100.00(a)
 15.453  15.453 (1.004)    85      4023                    33.97-  93.97    71.04
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.854  15.853 (1.030)   119      4762 0.04286  0.07028  80.00- 120.00   100.00(a)
 15.854  15.853 (1.030)   117      4503                    74.09- 134.09    94.56
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.183  16.183 (0.967)    78      6625 0.05477  0.08982  80.00- 120.00   100.00(a)
 16.207  16.183 (0.968)    77      1680                     0.00-  53.97    25.37
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    191052 4.92615    4.926  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     92195                   21.16-  81.16    48.26
-------------------------------------------------------------------------------
```

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

* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    504809 5.00000           80.00- 120.00   100.00
 16.737  16.713 (1.000)    88     73506                    0.00-  45.20    14.56
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43      3418 0.05475  0.08980  80.00- 120.00   100.00(a)
  0.000  18.984 (0.000)    58         0                   15.64-  75.64     0.00
 18.984  18.984 (1.134)    85       703                    0.00-  56.71    20.56
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    496990 5.01289    5.013  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     53518                    0.00-  40.11    10.77
 19.275  19.275 (1.152)   100    323005                   37.58-  97.58    64.99
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.410  19.410 (1.160)    91     57388 0.39828   0.6532  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92     33690                   28.92-  88.92    58.71
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.795  20.767 (0.938)    58      3517 0.09576   0.1570  80.00- 120.00   100.00(a)
 20.795  20.767 (0.938)    43      5285                  140.44- 200.44   150.28
  0.000  20.795 (0.000)   100         0                    0.00-  59.62     0.00
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    473472 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    229498                   20.64-  80.64    48.47
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.488  22.467 (1.014)   106      4508 0.06220   0.1020  80.00- 120.00   100.00(a)
 22.467  22.467 (1.013)    91      7542                  166.46- 226.46   167.30
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106      2215 0.03332  0.05464  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91      5653                  184.01- 244.01   255.19
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104      4577 0.04069  0.06673  80.00- 120.00   100.00(a)
 23.110  23.110 (1.042)    78      2301                   20.27-  80.27    50.27
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    322502 4.96407    4.964  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    316001                   77.42- 137.42    97.98
 23.856  23.856 (1.076)   176    304673                   65.38- 125.38    94.47
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.192  24.237 (1.091)   105      3653 0.01810  0.02969  80.00- 120.00   100.00(a)
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
188 4-Ethyltoluene (continued)								
24.192	24.237	(1.091)	120	1028			1.08- 61.08	28.14

QC Flag Legend

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

Report Date: 19-May-2016 10:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051817.d
Lab Smp Id: 1605308D-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.5"hg-5.0psi

Calibration Date: 18-MAY-2016
Calibration Time: 08:43

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	135096	-13.06
123 1,4-Difluorobenze	603874	362324	845424	504809	-16.40
163 Chlorobenzene-d5	522912	313747	732077	473472	-9.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 19-May-2016 10:42

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 18May2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1605308D-01A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09Bromo.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.5"hg-5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.926	98.52	70-130
$ 146 Toluene-d8	5.000	5.013	100.26	70-130
$ 177 4-Bromofluorobenze	5.000	4.964	99.28	70-130

Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

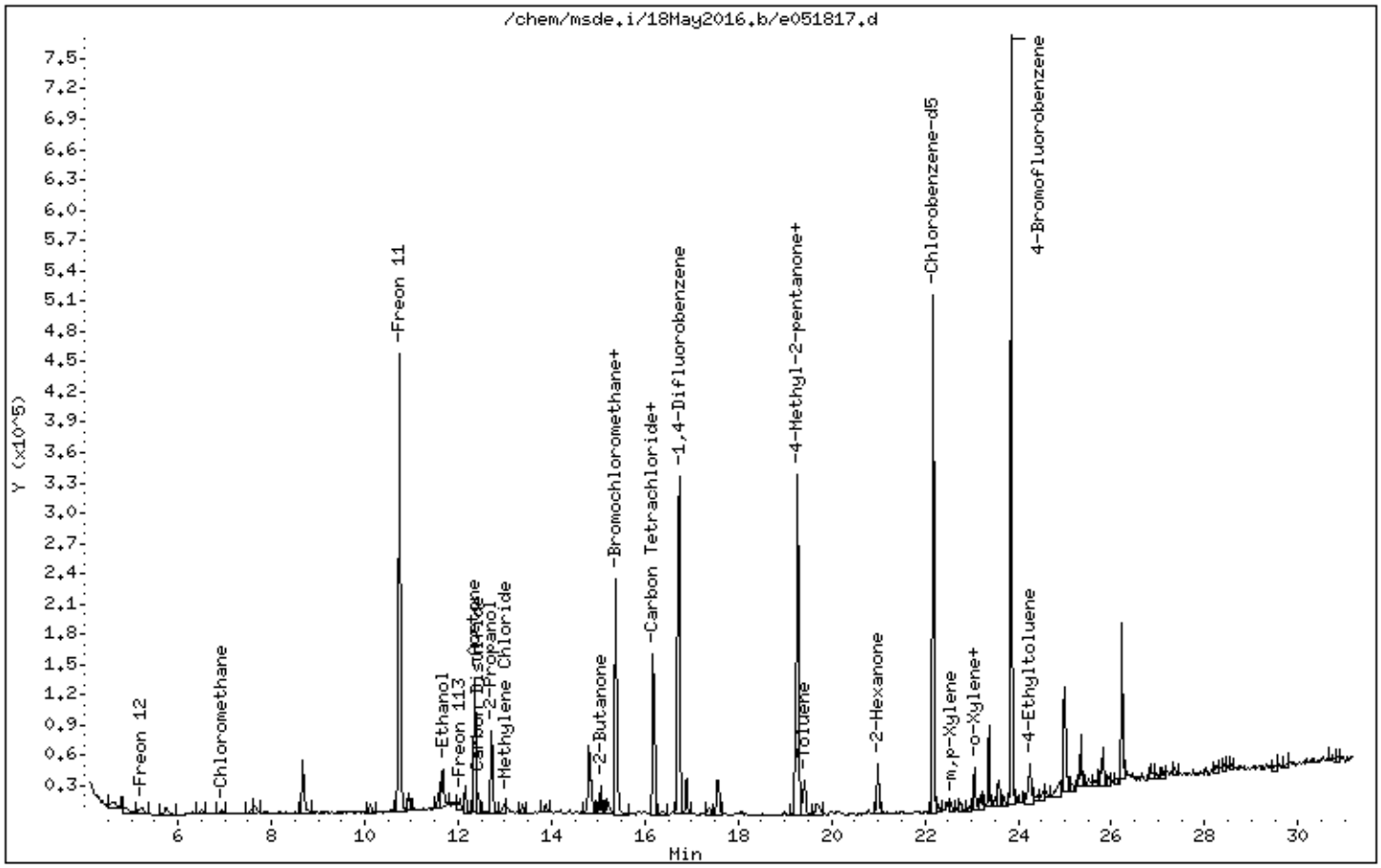
Instrument: msde.i

Sample Info: 250mL#00355

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

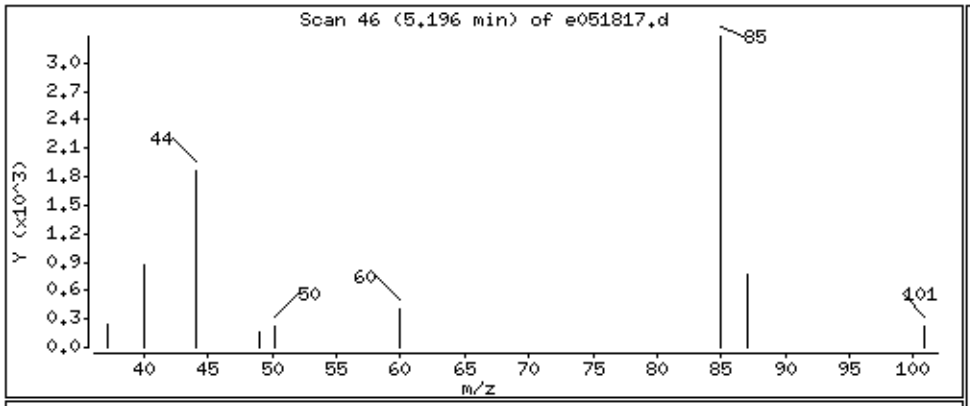
Operator: ea

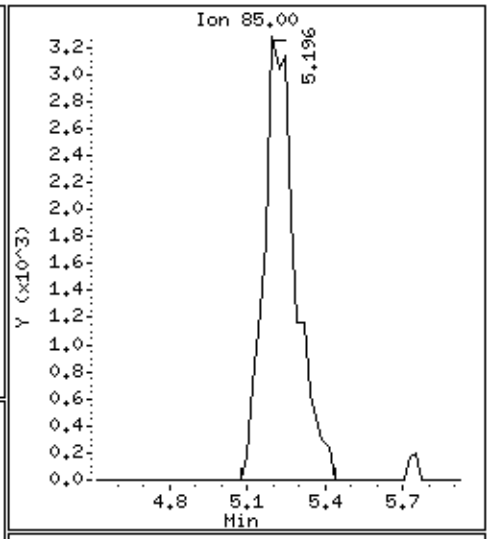
Column phase: RTX-624

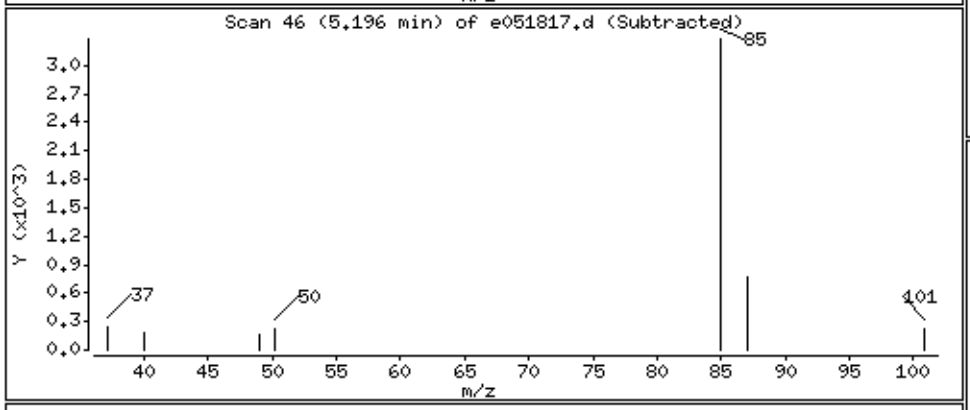
Column diameter: 0.32

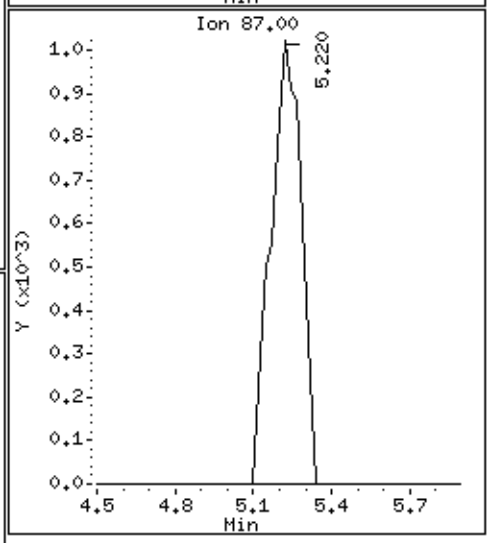
11 Freon 12

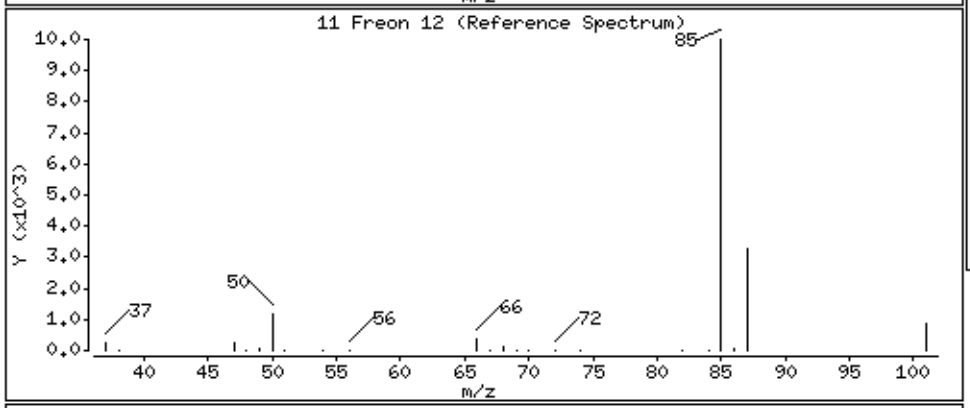
Concentration: 0.4033 PPBV

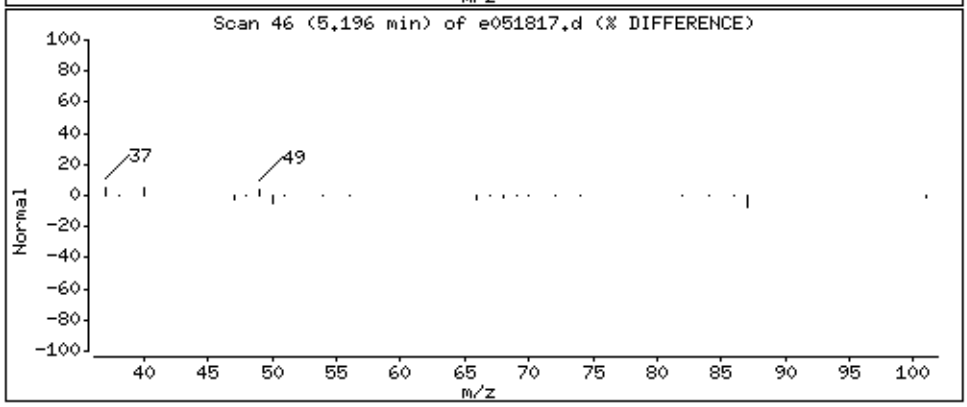












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

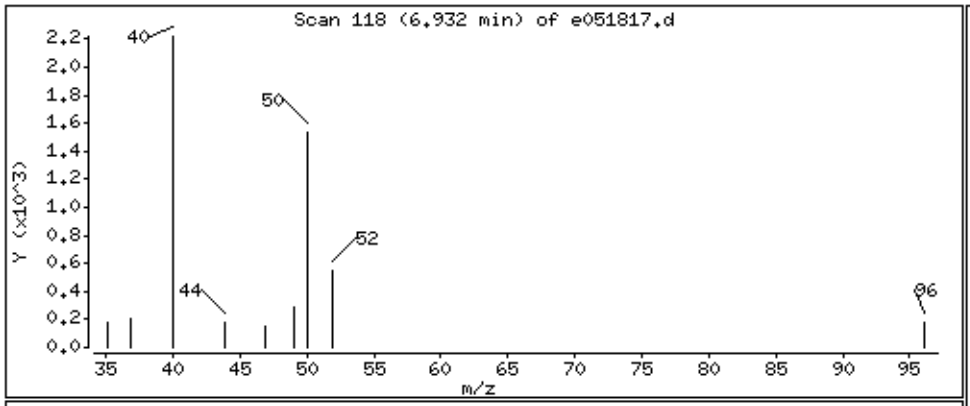
Operator: ea

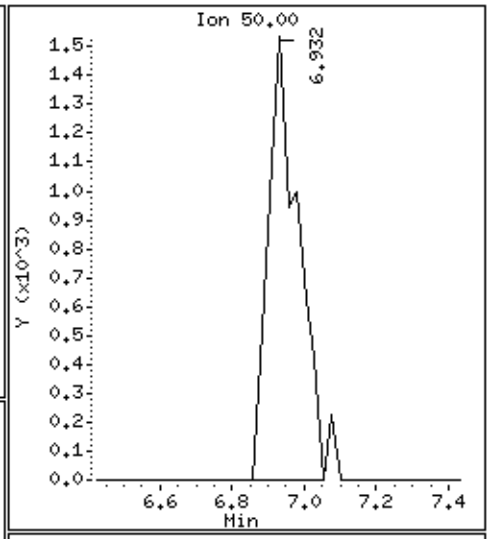
Column phase: RTX-624

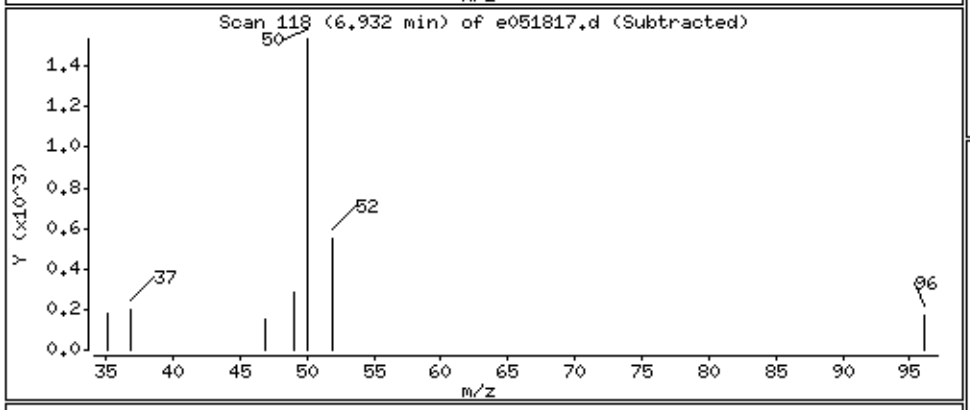
Column diameter: 0.32

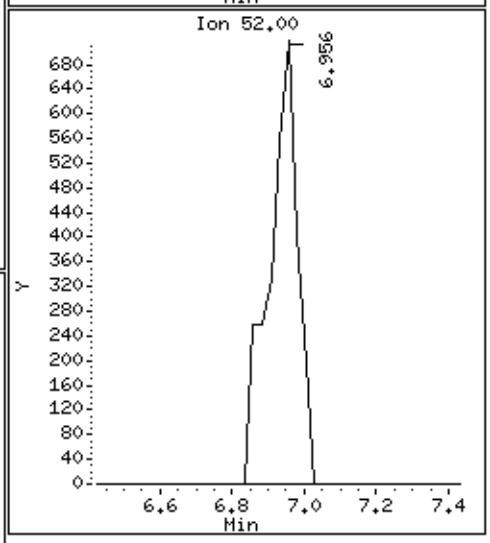
17 Chloromethane

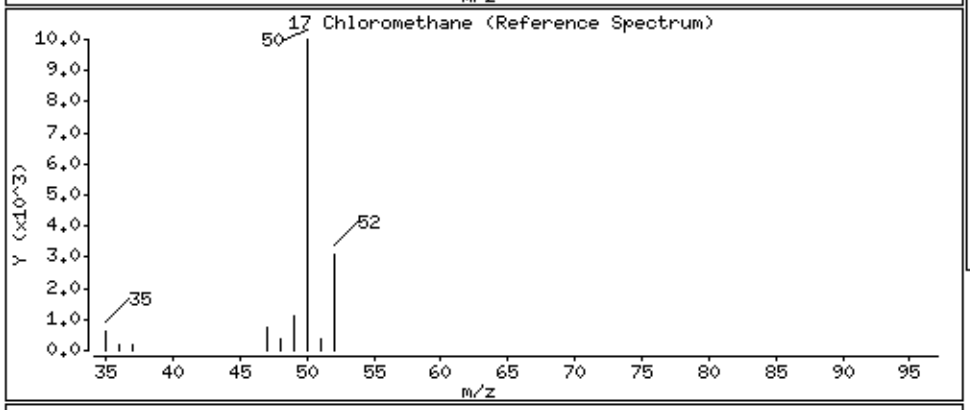
Concentration: 0.6762 PPBV

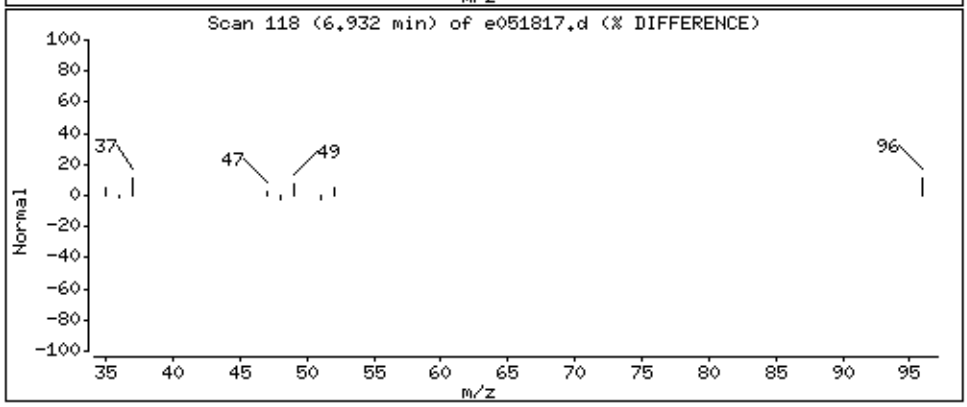












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

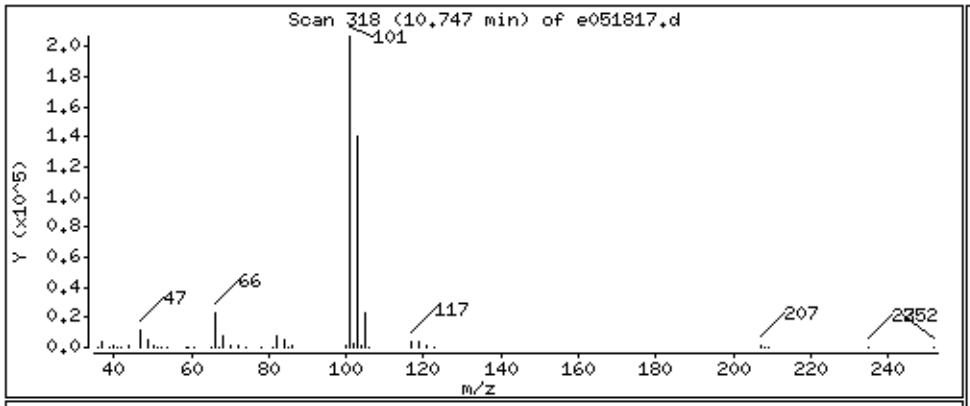
Operator: ea

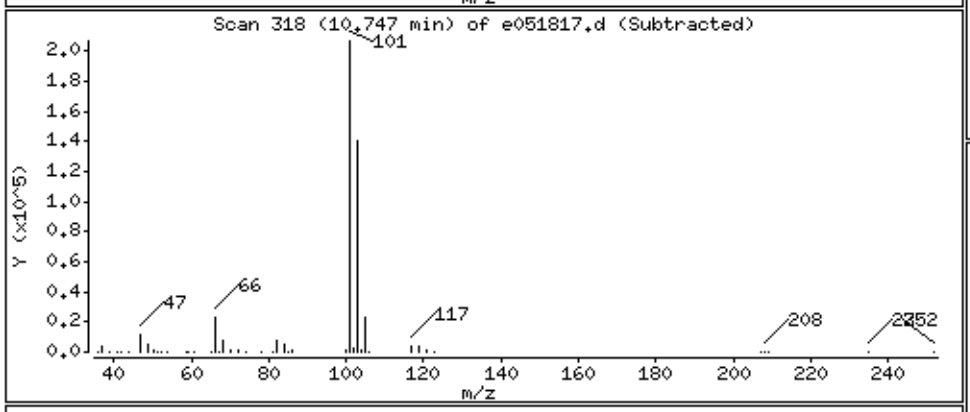
Column phase: RTX-624

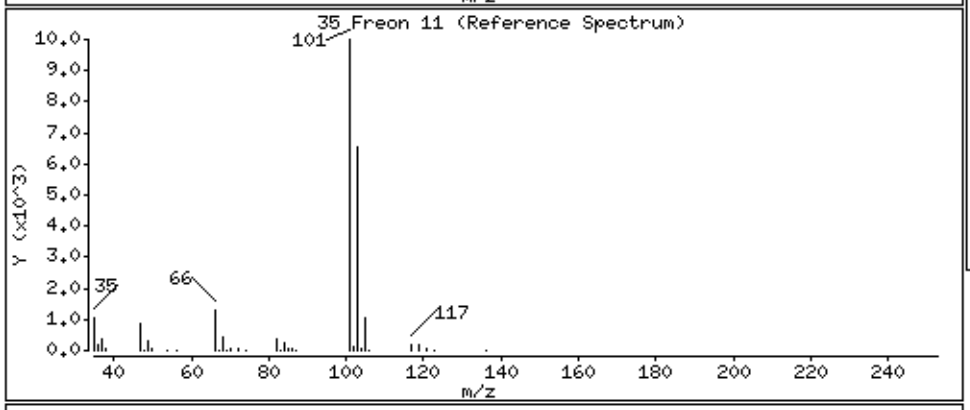
Column diameter: 0.32

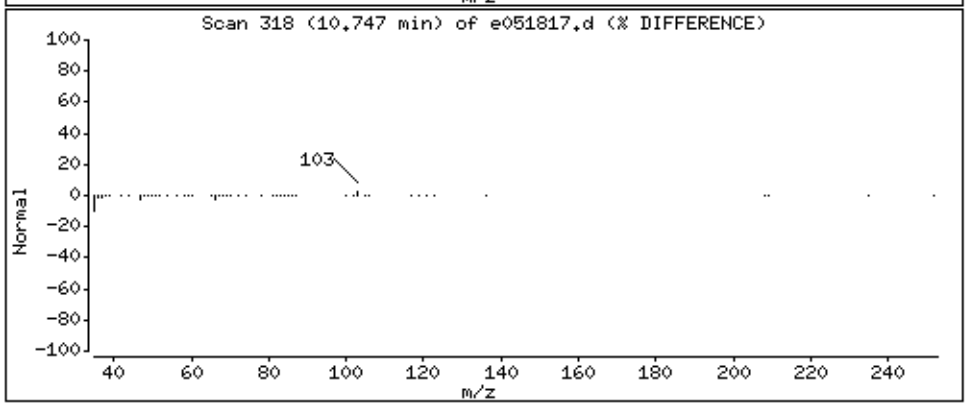
35 Freon 11

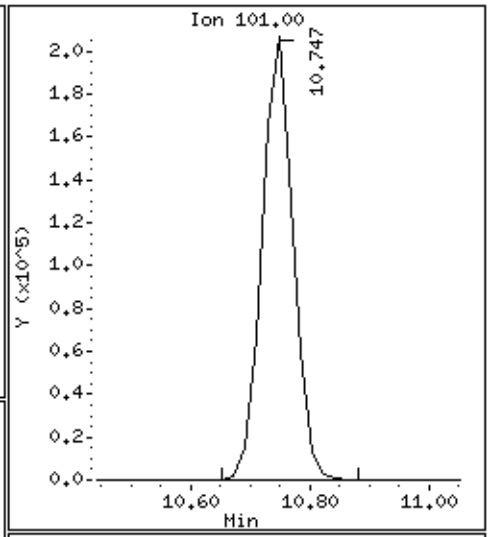
Concentration: 10.364 PPBV

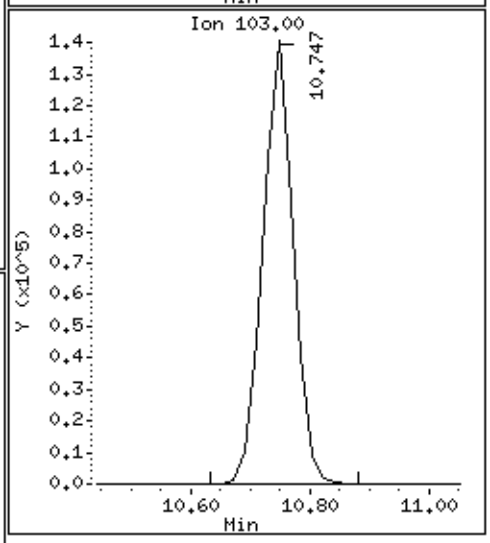












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

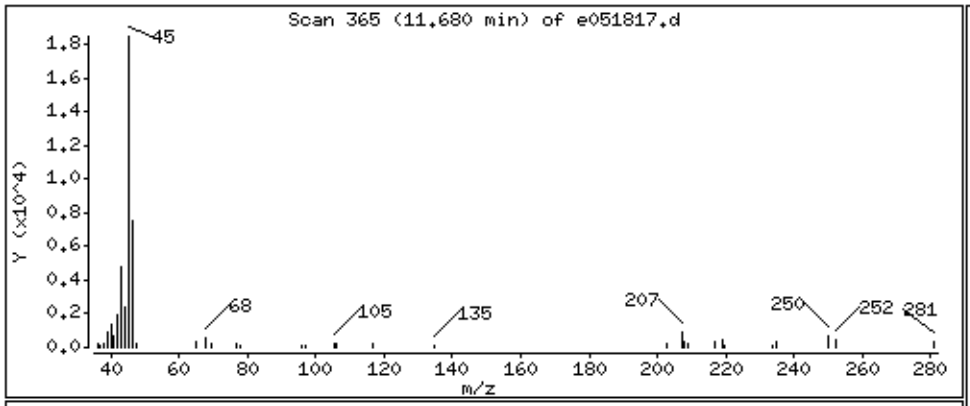
Operator: ea

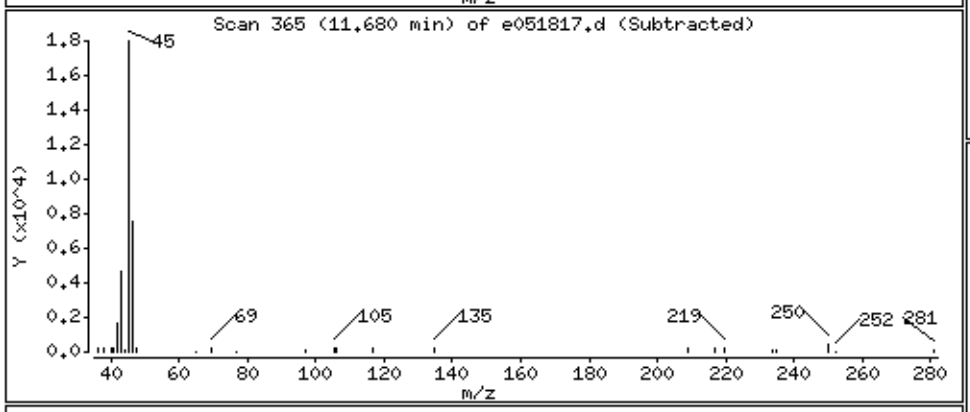
Column phase: RTX-624

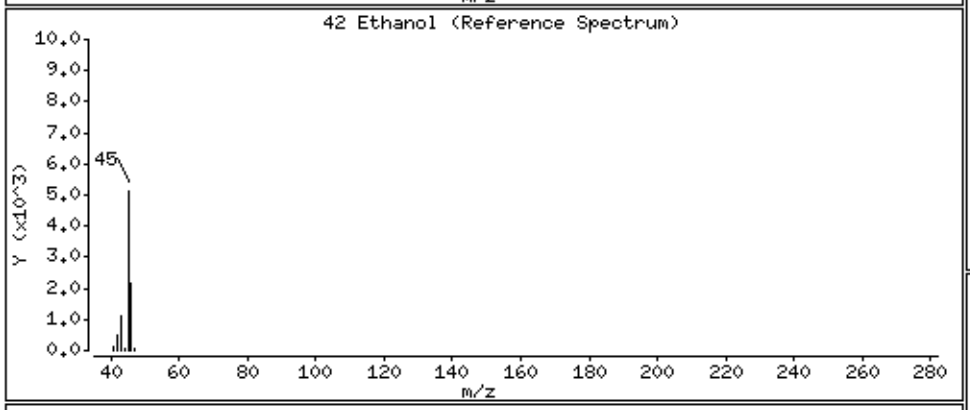
Column diameter: 0.32

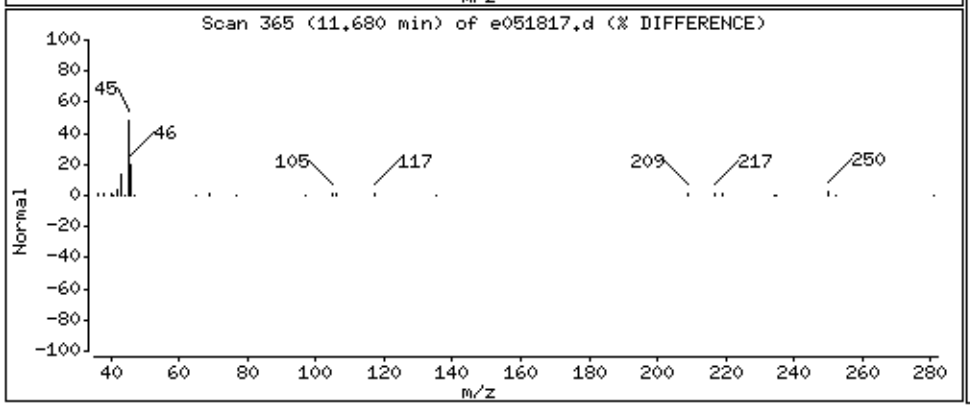
42 Ethanol

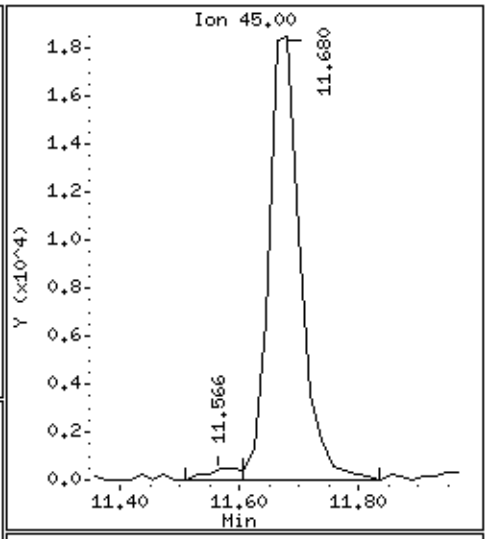
Concentration: 13.125 PPBV

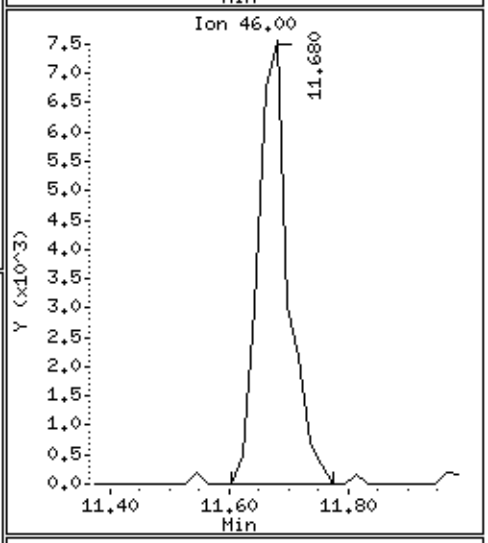


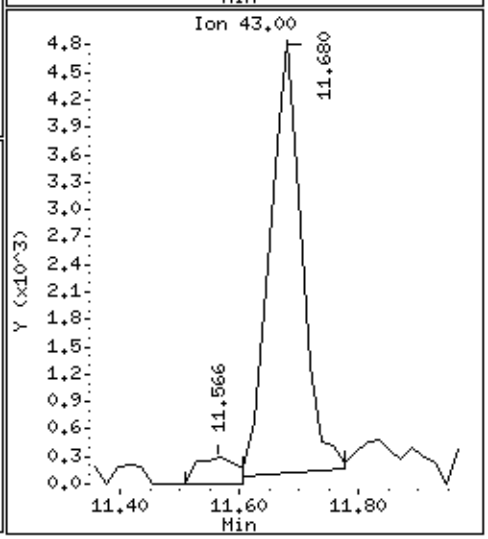












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

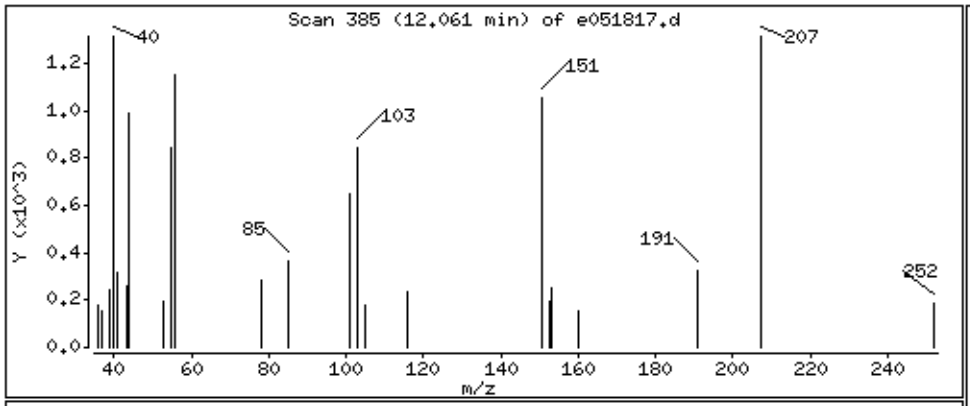
Operator: ea

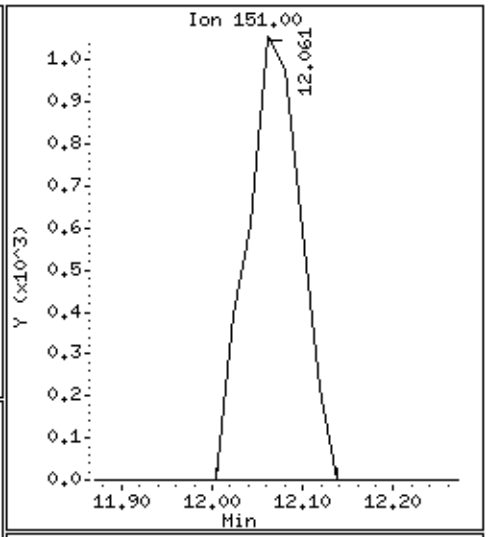
Column phase: RTX-624

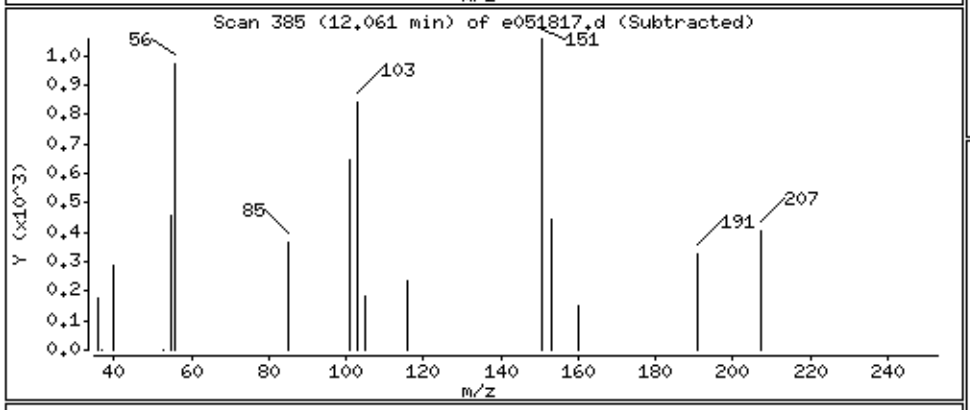
Column diameter: 0.32

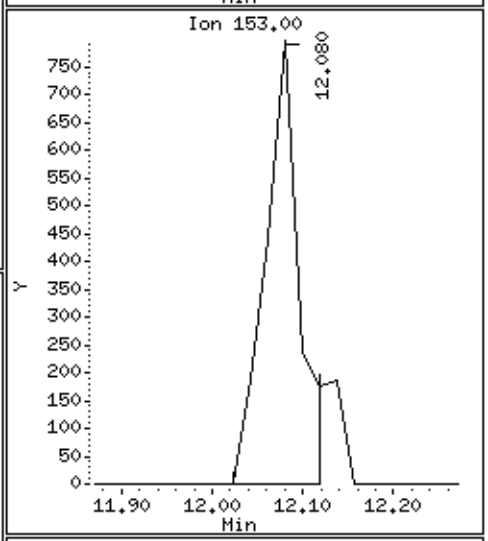
49 Freon 113

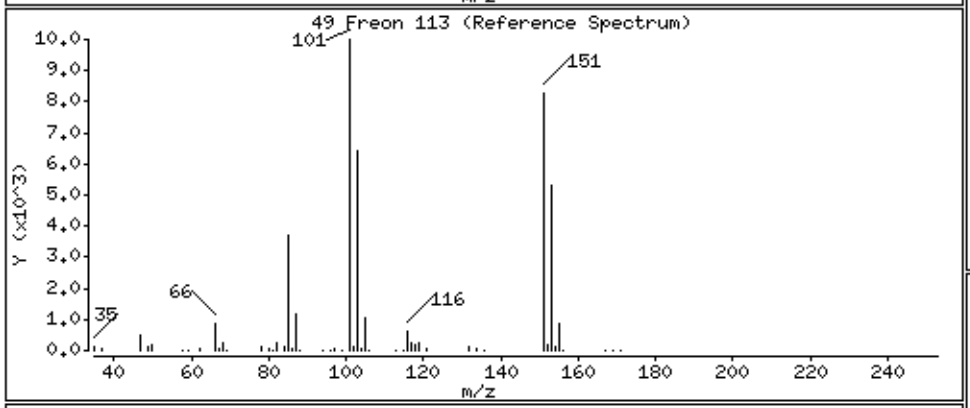
Concentration: 0.07877 PPBV

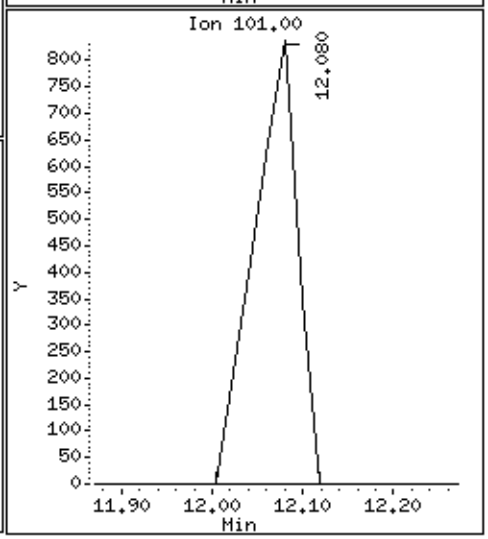


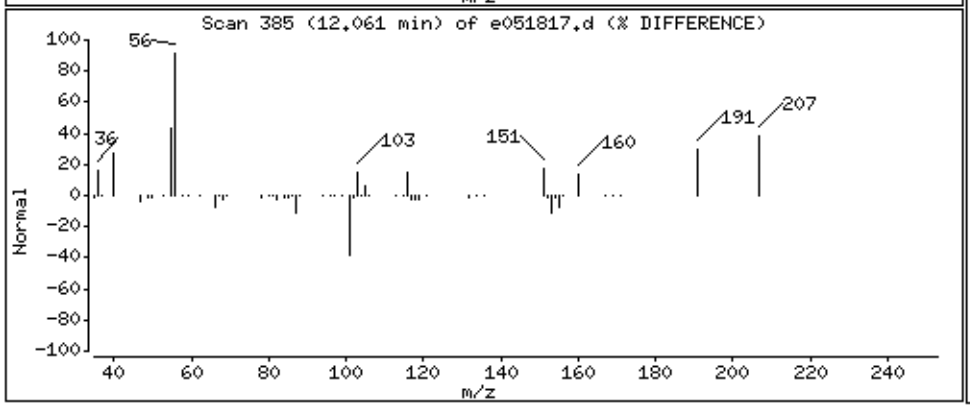












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

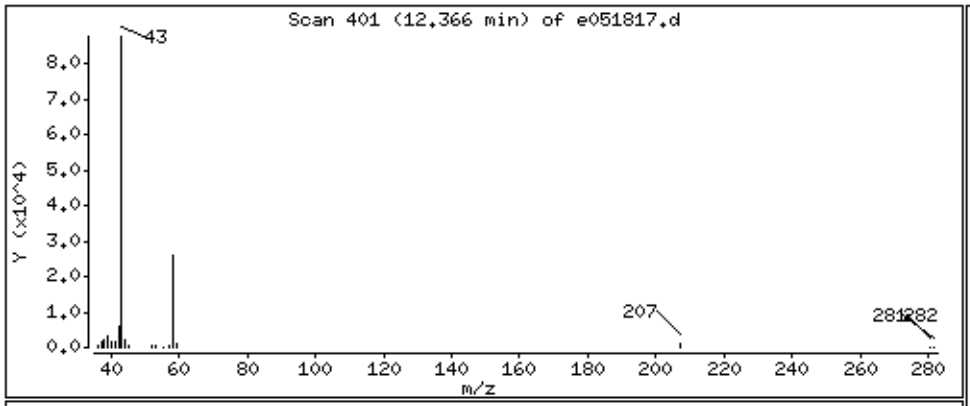
Operator: ea

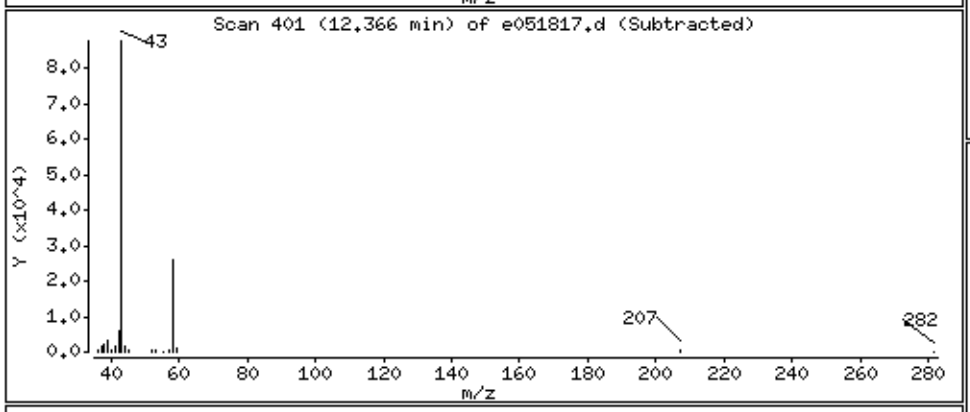
Column phase: RTX-624

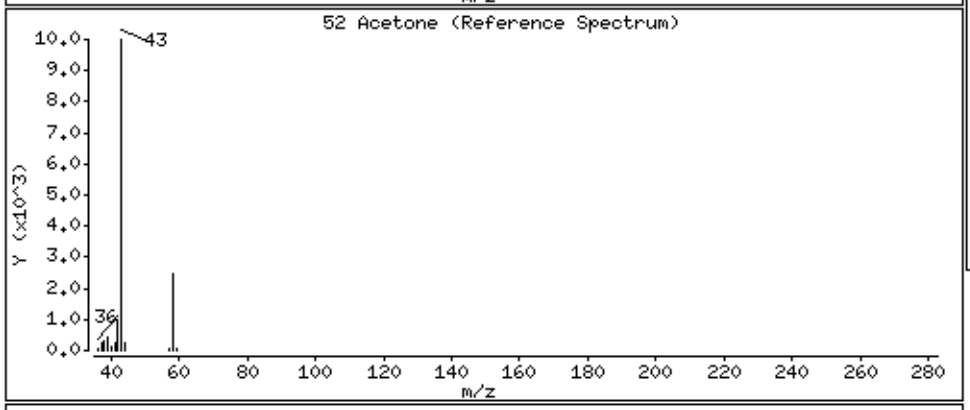
Column diameter: 0.32

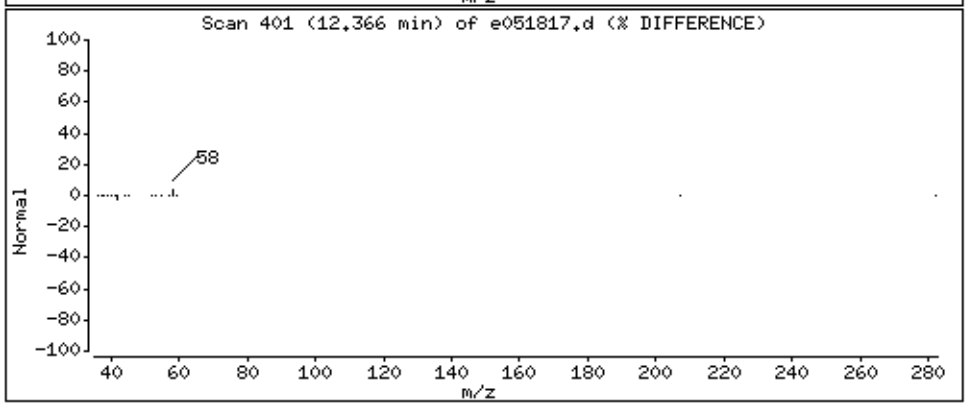
52 Acetone

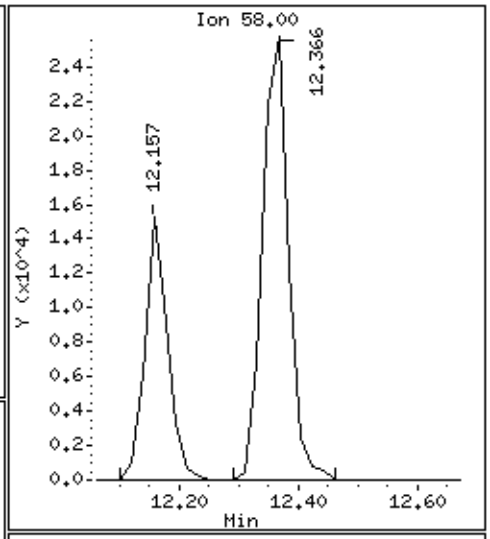
Concentration: 8.889 PPBV

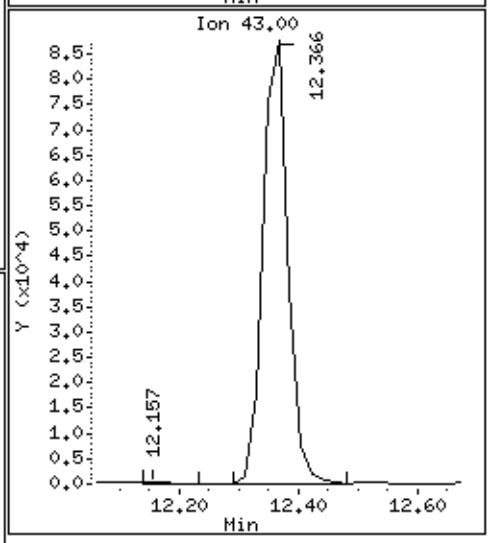












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

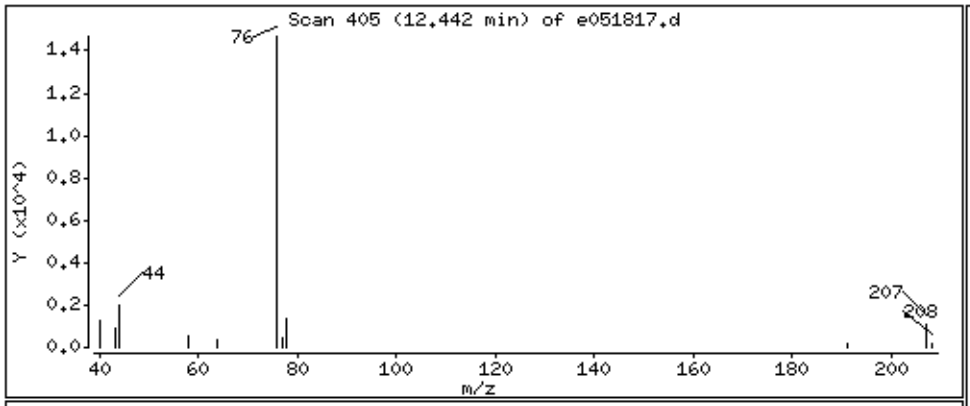
Operator: ea

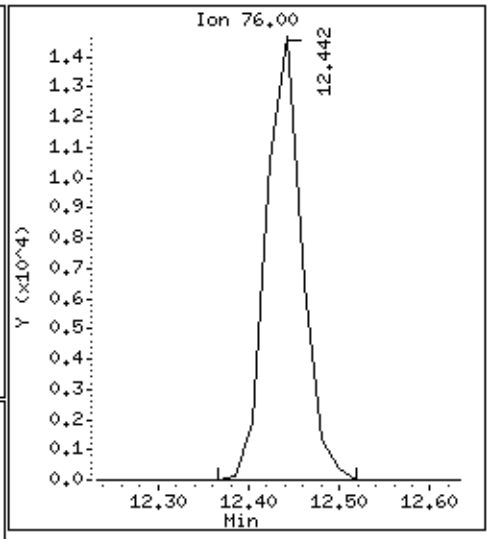
Column phase: RTX-624

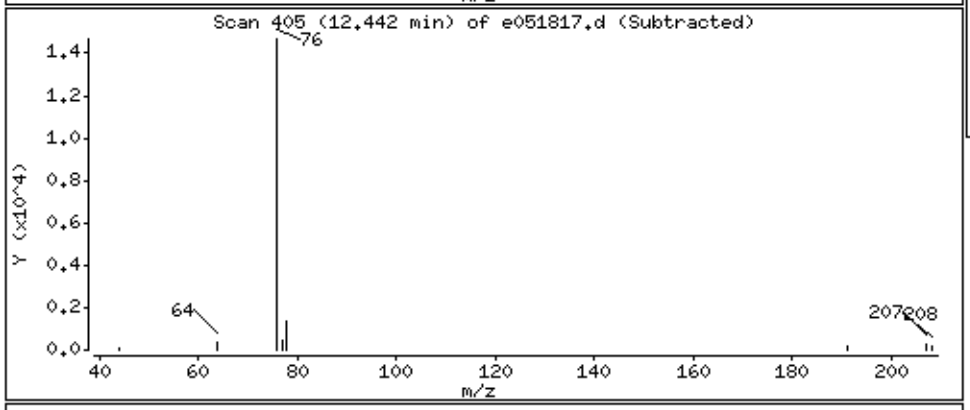
Column diameter: 0.32

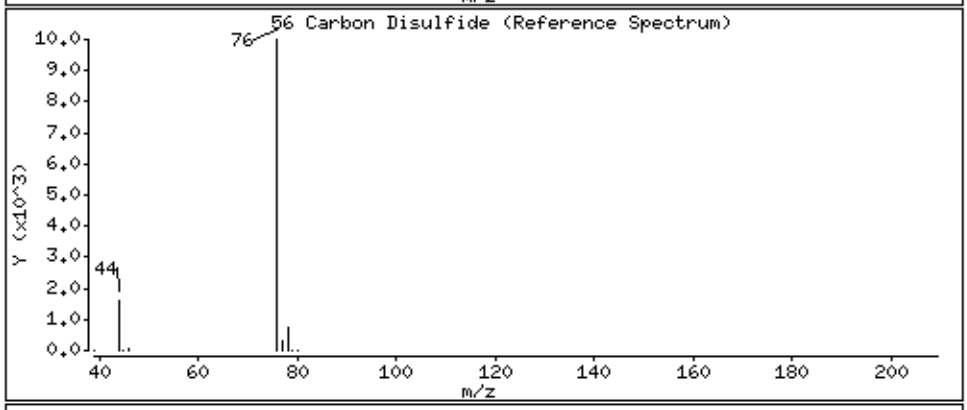
56 Carbon Disulfide

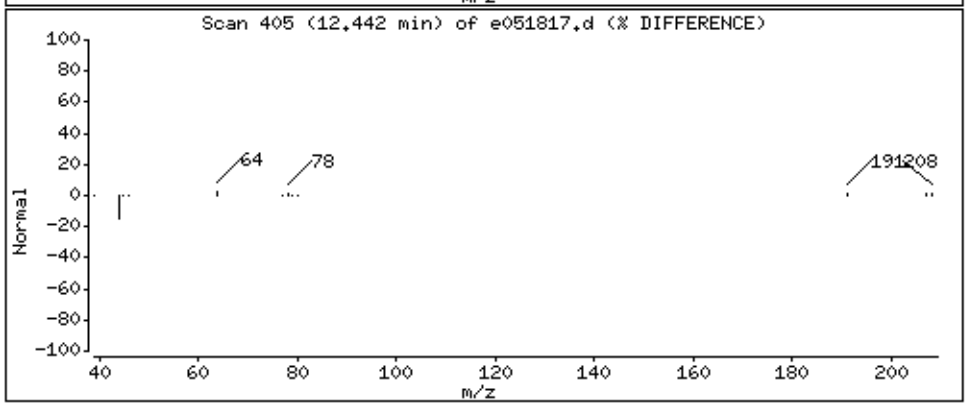
Concentration: 0.5847 PPBV











Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

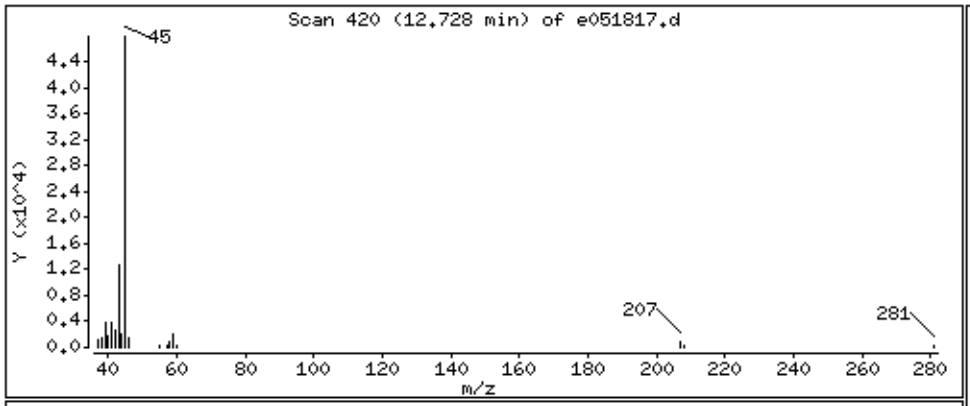
Operator: ea

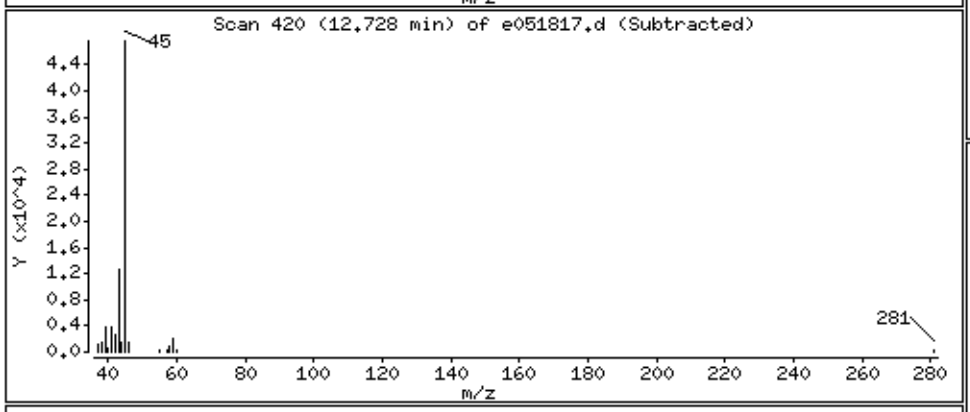
Column phase: RTX-624

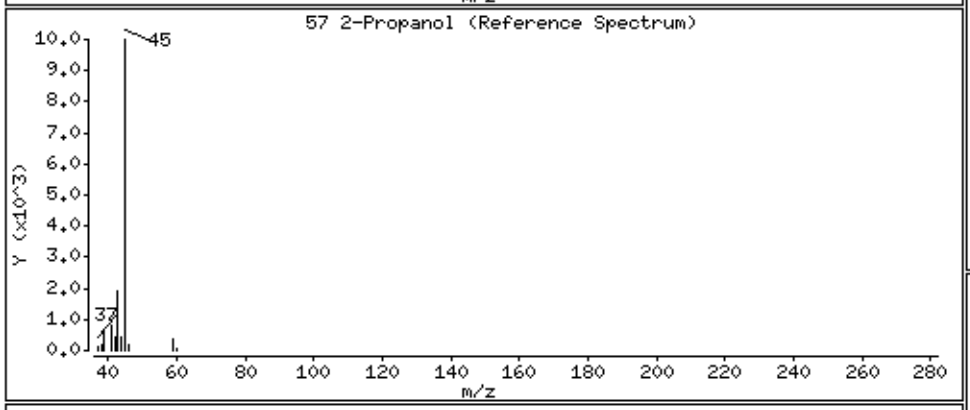
Column diameter: 0.32

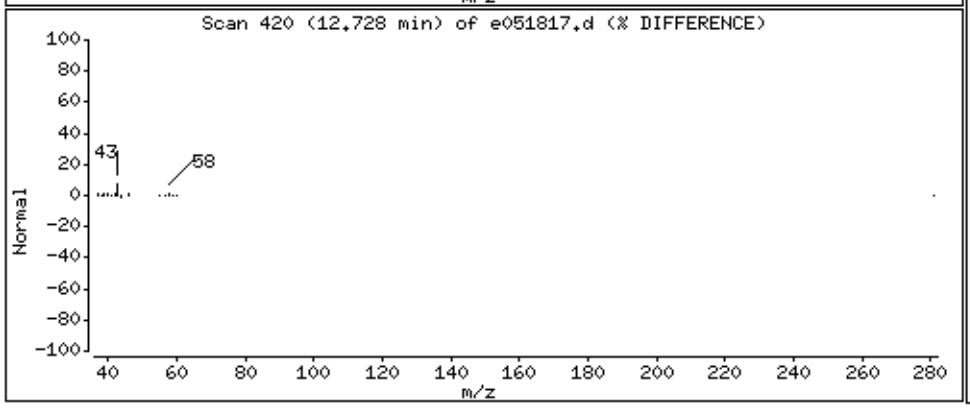
57 2-Propanol

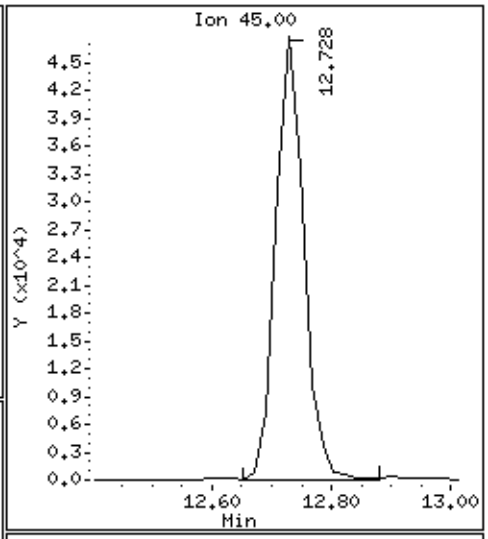
Concentration: 5.603 PPBV

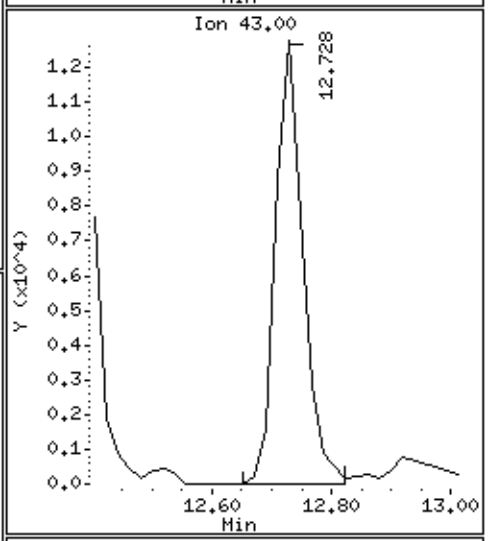


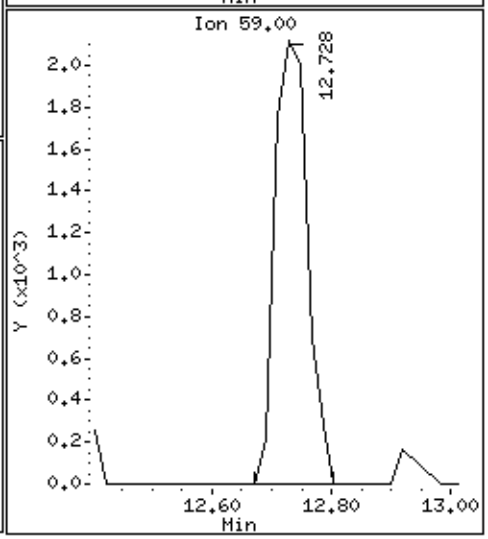












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

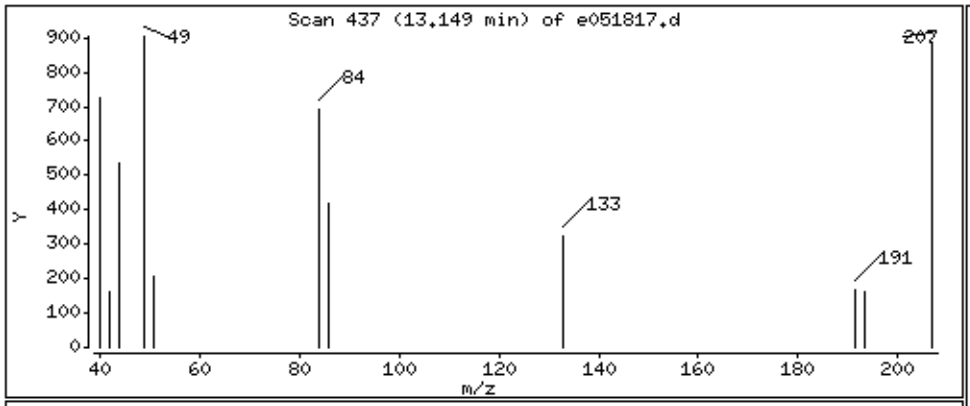
Operator: ea

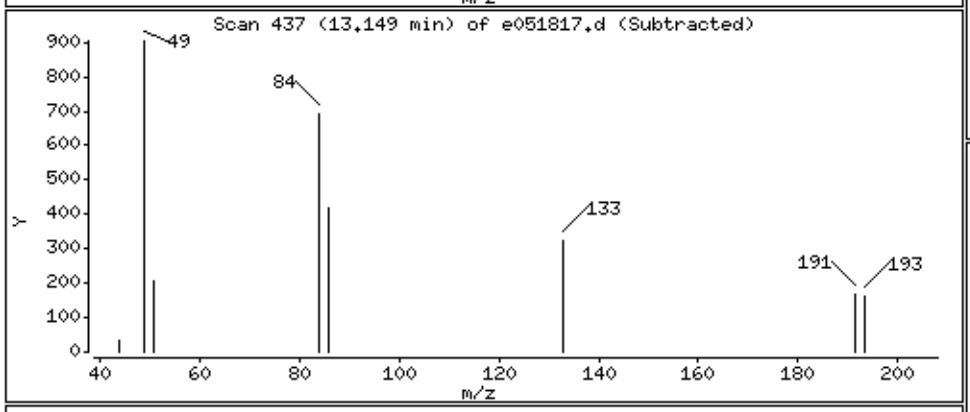
Column phase: RTX-624

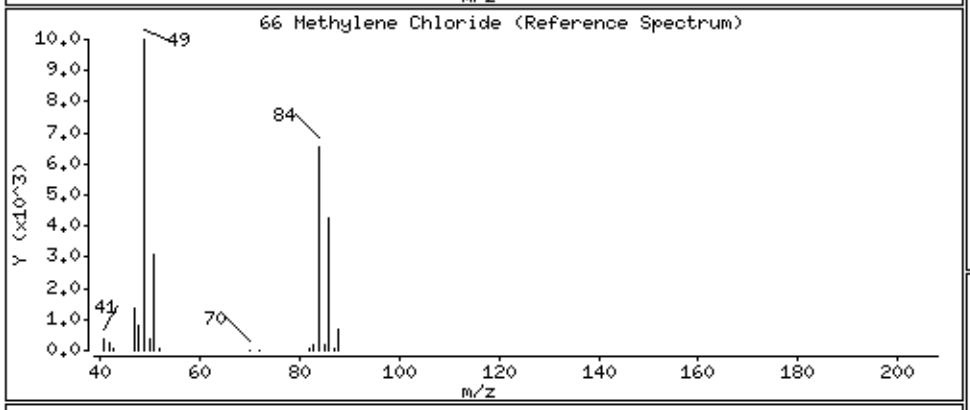
Column diameter: 0.32

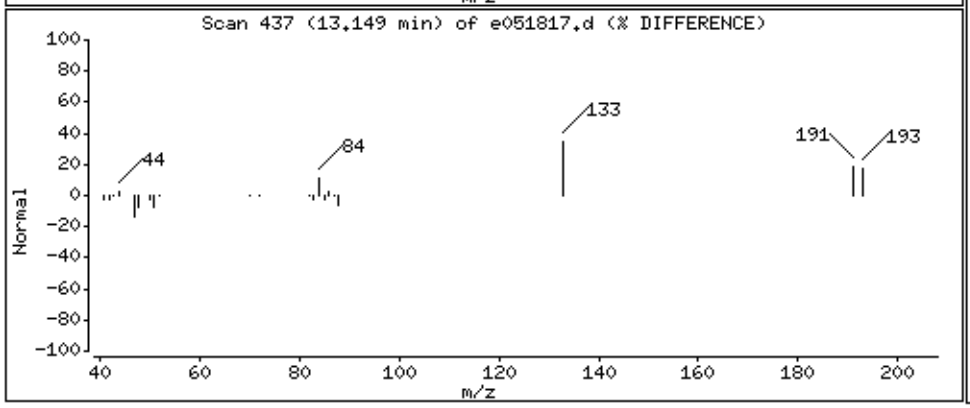
66 Methylene Chloride

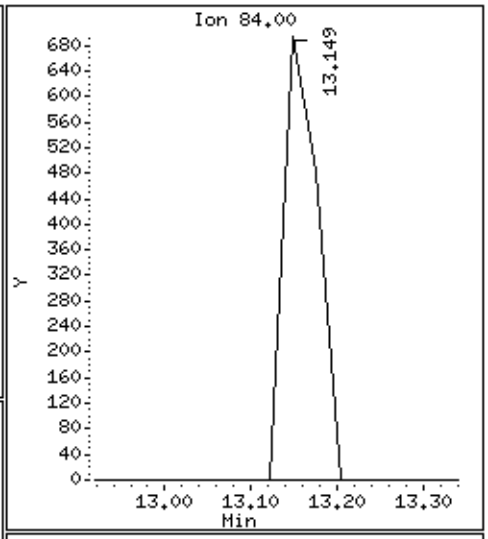
Concentration: 0.08881 PPBV

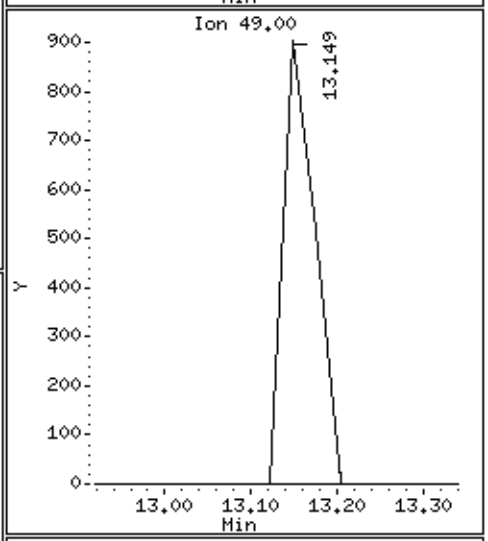


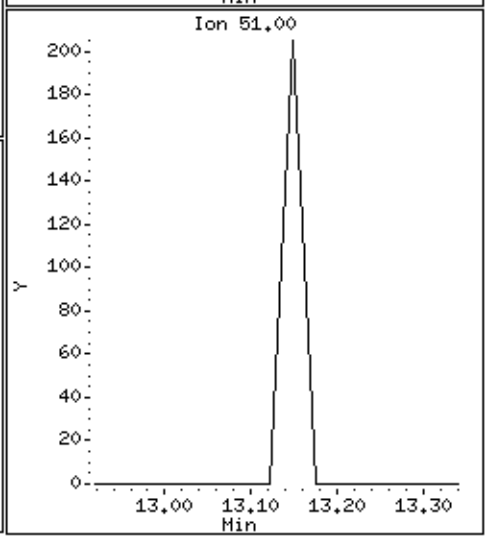












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

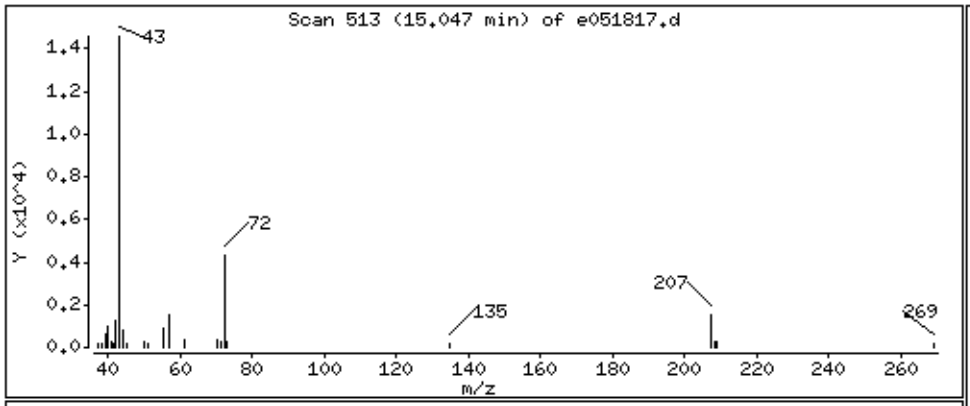
Operator: ea

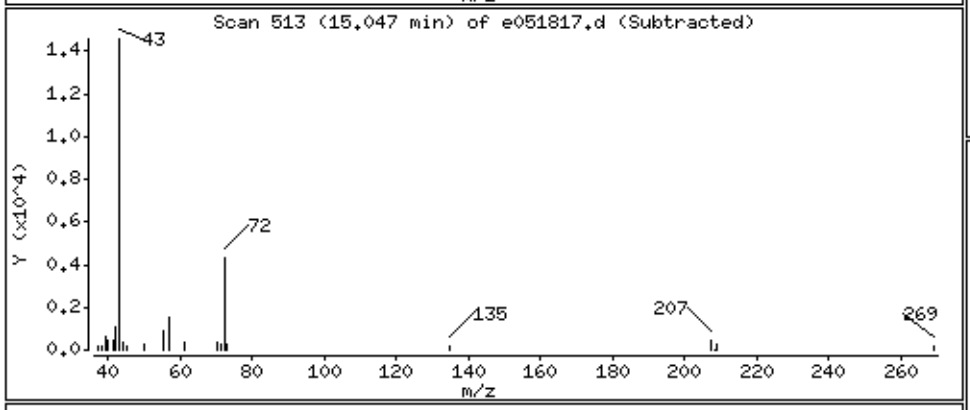
Column phase: RTX-624

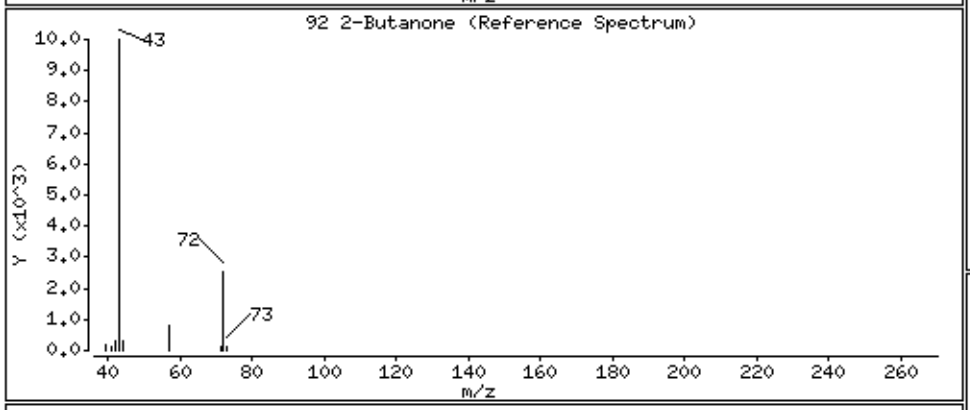
Column diameter: 0.32

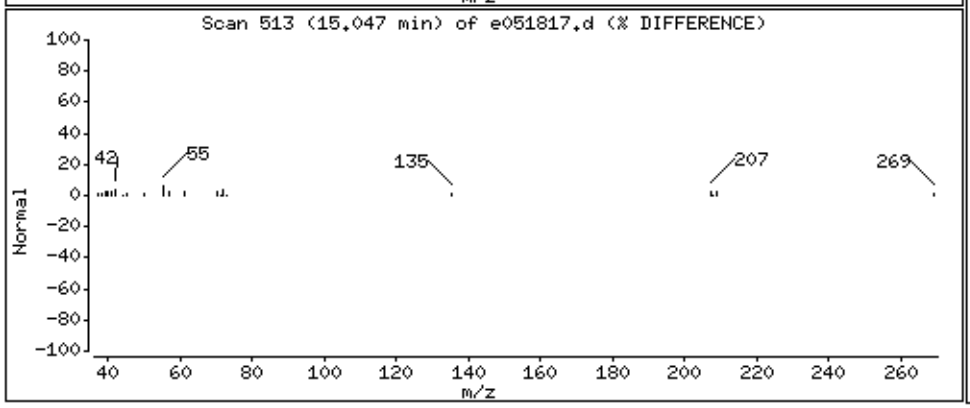
92 2-Butanone

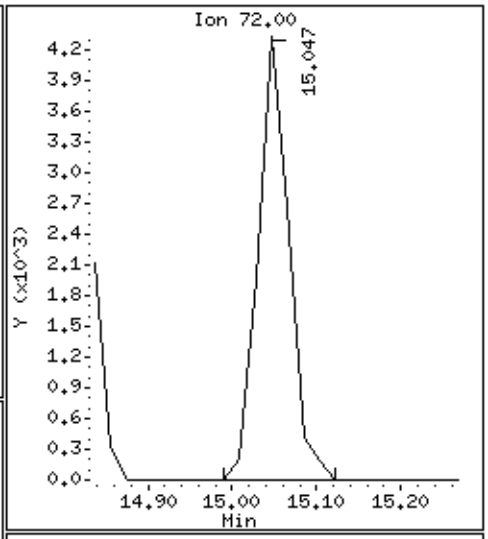
Concentration: 1.015 PPBV

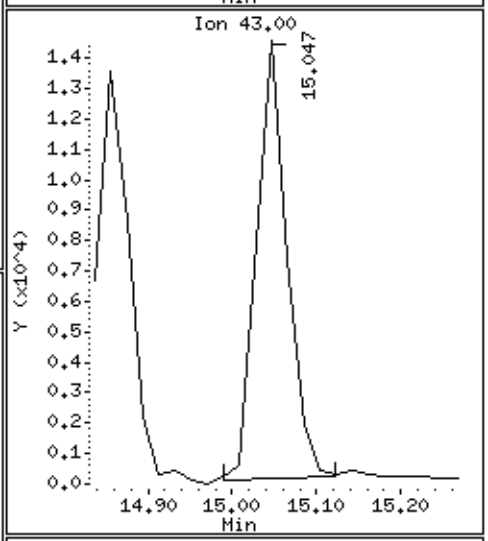


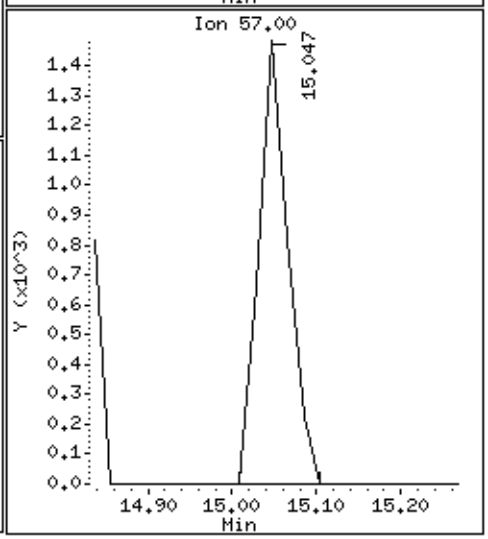












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

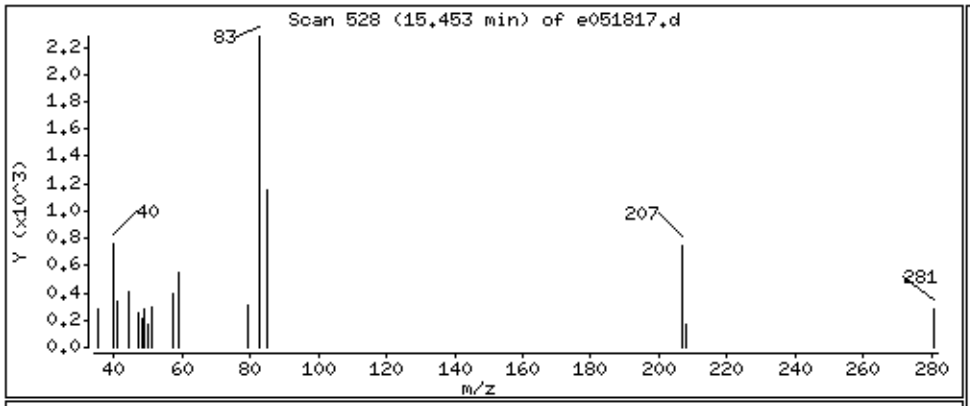
Operator: ea

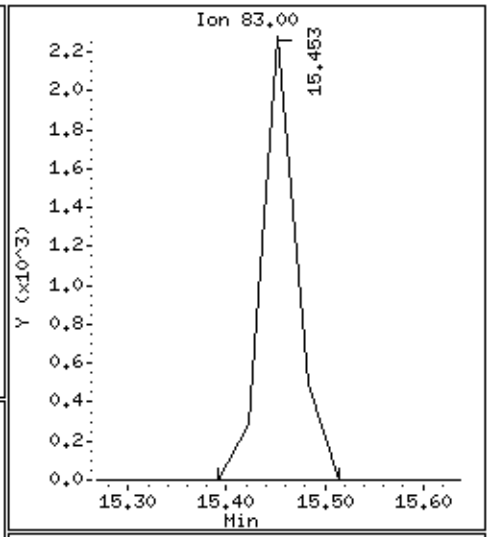
Column phase: RTX-624

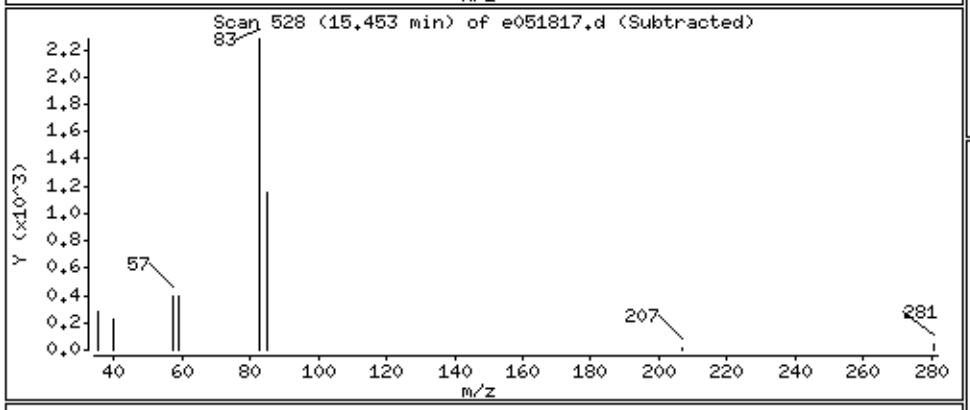
Column diameter: 0.32

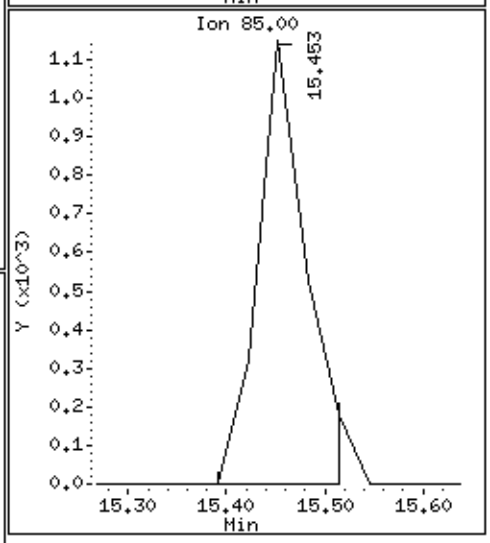
100 Chloroform

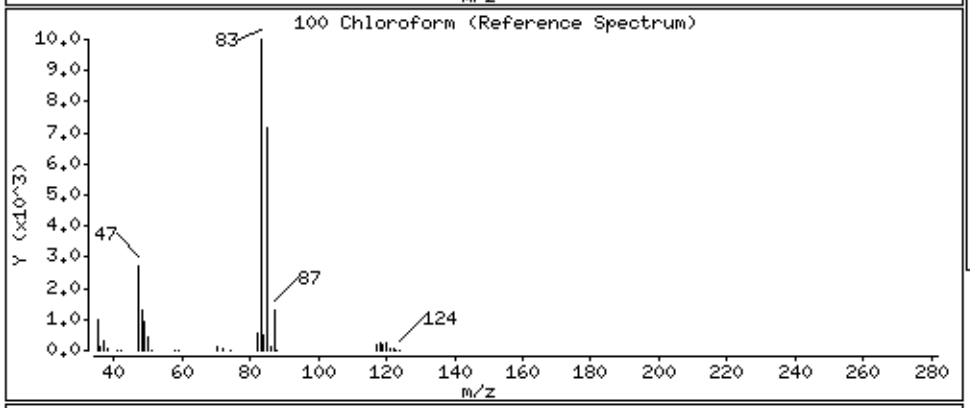
Concentration: 0.09523 PPBV

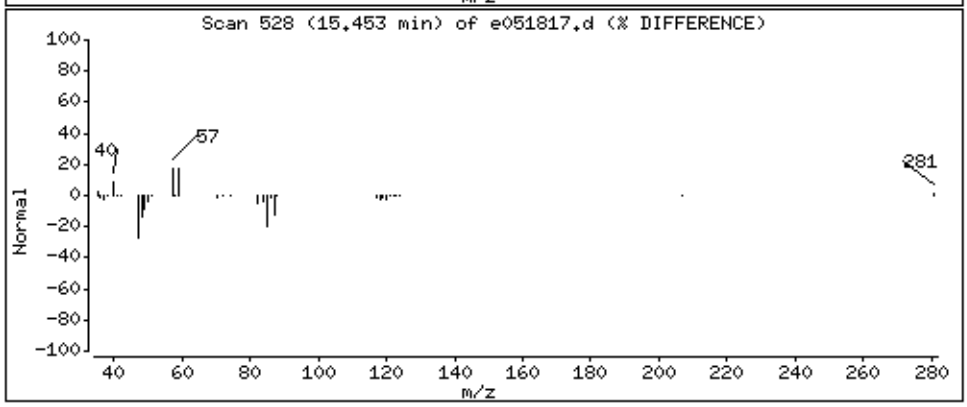












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

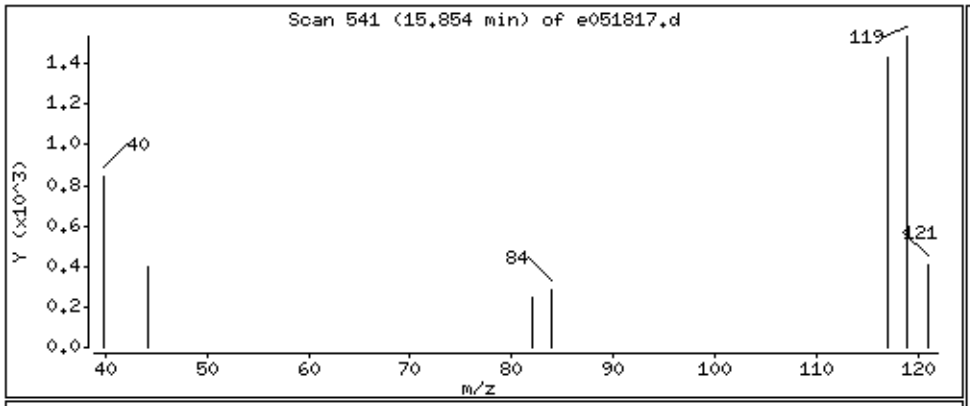
Operator: ea

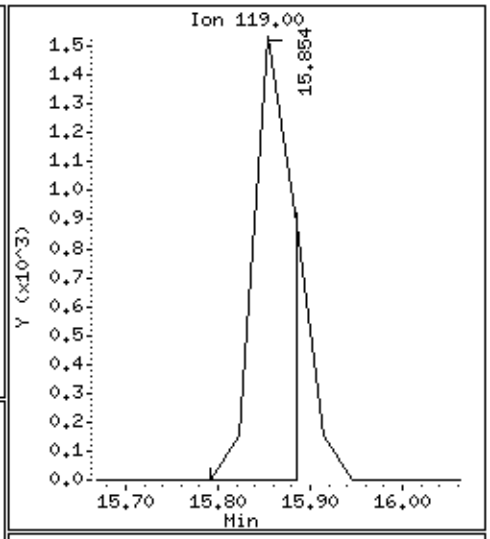
Column phase: RTX-624

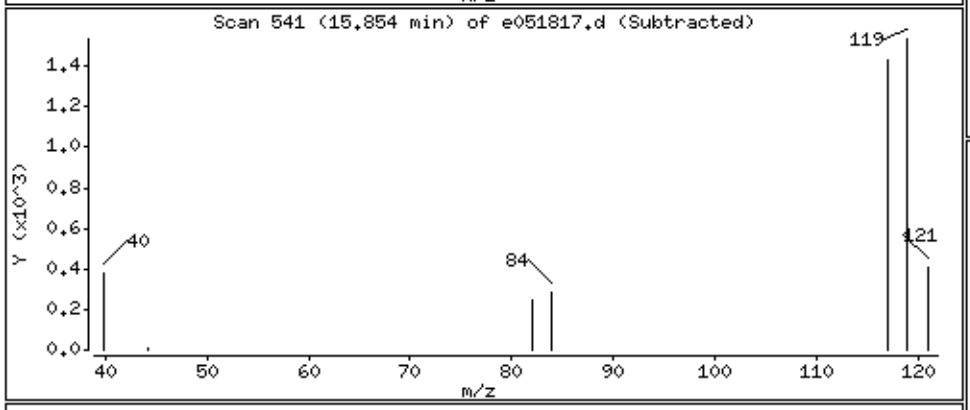
Column diameter: 0.32

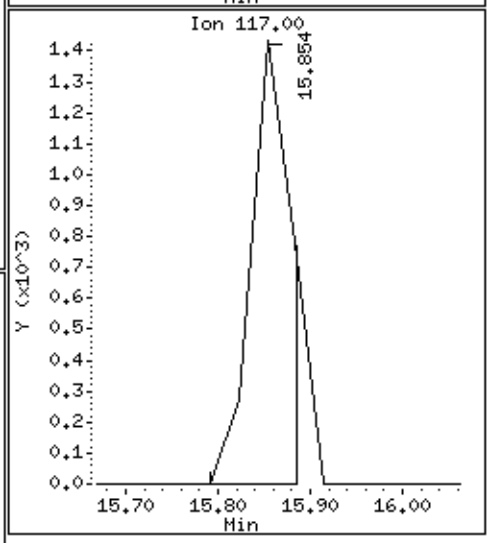
106 Carbon Tetrachloride

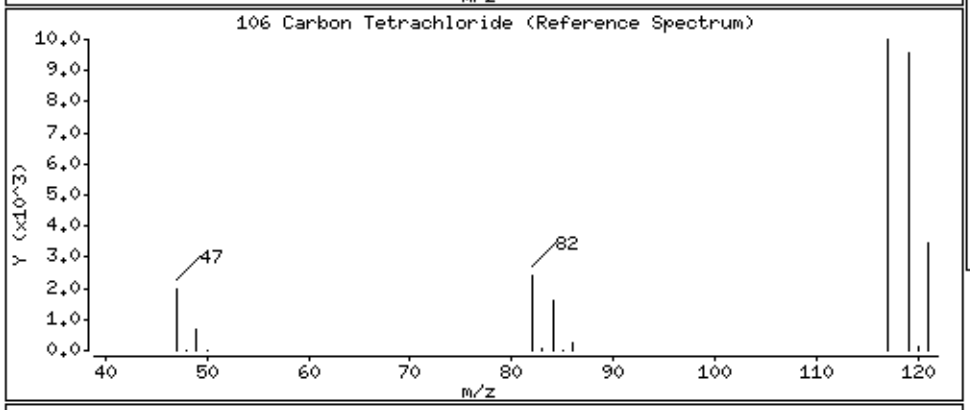
Concentration: 0.07028 PPBV

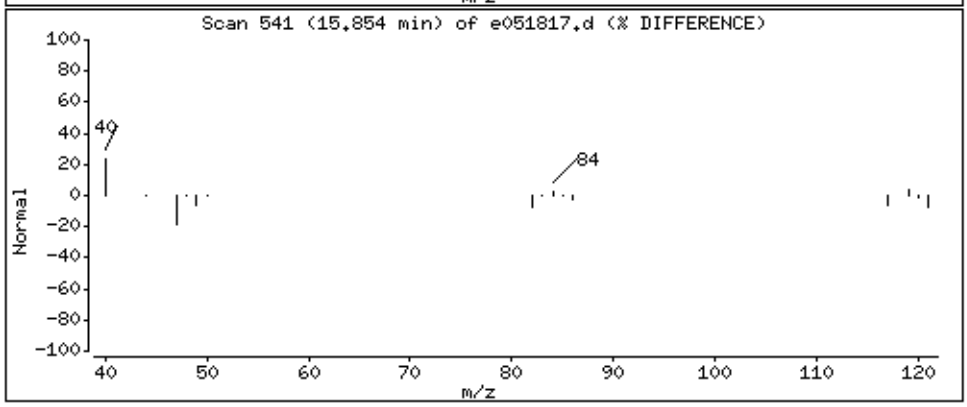












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

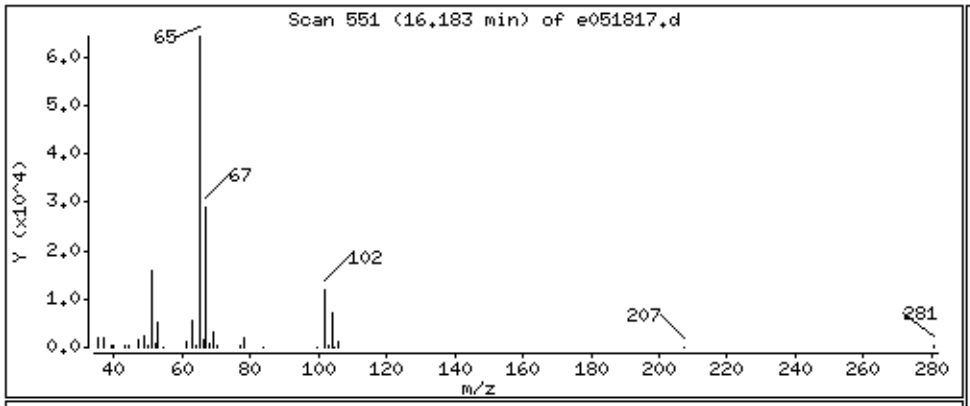
Operator: ea

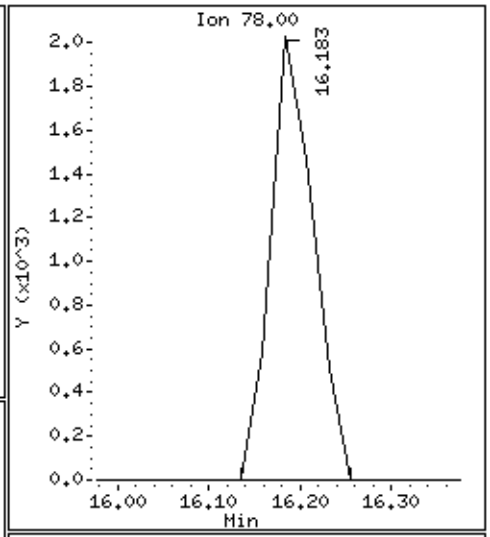
Column phase: RTX-624

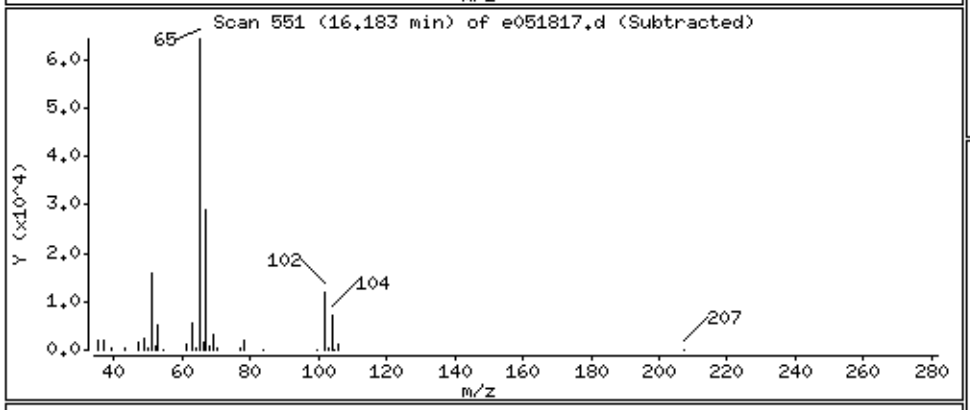
Column diameter: 0.32

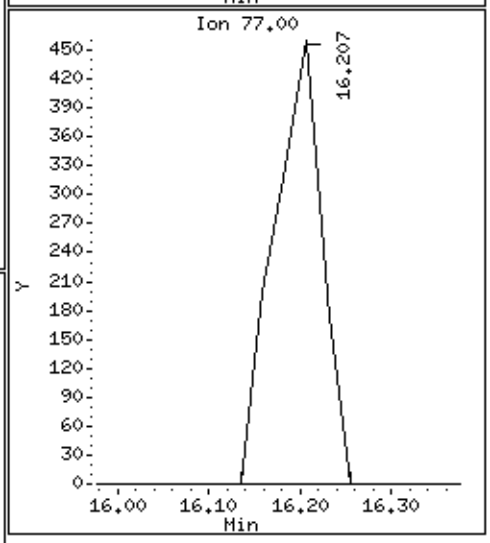
116 Benzene

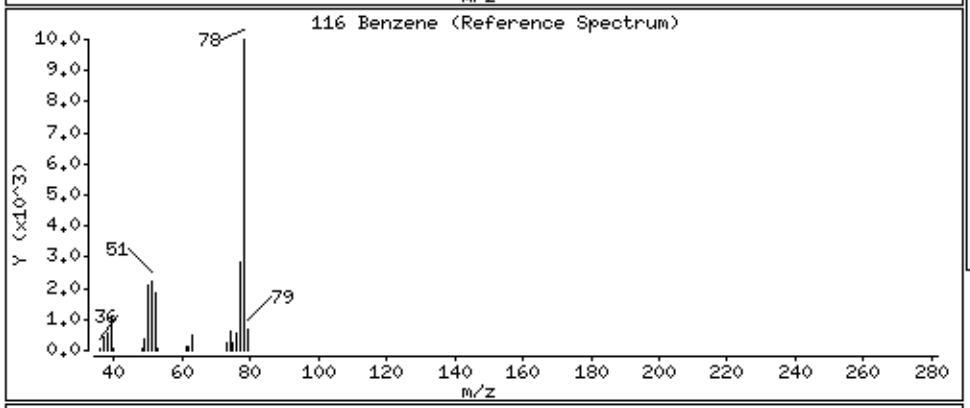
Concentration: 0.08982 PPBV

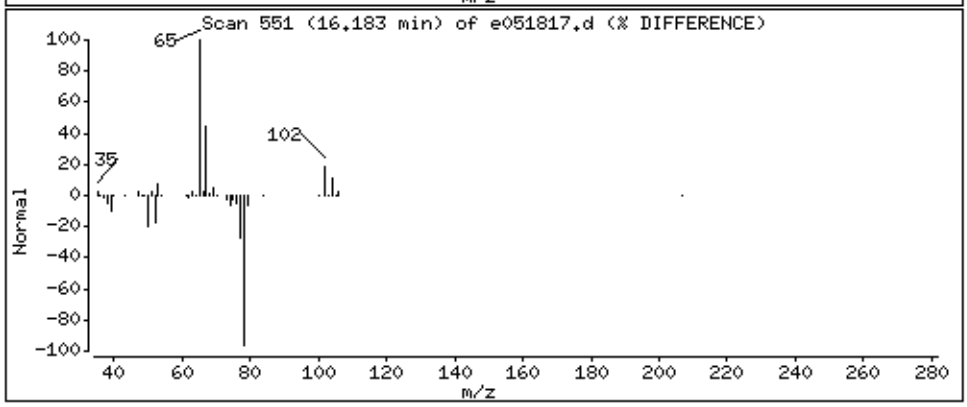












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

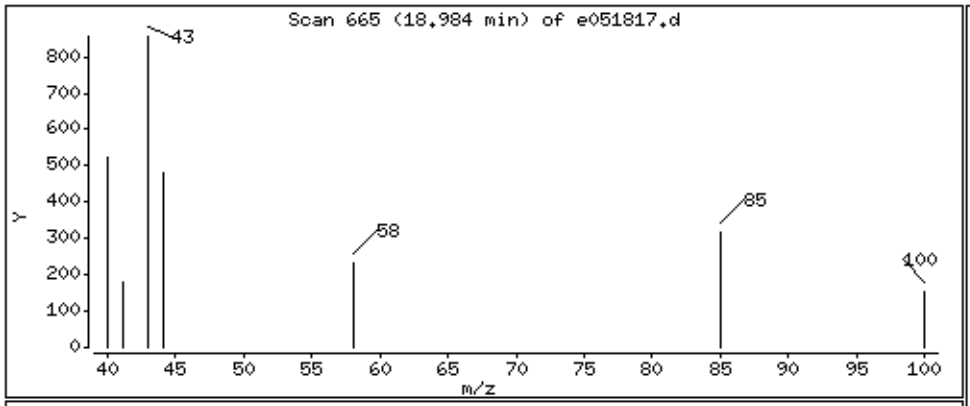
Operator: ea

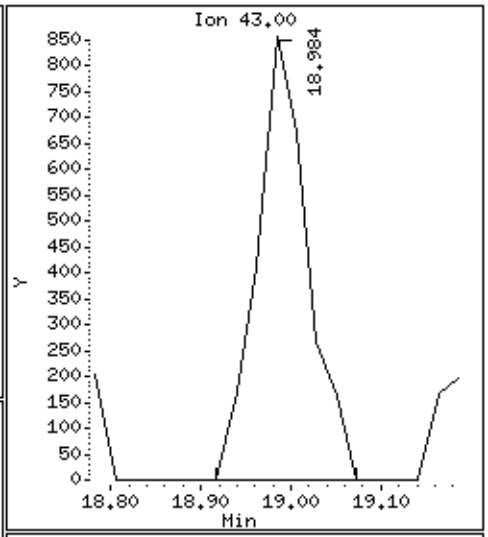
Column phase: RTX-624

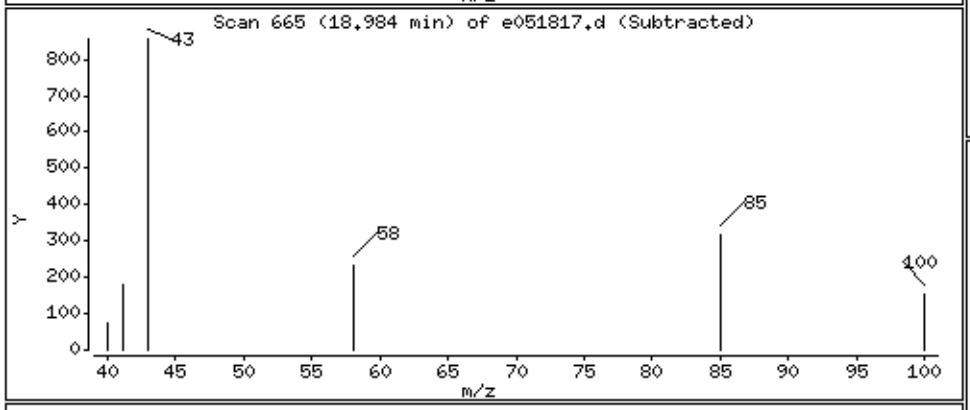
Column diameter: 0.32

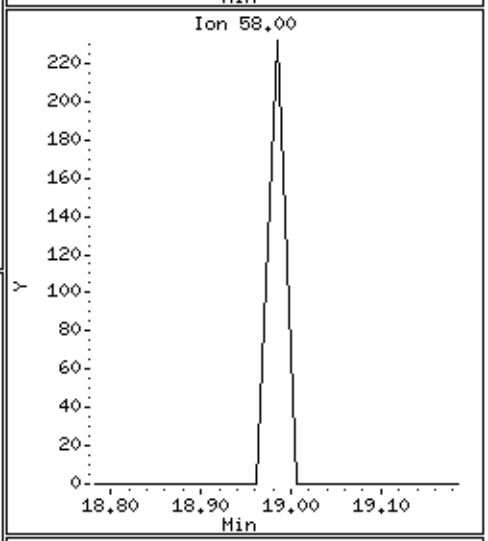
145 4-Methyl-2-pentanone

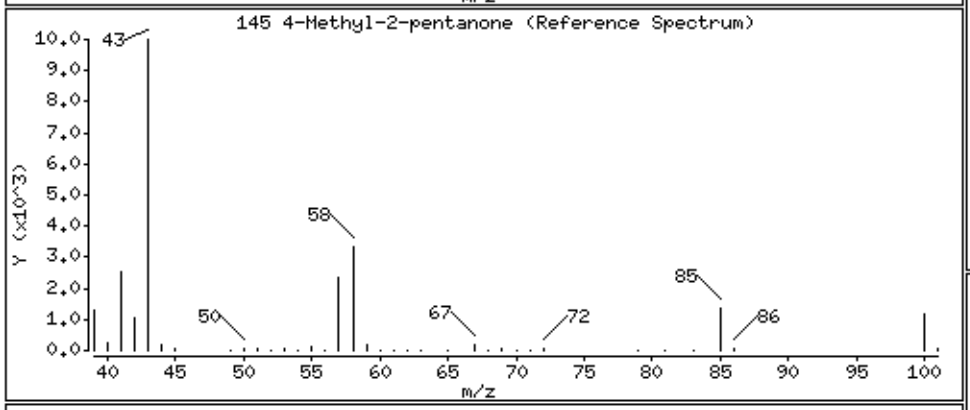
Concentration: 0.08980 PPBV

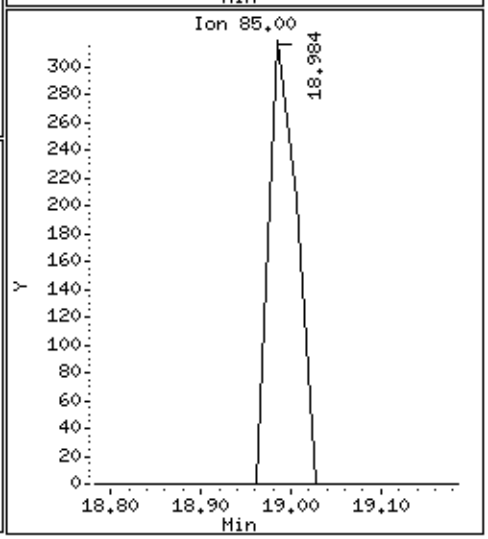


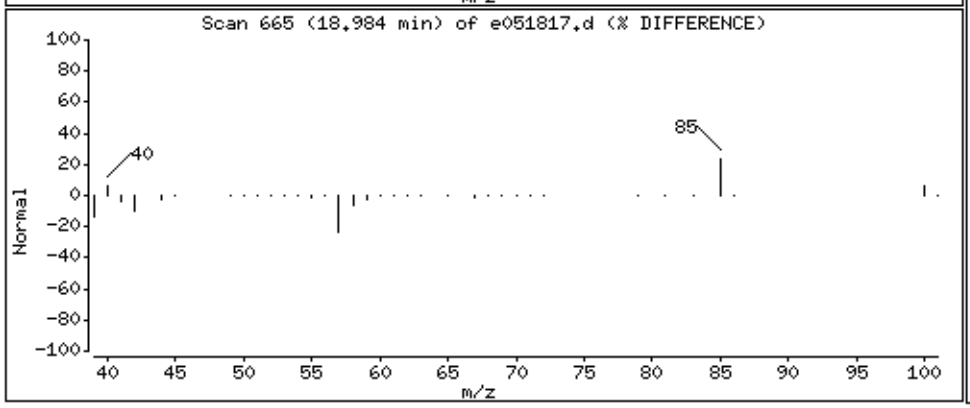












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

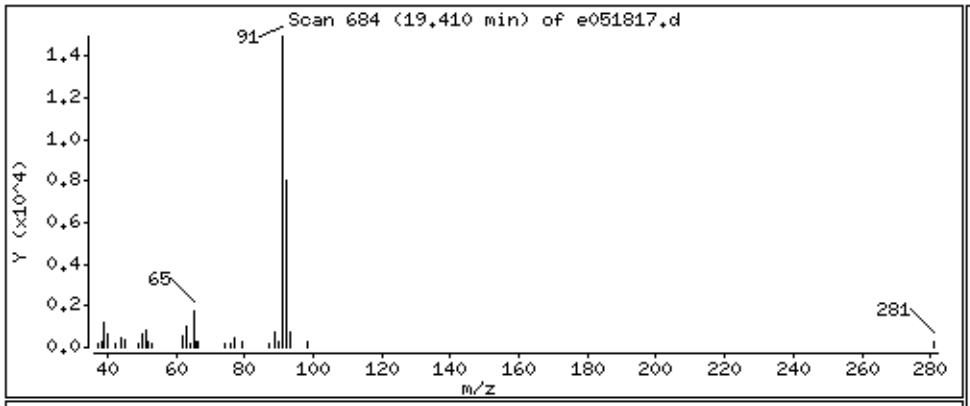
Operator: ea

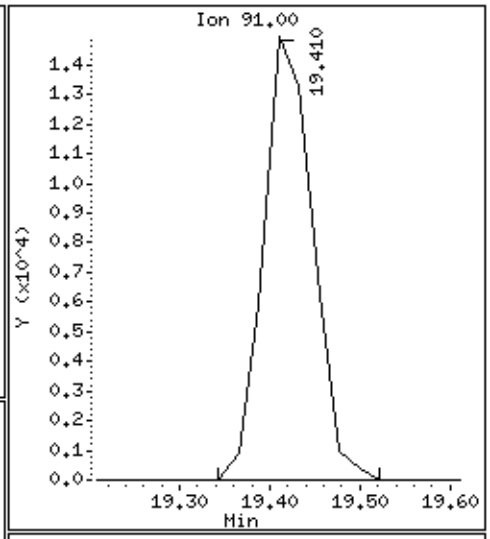
Column phase: RTX-624

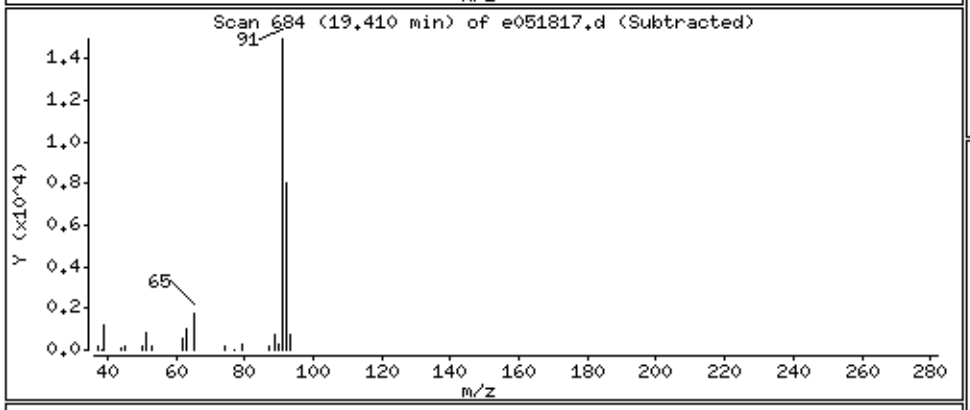
Column diameter: 0.32

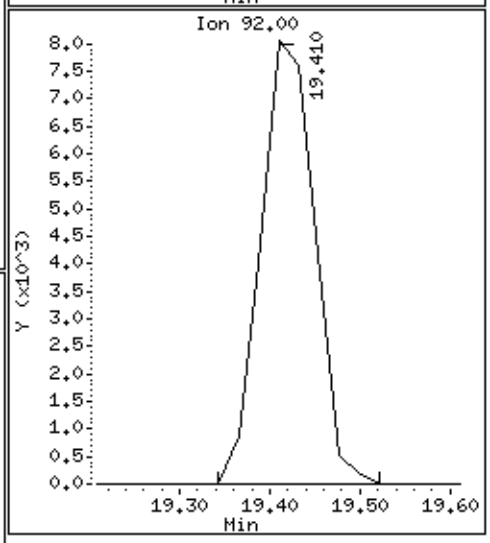
147 Toluene

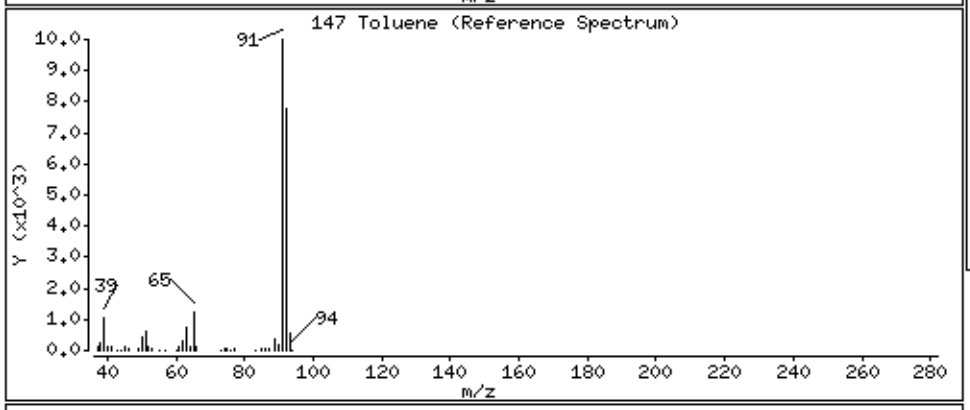
Concentration: 0.6532 PPBV

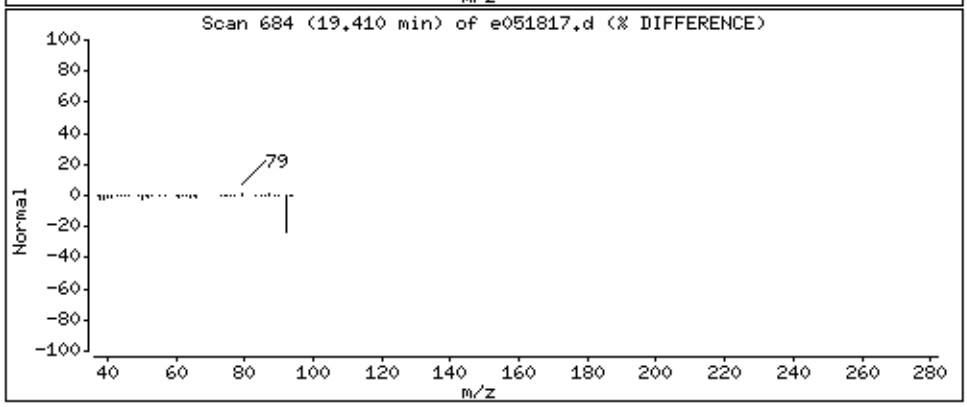












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

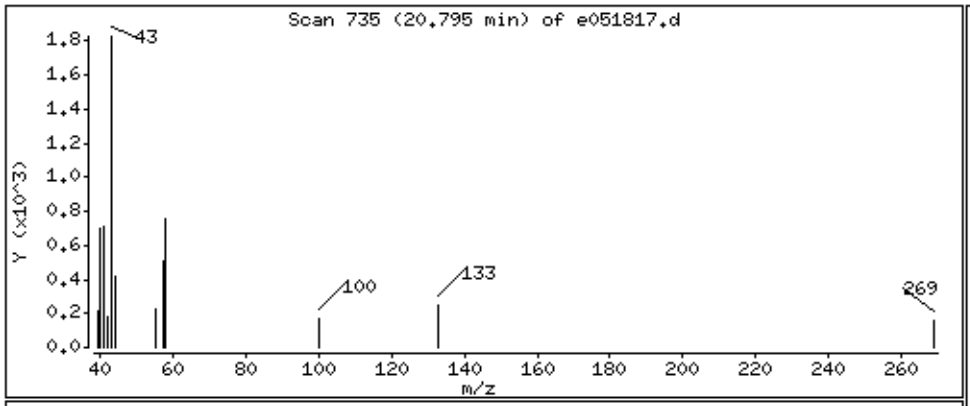
Operator: ea

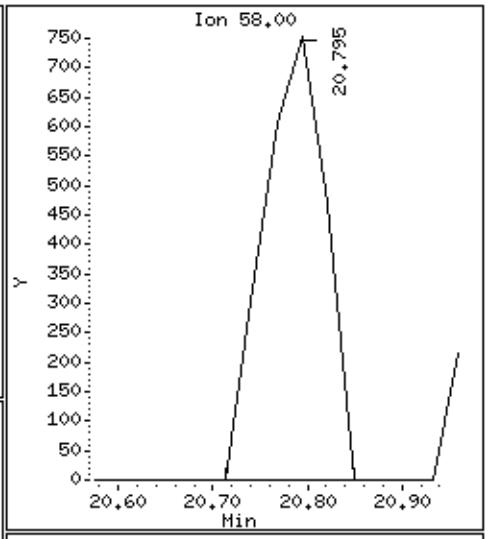
Column phase: RTX-624

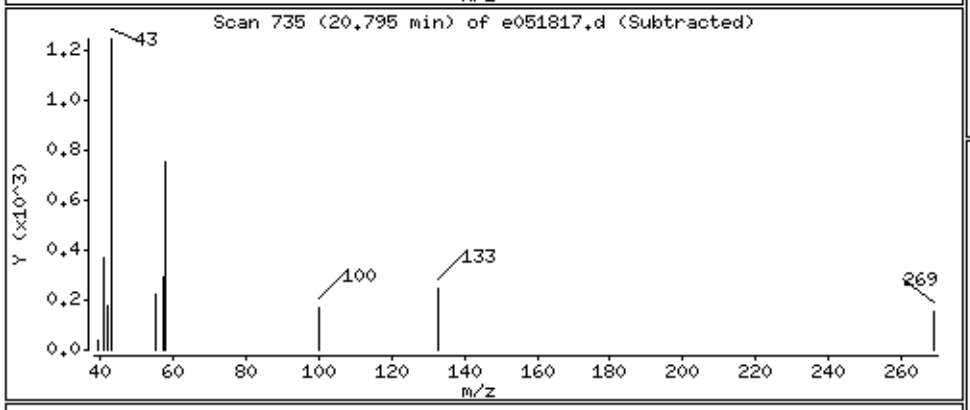
Column diameter: 0.32

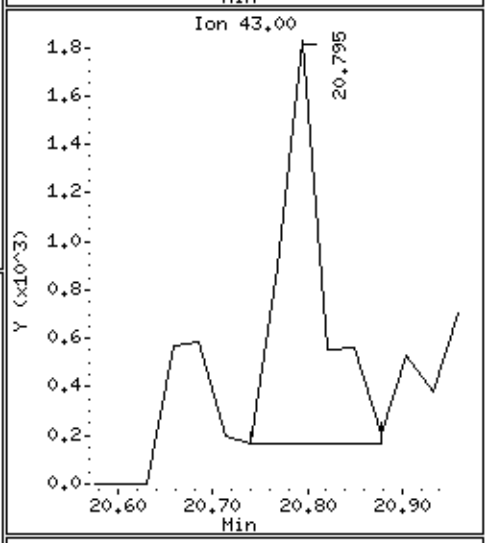
158 2-Hexanone

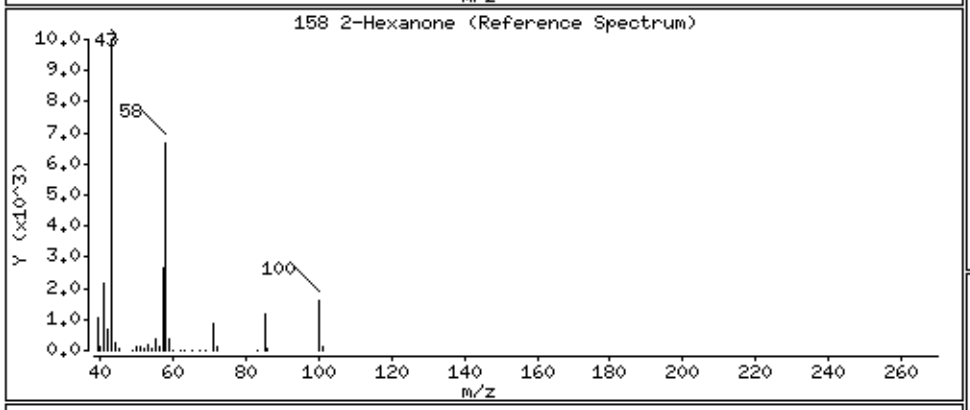
Concentration: 0.1570 PPBV

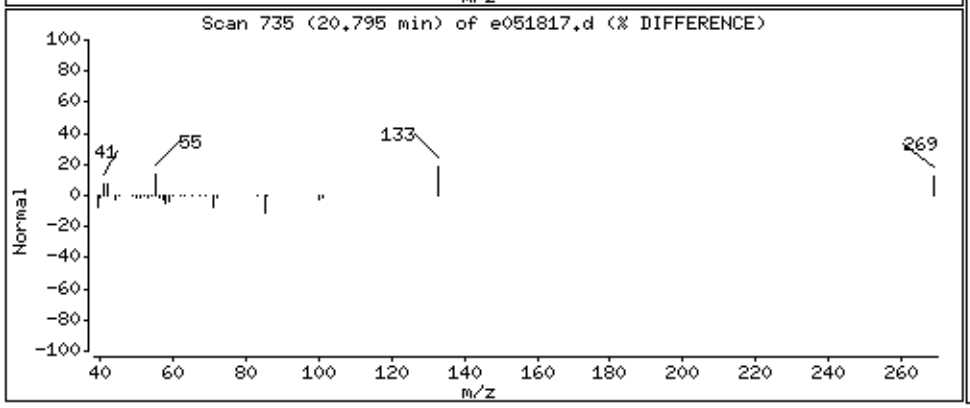


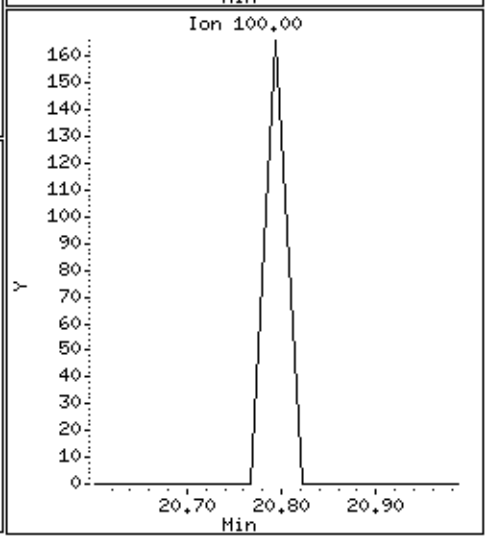












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

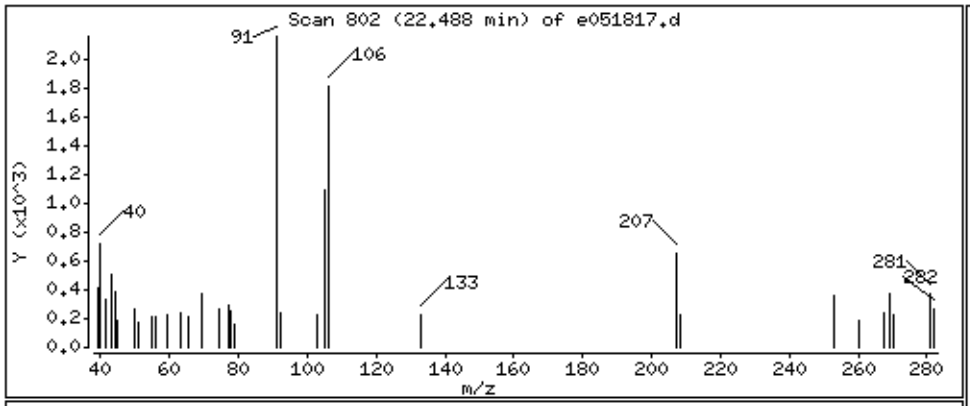
Operator: ea

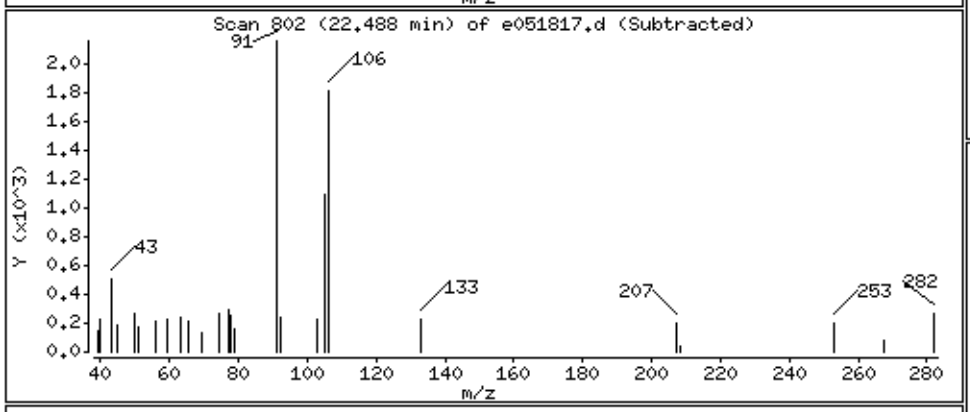
Column phase: RTX-624

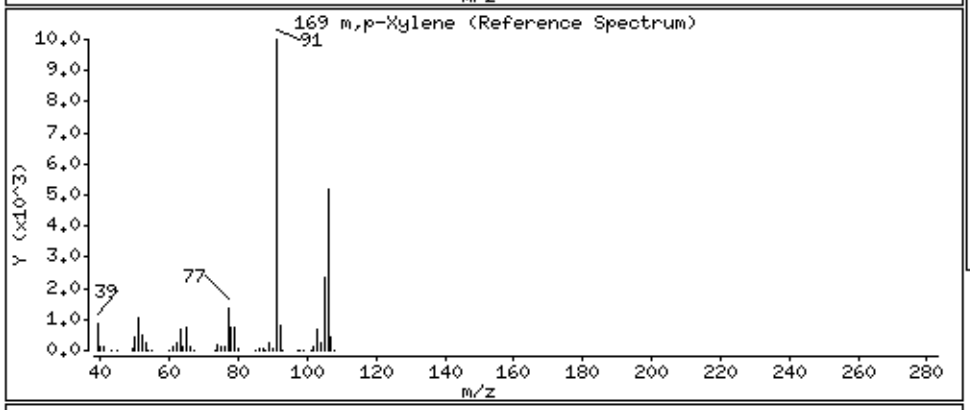
Column diameter: 0.32

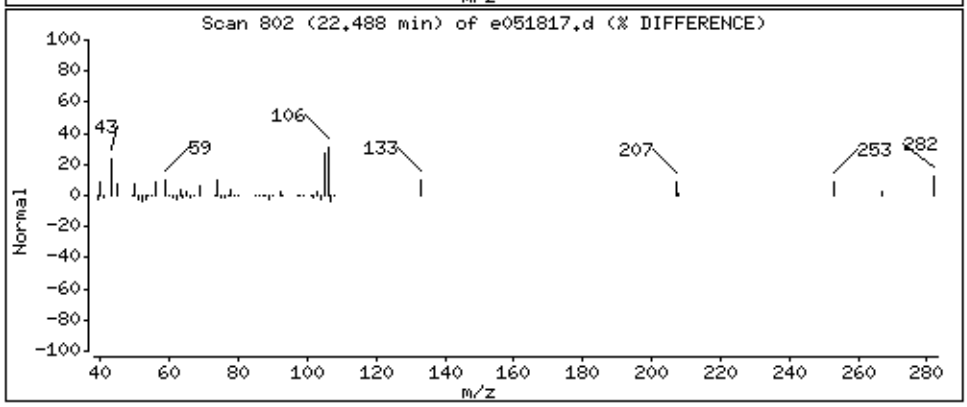
169 m,p-Xylene

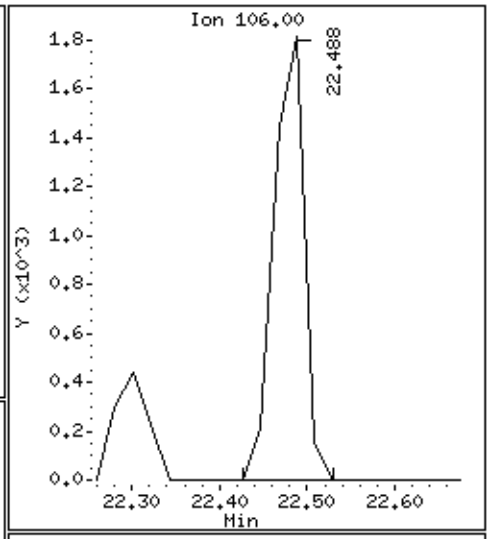
Concentration: 0.1020 PPBV

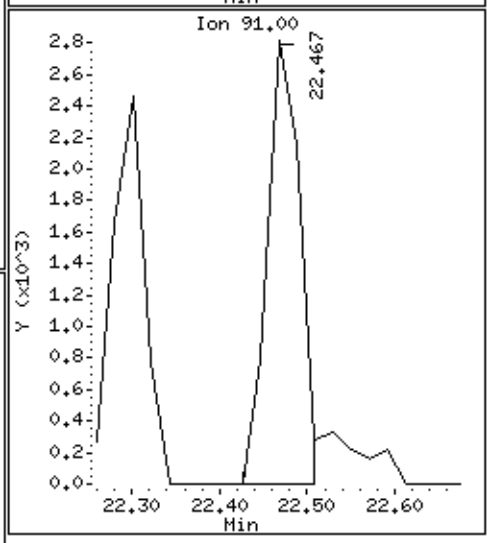












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

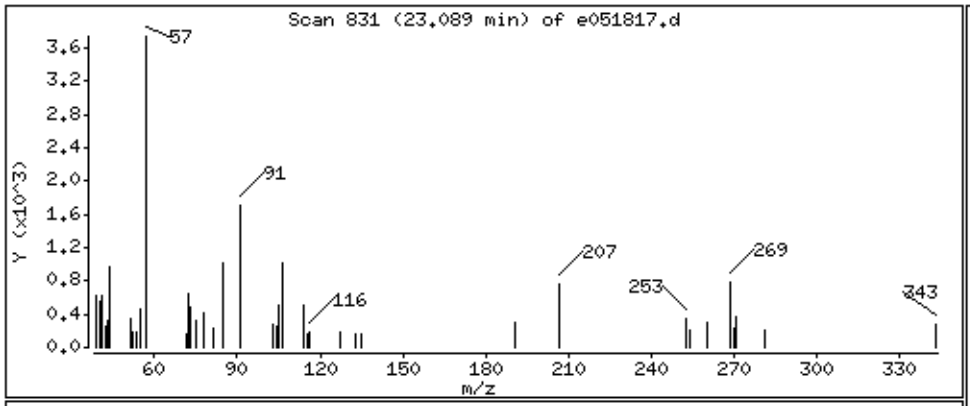
Operator: ea

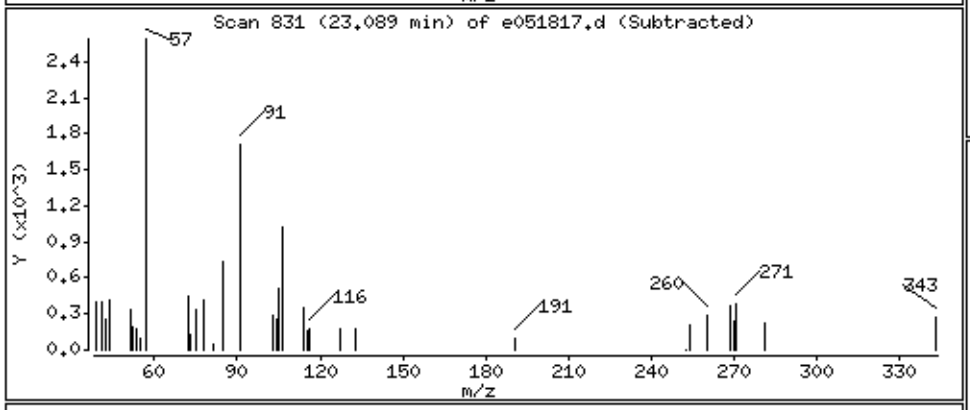
Column phase: RTX-624

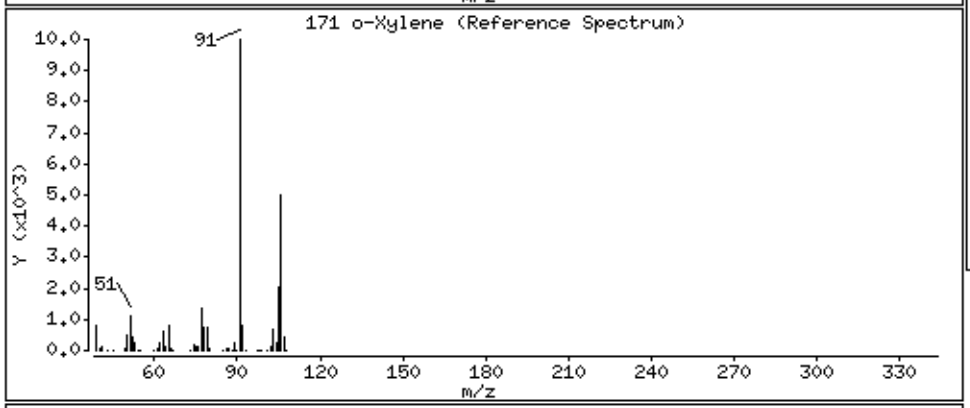
Column diameter: 0.32

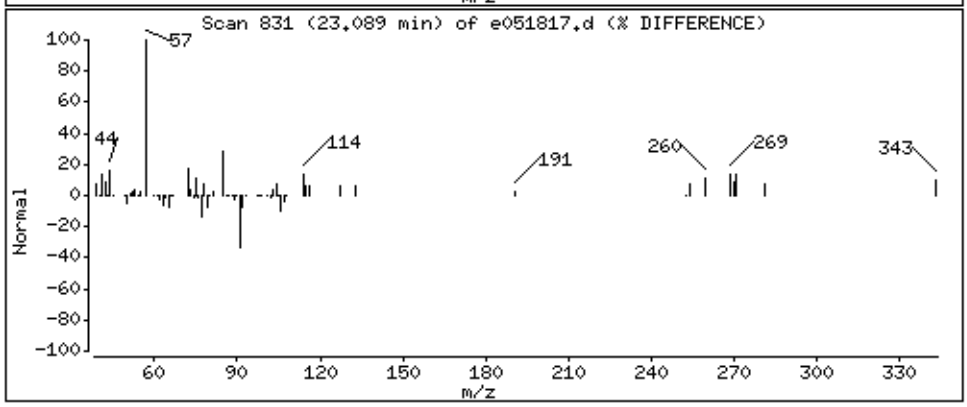
171 o-Xylene

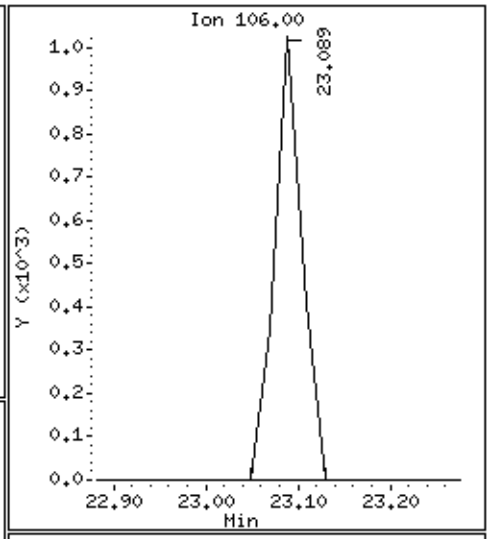
Concentration: 0.05464 PPBV

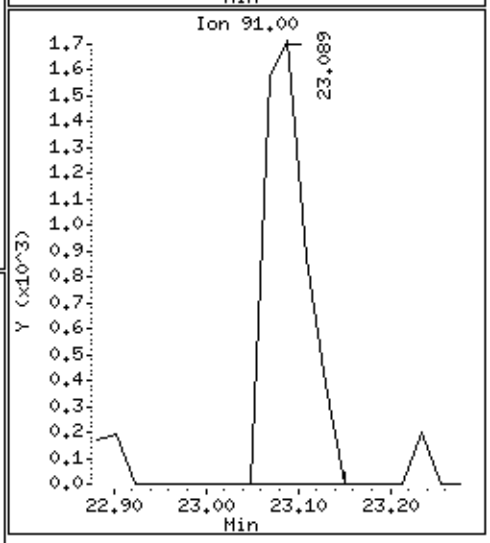












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

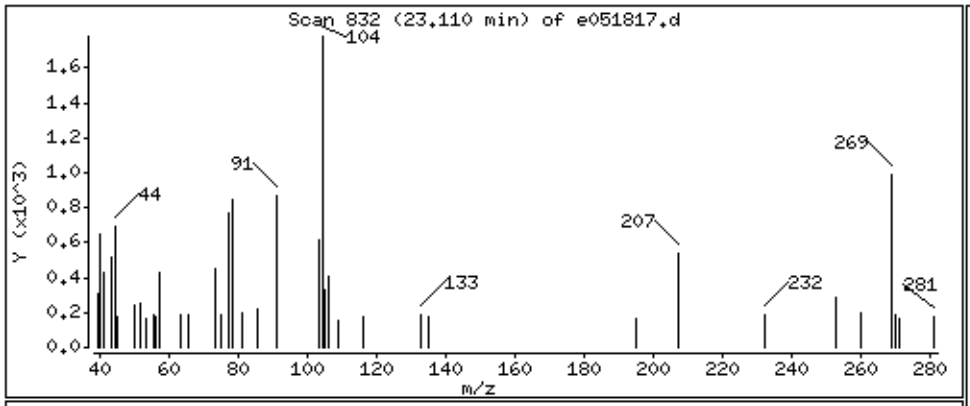
Operator: ea

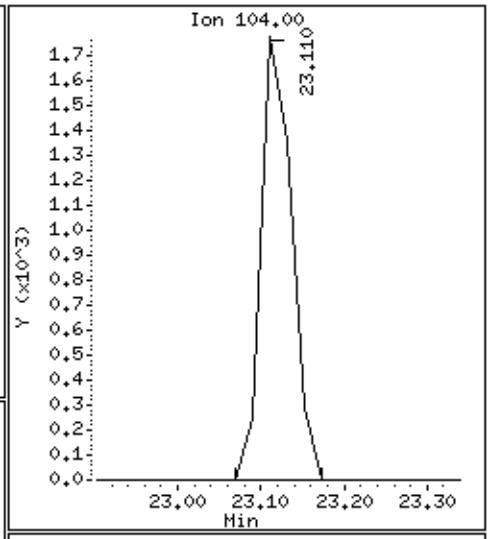
Column phase: RTX-624

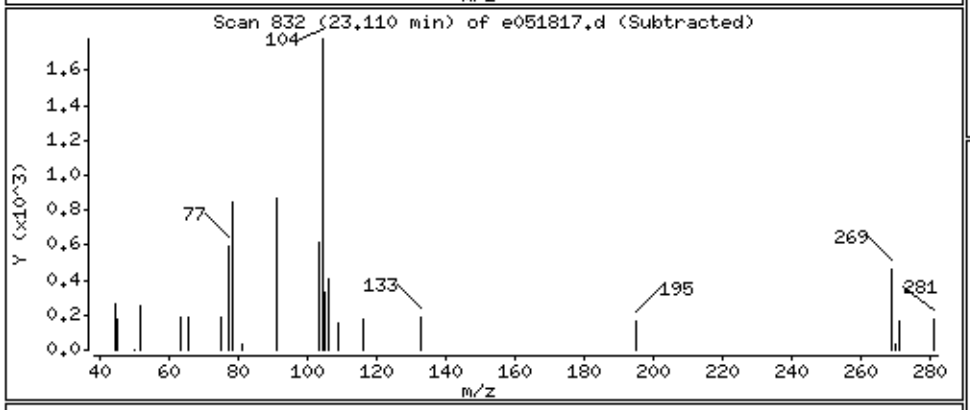
Column diameter: 0.32

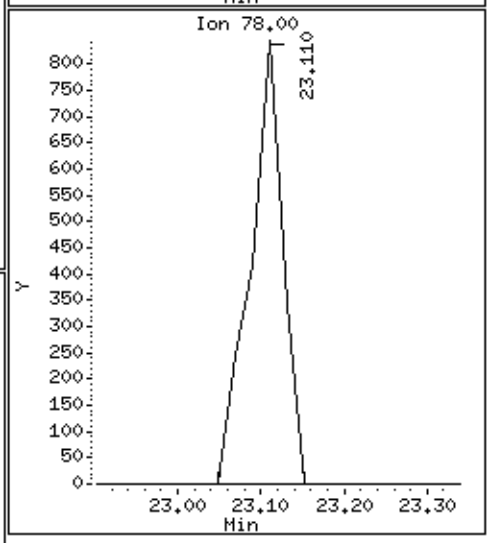
172 Styrene

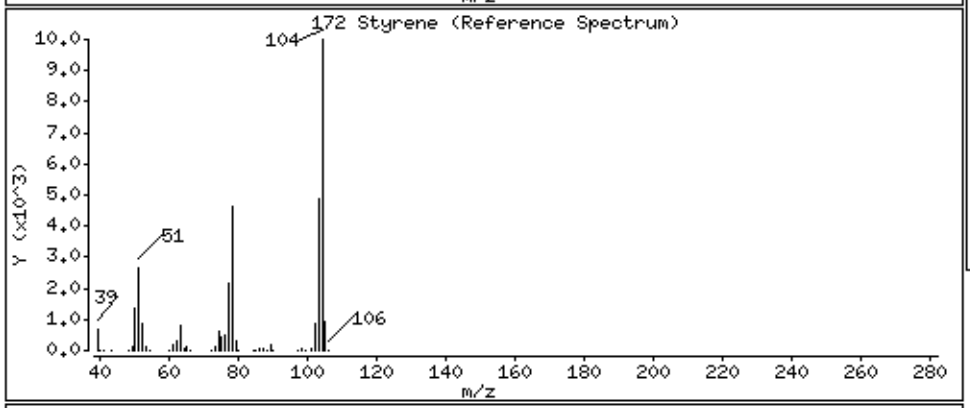
Concentration: 0.06673 PPBV

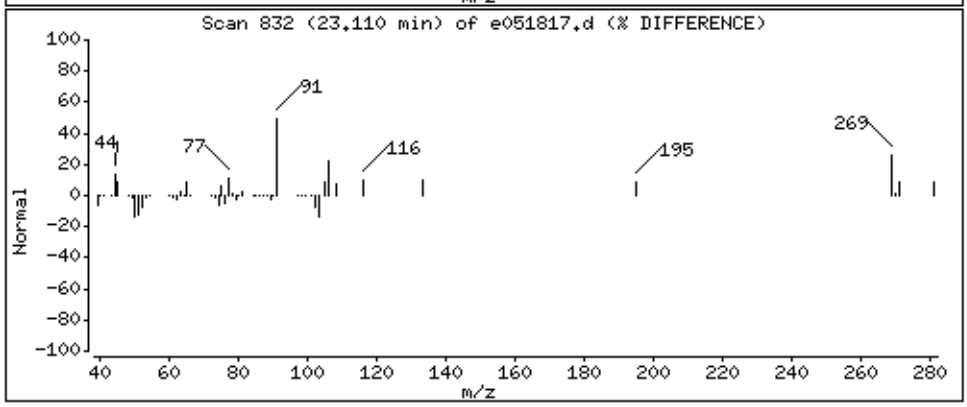












Data File: /chem/msde.i/18May2016.b/e051817.d

Date : 18-MAY-2016 20:59

Client ID:

Instrument: msde.i

Sample Info: 250mL#00355

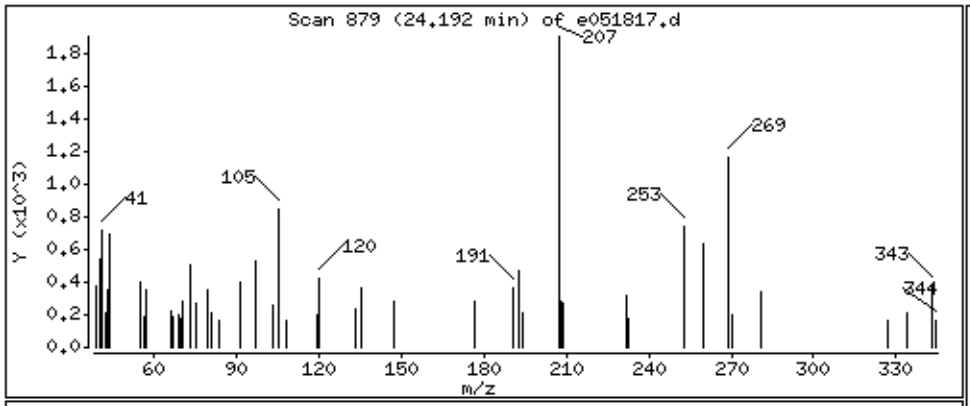
Operator: ea

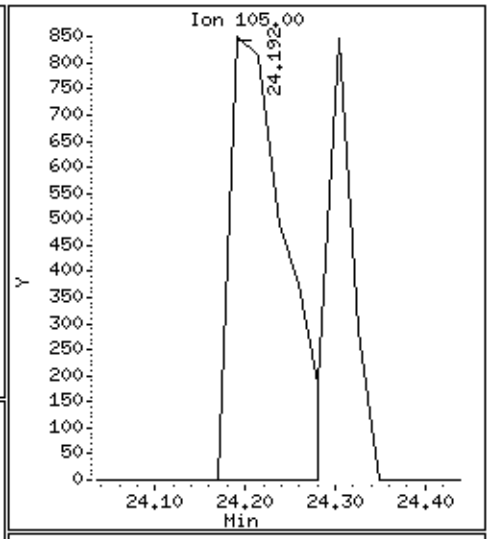
Column phase: RTX-624

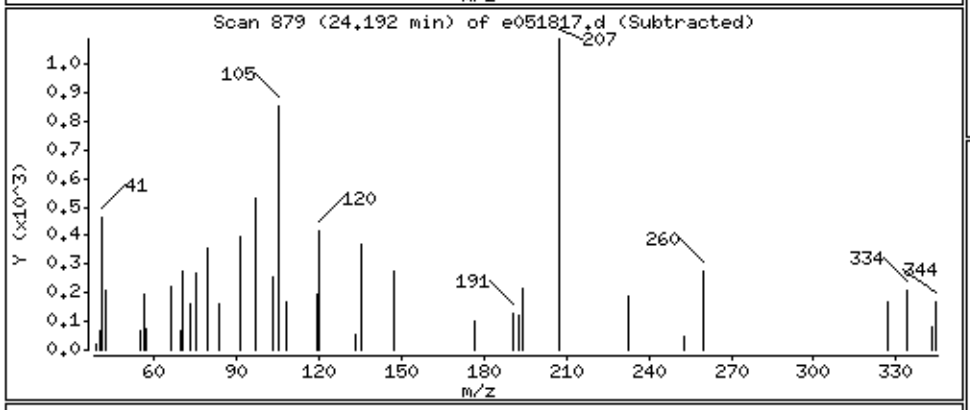
Column diameter: 0.32

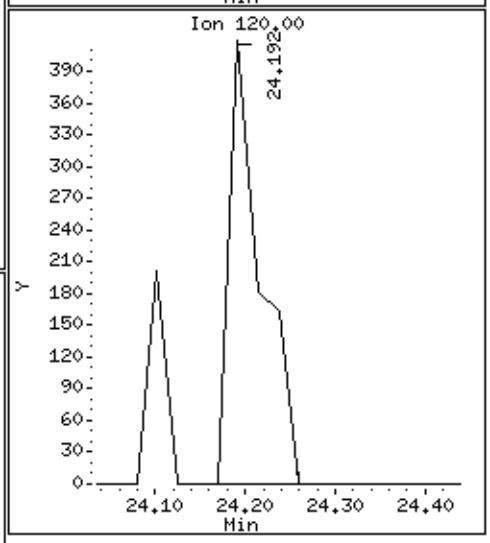
188 4-Ethyltoluene

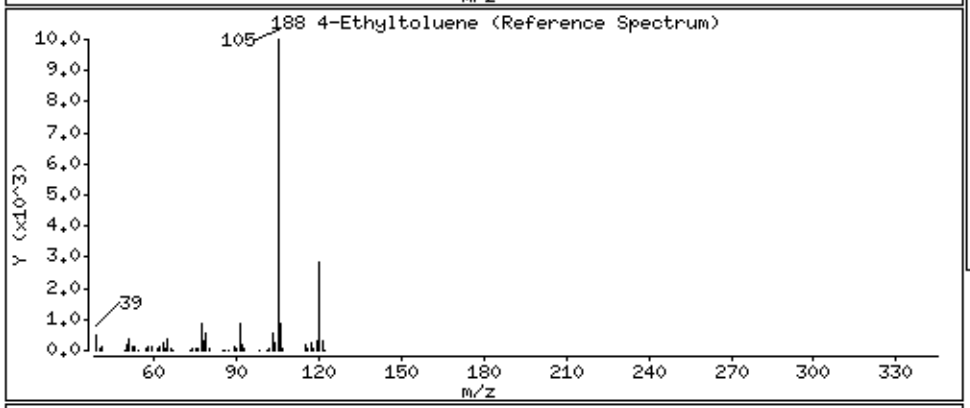
Concentration: 0.02969 PPBV

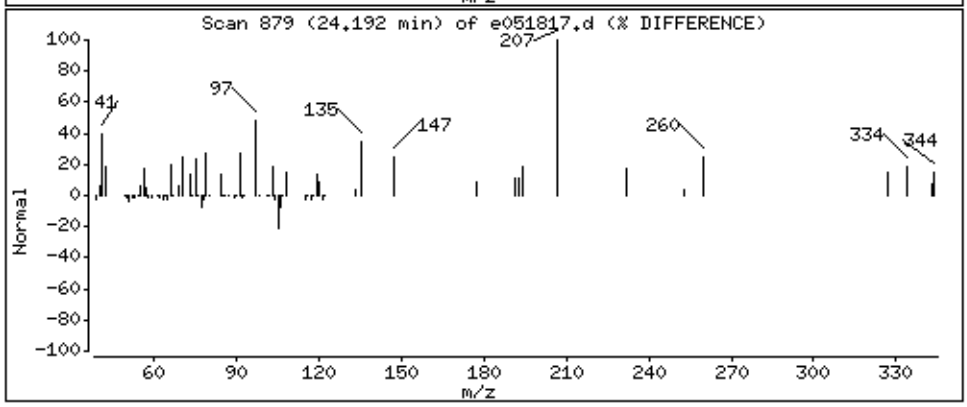












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B7IA-2

Lab ID#: 1605308D-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.21	0.39	1.0	1.9
Chloromethane	1.0	0.57 J	2.1	1.2 J
Freon 11	0.21	3.1	1.2	17
Ethanol	1.0	25	2.0	47
Freon 113	0.21	0.063 J	1.6	0.48 J
Acetone	1.0	15	2.4	36
2-Propanol	1.0	7.8	2.5	19
Carbon Disulfide	1.0	0.47 J	3.2	1.5 J
Methylene Chloride	0.41	0.12 J	1.4	0.44 J
2-Butanone (Methyl Ethyl Ketone)	1.0	1.6	3.0	4.8
Chloroform	0.21	0.15 J	1.0	0.72 J
Carbon Tetrachloride	0.21	0.060 J	1.3	0.38 J
Benzene	0.21	0.12 J	0.66	0.39 J
Toluene	0.21	0.64	0.78	2.4
2-Hexanone	1.0	0.17 J	4.2	0.69 J
Ethyl Benzene	0.21	0.062 J	0.90	0.27 J
m,p-Xylene	0.21	0.21	0.90	0.90
o-Xylene	0.21	0.079 J	0.90	0.34 J
Styrene	0.21	0.22	0.88	0.94
4-Ethyltoluene	0.21	0.045 J	1.0	0.22 J
1,3,5-Trimethylbenzene	0.21	0.043 J	1.0	0.21 J
1,2,4-Trimethylbenzene	0.21	0.065 J	1.0	0.32 J
Naphthalene	1.0	0.042 J	5.4	0.22 J

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Client Sample ID: B7IA-2

Lab ID#: 1605308D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051815**	**Date of Collection:**	**5/14/16 8:25:00 PM**
Dil. Factor:	**2.07**	**Date of Analysis:**	**5/18/16 07:15 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.21	0.39	1.0	1.9
Freon 114	0.21	Not Detected	1.4	Not Detected
Chloromethane	1.0	0.57 J	2.1	1.2 J
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.21	3.1	1.2	17
Ethanol	1.0	25	2.0	47
Freon 113	0.21	0.063 J	1.6	0.48 J
1,1-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Acetone	1.0	15	2.4	36
2-Propanol	1.0	7.8	2.5	19
Carbon Disulfide	1.0	0.47 J	3.2	1.5 J
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	0.12 J	1.4	0.44 J
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Hexane	0.21	Not Detected	0.73	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.84	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	1.6	3.0	4.8
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Tetrahydrofuran	1.0	Not Detected UJ	3.0	Not Detected UJ
Chloroform	0.21	0.15 J	1.0	0.72 J
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	0.21	Not Detected	0.71	Not Detected
Carbon Tetrachloride	0.21	0.060 J	1.3	0.38 J
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.21	0.12 J	0.66	0.39 J
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	0.21	Not Detected	0.85	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
1,4-Dioxane	0.21	Not Detected	0.74	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.85	Not Detected
Toluene	0.21	0.64	0.78	2.4
trans-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.0	0.17 J	4.2	0.69 J

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Client Sample ID: B7IA-2

Lab ID#: 1605308D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051815**	**Date of Collection:**	**5/14/16 8:25:00 PM**
Dil. Factor:	**2.07**	**Date of Analysis:**	**5/18/16 07:15 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.95	Not Detected
Ethyl Benzene	0.21	0.062 J	0.90	0.27 J
m,p-Xylene	0.21	0.21	0.90	0.90
o-Xylene	0.21	0.079 J	0.90	0.34 J
Styrene	0.21	0.22	0.88	0.94
Bromoform	0.21	Not Detected	2.1	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	0.045 J	1.0	0.22 J
1,3,5-Trimethylbenzene	0.21	0.043 J	1.0	0.21 J
1,2,4-Trimethylbenzene	0.21	0.065 J	1.0	0.32 J
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.7	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected
Naphthalene	1.0	0.042 J	5.4	0.22 J

J = Estimated value.
UJ = Analyte associated with low bias in the CCV.
Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051815.d
Lab Smp Id: 1605308D-03A
Inj Date : 18-MAY-2016 19:15
Operator : ea Inst ID: msde.i
Smp Info : 250mL#N0593
Misc Info : 10.6"hg-5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1
Dil Factor: 2.07000
Integrator: HP RTE Compound Sublist: TO15NMDL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	21588	0.18941	0.3921	80.00- 120.00	100.00(M)
5.244	5.196 (0.341)	87	6261			2.00- 62.00	29.00
17 Chloromethane					CAS #: 74-87-3		
6.956	6.932 (0.452)	50	5989	0.27694	0.5733	80.00- 120.00	100.00(a)
6.932	6.932 (0.450)	52	2053			5.50- 65.50	34.28
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	183766	1.49738	3.100	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	120169			37.17- 97.17	65.39
42 Ethanol					CAS #: 64-17-5		
11.680	11.661 (0.759)	45	106562	11.9829	24.805	80.00- 120.00	100.00
11.680	11.680 (0.759)	46	40953			6.61- 66.61	38.43
11.680	11.661 (0.759)	43	25941			0.00- 54.66	24.34
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	2802	0.03047	0.06306	80.00- 120.00	100.00(a)
12.100	12.080 (0.786)	153	1622			33.64- 93.64	57.91

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

   49 Freon 113 (continued)
 12.081  12.080 (0.785)   101      2237                    80.40- 140.40    79.85
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.366  12.366 (0.803)    58    109703 7.31508   15.142  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    360710                  321.47- 381.47   328.81
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.442  12.442 (0.808)    76     26021 0.22765   0.4712  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.728  12.709 (0.827)    45    173775 3.78788    7.841  80.00- 120.00   100.00
 12.728  12.709 (0.827)    43     44802                     0.00-  54.09    25.78
 12.728  12.709 (0.827)    59      7941                     0.00-  34.43     4.57
-------------------------------------------------------------------------------
   66 Methylene Chloride                          CAS #: 75-09-2
 13.149  13.149 (0.854)    84      2176 0.06055   0.1253  80.00- 120.00   100.00(a)
 13.149  13.149 (0.854)    49      2003                    63.99- 123.99    92.05
  0.000  13.149 (0.000)    51         0                     0.29-  60.29     0.00
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72     14239 0.78824    1.632  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     48100                   262.26- 322.26   337.80
 15.047  15.047 (0.978)    57      4499                     0.00-  55.71    31.60
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    135509 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107304                   52.25- 112.25    79.19
 15.391  15.391 (1.000)    49     96891                   89.81- 149.81    71.50
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83      6950 0.07104   0.1470  80.00- 120.00   100.00(a)
 15.453  15.453 (1.004)    85      6121                    33.97-  93.97    88.08
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.853 (1.030)   119      3247 0.02913  0.06030  80.00- 120.00   100.00(a)
  0.000  15.853 (0.000)   117         0                   74.09- 134.09     0.00
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.183  16.183 (0.967)    78      7099 0.05895   0.1220  80.00- 120.00   100.00(a)
 16.183  16.183 (0.967)    77      1569                     0.00-  53.97    22.10
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    186405 4.79168    4.792  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     87691                   21.16-  81.16    47.04
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	502525	5.00000		80.00- 120.00	100.00
16.737	16.713 (1.000)	88	70681			0.00- 45.20	14.07
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	484164	4.90571	4.906	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	49750			0.00- 40.11	10.28
19.275	19.275 (1.152)	100	324043			37.58- 97.58	66.93
147 Toluene					CAS #: 108-88-3		
19.432	19.410 (1.161)	91	44345	0.30916	0.6400	80.00- 120.00	100.00
19.410	19.410 (1.160)	92	24099			28.92- 88.92	54.35
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.767 (0.938)	58	2970	0.08122	0.1681	80.00- 120.00	100.00(a)
20.795	20.767 (0.938)	43	3631			140.44- 200.44	122.25
20.795	20.795 (0.938)	100	1076			0.00- 59.62	36.24
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	471417	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	225694			20.64- 80.64	47.88
167 Ethyl Benzene					CAS #: 100-41-4		
22.301	22.301 (1.006)	106	1853	0.02983	0.06175	80.00- 120.00	100.00(a)
22.301	22.301 (1.006)	91	8441			282.51- 342.51	455.44
169 m,p-Xylene					CAS #: 108-38-3		
22.467	22.467 (1.013)	106	7200	0.09978	0.2065	80.00- 120.00	100.00(a)
22.467	22.467 (1.013)	91	13534			166.46- 226.46	187.98
171 o-Xylene					CAS #: 95-47-6		
23.089	23.089 (1.041)	106	2516	0.03801	0.07869	80.00- 120.00	100.00(a)
23.089	23.089 (1.041)	91	6267			184.01- 244.01	249.06
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.042)	104	11994	0.10709	0.2217	80.00- 120.00	100.00
23.110	23.110 (1.042)	78	4812			20.27- 80.27	40.12
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	322371	4.98368	4.984	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	314910			77.42- 137.42	97.69
23.856	23.856 (1.076)	176	308942			65.38- 125.38	95.83
188 4-Ethyltoluene					CAS #: 622-96-8		
24.192	24.237 (1.091)	105	4369	0.02175	0.04502	80.00- 120.00	100.00(a)
24.192	24.237 (1.091)	120	2202			1.08- 61.08	50.41

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8	
24.304	24.304 (1.096)	105	3214	0.02060	0.04264	80.00- 120.00	100.00(a)
24.304	24.304 (1.096)	120	954			18.44- 78.44	29.68
196 1,2,4-Trimethylbenzene						CAS #: 95-63-6	
24.775	24.775 (1.117)	105	4227	0.03127	0.06473	80.00- 120.00	100.00(a)
24.775	24.775 (1.117)	120	1585			16.20- 76.20	37.50
228 Naphthalene						CAS #: 91-20-3	
27.734	27.712 (1.251)	128	1455	0.02007	0.04154	80.00- 120.00	100.00(a)
27.712	27.734 (1.250)	127	1612			0.00- 46.39	110.81

QC Flag Legend

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

Report Date: 19-May-2016 10:35

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051815.d
Lab Smp Id: 1605308D-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 10.6"hg-5.0psi

Calibration Date: 18-MAY-2016
Calibration Time: 08:43

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	135509	-12.80
123 1,4-Difluorobenze	603874	362324	845424	502525	-16.78
163 Chlorobenzene-d5	522912	313747	732077	471417	-9.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 19-May-2016 10:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 18May2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1605308D-03A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09Bromo.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 10.6"hg-5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.792	95.83	70-130
$ 146 Toluene-d8	5.000	4.906	98.11	70-130
$ 177 4-Bromofluorobenze	5.000	4.984	99.67	70-130

Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

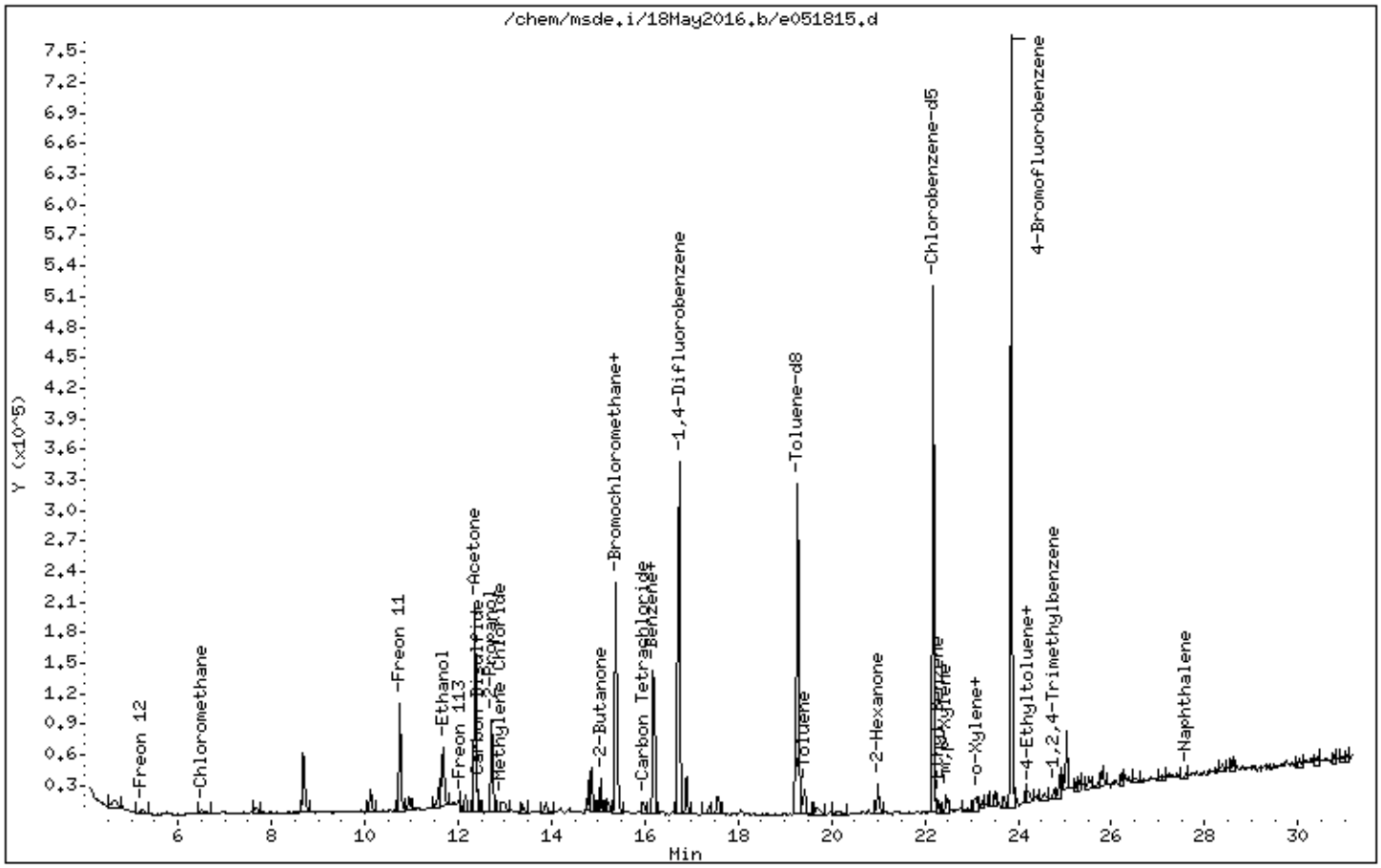
Instrument: msde.i

Sample Info: 250mL#N0593

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

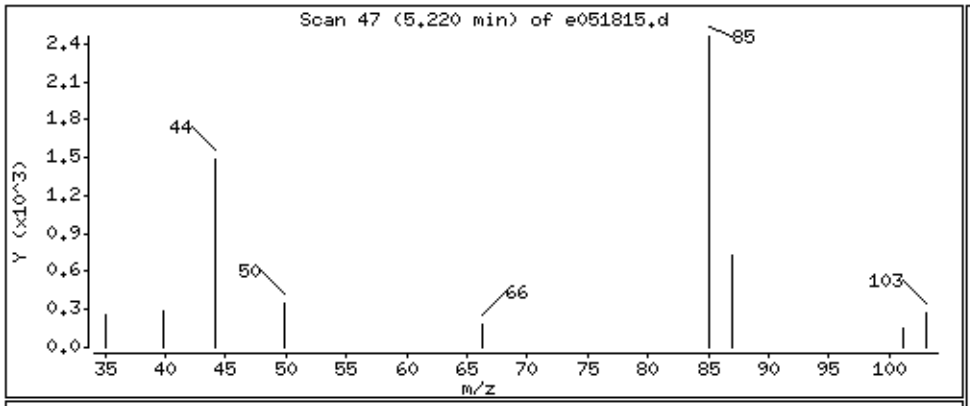
Operator: ea

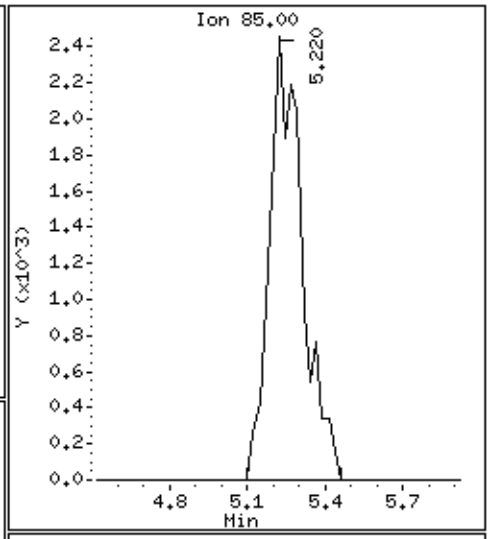
Column phase: RTX-624

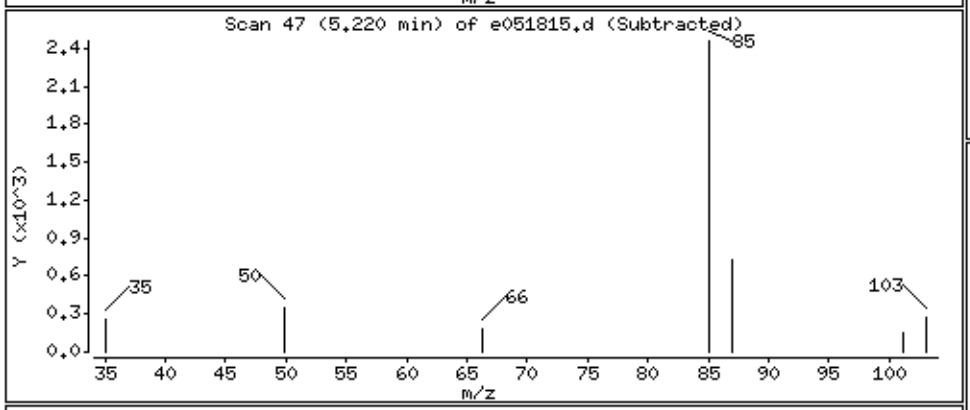
Column diameter: 0.32

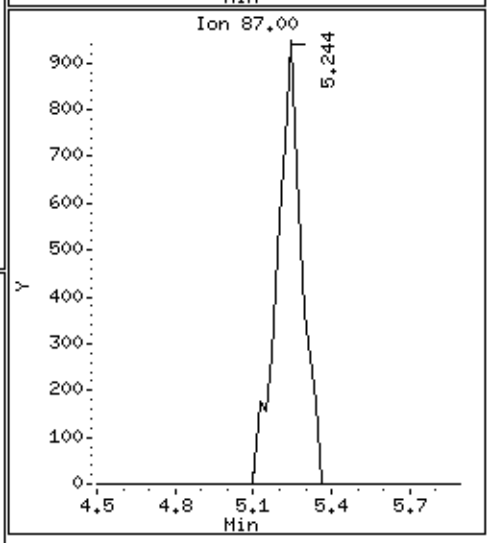
11 Freon 12

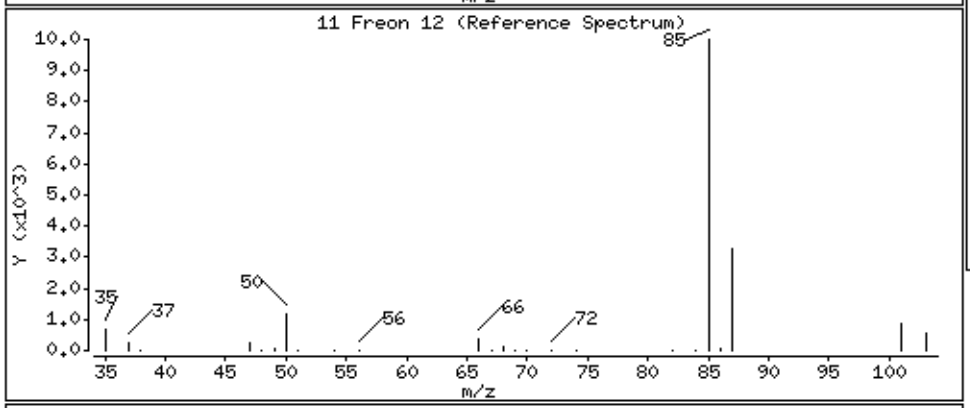
Concentration: 0.3921 PPBV

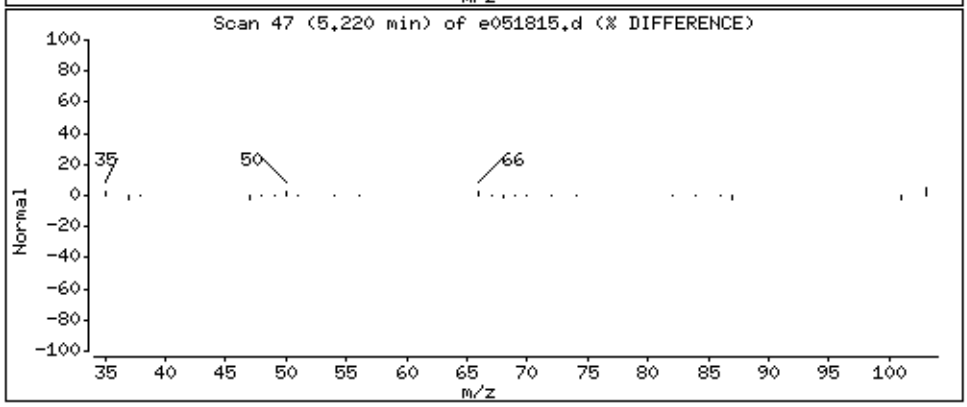












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

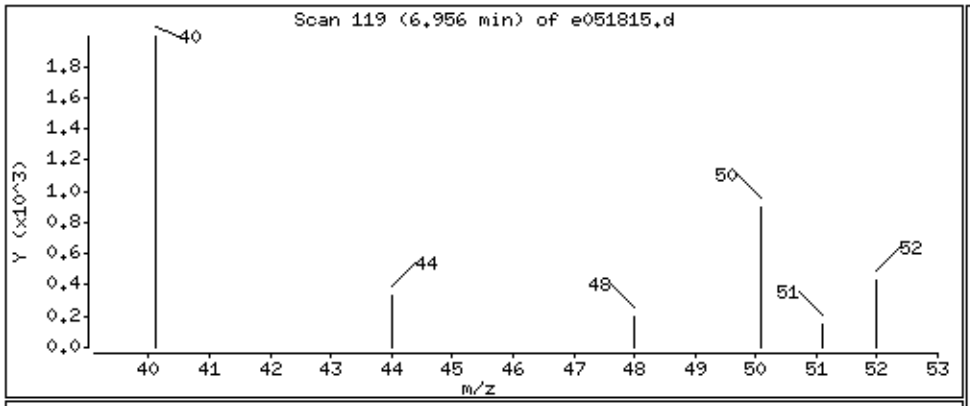
Operator: ea

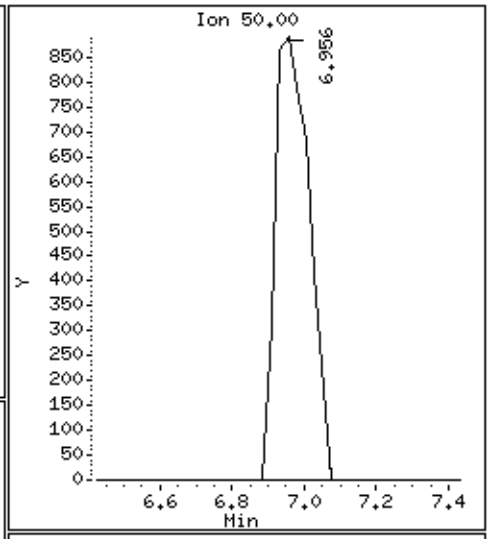
Column phase: RTX-624

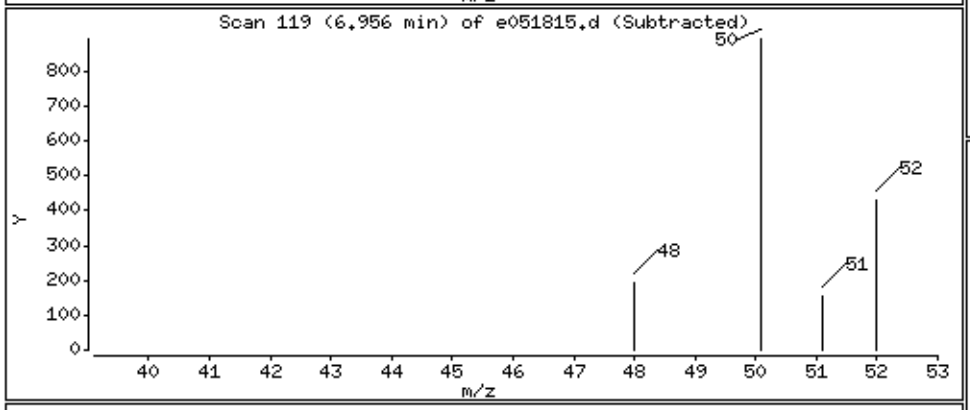
Column diameter: 0.32

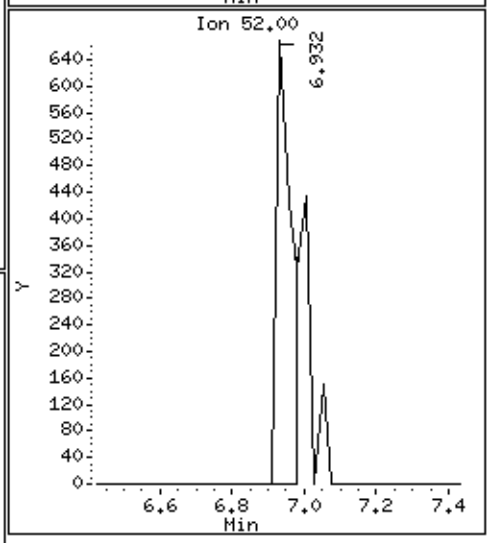
17 Chloromethane

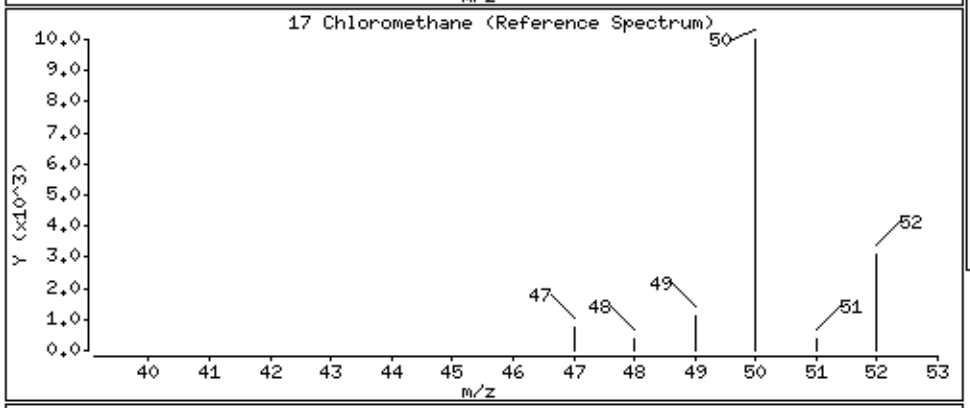
Concentration: 0.5733 PPBV

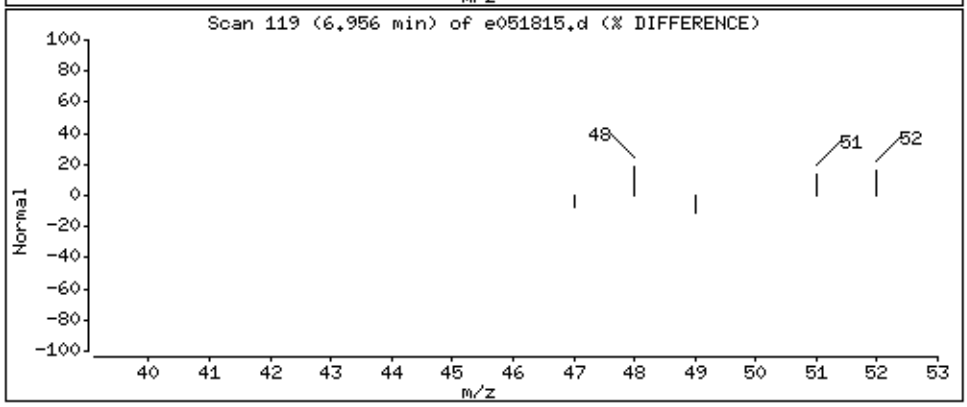












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

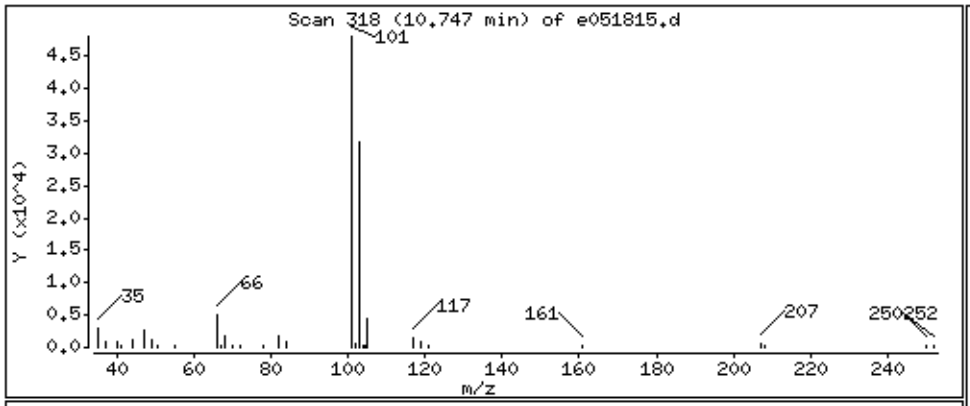
Operator: ea

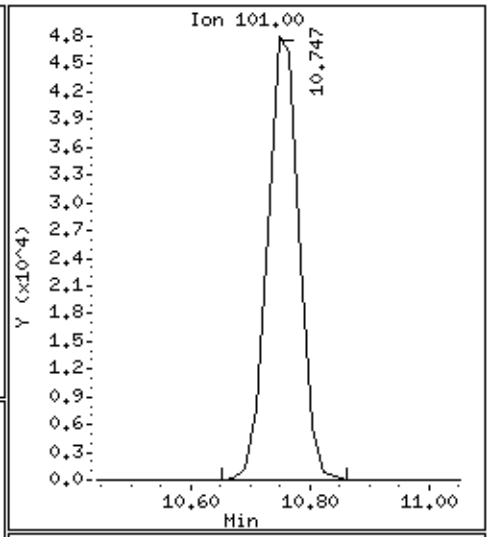
Column phase: RTX-624

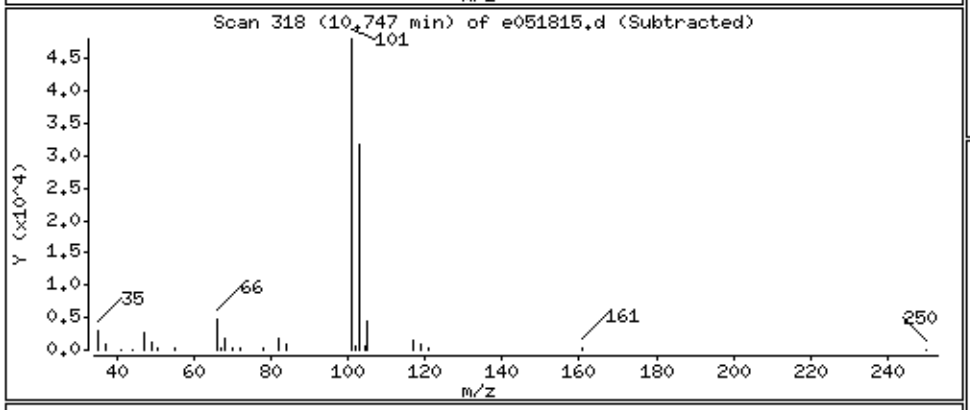
Column diameter: 0.32

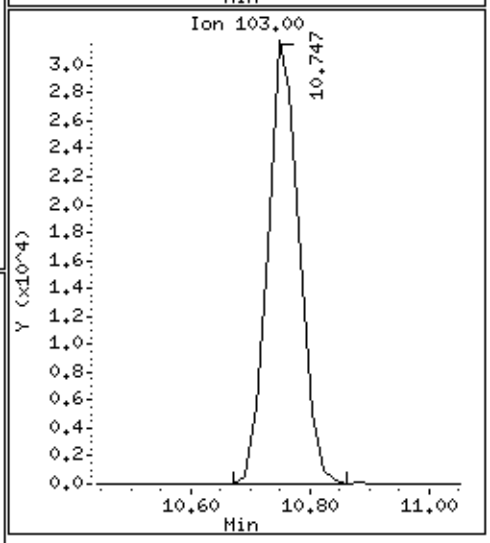
35 Freon 11

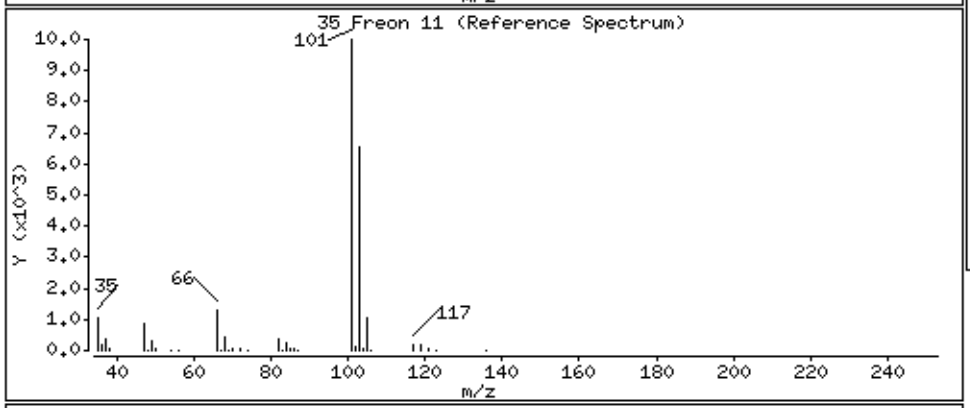
Concentration: 3.100 PPBV

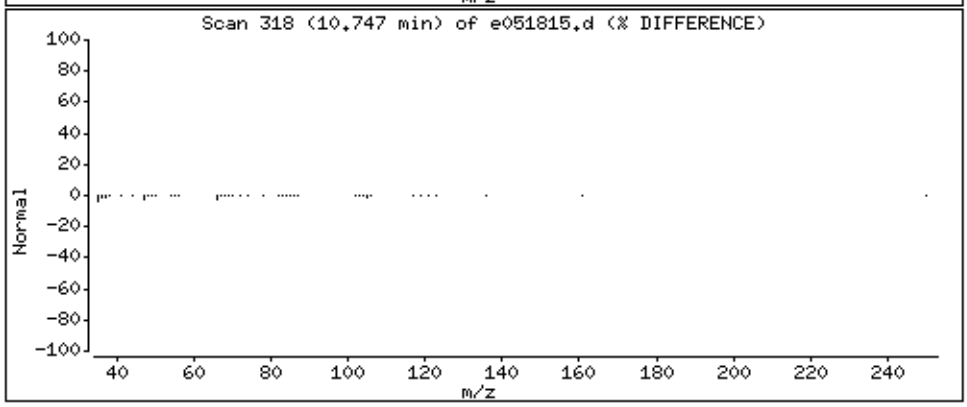












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

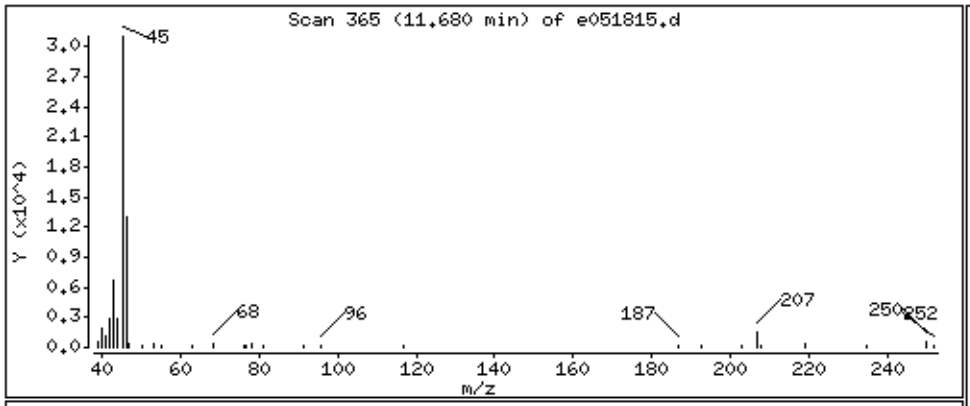
Operator: ea

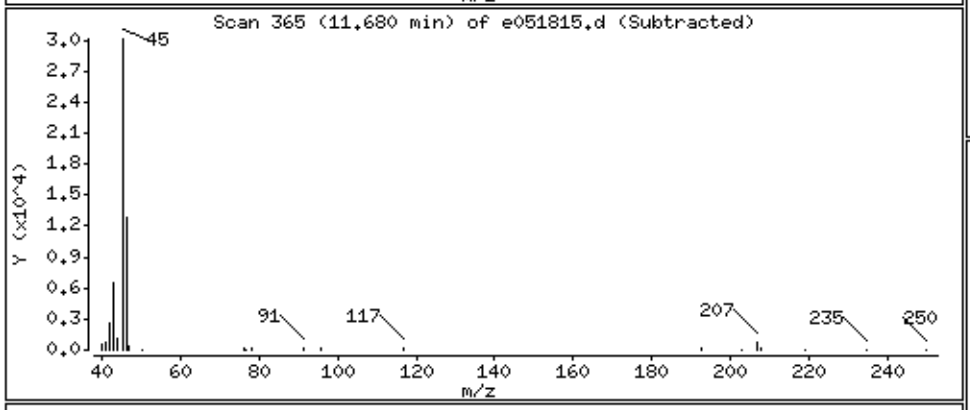
Column phase: RTX-624

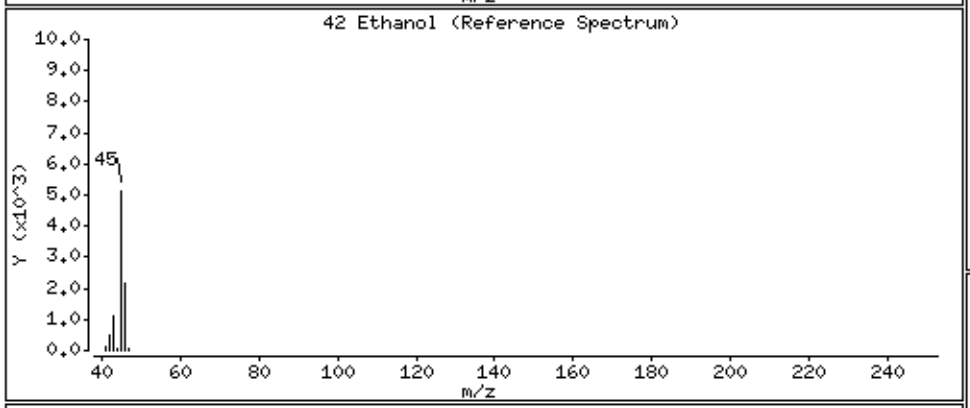
Column diameter: 0.32

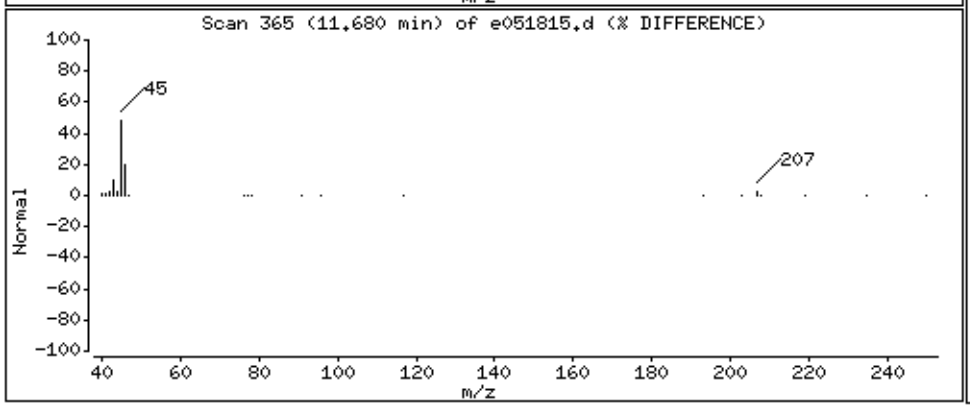
42 Ethanol

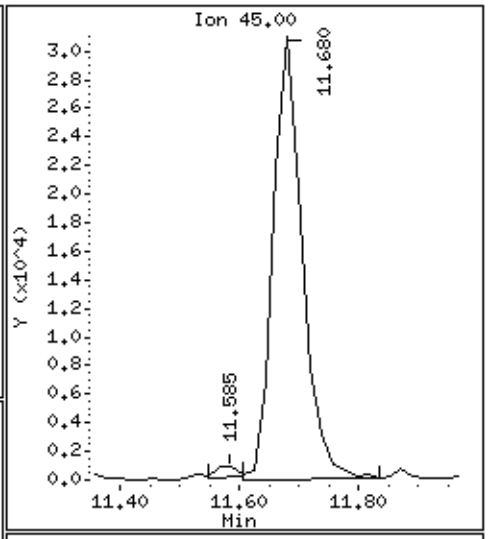
Concentration: 24.805 PPBV

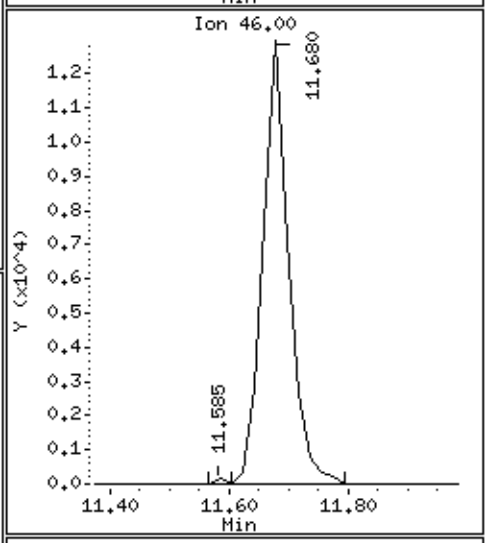


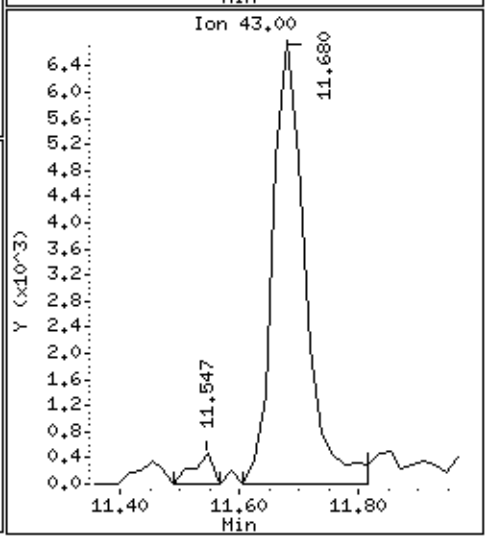












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

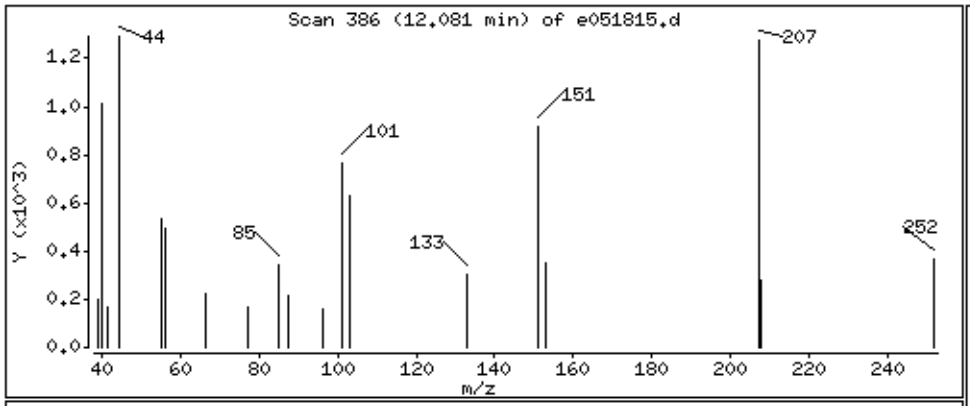
Operator: ea

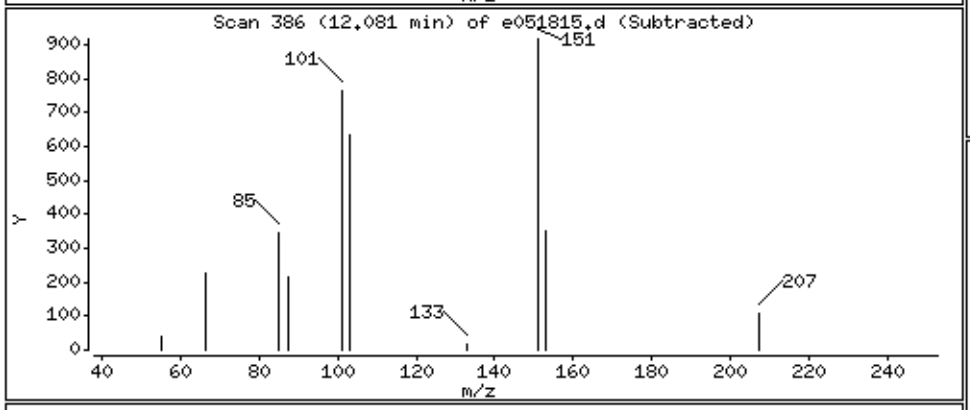
Column phase: RTX-624

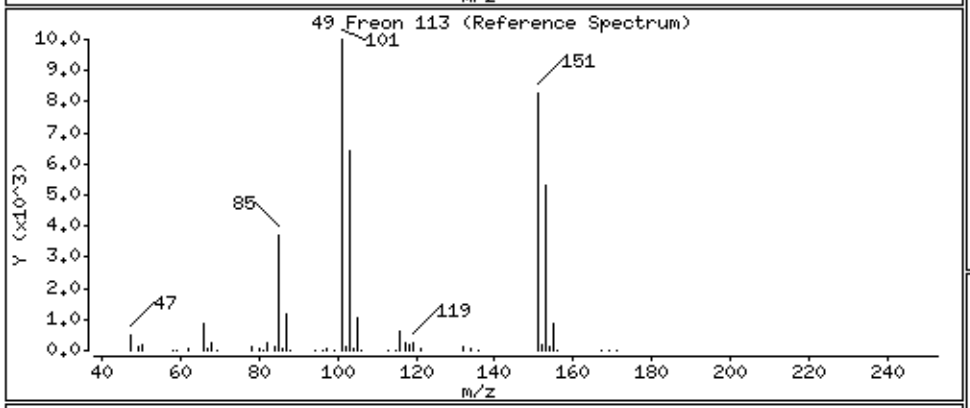
Column diameter: 0.32

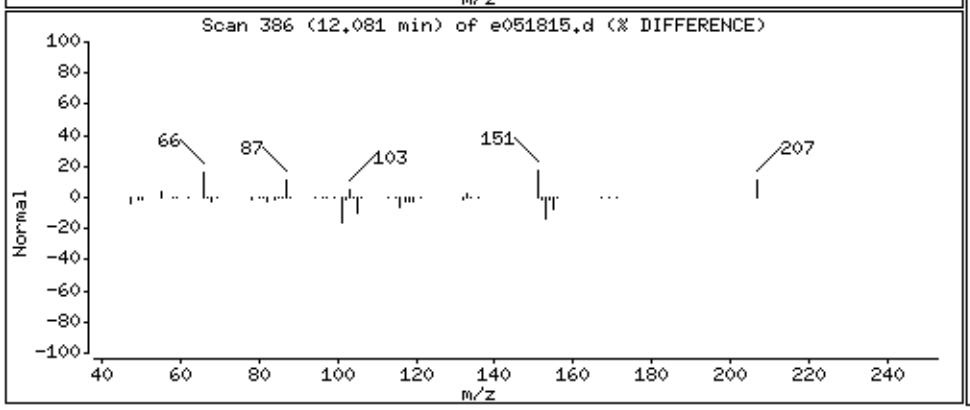
49 Freon 113

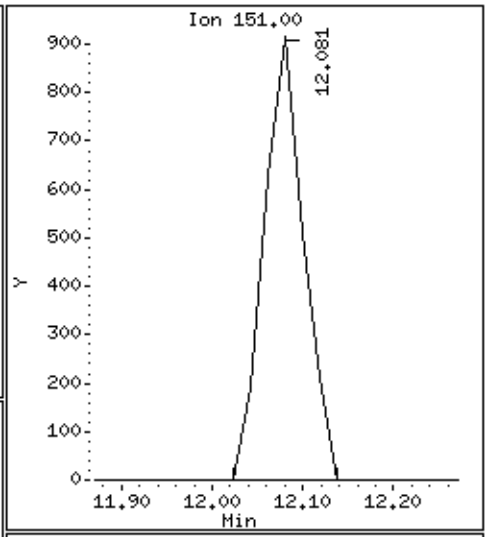
Concentration: 0.06306 PPBV

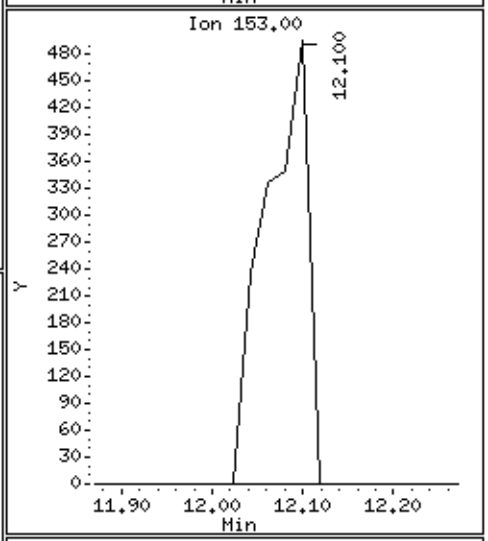


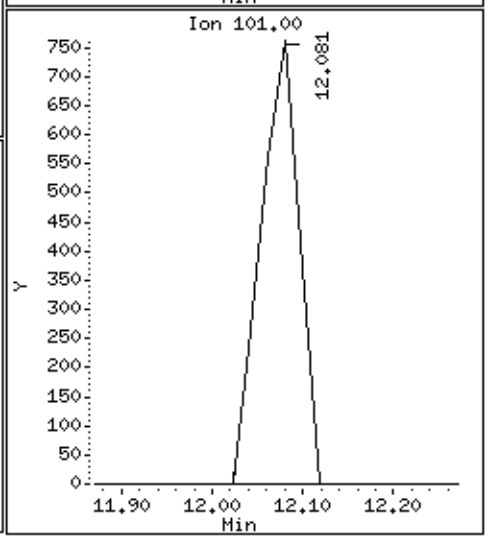












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

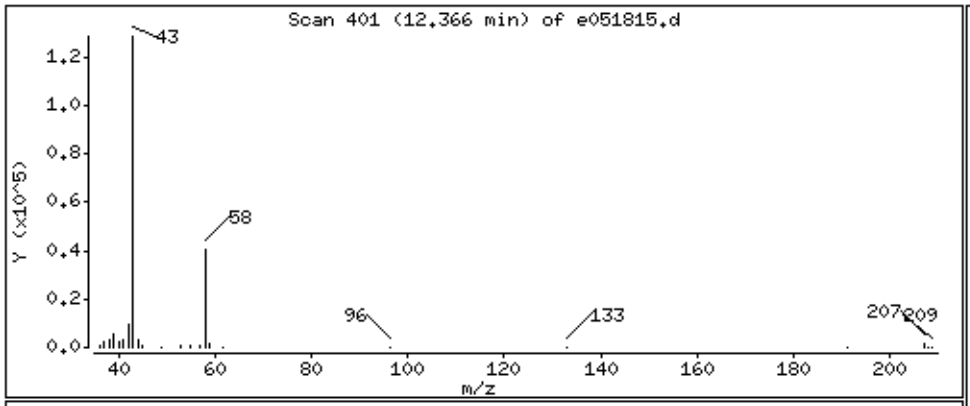
Operator: ea

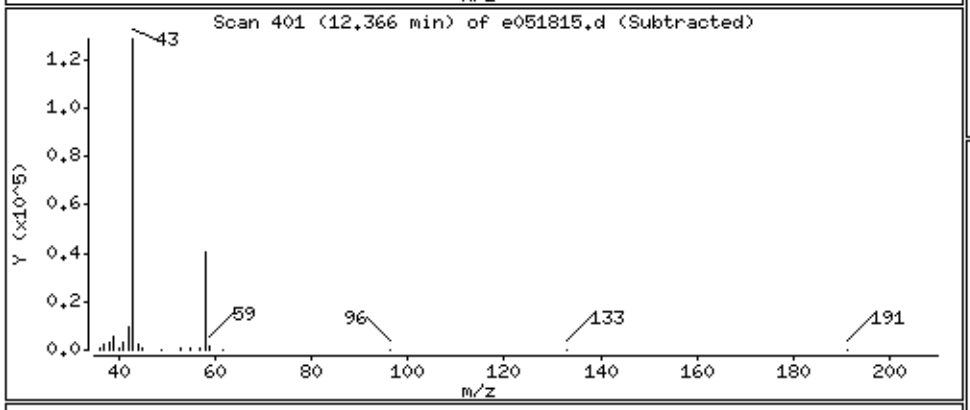
Column phase: RTX-624

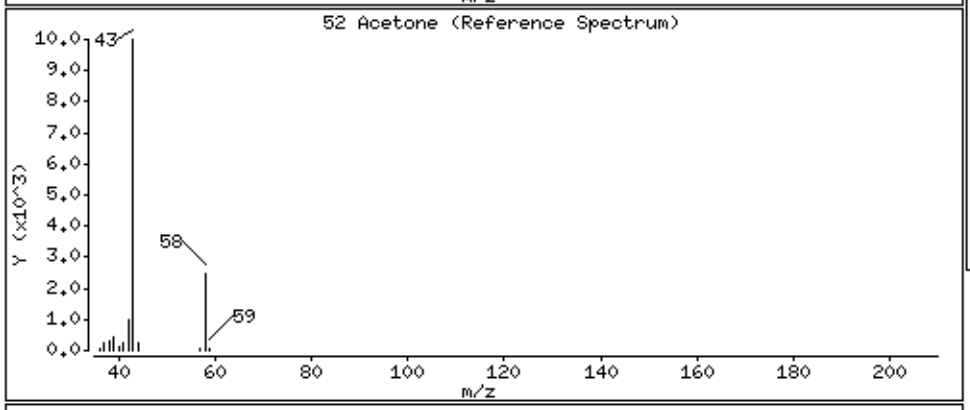
Column diameter: 0.32

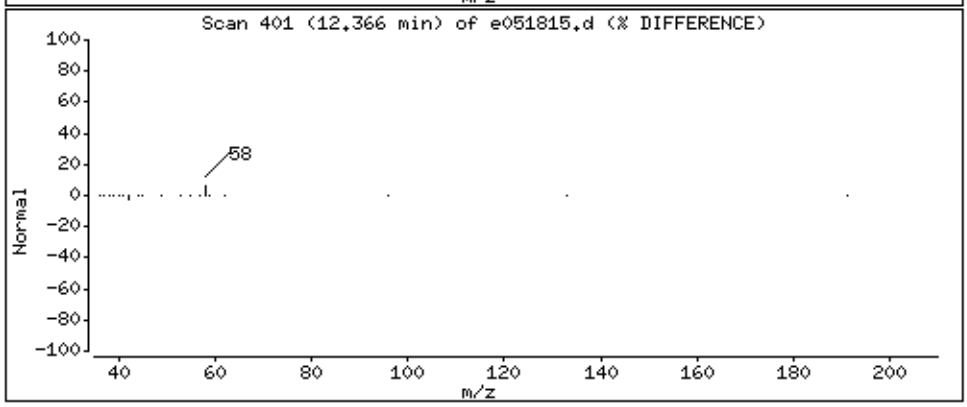
52 Acetone

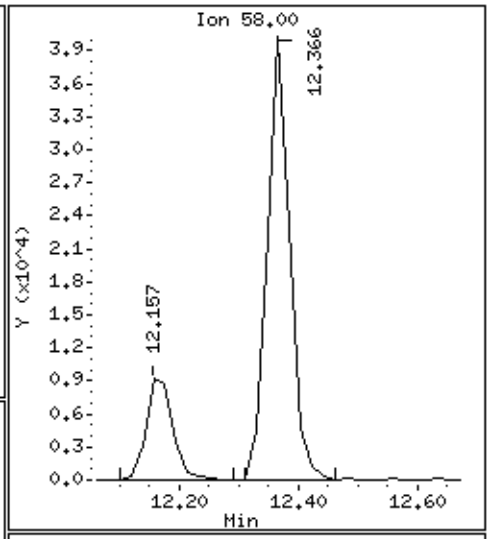
Concentration: 15.142 PPBV

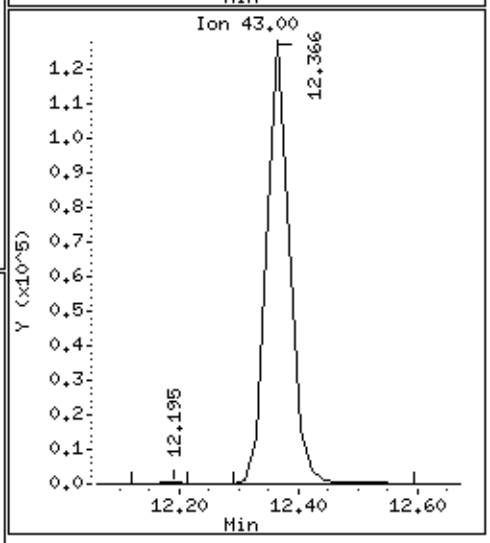












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

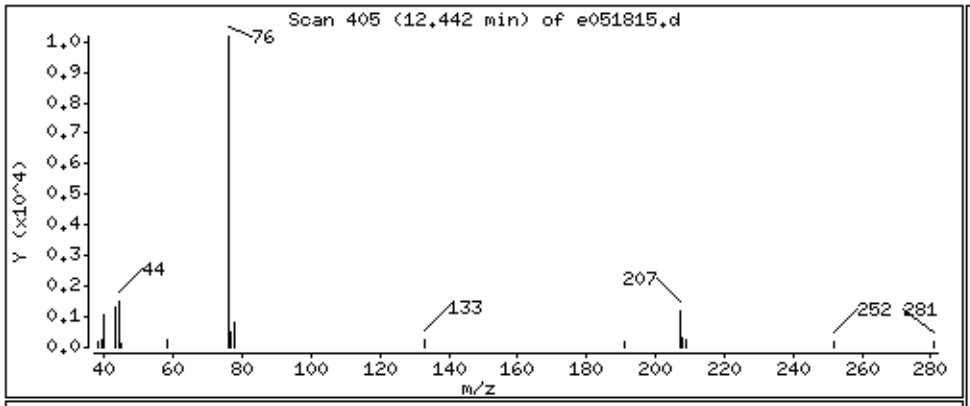
Operator: ea

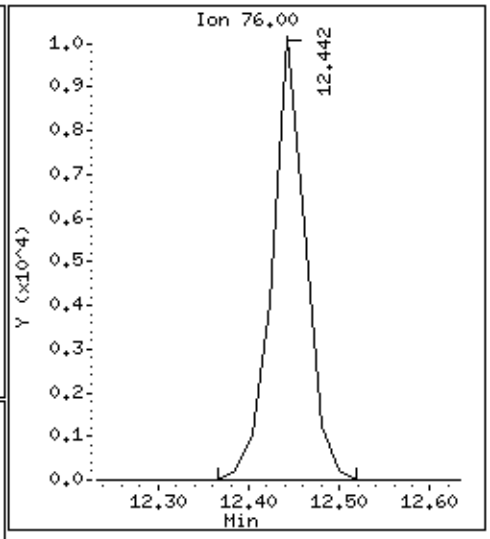
Column phase: RTX-624

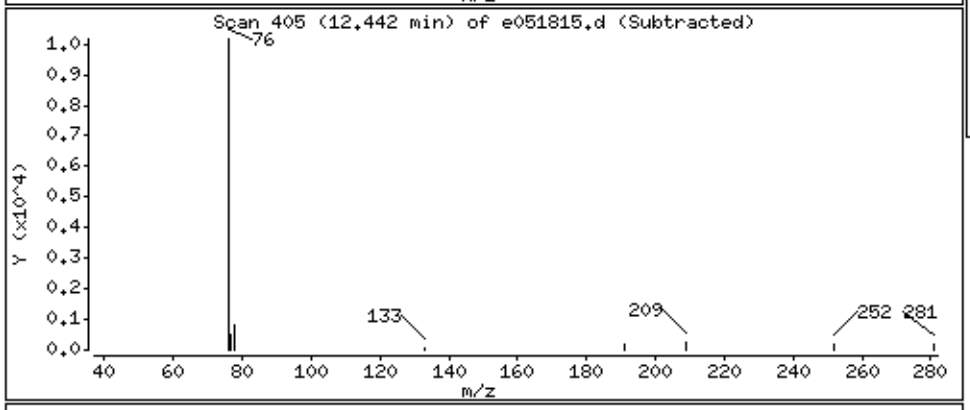
Column diameter: 0.32

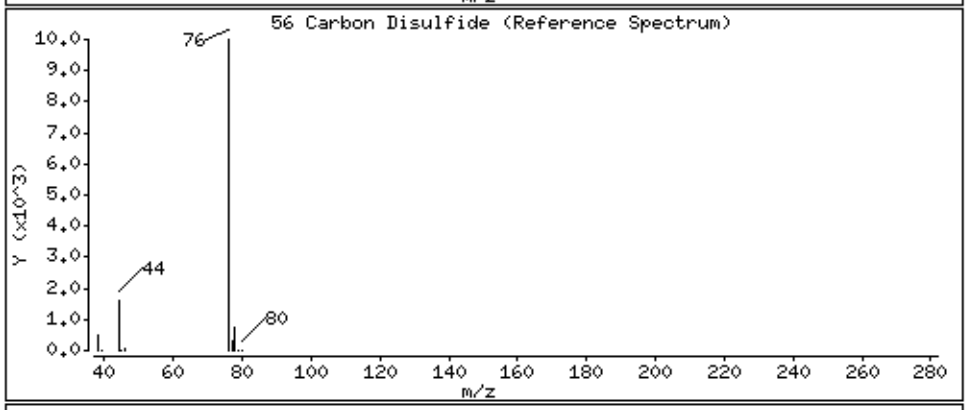
56 Carbon Disulfide

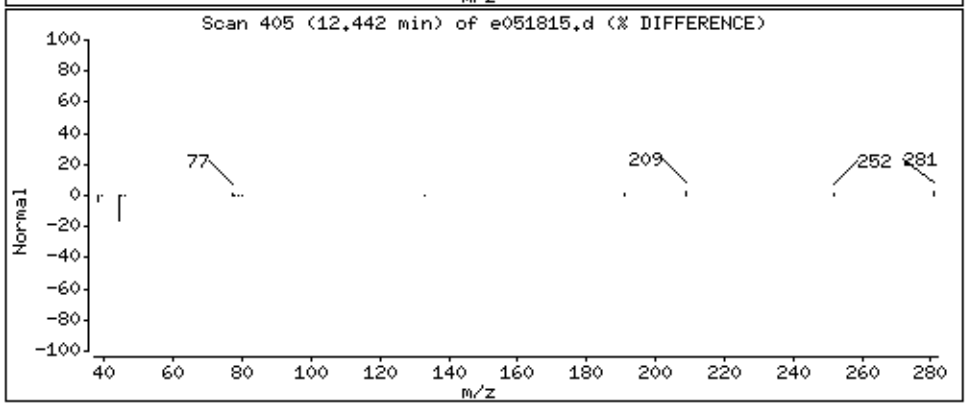
Concentration: 0.4712 PPBV











Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

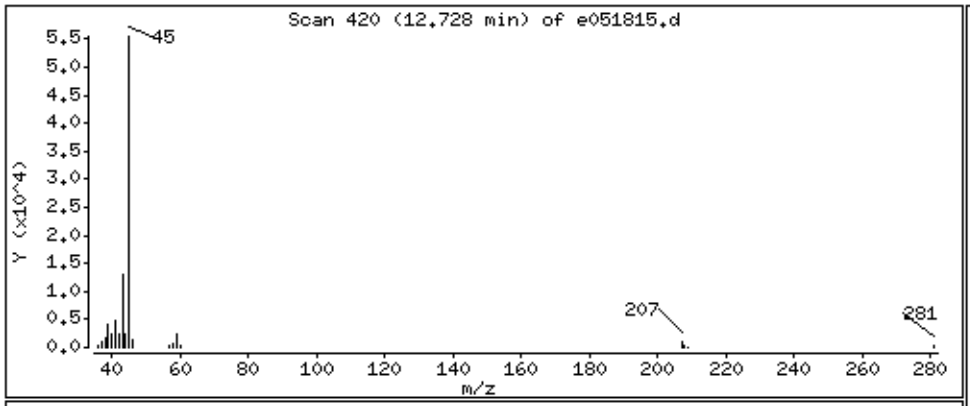
Operator: ea

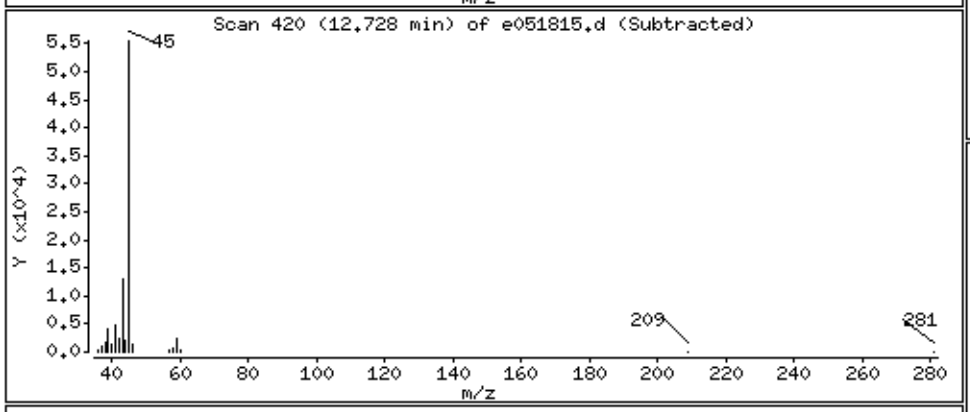
Column phase: RTX-624

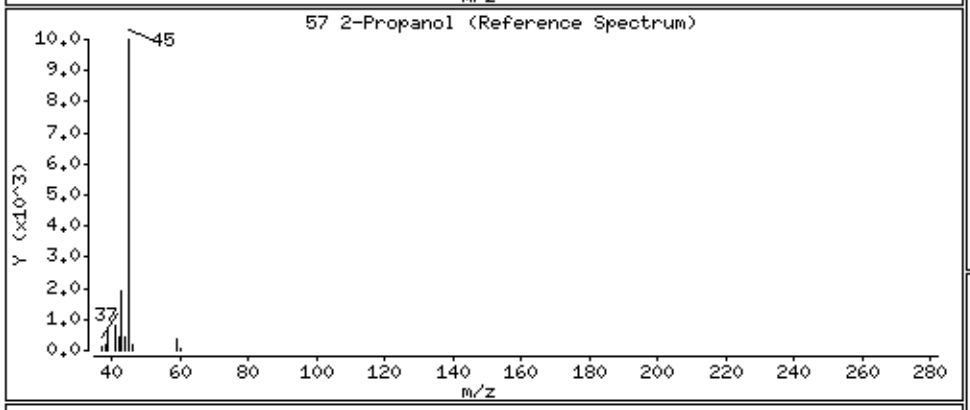
Column diameter: 0.32

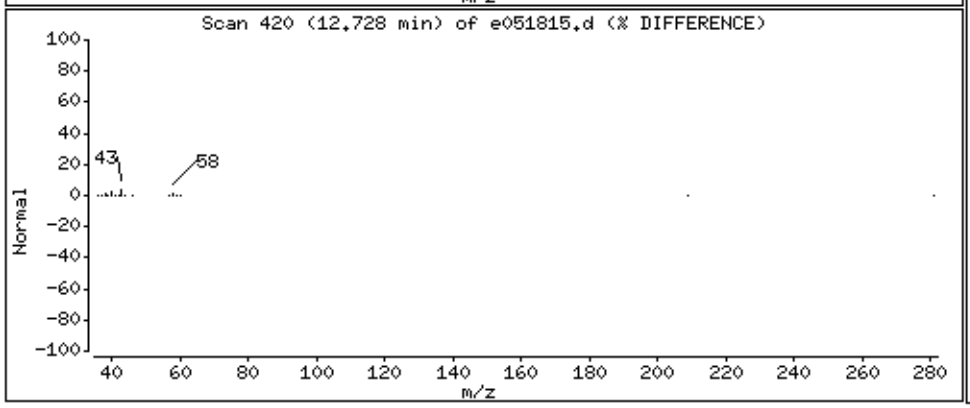
57 2-Propanol

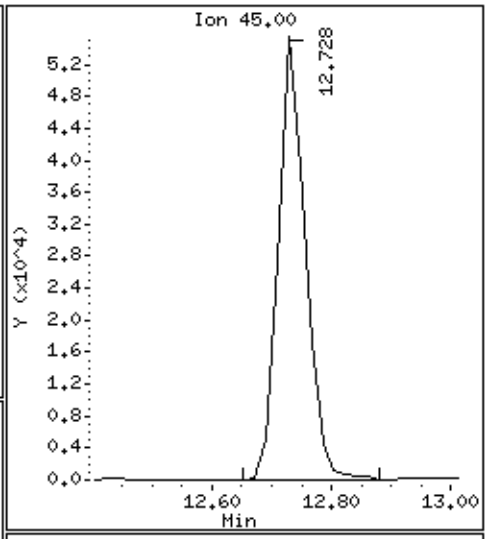
Concentration: 7.841 PPBV

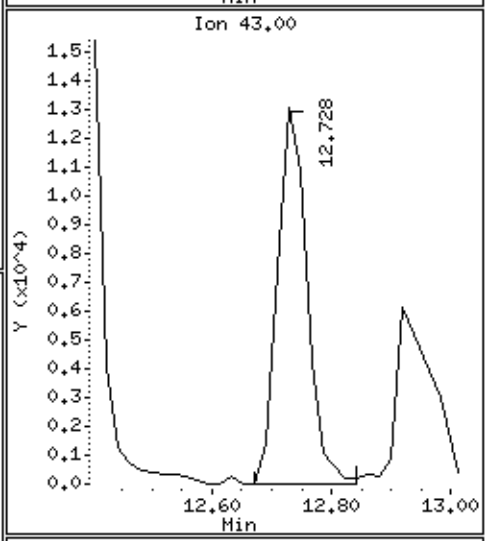


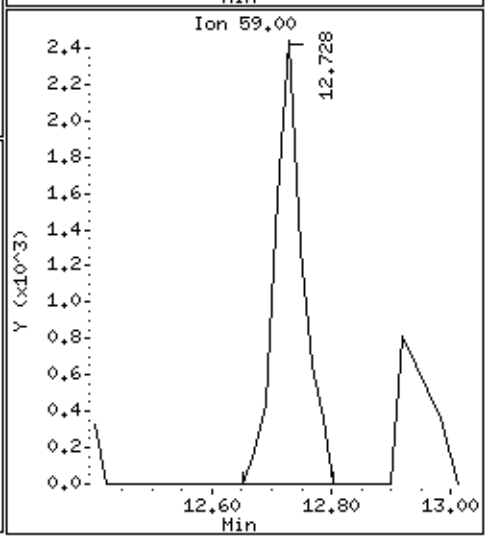












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

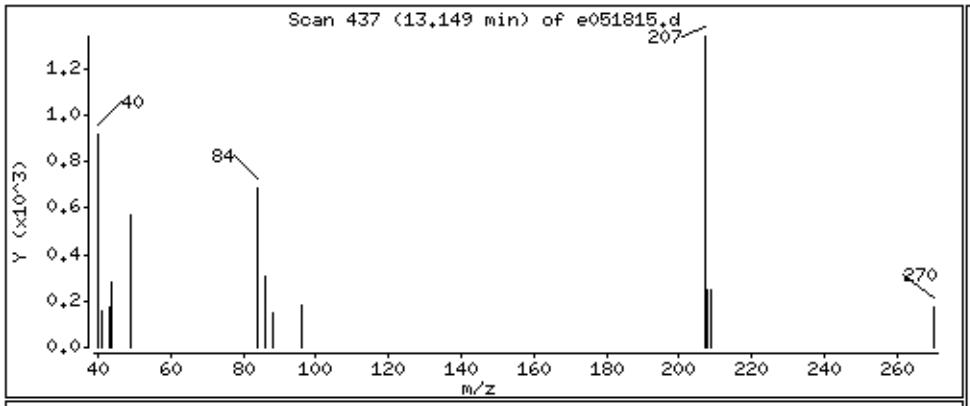
Operator: ea

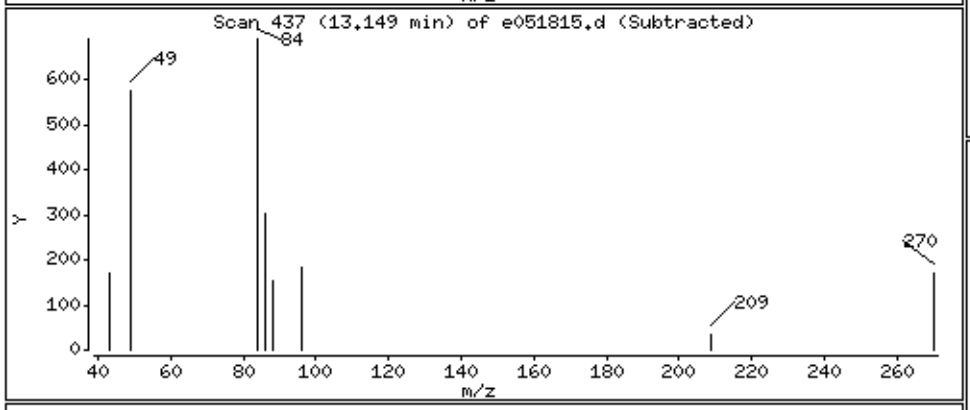
Column phase: RTX-624

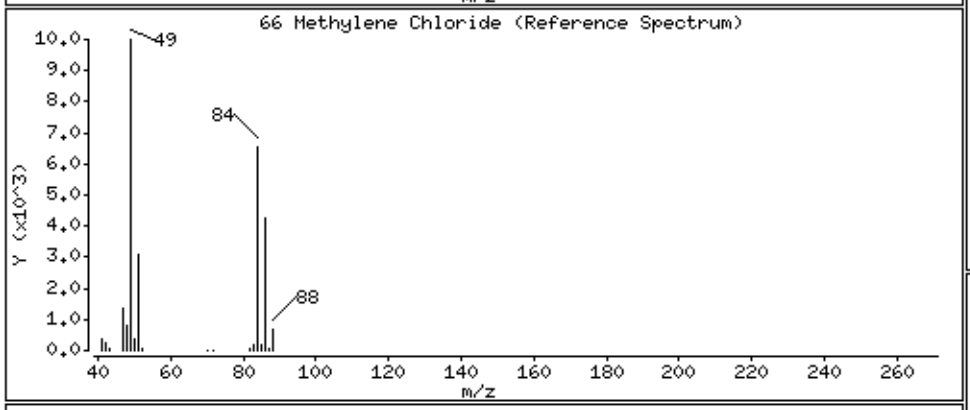
Column diameter: 0.32

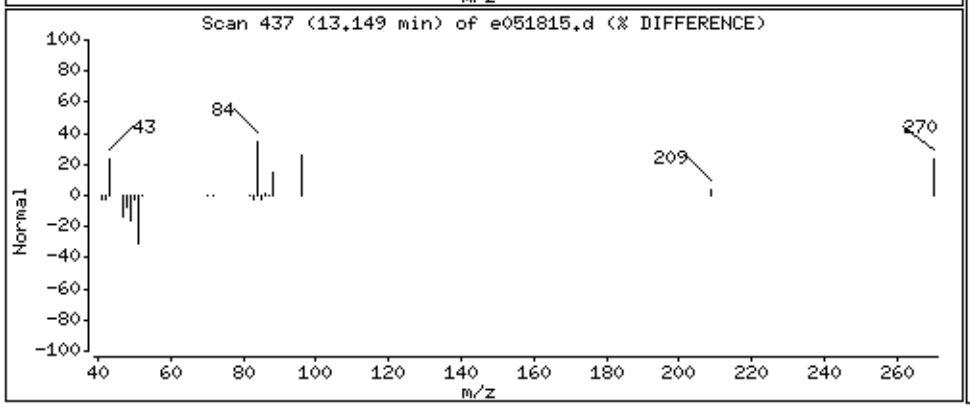
66 Methylene Chloride

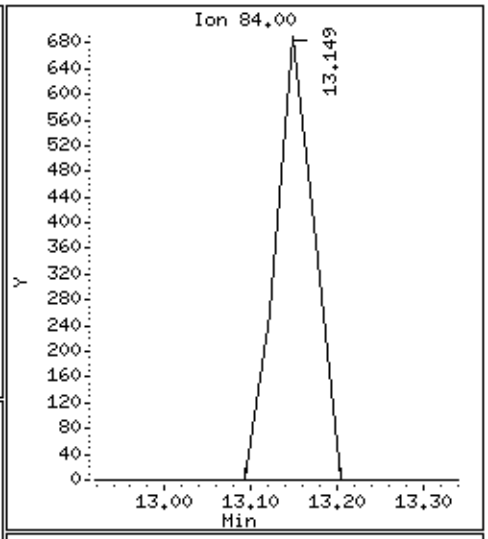
Concentration: 0.1253 PPBV

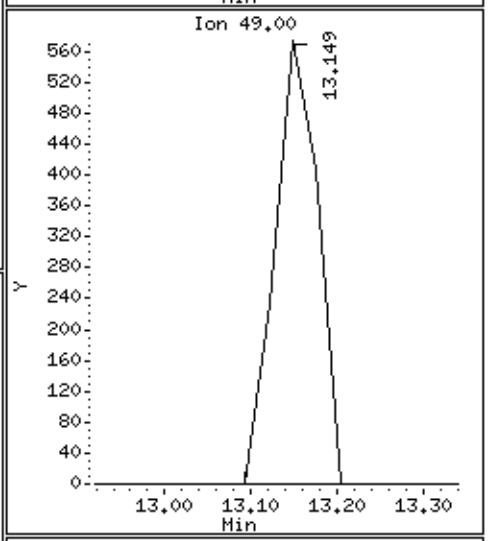


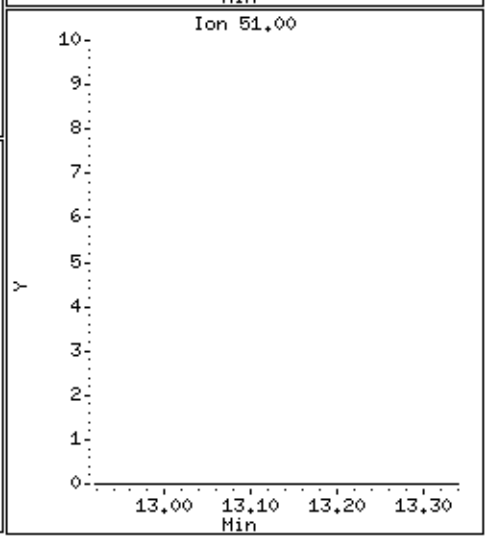












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

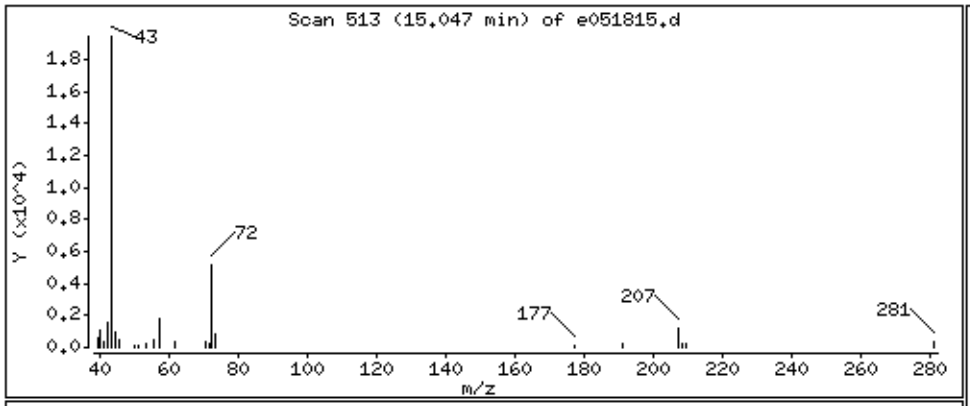
Operator: ea

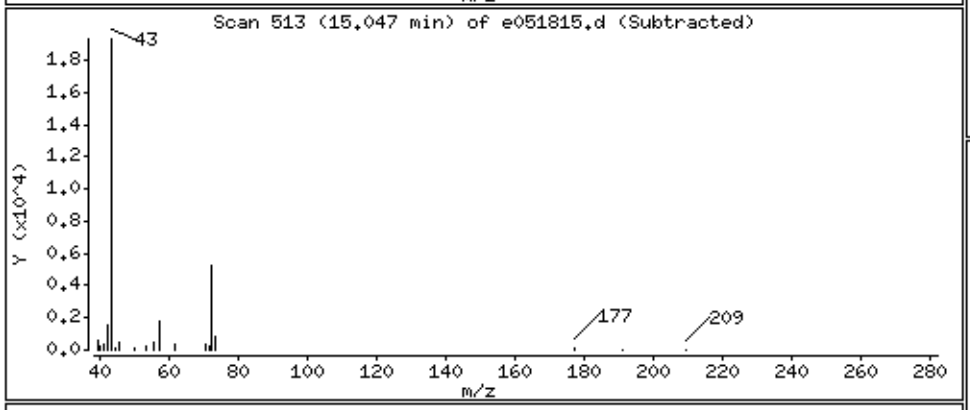
Column phase: RTX-624

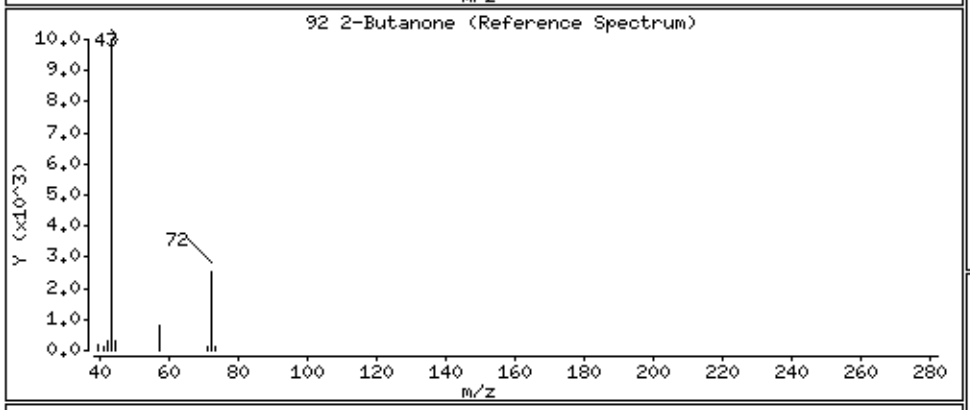
Column diameter: 0.32

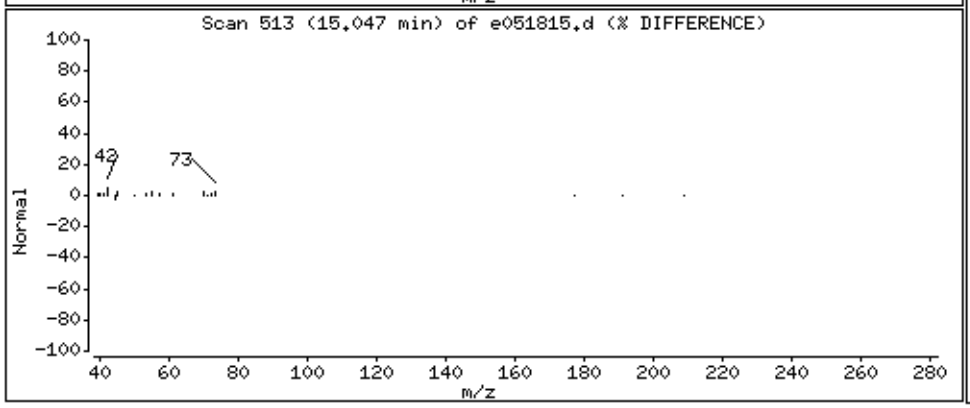
92 2-Butanone

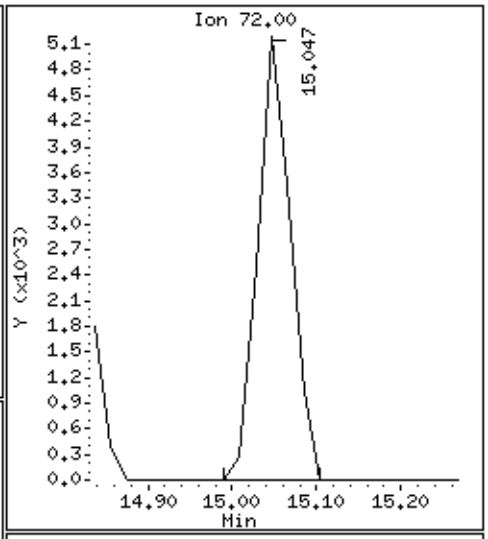
Concentration: 1.632 PPBV

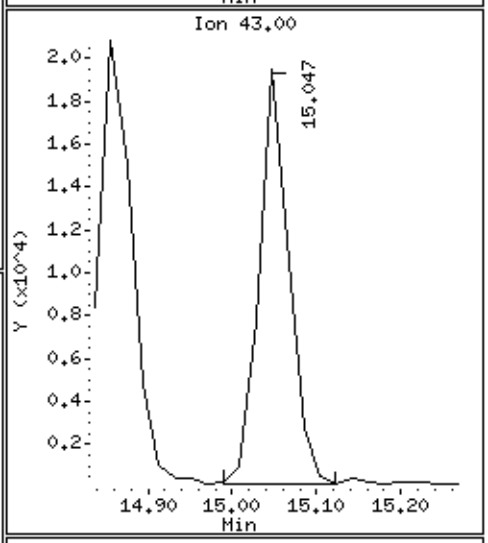


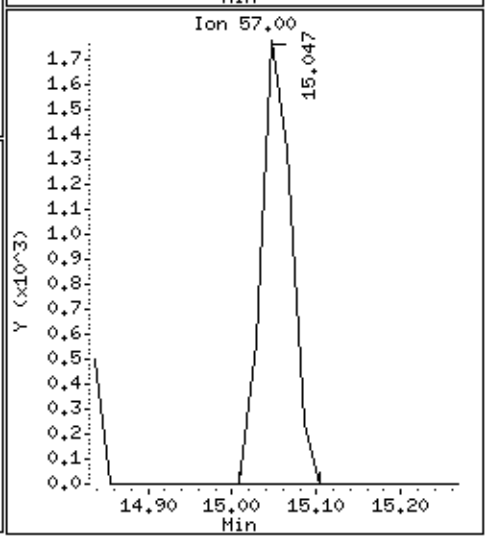












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

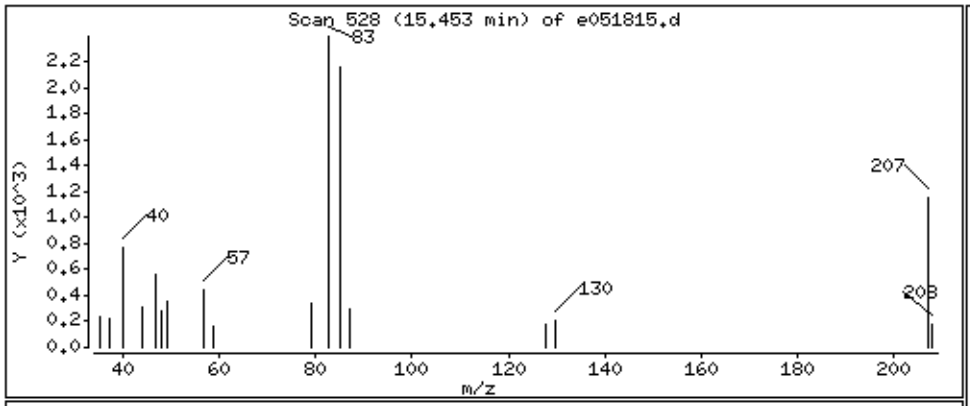
Operator: ea

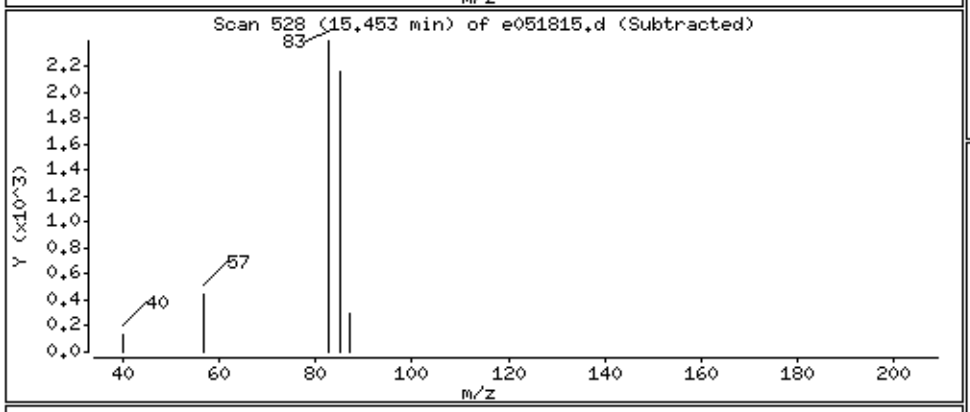
Column phase: RTX-624

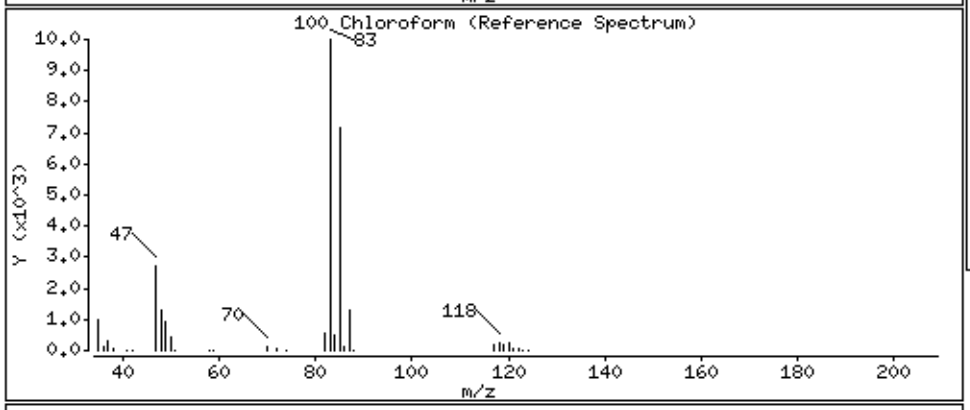
Column diameter: 0.32

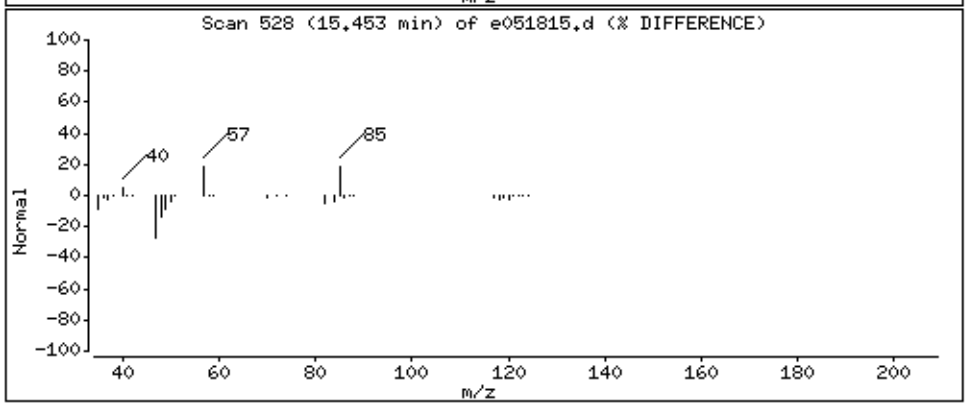
100 Chloroform

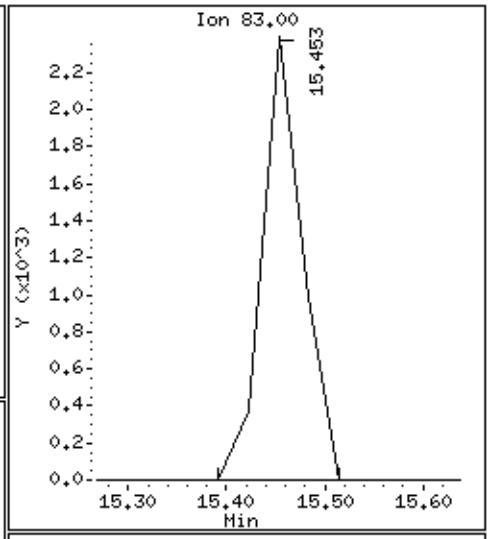
Concentration: 0.1470 PPBV

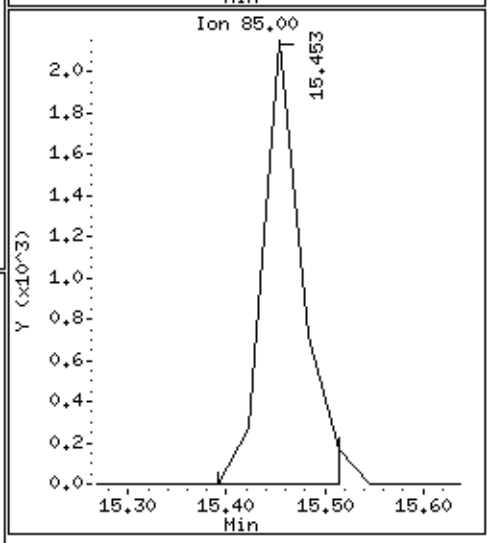












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

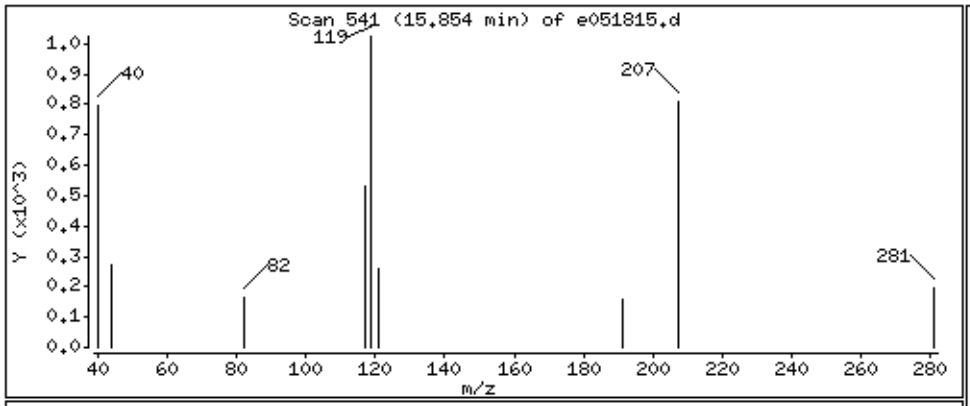
Operator: ea

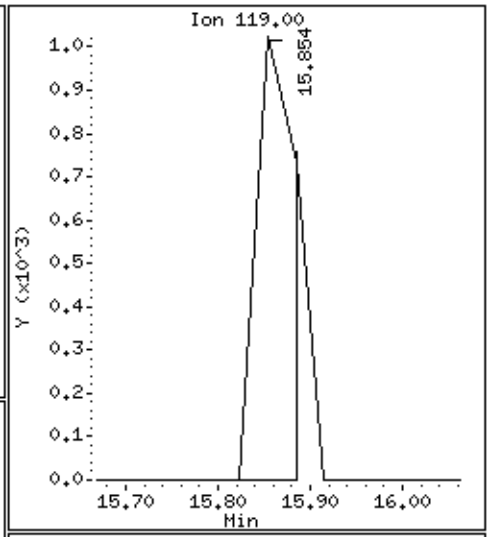
Column phase: RTX-624

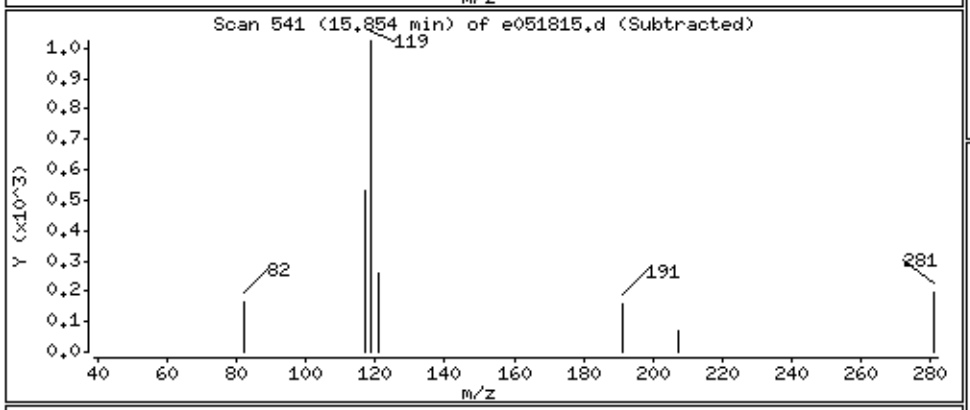
Column diameter: 0.32

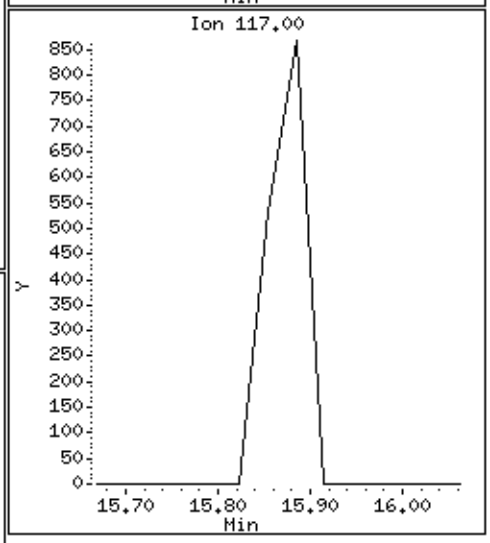
106 Carbon Tetrachloride

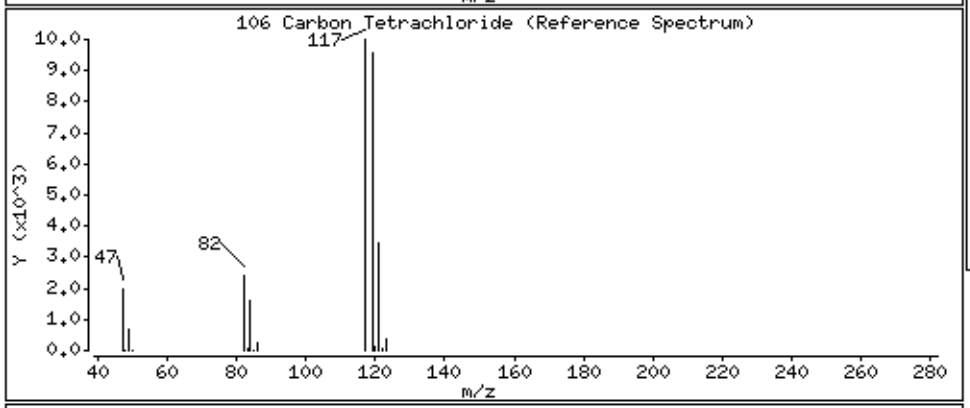
Concentration: 0.06030 PPBV

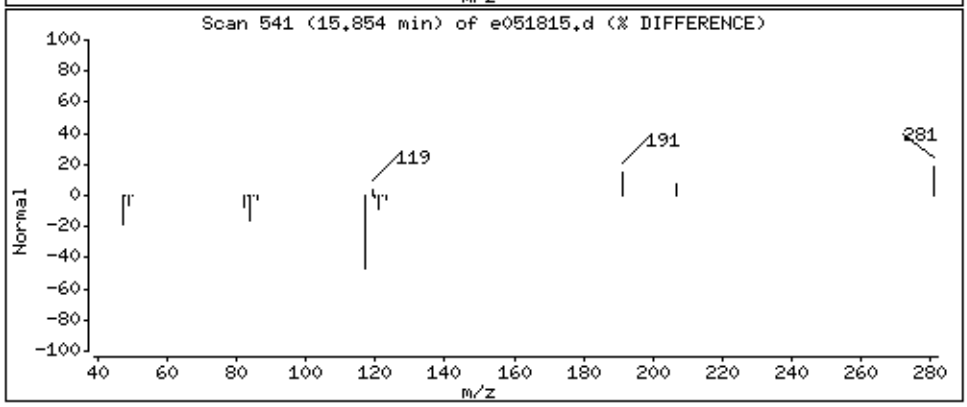












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

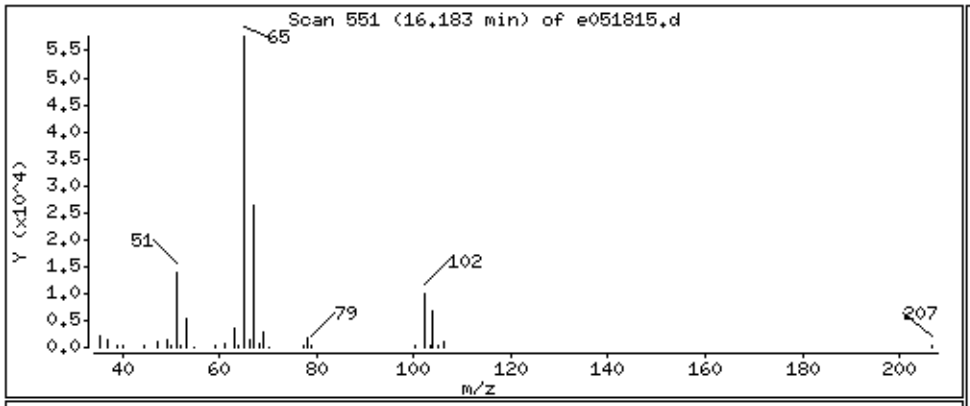
Operator: ea

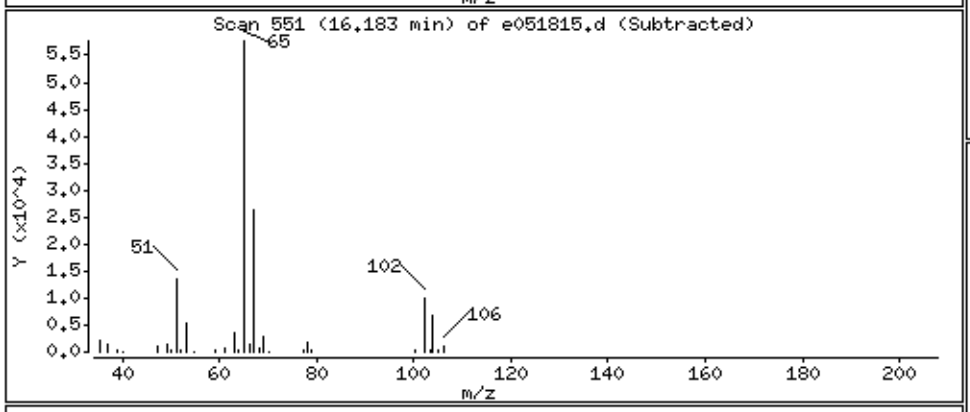
Column phase: RTX-624

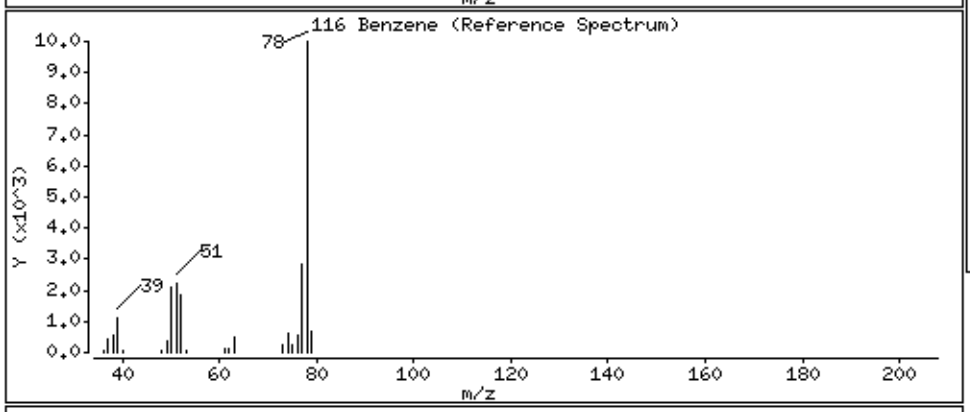
Column diameter: 0.32

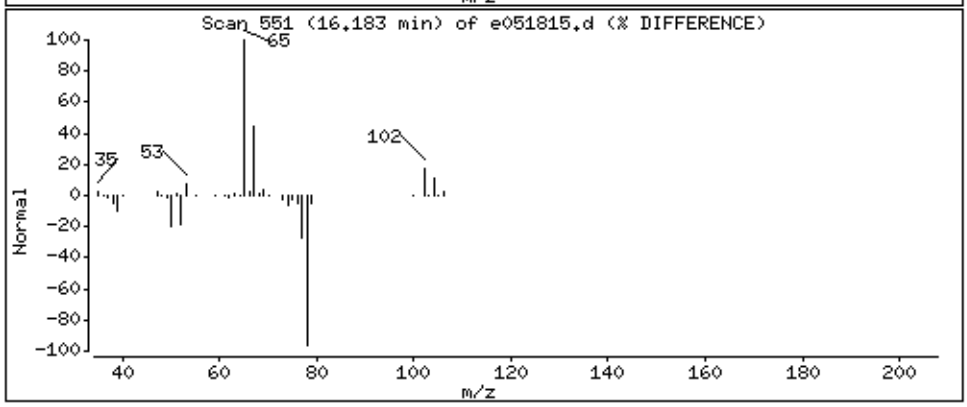
116 Benzene

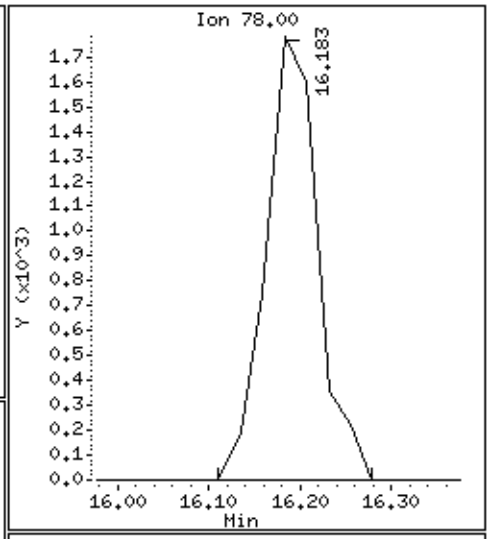
Concentration: 0.1220 PPBV

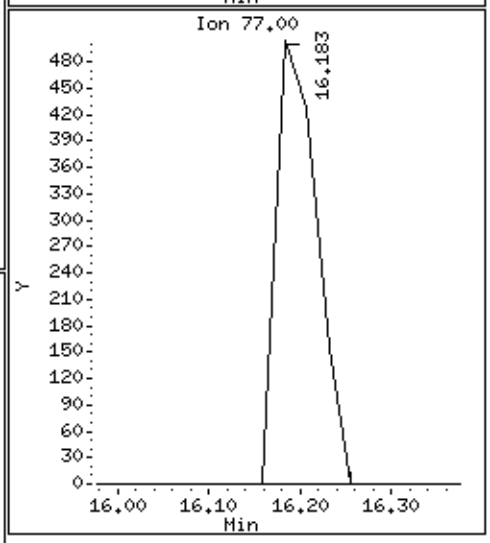












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

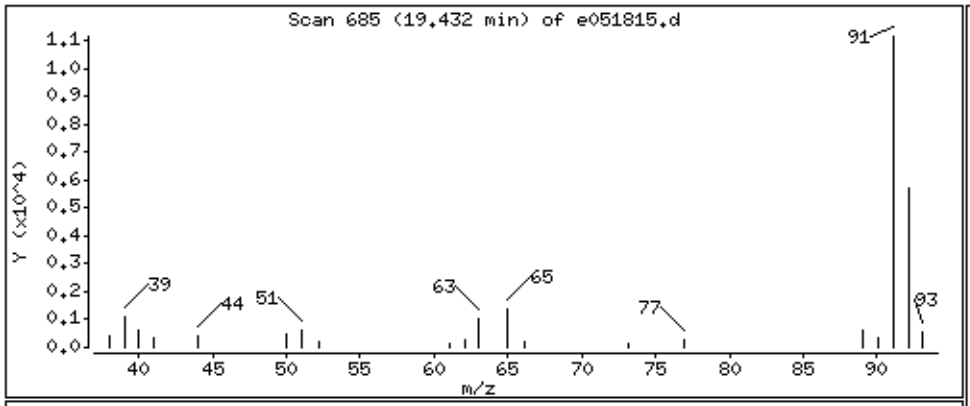
Operator: ea

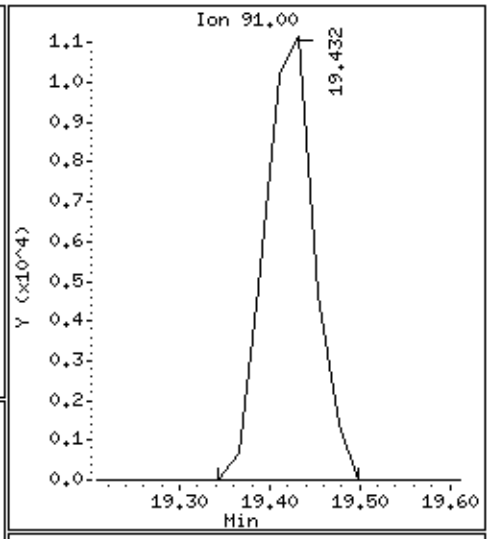
Column phase: RTX-624

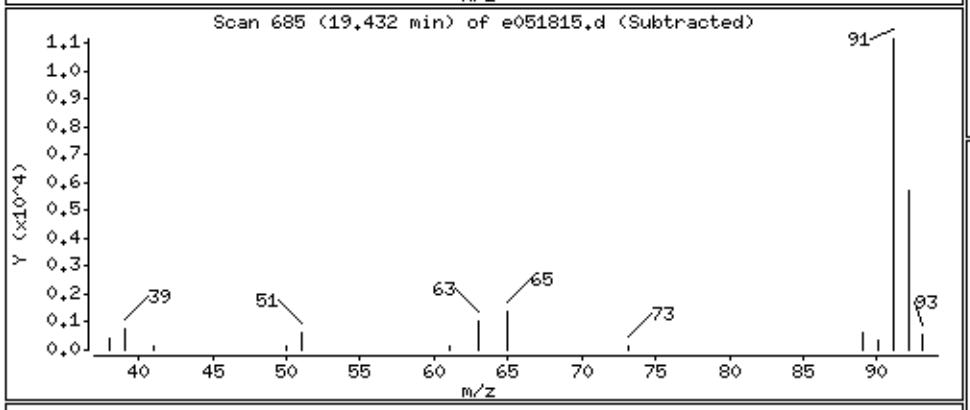
Column diameter: 0.32

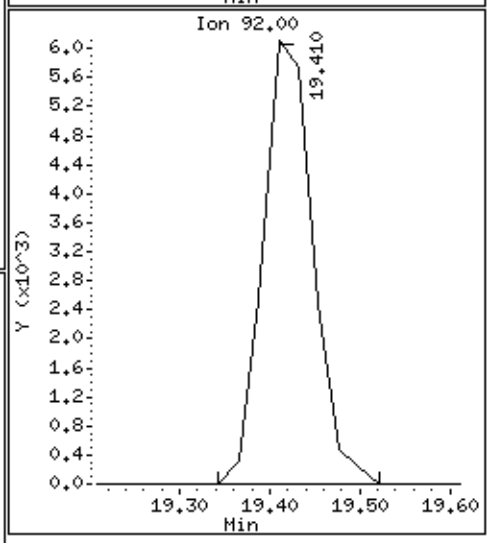
147 Toluene

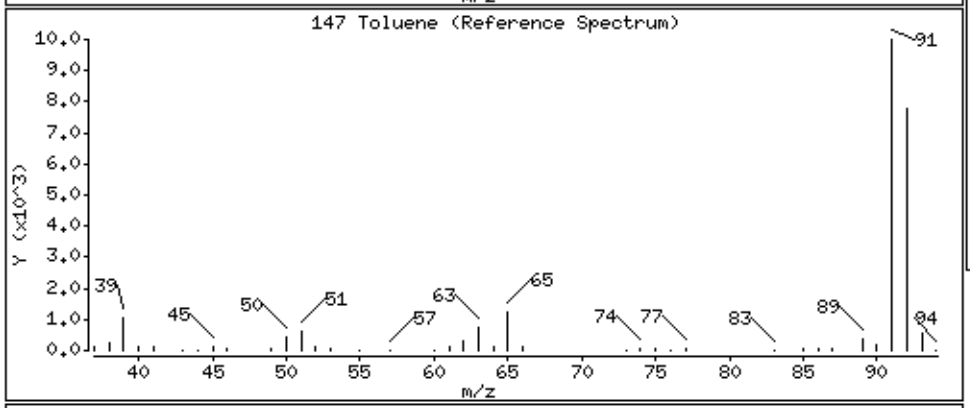
Concentration: 0.6400 PPBV

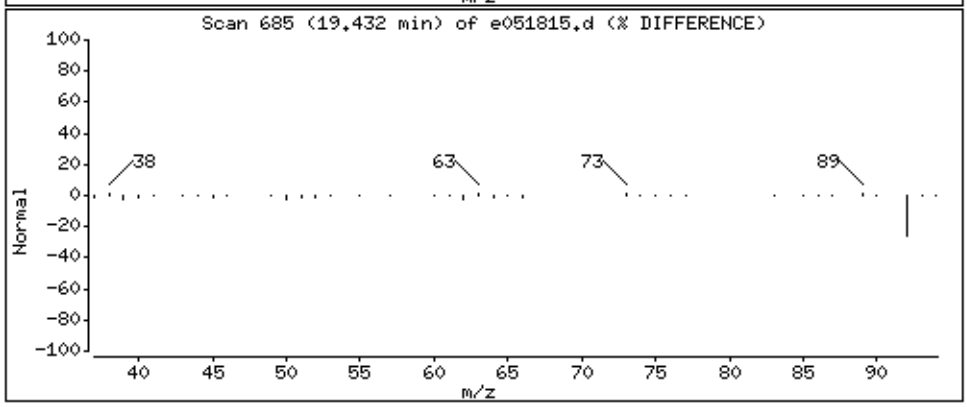












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

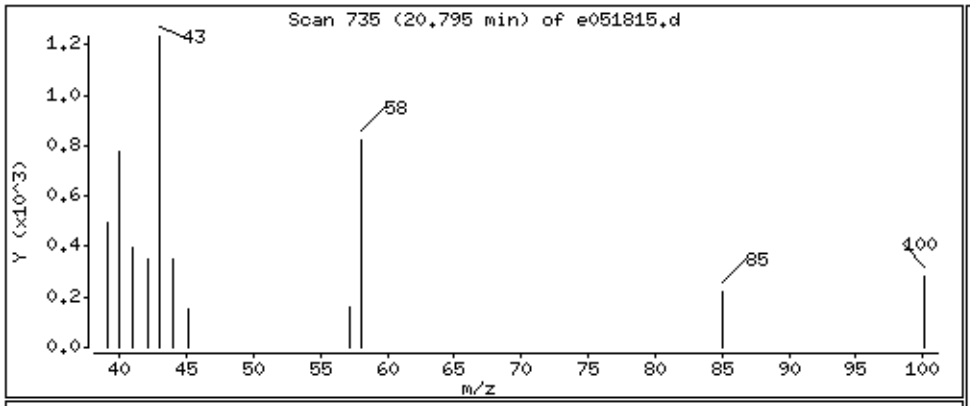
Operator: ea

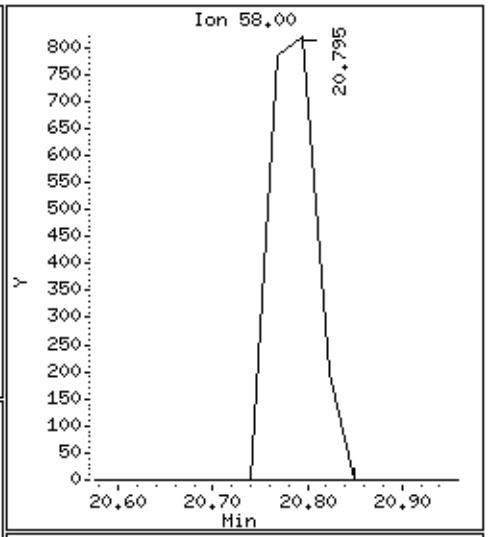
Column phase: RTX-624

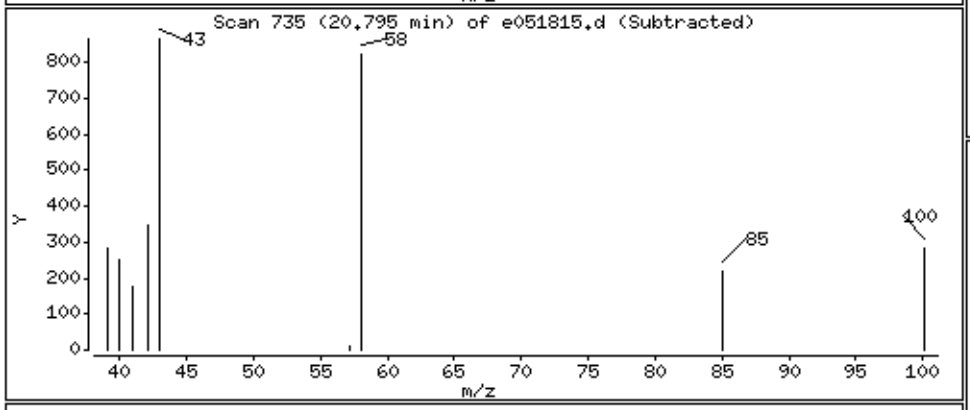
Column diameter: 0.32

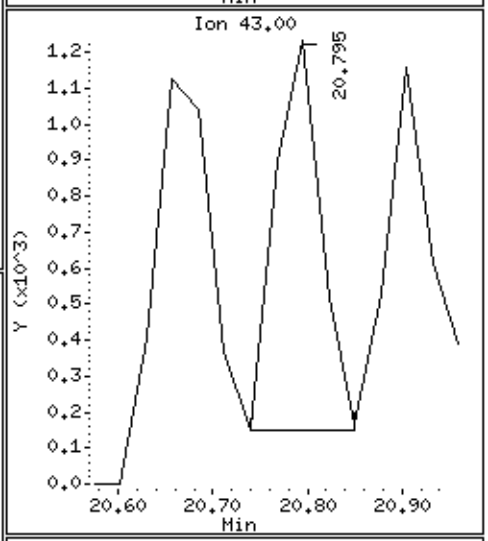
158 2-Hexanone

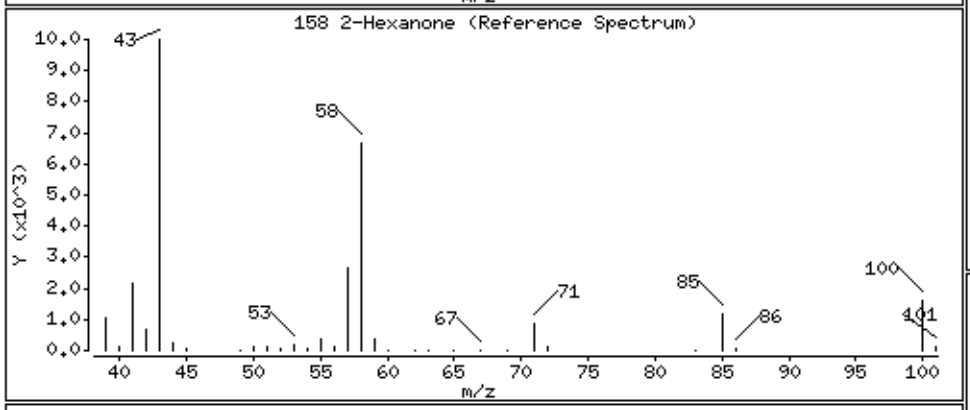
Concentration: 0.1681 PPBV

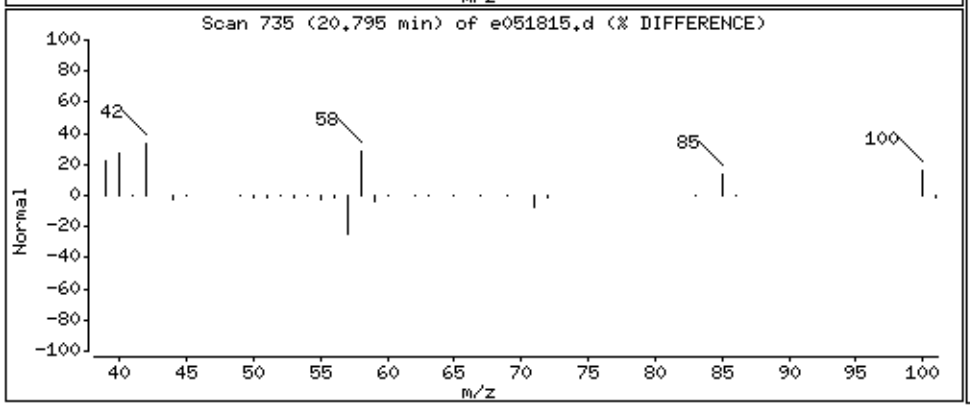


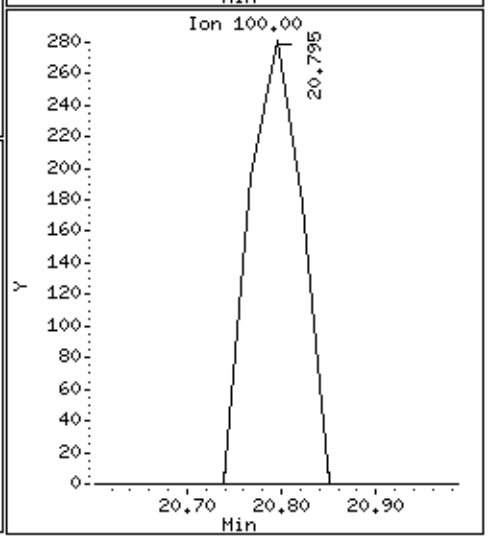












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

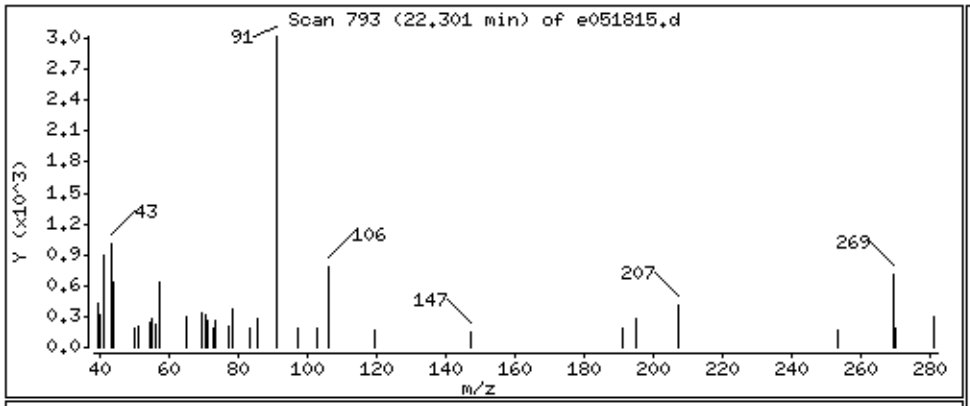
Operator: ea

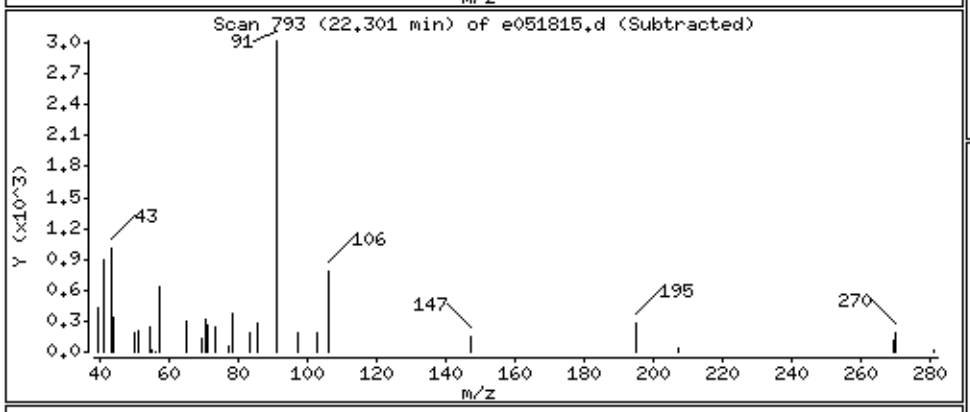
Column phase: RTX-624

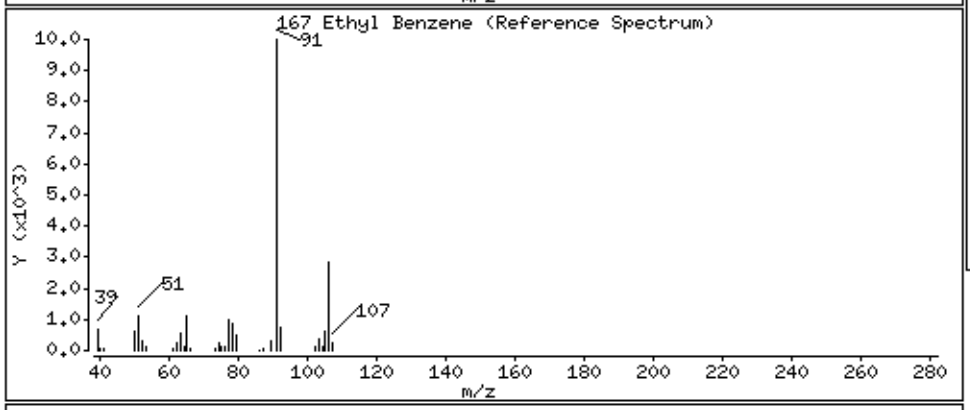
Column diameter: 0.32

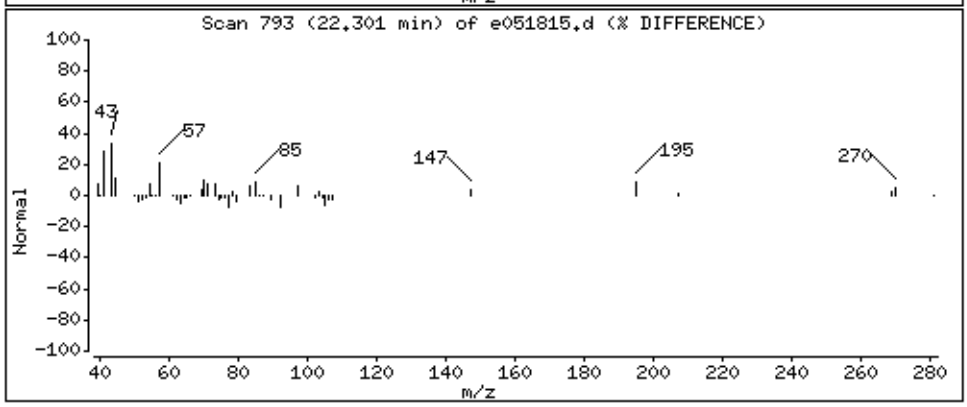
167 Ethyl Benzene

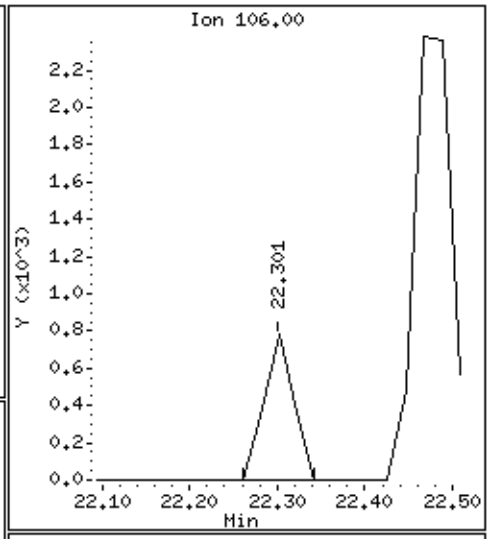
Concentration: 0.06175 PPBV

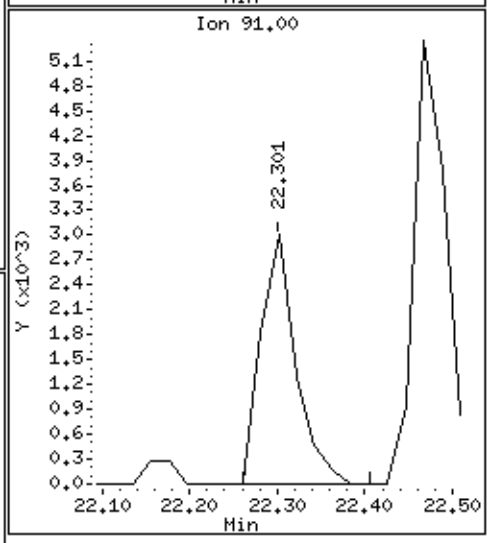












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

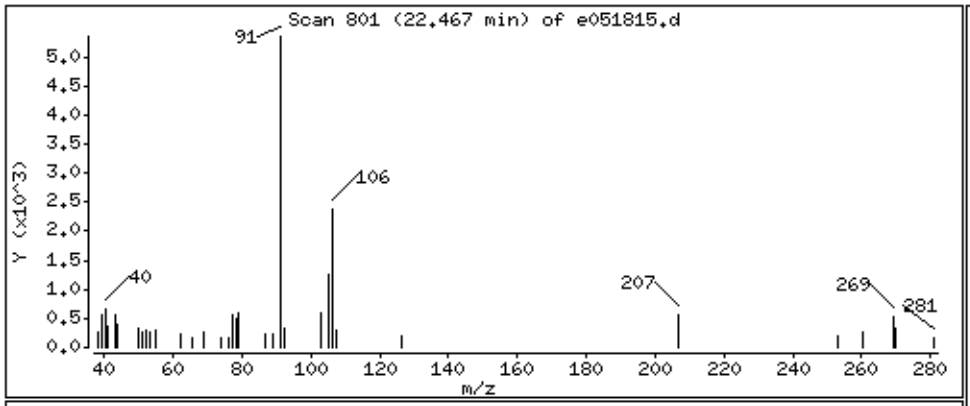
Operator: ea

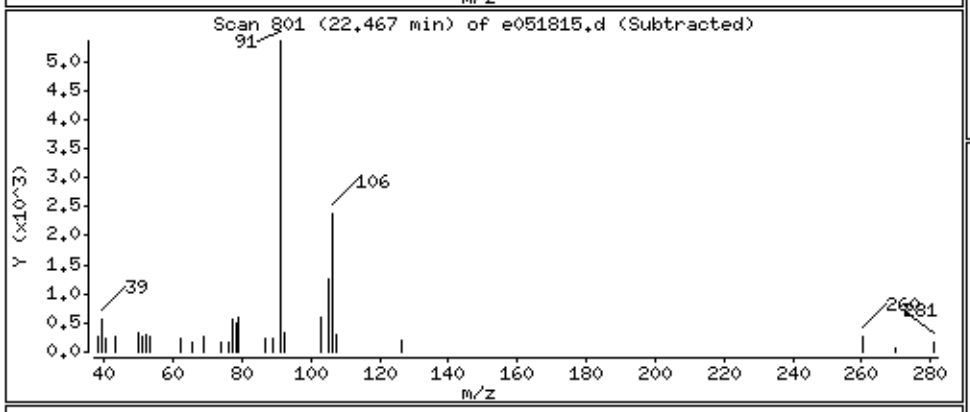
Column phase: RTX-624

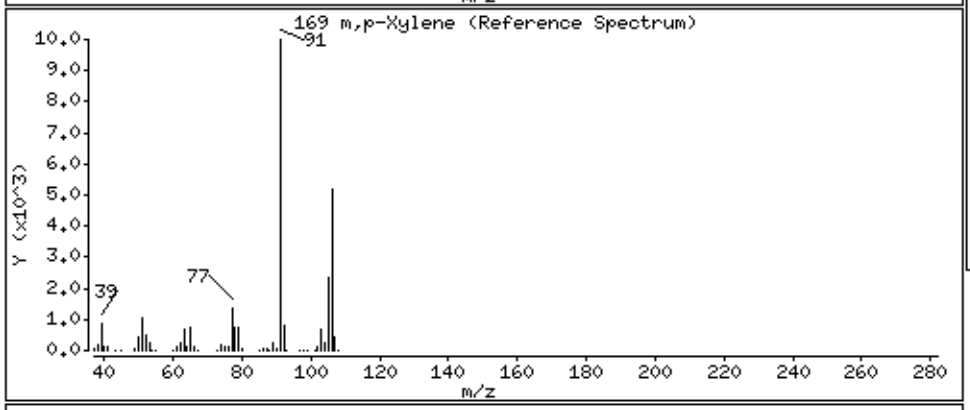
Column diameter: 0.32

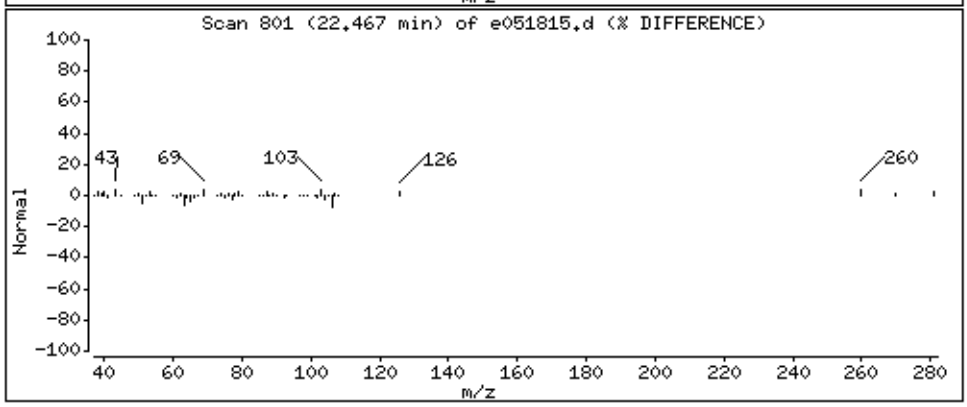
169 m,p-Xylene

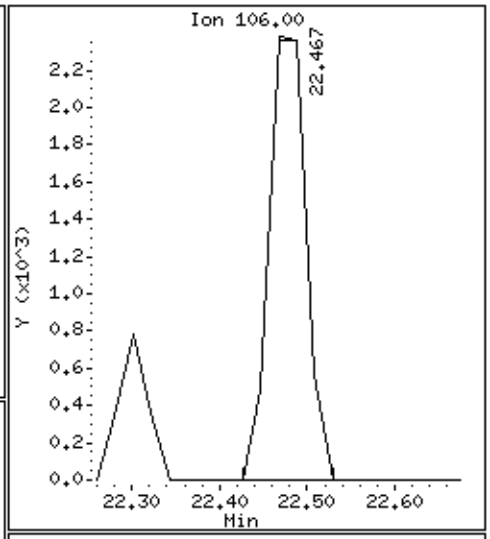
Concentration: 0.2065 PPBV

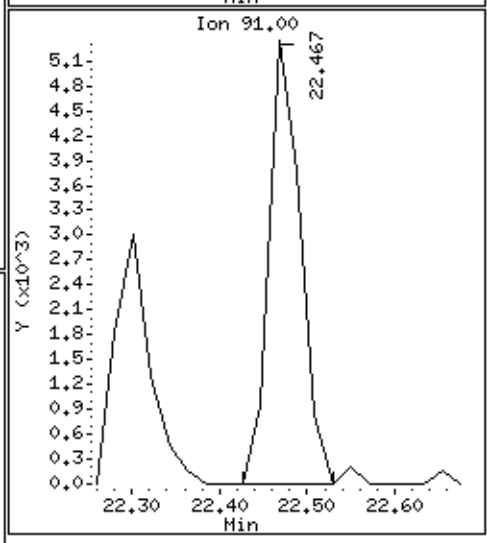












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

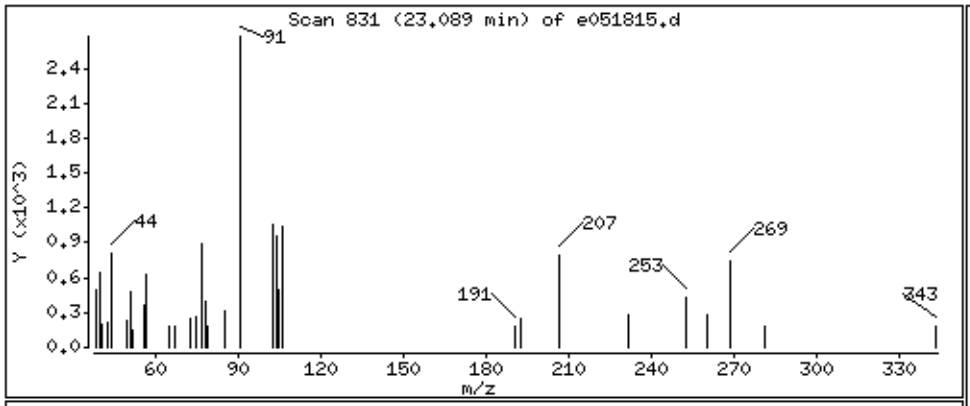
Operator: ea

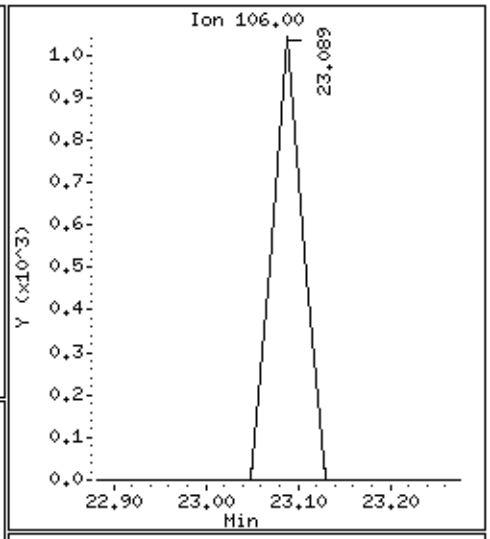
Column phase: RTX-624

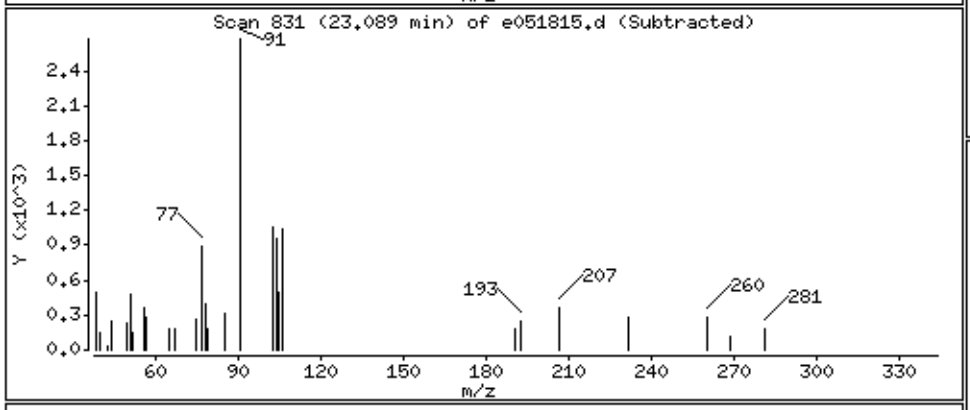
Column diameter: 0.32

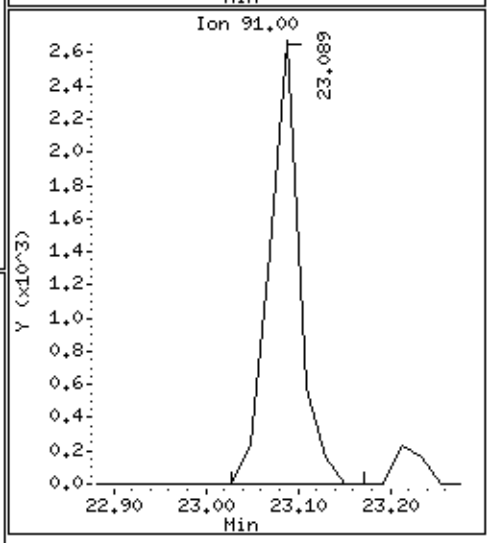
171 o-Xylene

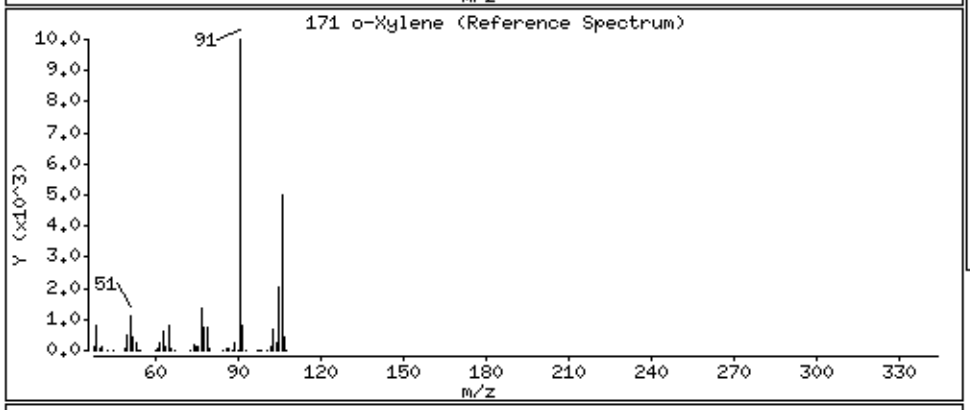
Concentration: 0.07869 PPBV

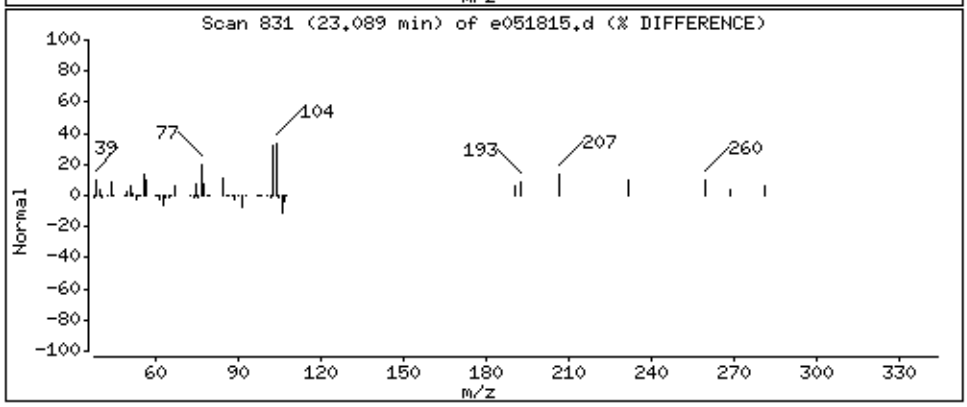












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

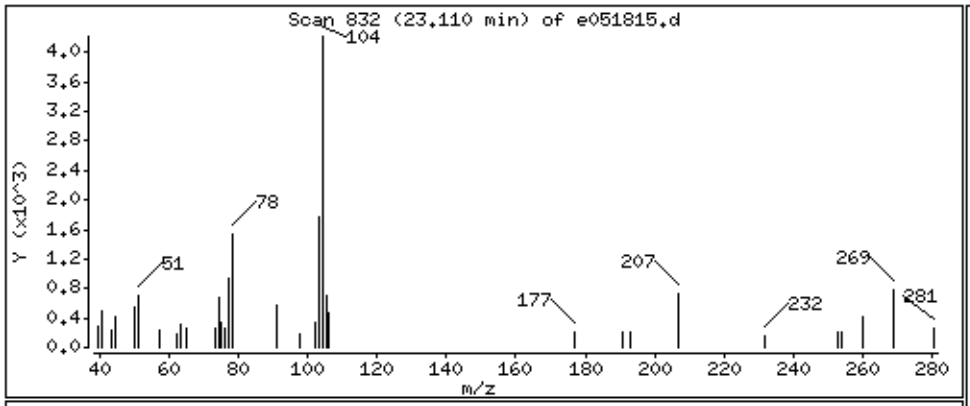
Operator: ea

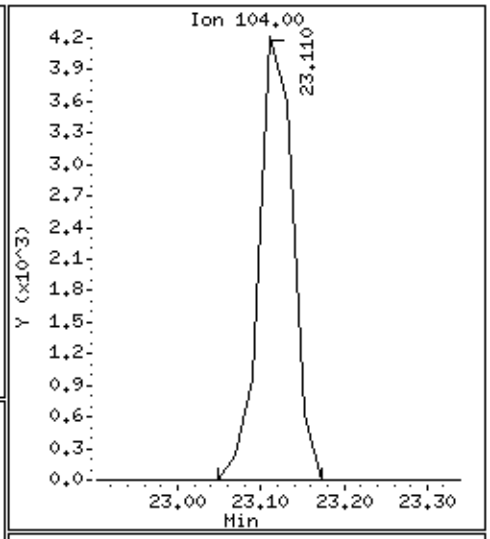
Column phase: RTX-624

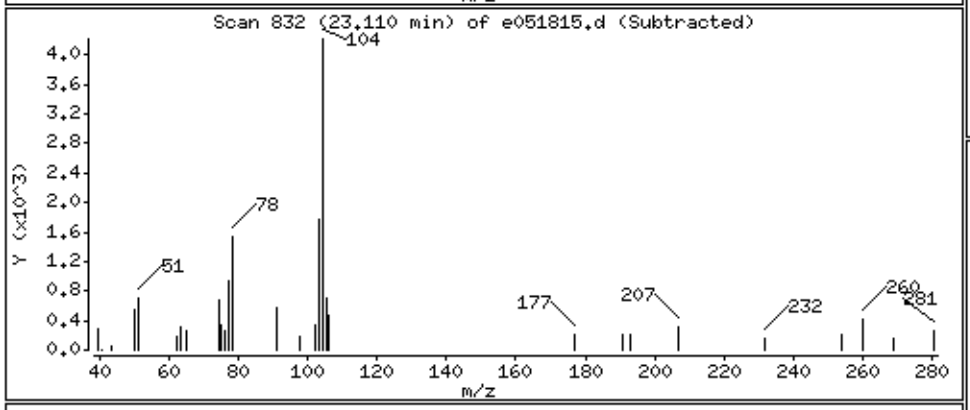
Column diameter: 0.32

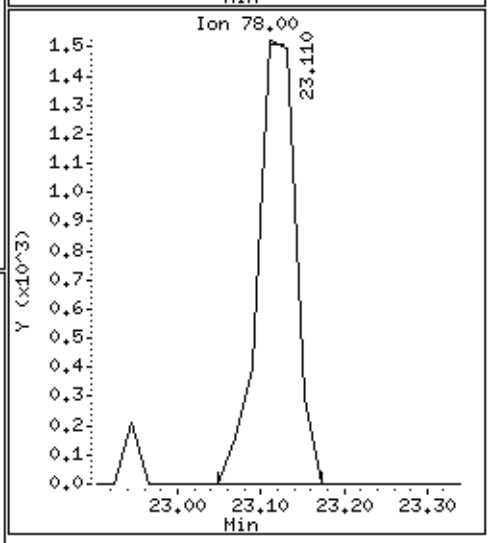
172 Styrene

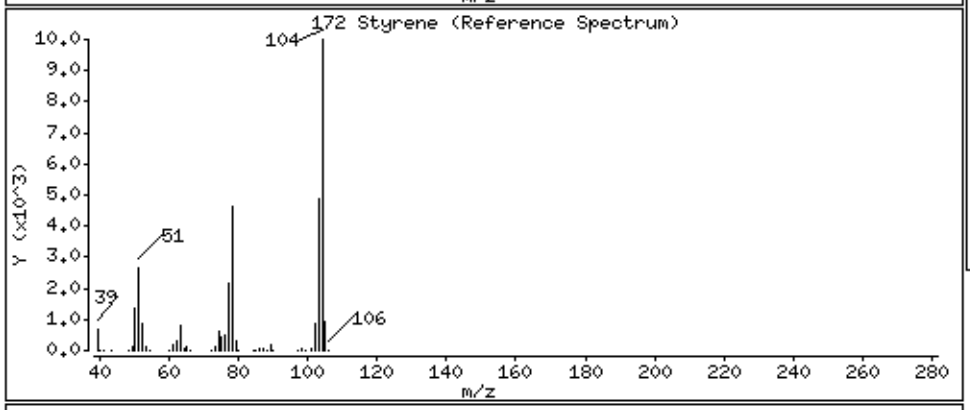
Concentration: 0.2217 PPBV

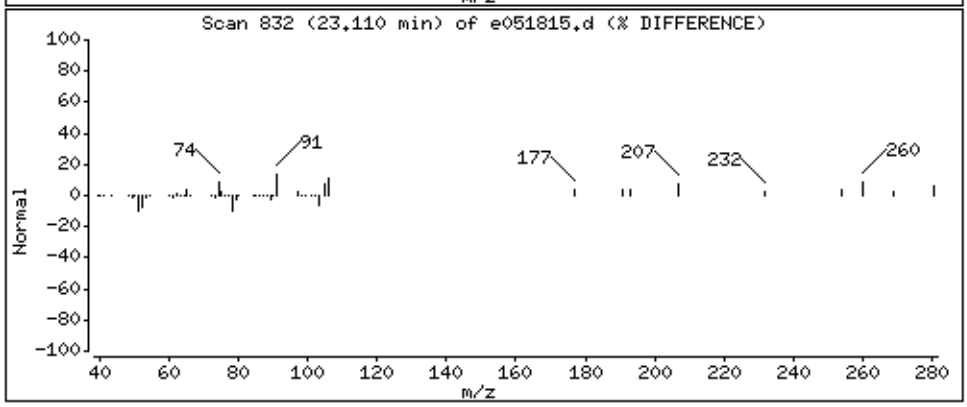












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

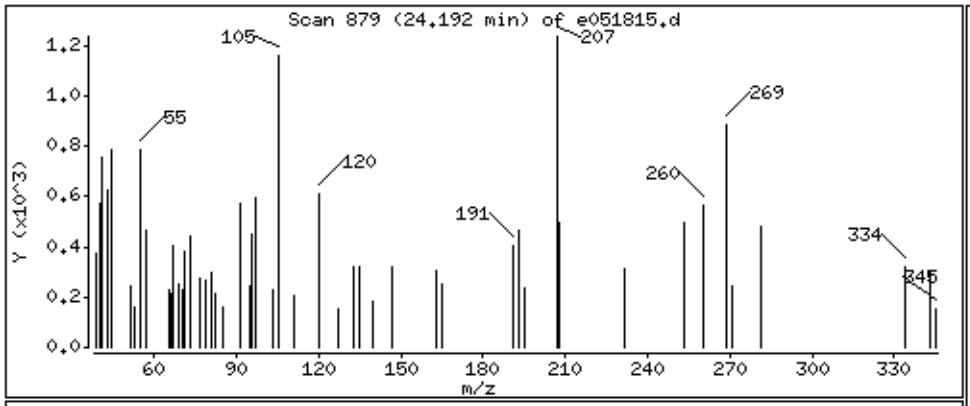
Operator: ea

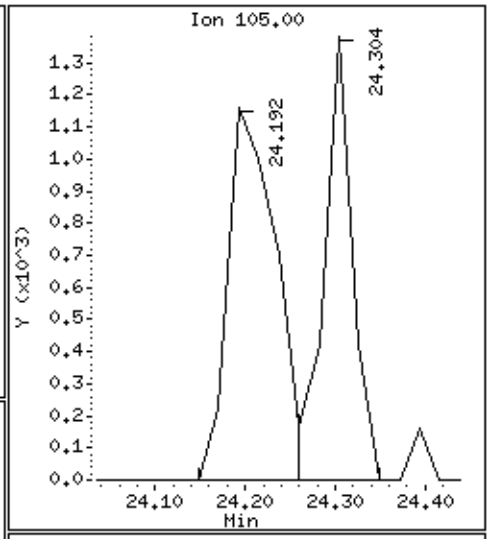
Column phase: RTX-624

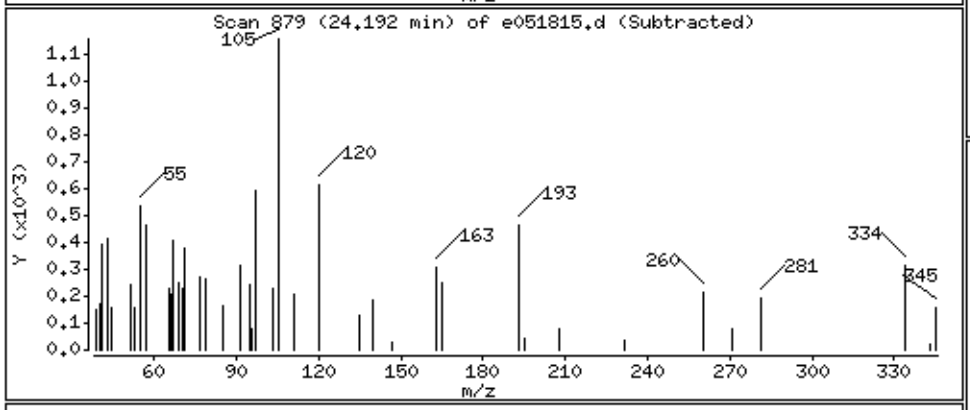
Column diameter: 0.32

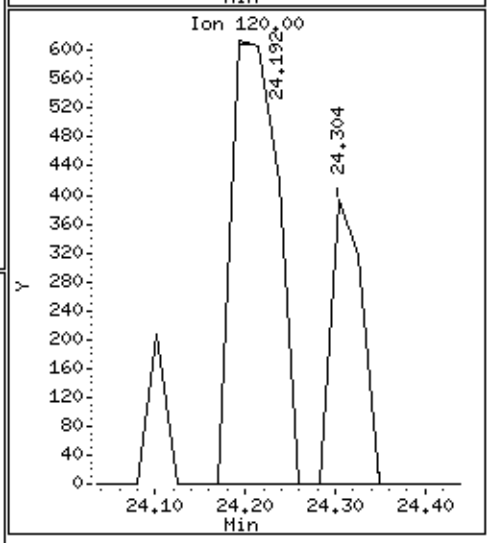
188 4-Ethyltoluene

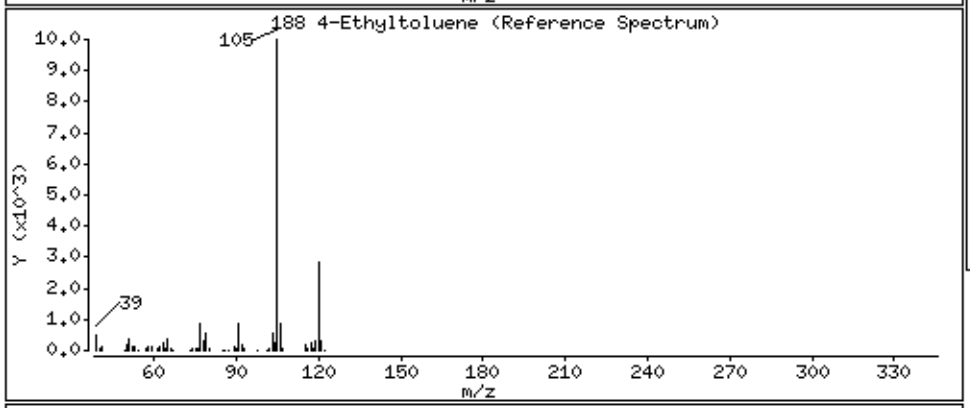
Concentration: 0.04502 PPBV

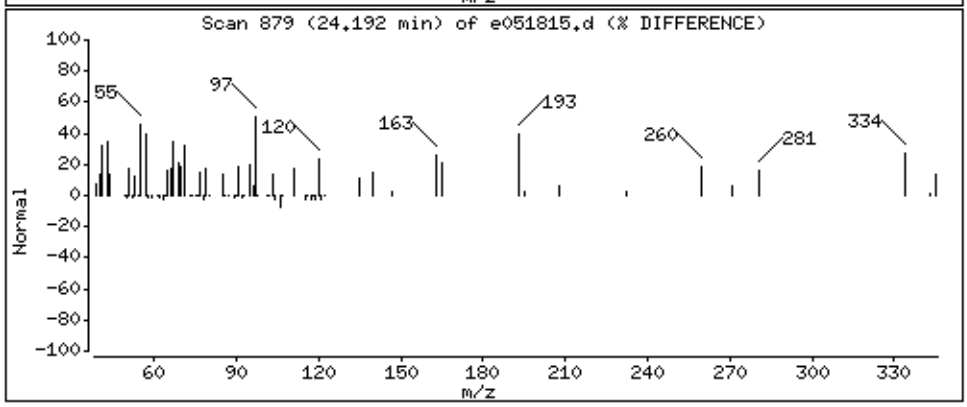












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

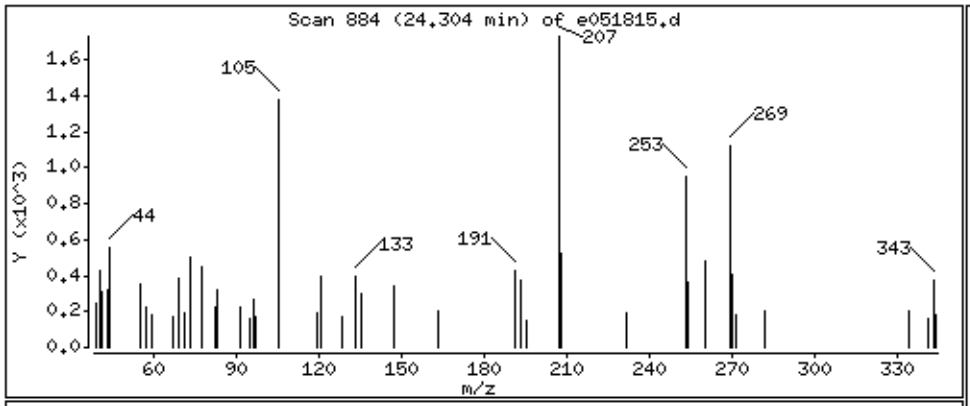
Operator: ea

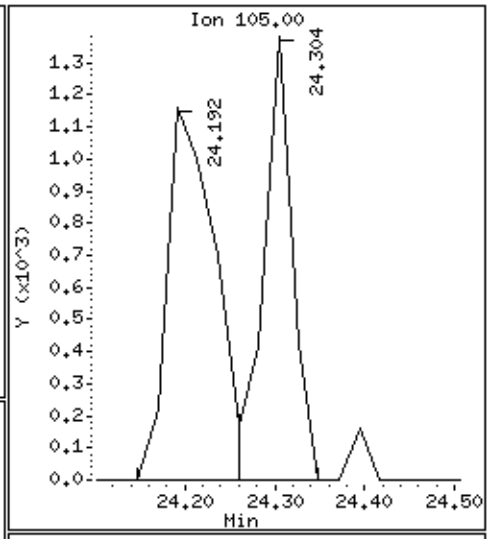
Column phase: RTX-624

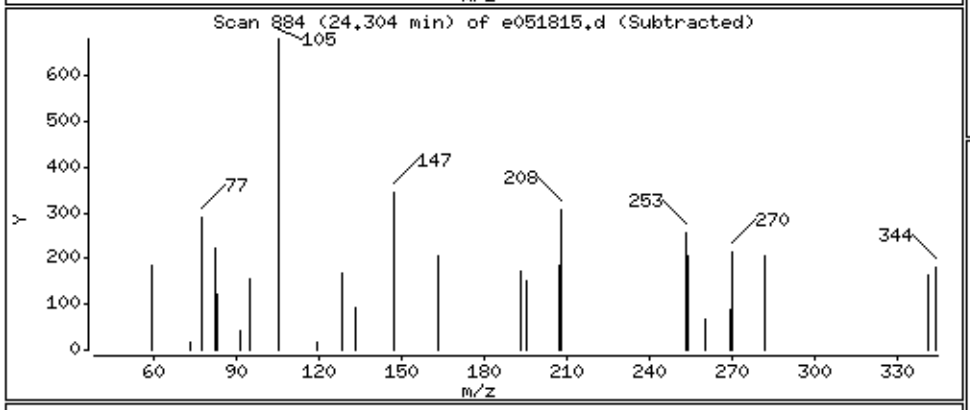
Column diameter: 0.32

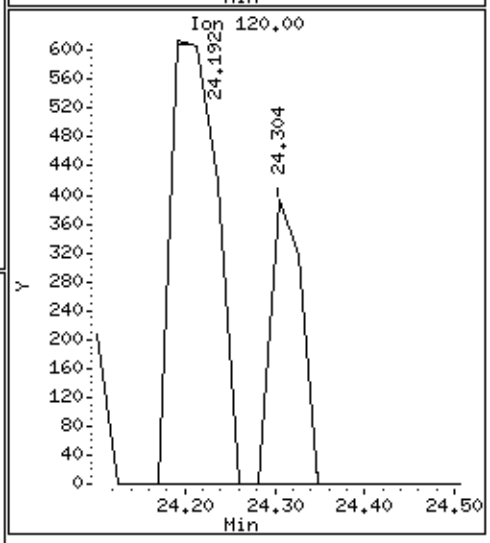
190 1,3,5-Trimethylbenzene

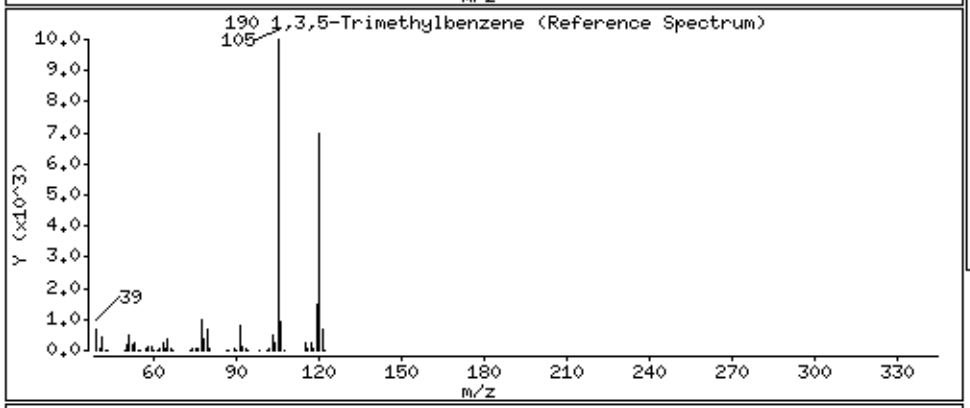
Concentration: 0.04264 PPBV

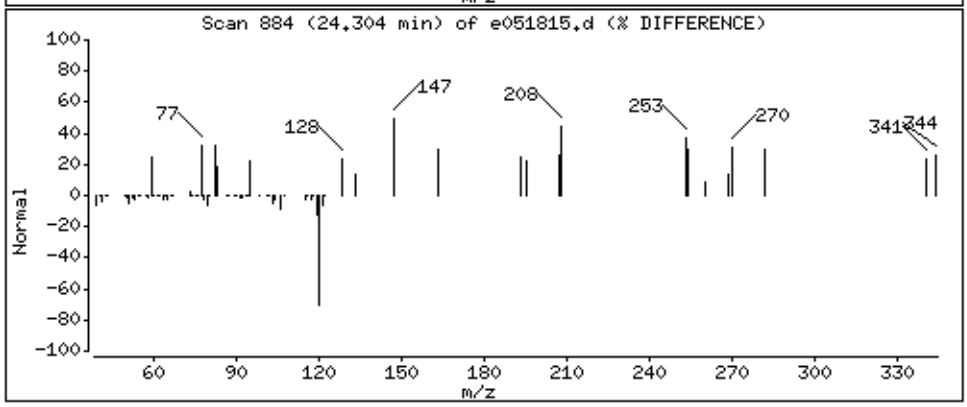












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

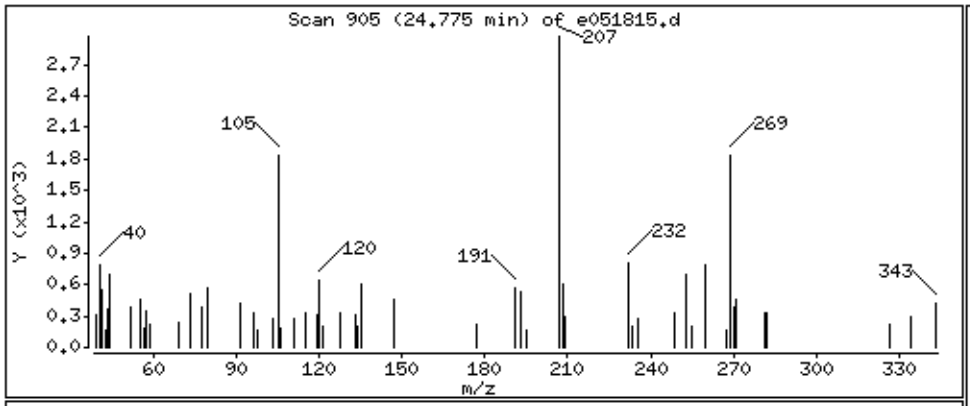
Operator: ea

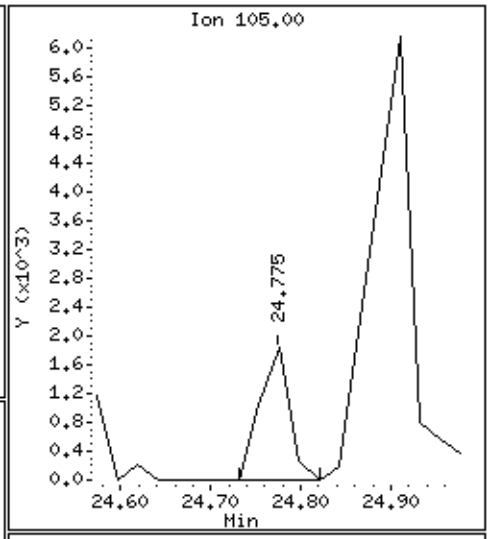
Column phase: RTX-624

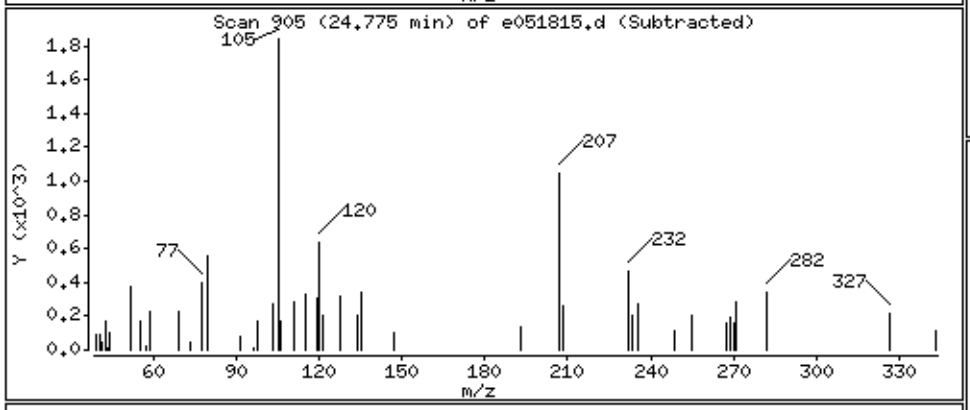
Column diameter: 0.32

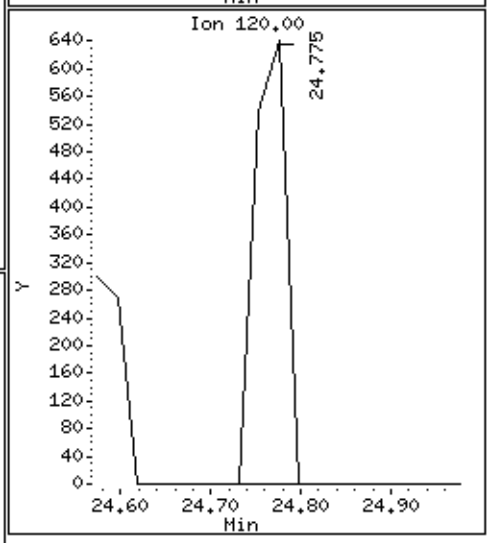
196 1,2,4-Trimethylbenzene

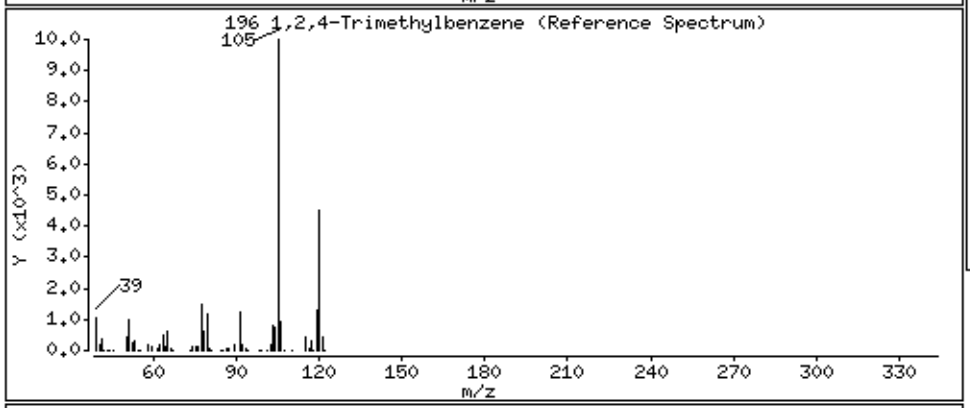
Concentration: 0.06473 PPBV

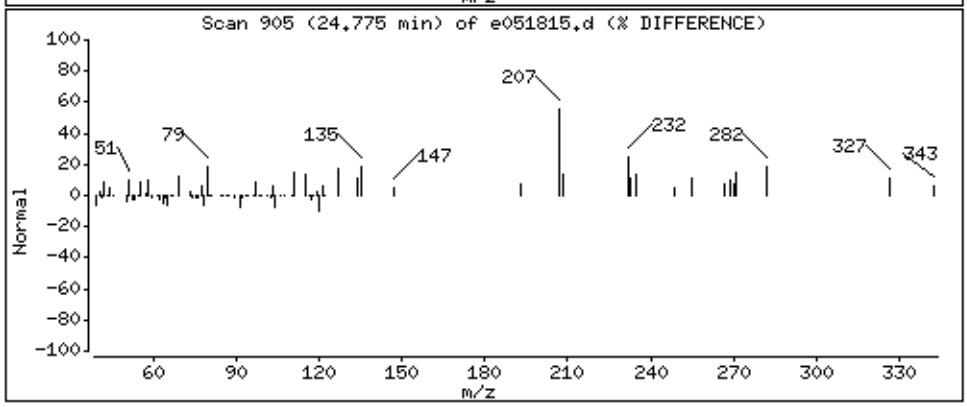












Data File: /chem/msde.i/18May2016.b/e051815.d

Date : 18-MAY-2016 19:15

Client ID:

Instrument: msde.i

Sample Info: 250mL#N0593

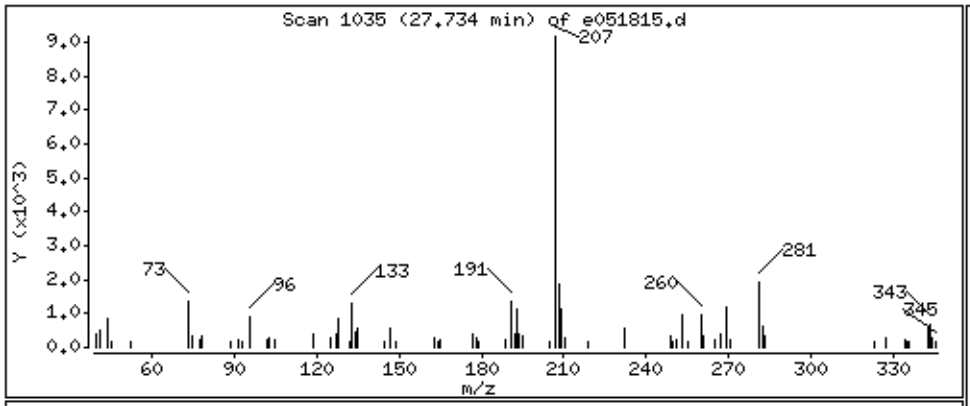
Operator: ea

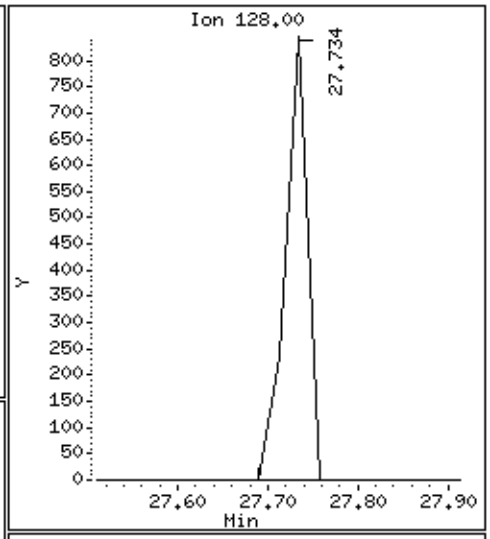
Column phase: RTX-624

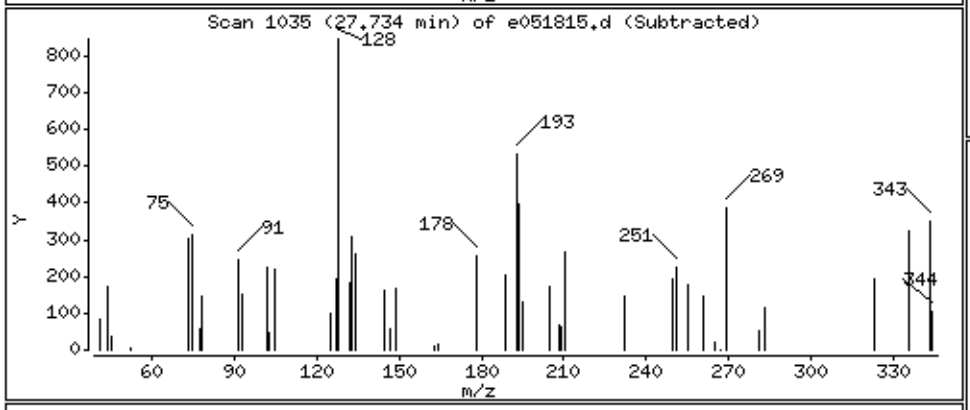
Column diameter: 0.32

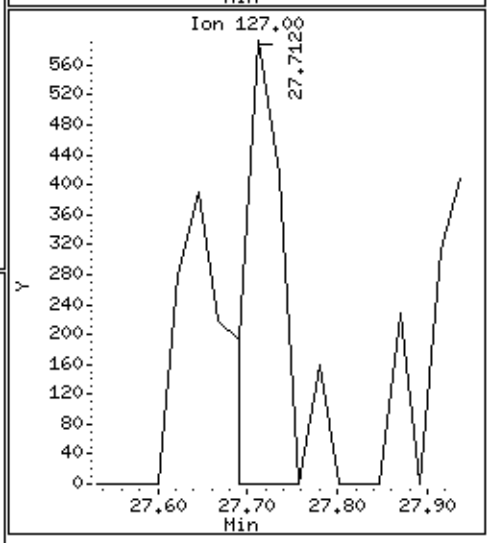
228 Naphthalene

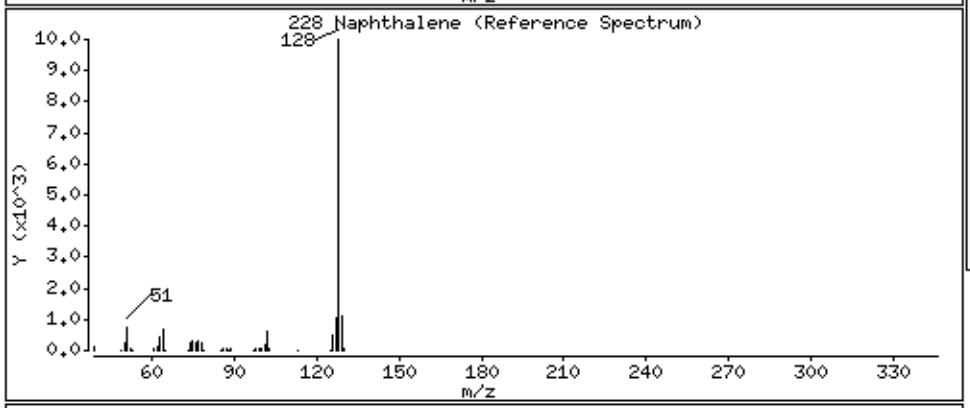
Concentration: 0.04154 PPBV

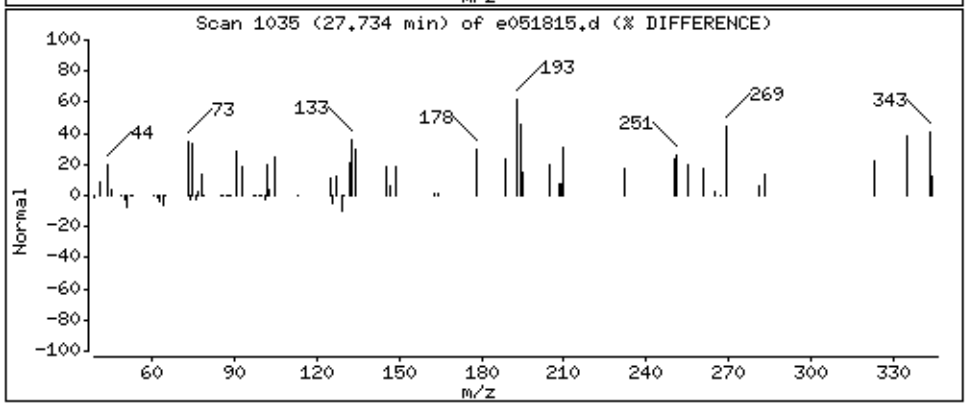












eurofins | Air Toxics

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

Client Sample ID: B7IA-6

Lab ID#: 1605308D-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.27	0.43	1.3	2.1
Chloromethane	1.3	0.66 J	2.8	1.4 J
Freon 11	0.27	2.1	1.5	12
Ethanol	1.3	220 E	2.5	420 E
Acetone	1.3	8.9	3.2	21
2-Propanol	1.3	8.8	3.3	22
Carbon Disulfide	1.3	0.92 J	4.2	2.8 J
2-Butanone (Methyl Ethyl Ketone)	1.3	1.4	4.0	4.3
Chloroform	0.27	0.13 J	1.3	0.62 J
Benzene	0.27	0.12 J	0.86	0.37 J
Toluene	0.27	0.38	1.0	1.4
2-Hexanone	1.3	0.16 J	5.5	0.67 J
m,p-Xylene	0.27	0.12 J	1.2	0.54 J
Styrene	0.27	0.27	1.1	1.2
4-Ethyltoluene	0.27	0.052 J	1.3	0.26 J
Naphthalene	1.3	0.092 J	7.0	0.48 J

eurofins | Air Toxics

Client Sample ID: B7IA-6

Lab ID#: 1605308D-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051814**	**Date of Collection:**	**5/14/16 8:53:00 PM**
Dil. Factor:	**2.68**	**Date of Analysis:**	**5/18/16 06:31 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.27	0.43	1.3	2.1
Freon 114	0.27	Not Detected	1.9	Not Detected
Chloromethane	1.3	0.66 J	2.8	1.4 J
Vinyl Chloride	0.27	Not Detected	0.68	Not Detected
1,3-Butadiene	0.27	Not Detected	0.59	Not Detected
Bromomethane	1.3	Not Detected	5.2	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	0.27	2.1	1.5	12
Ethanol	1.3	220 E	2.5	420 E
Freon 113	0.27	Not Detected	2.0	Not Detected
1,1-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Acetone	1.3	8.9	3.2	21
2-Propanol	1.3	8.8	3.3	22
Carbon Disulfide	1.3	0.92 J	4.2	2.8 J
3-Chloropropene	1.3	Not Detected	4.2	Not Detected
Methylene Chloride	0.54	Not Detected	1.9	Not Detected
Methyl tert-butyl ether	0.27	Not Detected	0.97	Not Detected
trans-1,2-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Hexane	0.27	Not Detected	0.94	Not Detected
1,1-Dichloroethane	0.27	Not Detected	1.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	1.4	4.0	4.3
cis-1,2-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Tetrahydrofuran	1.3	Not Detected UJ	4.0	Not Detected UJ
Chloroform	0.27	0.13 J	1.3	0.62 J
1,1,1-Trichloroethane	0.27	Not Detected	1.5	Not Detected
Cyclohexane	0.27	Not Detected	0.92	Not Detected
Carbon Tetrachloride	0.27	Not Detected	1.7	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	0.27	0.12 J	0.86	0.37 J
1,2-Dichloroethane	0.27	Not Detected	1.1	Not Detected
Heptane	0.27	Not Detected	1.1	Not Detected
Trichloroethene	0.27	Not Detected	1.4	Not Detected
1,2-Dichloropropane	0.27	Not Detected	1.2	Not Detected
1,4-Dioxane	0.27	Not Detected	0.96	Not Detected
Bromodichloromethane	0.27	Not Detected	1.8	Not Detected
cis-1,3-Dichloropropene	0.27	Not Detected	1.2	Not Detected
4-Methyl-2-pentanone	0.27	Not Detected	1.1	Not Detected
Toluene	0.27	0.38	1.0	1.4
trans-1,3-Dichloropropene	0.27	Not Detected	1.2	Not Detected
1,1,2-Trichloroethane	0.27	Not Detected	1.5	Not Detected
Tetrachloroethene	0.27	Not Detected	1.8	Not Detected
2-Hexanone	1.3	0.16 J	5.5	0.67 J

eurofins | Air Toxics

Client Sample ID: B7IA-6

Lab ID#: 1605308D-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051814**	**Date of Collection:**	**5/14/16 8:53:00 PM**
Dil. Factor:	**2.68**	**Date of Analysis:**	**5/18/16 06:31 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.27	Not Detected	2.3	Not Detected
1,2-Dibromoethane (EDB)	0.27	Not Detected	2.0	Not Detected
Chlorobenzene	0.27	Not Detected	1.2	Not Detected
Ethyl Benzene	0.27	Not Detected	1.2	Not Detected
m,p-Xylene	0.27	0.12 J	1.2	0.54 J
o-Xylene	0.27	Not Detected	1.2	Not Detected
Styrene	0.27	0.27	1.1	1.2
Bromoform	0.27	Not Detected	2.8	Not Detected
Cumene	0.27	Not Detected	1.3	Not Detected
1,1,2,2-Tetrachloroethane	0.27	Not Detected	1.8	Not Detected
Propylbenzene	0.27	Not Detected	1.3	Not Detected
4-Ethyltoluene	0.27	0.052 J	1.3	0.26 J
1,3,5-Trimethylbenzene	0.27	Not Detected	1.3	Not Detected
1,2,4-Trimethylbenzene	0.27	Not Detected UJ	1.3	Not Detected UJ
1,3-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
1,4-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.27	Not Detected	1.4	Not Detected
1,2-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
1,2,4-Trichlorobenzene	1.3	Not Detected	9.9	Not Detected
Hexachlorobutadiene	1.3	Not Detected	14	Not Detected
Naphthalene	1.3	0.092 J	7.0	0.48 J

J = Estimated value.
E = Exceeds instrument calibration range.
UJ = Analyte associated with low bias in the CCV.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051814.d
Lab Smp Id: 1605308D-07A
Inj Date : 18-MAY-2016 18:31
Operator : ea Inst ID: msde.i
Smp Info : 250mL#O0316
Misc Info : 14.9"hg-5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1
Dil Factor: 2.68000
Integrator: HP RTE Compound Sublist: TO15NMDL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
11 Freon 12						CAS #: 75-71-8		
5.269	5.220	(0.342)	85	18141	0.15961	0.4278	80.00- 120.00	100.00
5.269	5.196	(0.342)	87	5189			2.00- 62.00	28.60
17 Chloromethane						CAS #: 74-87-3		
6.932	6.932	(0.450)	50	5348	0.24800	0.6646	80.00- 120.00	100.00(a)
6.956	6.932	(0.452)	52	1898			5.50- 65.50	35.51
35 Freon 11						CAS #: 75-69-4		
10.747	10.747	(0.698)	101	95116	0.77721	2.083	80.00- 120.00	100.00
10.747	10.747	(0.698)	103	59179			37.17- 97.17	62.22
42 Ethanol						CAS #: 64-17-5		
11.680	11.661	(0.759)	45	744583	83.9632	225.02	80.00- 120.00	100.00(A)
11.680	11.680	(0.759)	46	286047			6.61- 66.61	38.42
11.661	11.661	(0.758)	43	179683			0.00- 54.66	24.13
52 Acetone						CAS #: 67-64-1		
12.366	12.366	(0.803)	58	49663	3.32086	8.900	80.00- 120.00	100.00
12.366	12.366	(0.803)	43	154348			321.47- 381.47	310.79

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

   56 Carbon Disulfide                                CAS #: 75-15-0
 12.442  12.442 (0.808)    76     39053 0.34263   0.9182  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.709 (0.827)    45    149420 3.26614    8.753  80.00- 120.00   100.00
 12.728  12.709 (0.827)    43     39922                     0.00-  54.09    26.72
 12.728  12.709 (0.827)    59      6379                     0.00-  34.43     4.27
-------------------------------------------------------------------------------
   92 2-Butanone                                      CAS #: 78-93-3
 15.047  15.047 (0.978)    72      9732 0.54025    1.448  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     47400                   262.26- 322.26   487.02
 15.047  15.047 (0.978)    57      2191                     0.00-  55.71    22.51
-------------------------------------------------------------------------------
*  98 Bromochloromethane                              CAS #: 74-97-5
 15.391  15.391 (1.000)   130    135130 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105378                   52.25- 112.25    77.98
 15.391  15.391 (1.000)    49     97804                   89.81- 149.81    72.38
-------------------------------------------------------------------------------
  100 Chloroform                                      CAS #: 67-66-3
 15.453  15.453 (1.004)    83      4597 0.04712   0.1263  80.00- 120.00   100.00(a)
 15.453  15.453 (1.004)    85      2847                   33.97-  93.97    61.94
-------------------------------------------------------------------------------
  116 Benzene                                         CAS #: 71-43-2
 16.183  16.183 (0.967)    78      5181 0.04368   0.1171  80.00- 120.00   100.00(a)
 16.183  16.183 (0.967)    77      1502                     0.00-  53.97    29.00
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                           CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    185867 4.79125    4.791  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     93622                   21.16-  81.16    50.37
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                             CAS #: 540-36-3
 16.737  16.737 (1.000)   114    494963 5.00000           80.00- 120.00   100.00
 16.737  16.713 (1.000)    88     73671                     0.00-  45.20    14.88
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                      CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    477165 4.90866    4.909  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     50672                     0.00-  40.11    10.62
 19.275  19.275 (1.152)   100    321874                   37.58-  97.58    67.46
-------------------------------------------------------------------------------
  147 Toluene                                         CAS #: 108-88-3
 19.432  19.410 (1.161)    91     20034 0.14180   0.3800  80.00- 120.00   100.00
 19.432  19.410 (1.161)    92     11379                   28.92-  88.92    56.80
-------------------------------------------------------------------------------
  158 2-Hexanone                                      CAS #: 591-78-6
 20.767  20.767 (0.936)    58      2209 0.06078   0.1629  80.00- 120.00   100.00(a)
 20.795  20.767 (0.938)    43      4718                  140.44- 200.44   213.50
```

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

  158 2-Hexanone (continued)
  0.000  20.795 (0.000)   100         0                     0.00-  59.62     0.00
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    468562 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    226194                   20.64-  80.64    48.27
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106      3351 0.04672   0.1252  80.00- 120.00   100.00(a)
 22.467  22.467 (1.013)    91      7464                  166.46- 226.46   222.72
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104     11314 0.10163   0.2724  80.00- 120.00   100.00
 23.131  23.110 (1.043)    78      5086                   20.27-  80.27    44.96
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    318899 4.96005    4.960  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    321203                   77.42- 137.42   100.72
 23.856  23.856 (1.076)   176    303753                   65.38- 125.38    95.25
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.192  24.237 (1.091)   105      3898 0.01952  0.05232  80.00- 120.00   100.00(a)
 24.192  24.237 (1.091)   120      1563                    1.08-  61.08    40.11
-------------------------------------------------------------------------------
  228 Naphthalene                                   CAS #: 91-20-3
 27.734  27.712 (1.251)   128      2481 0.03443  0.09227  80.00- 120.00   100.00(a)
 27.734  27.734 (1.251)   127       737                    0.00-  46.39    29.70
-------------------------------------------------------------------------------
```

QC Flag Legend

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

Report Date: 19-May-2016 10:36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051814.d
Lab Smp Id: 1605308D-07A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 14.9"hg-5.1psi

Calibration Date: 18-MAY-2016
Calibration Time: 08:43

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	135130	-13.04
123 1,4-Difluorobenze	603874	362324	845424	494963	-18.04
163 Chlorobenzene-d5	522912	313747	732077	468562	-10.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 19-May-2016 10:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 18May2016
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1605308D-07A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09Bromo.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 14.9"hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.791	95.83	70-130
$ 146 Toluene-d8	5.000	4.909	98.17	70-130
$ 177 4-Bromofluorobenze	5.000	4.960	99.20	70-130

Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

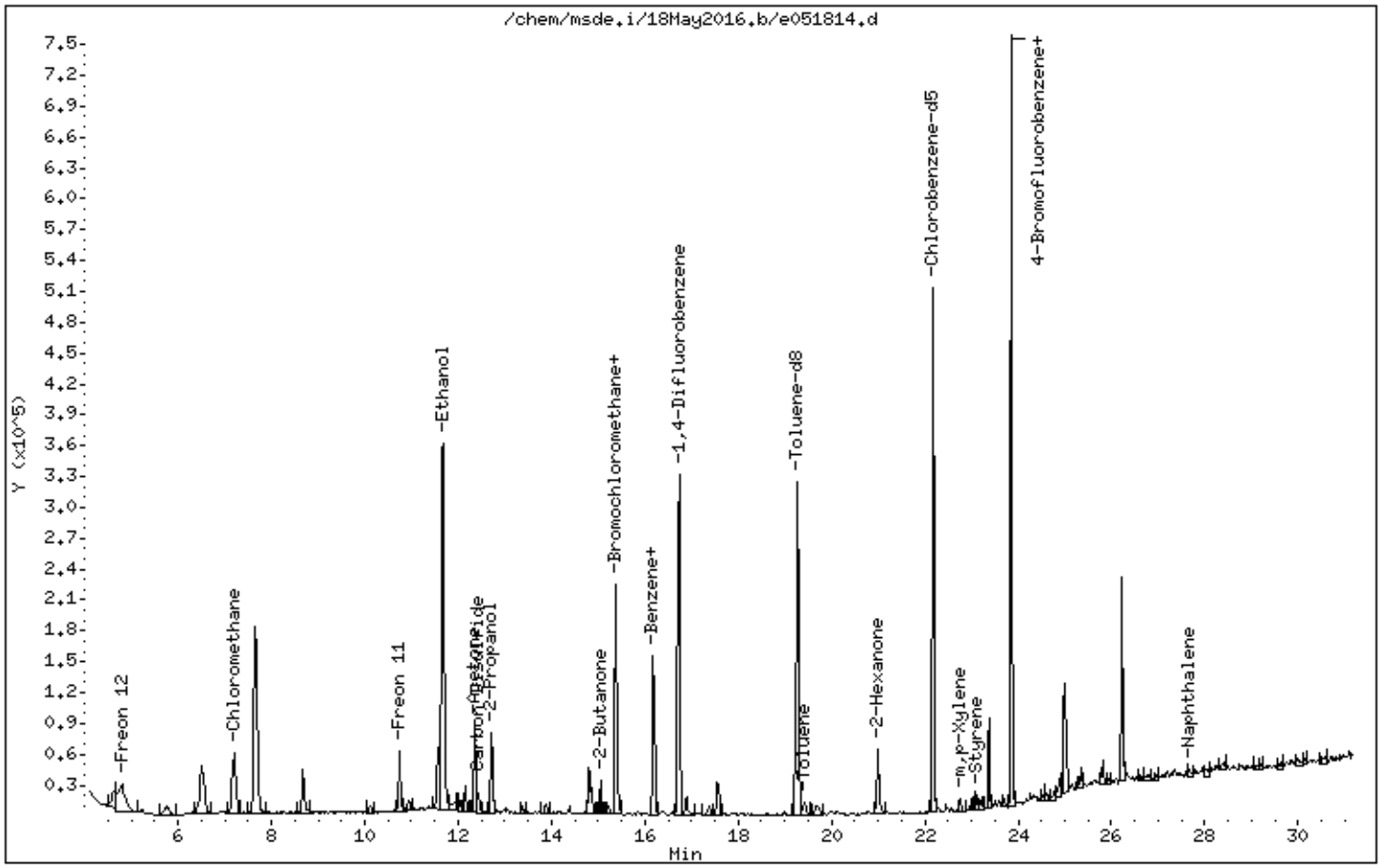
Instrument: msde.i

Sample Info: 250mL#00316

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

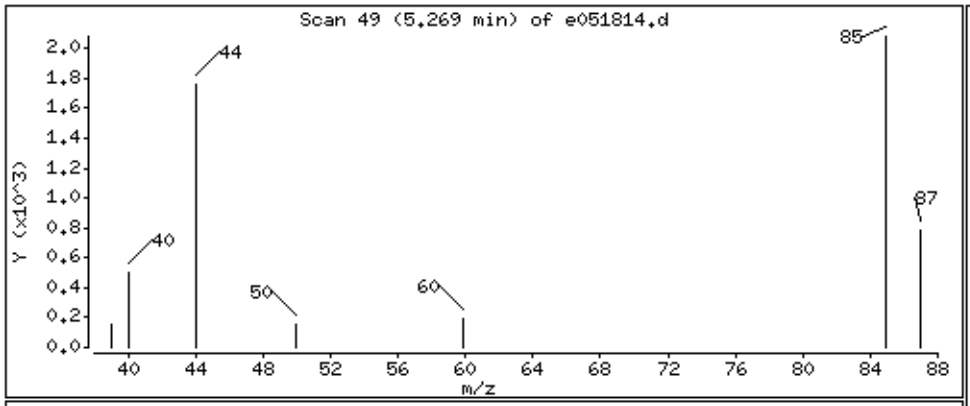
Operator: ea

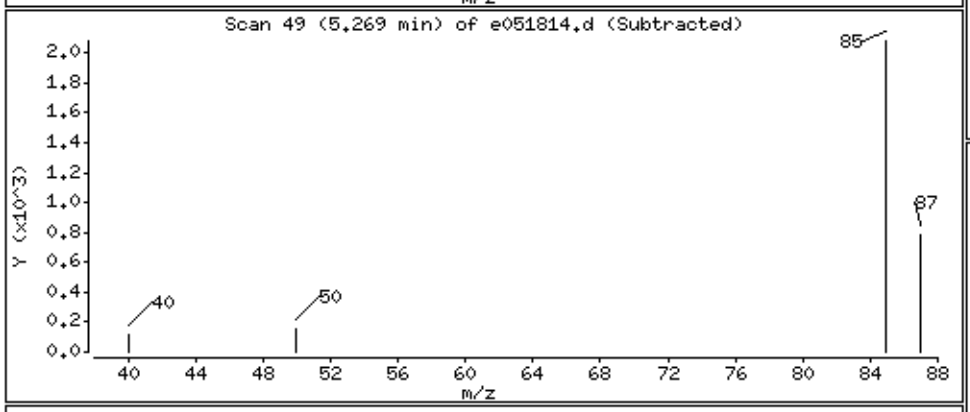
Column phase: RTX-624

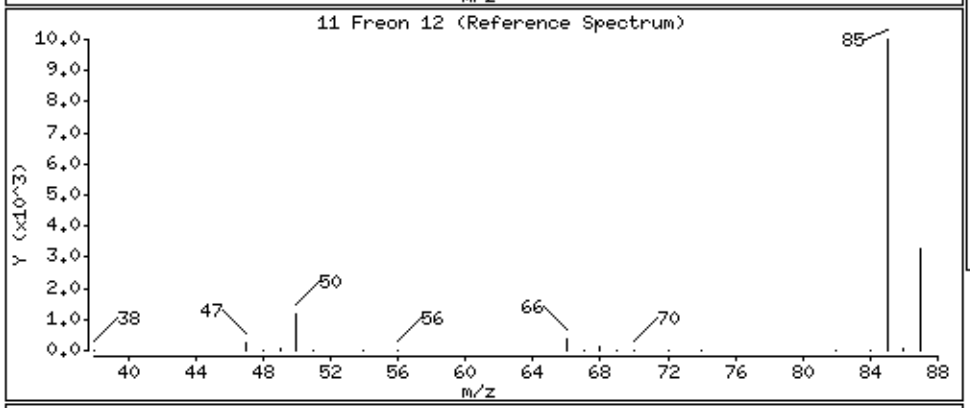
Column diameter: 0.32

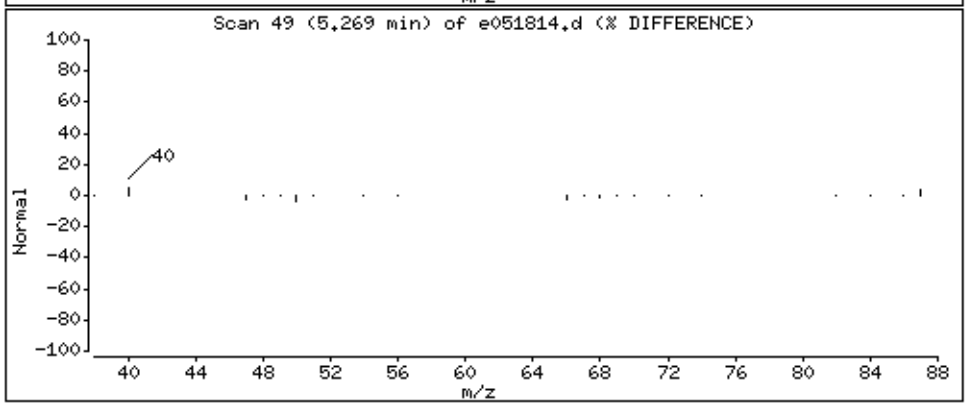
11 Freon 12

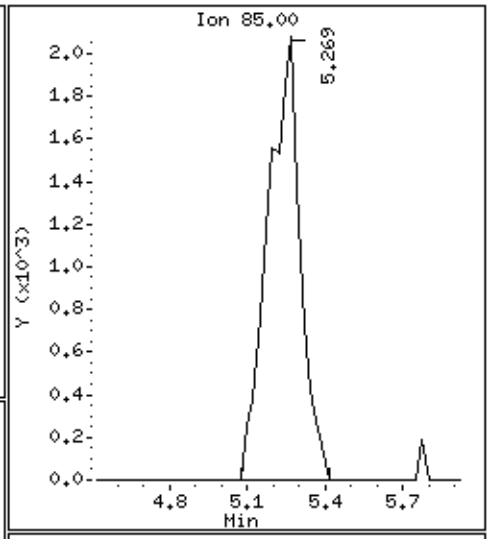
Concentration: 0.4278 PPBV

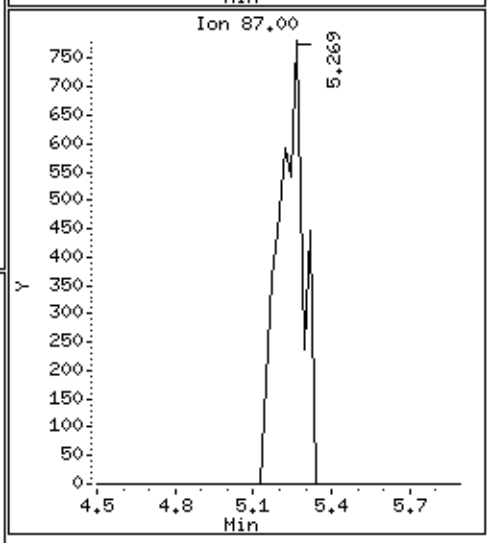












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

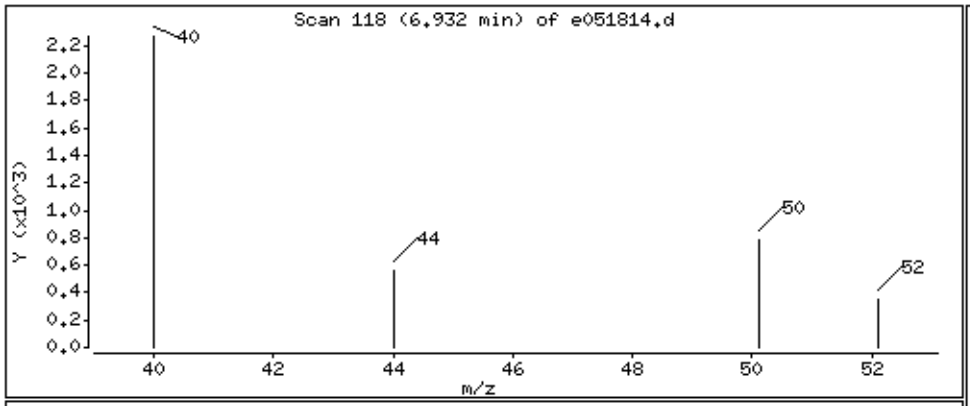
Operator: ea

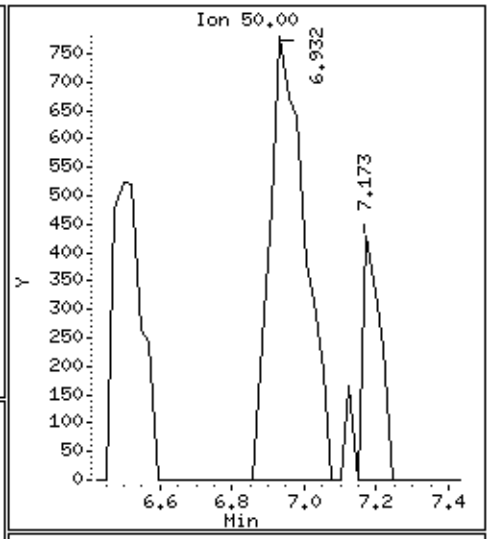
Column phase: RTX-624

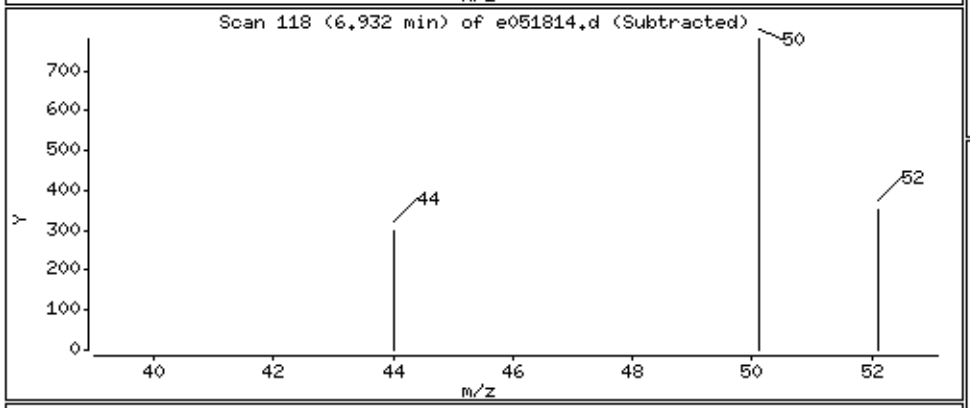
Column diameter: 0.32

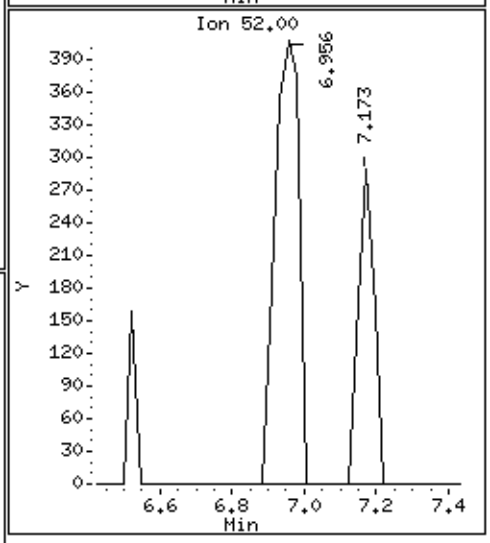
17 Chloromethane

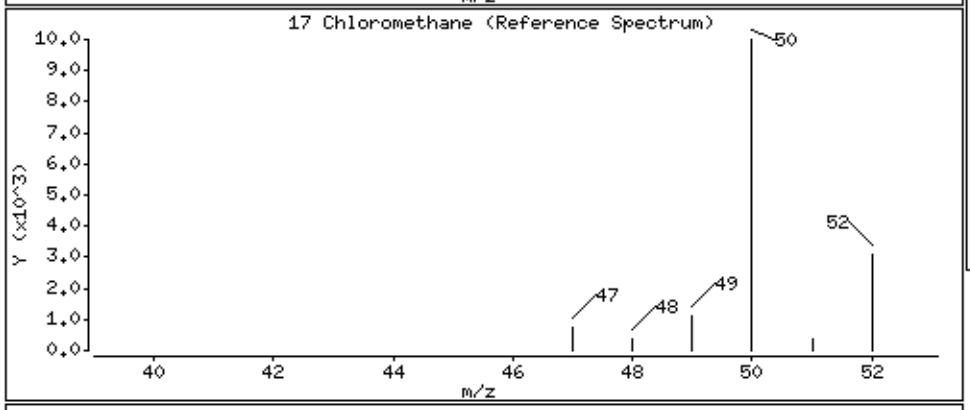
Concentration: 0.6646 PPBV

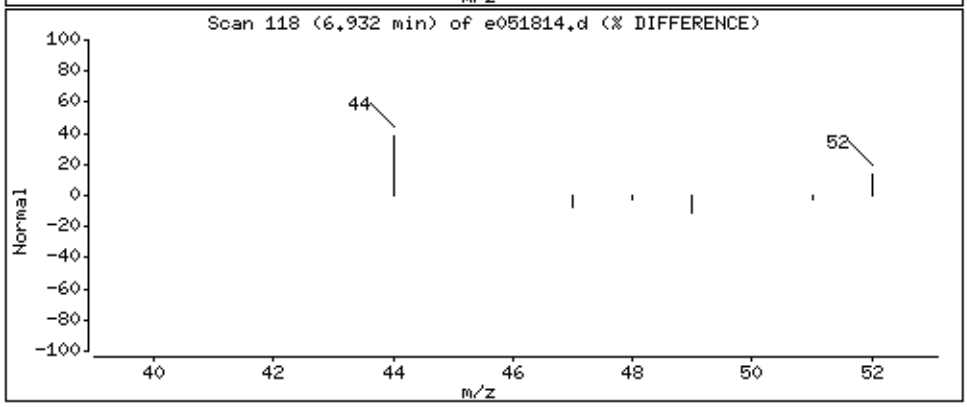












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

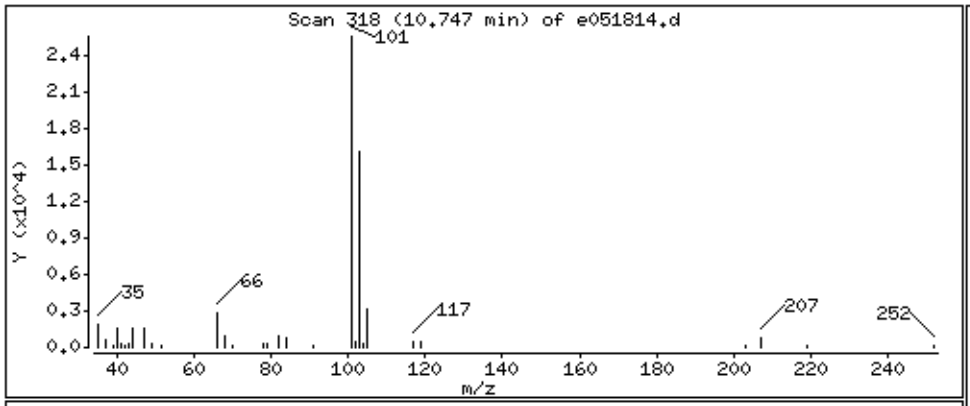
Operator: ea

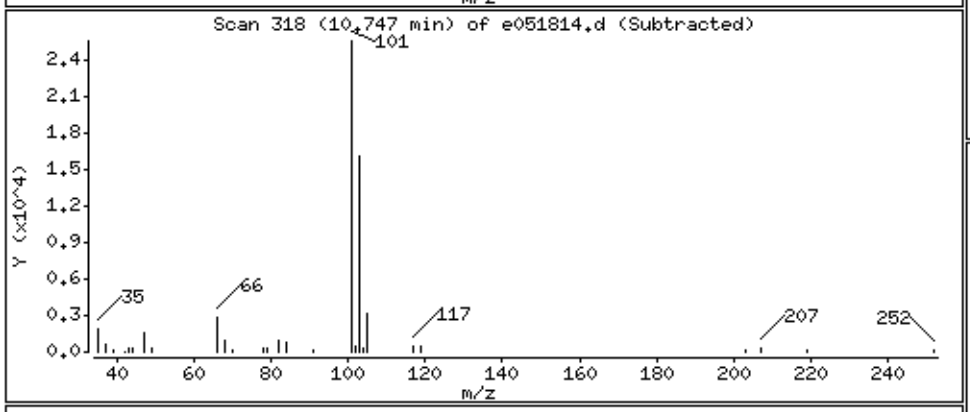
Column phase: RTX-624

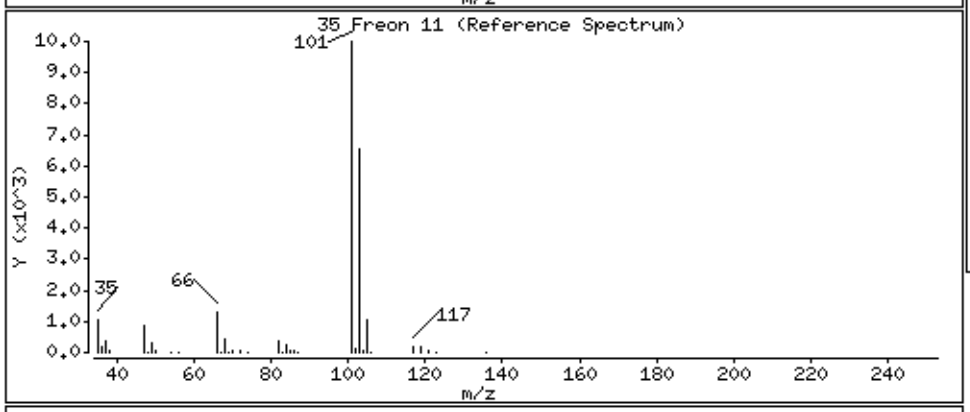
Column diameter: 0.32

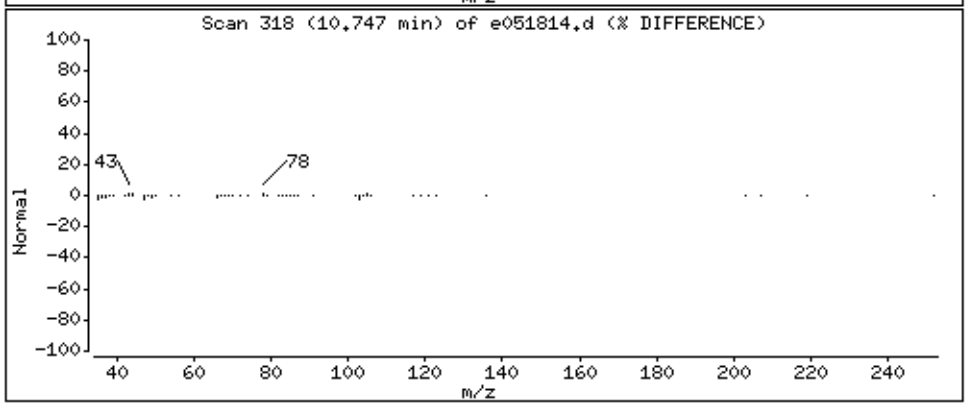
35 Freon 11

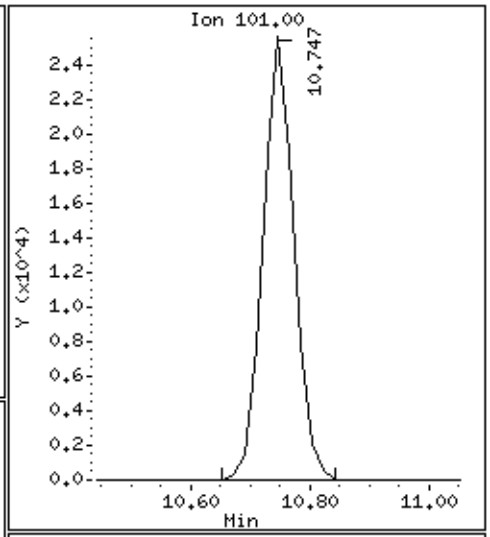
Concentration: 2.083 PPBV

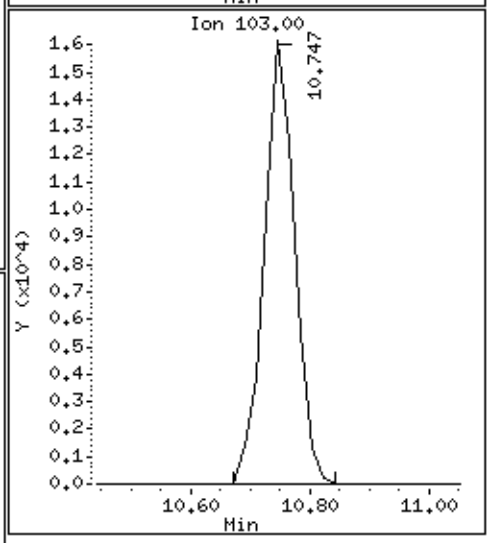












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

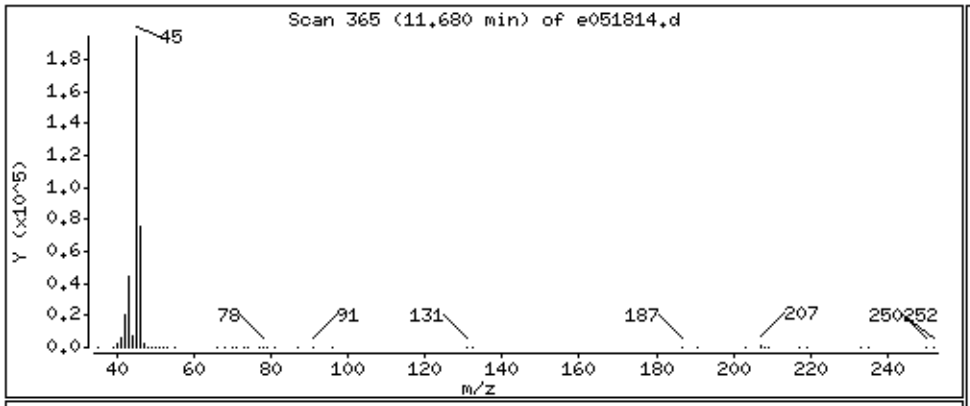
Operator: ea

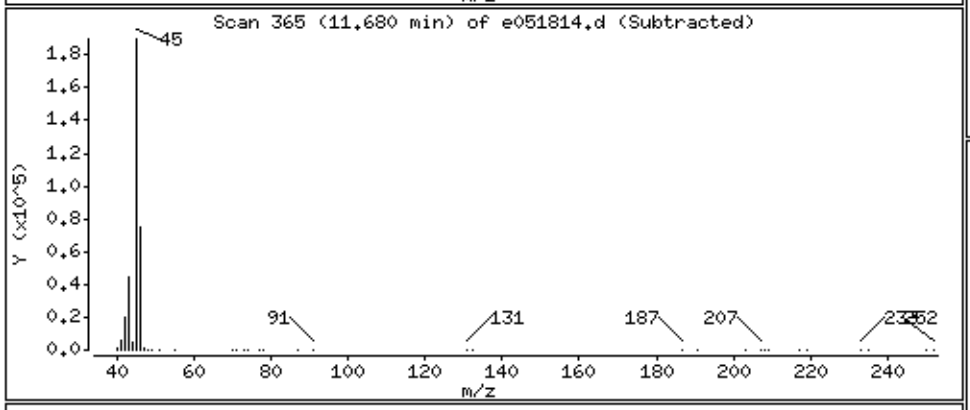
Column phase: RTX-624

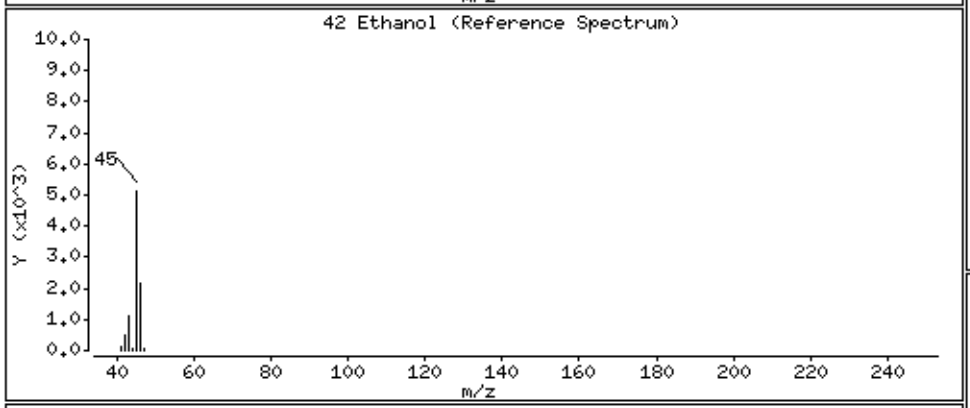
Column diameter: 0.32

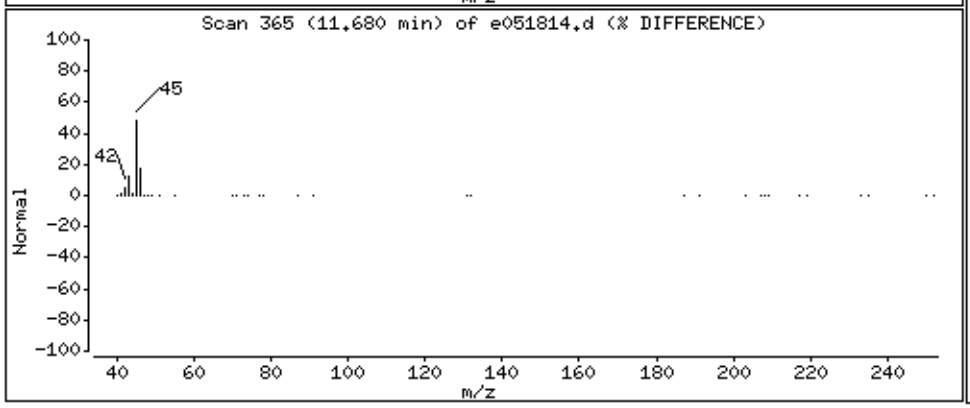
42 Ethanol

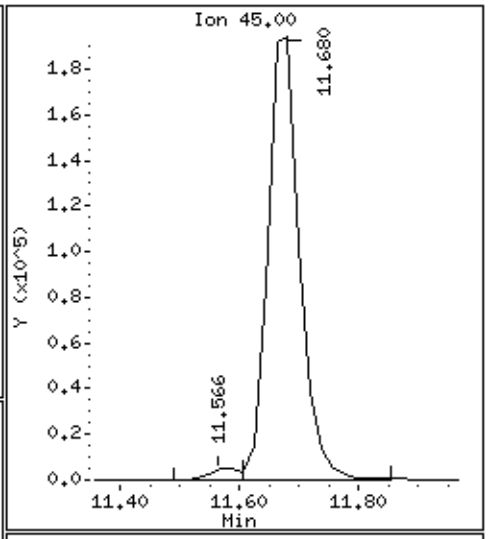
Concentration: 225.02 PPBV

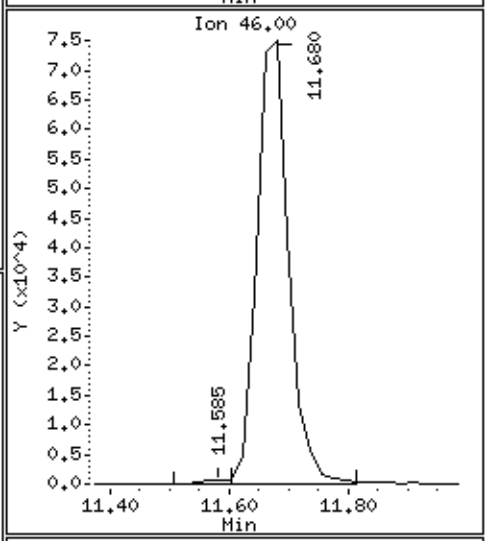


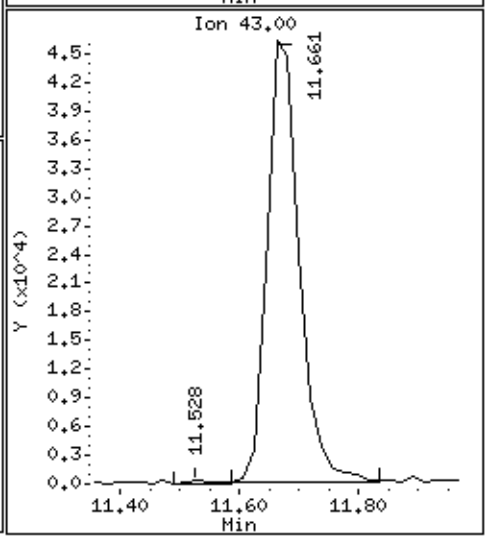












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

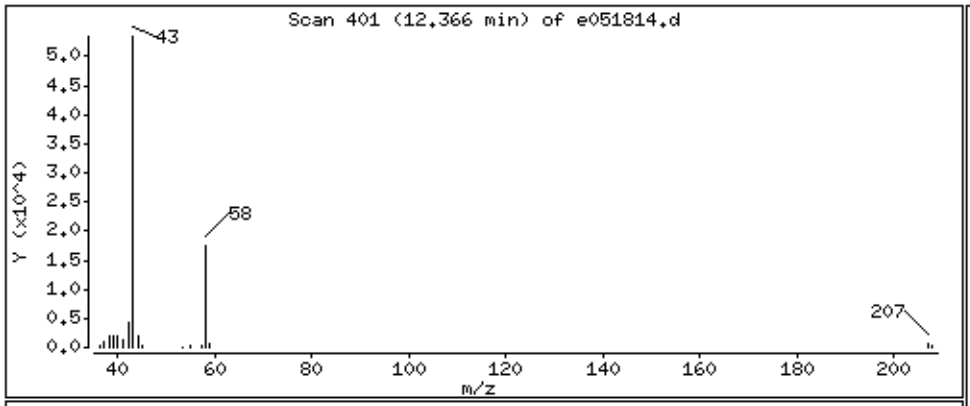
Operator: ea

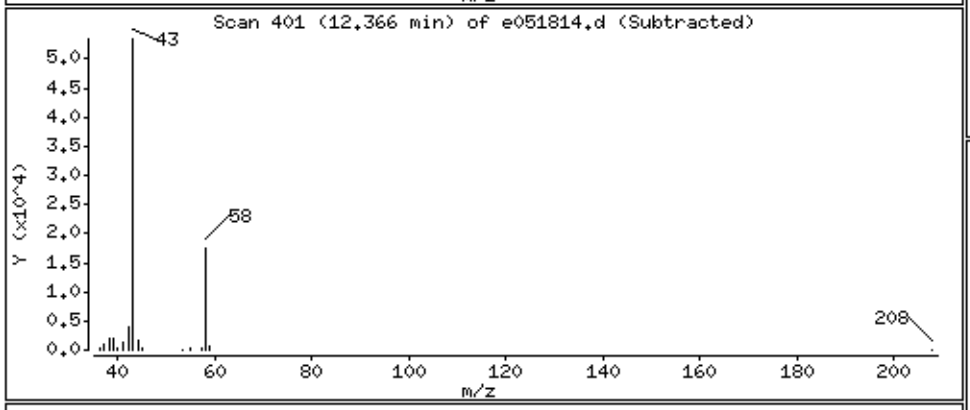
Column phase: RTX-624

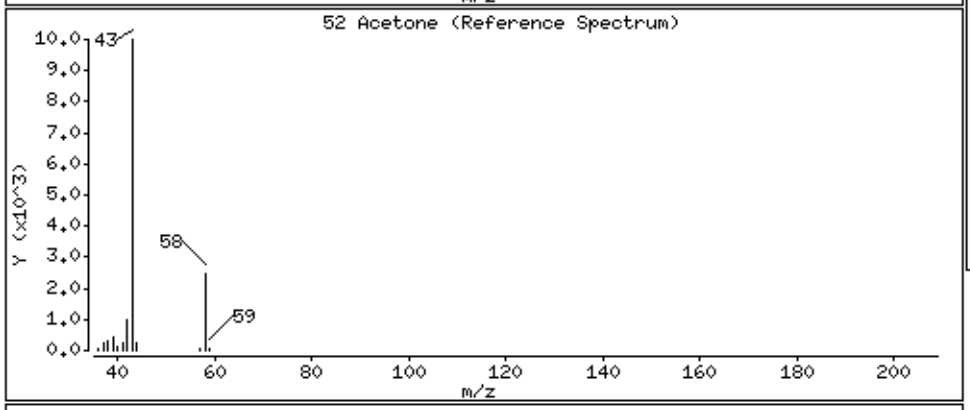
Column diameter: 0.32

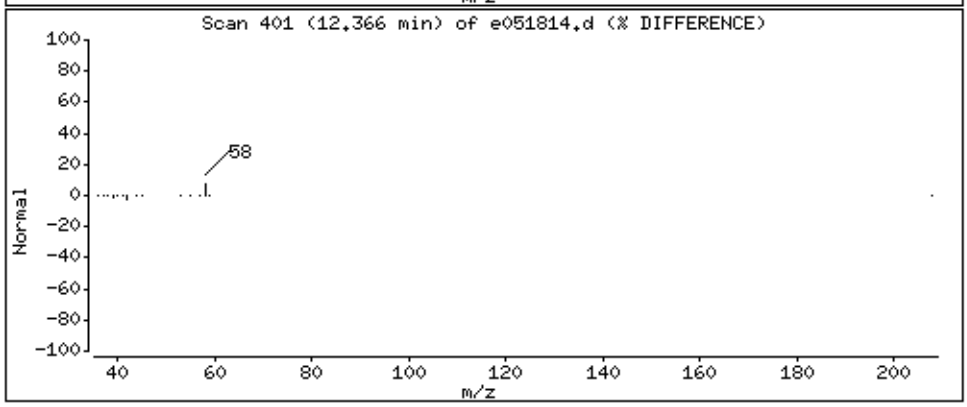
52 Acetone

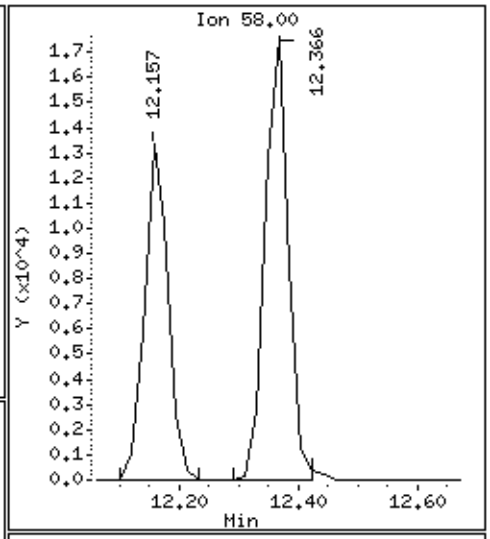
Concentration: 8.900 PPBV

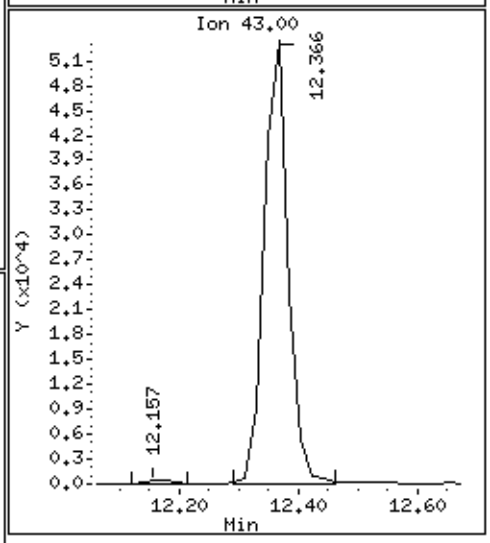












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

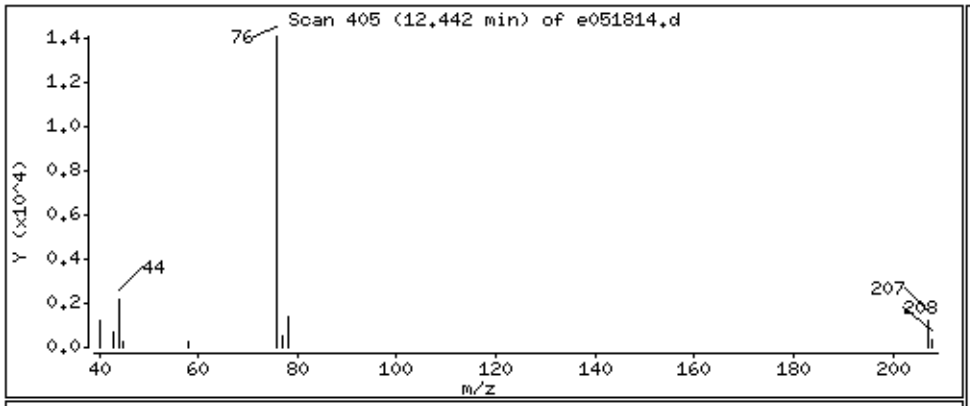
Operator: ea

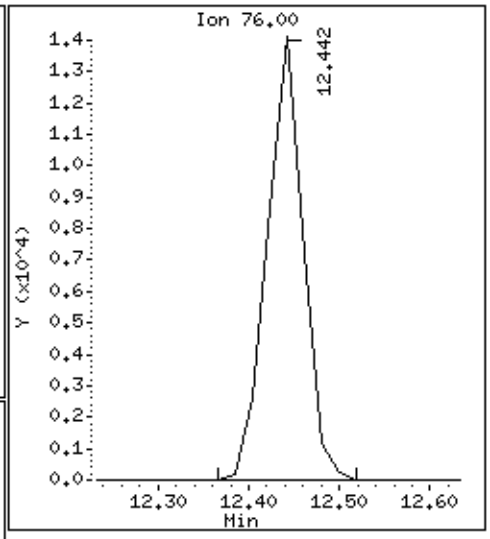
Column phase: RTX-624

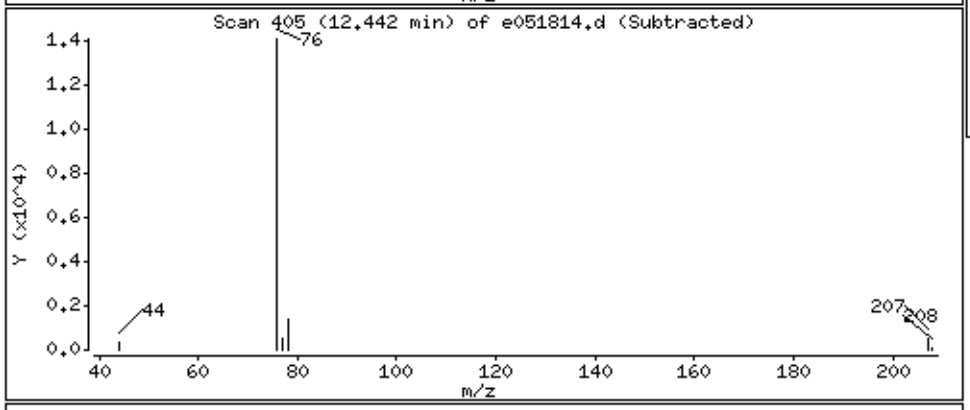
Column diameter: 0.32

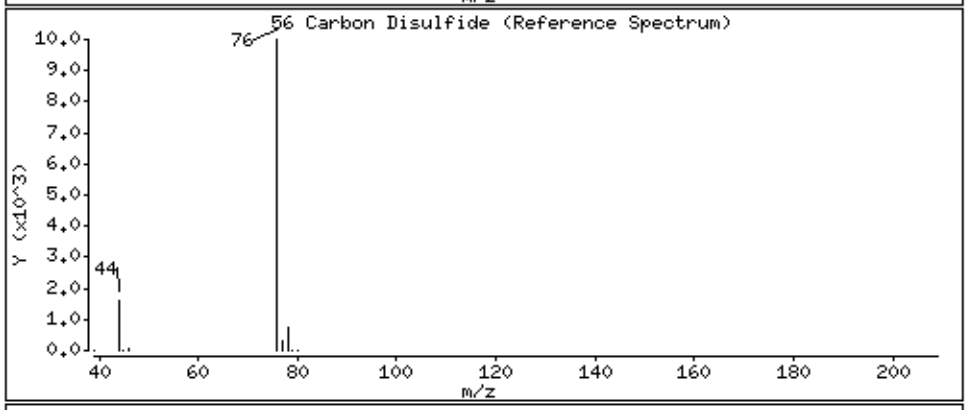
56 Carbon Disulfide

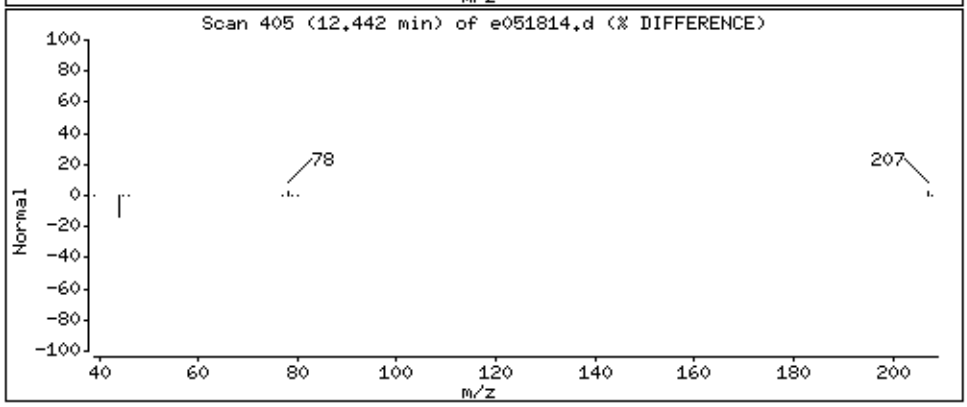
Concentration: 0.9182 PPBV











Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

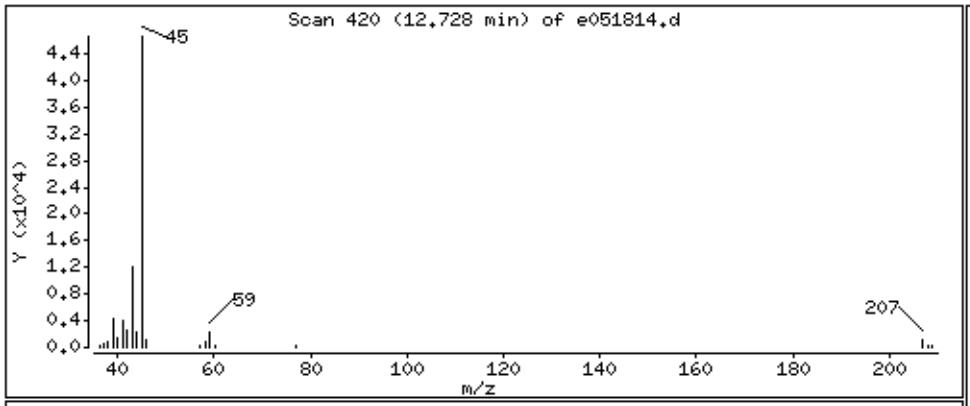
Operator: ea

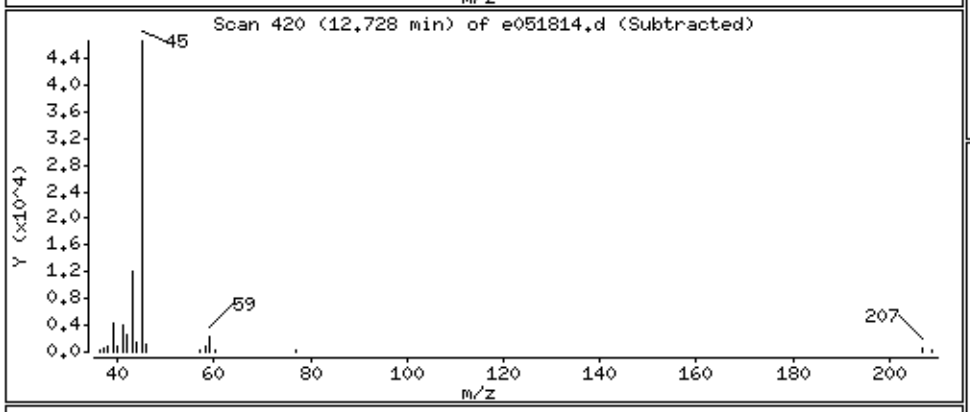
Column phase: RTX-624

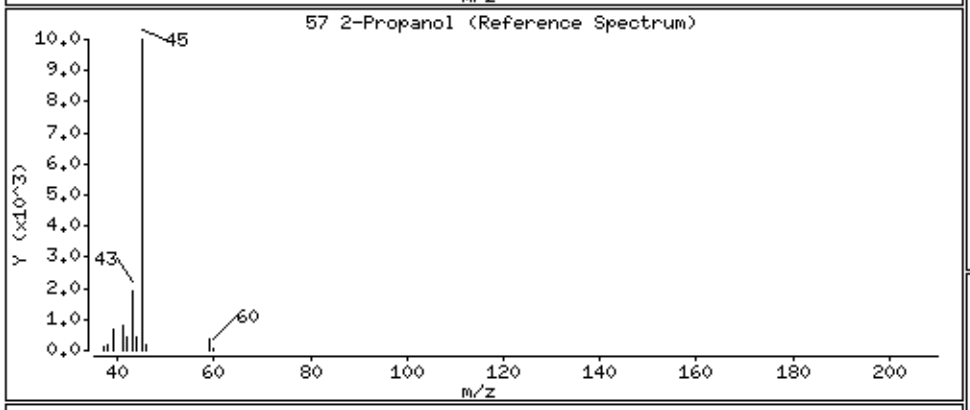
Column diameter: 0.32

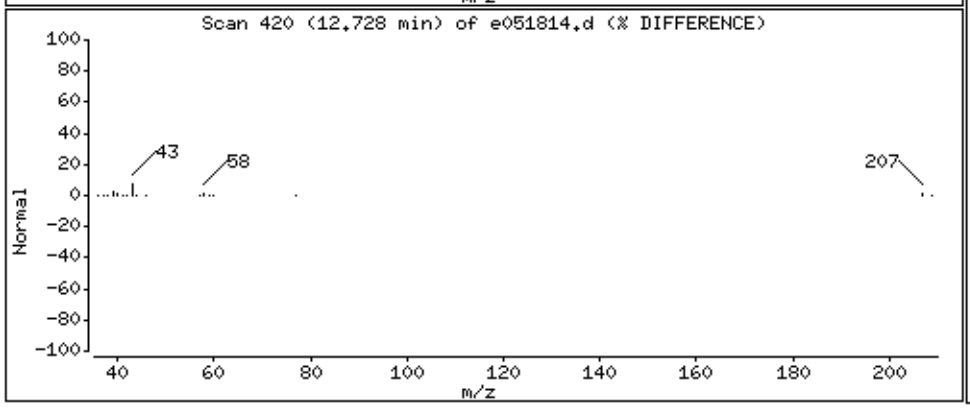
57 2-Propanol

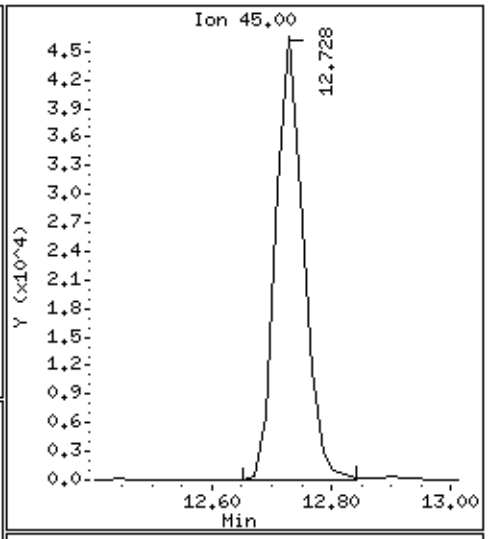
Concentration: 8.753 PPBV

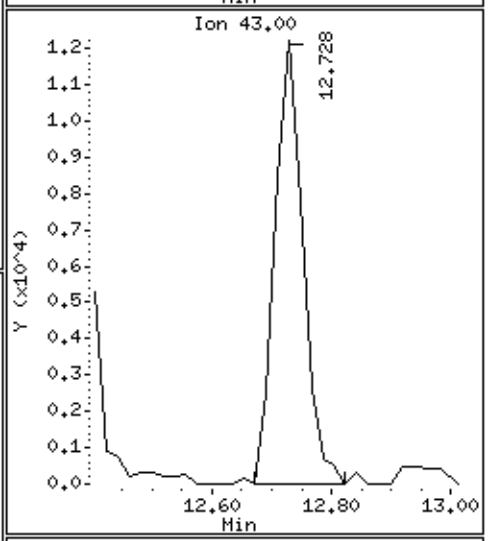


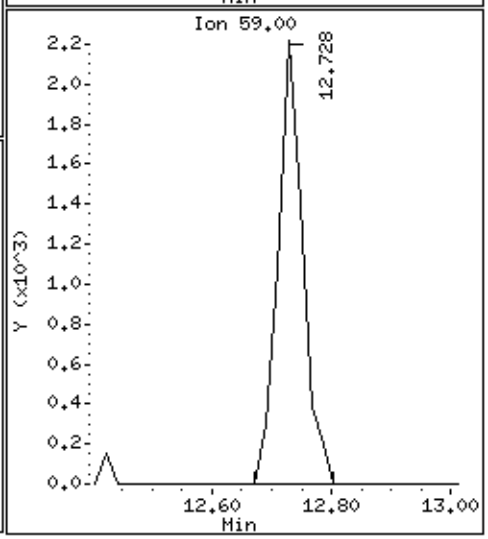












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

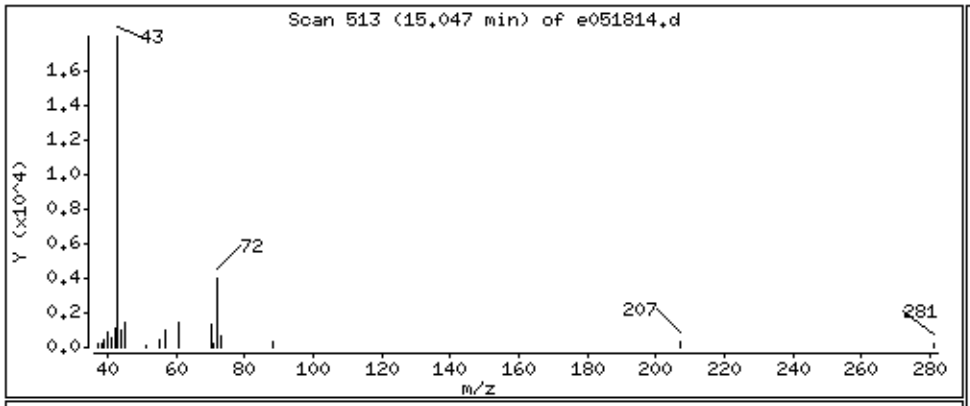
Operator: ea

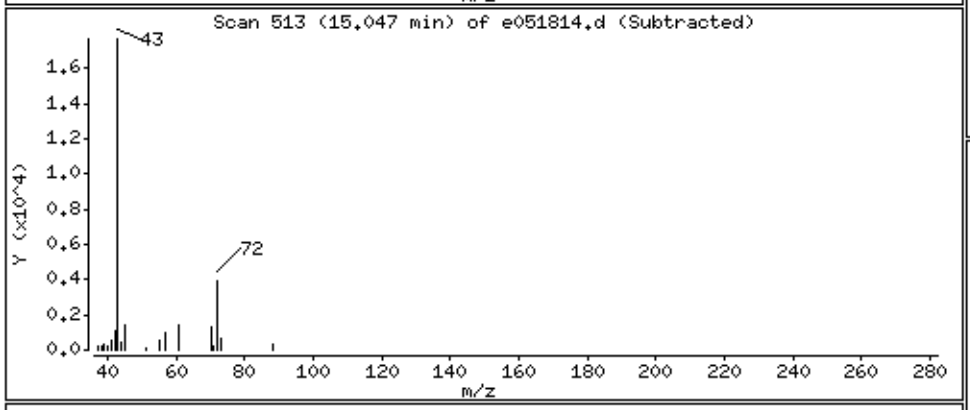
Column phase: RTX-624

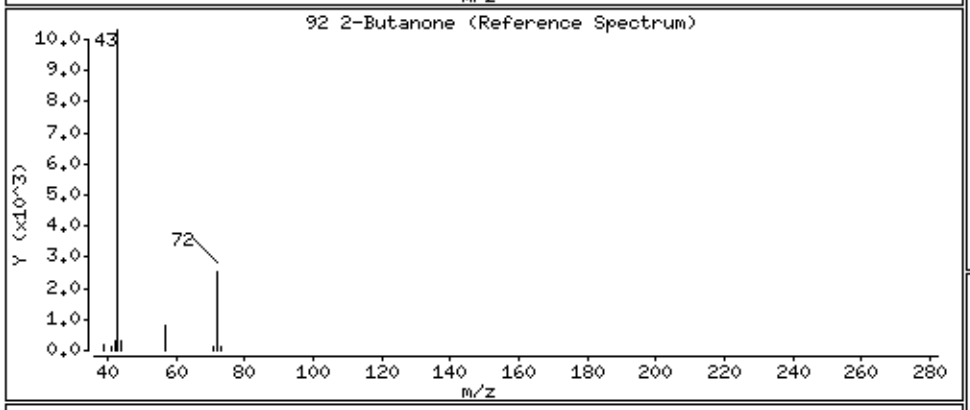
Column diameter: 0.32

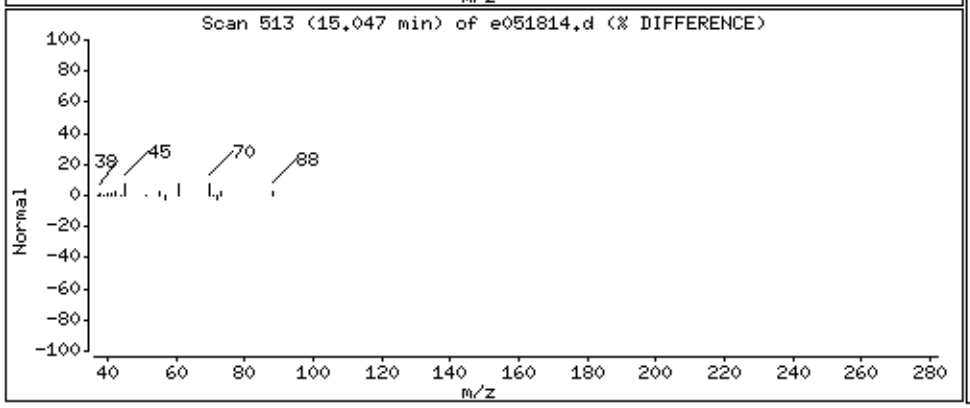
92 2-Butanone

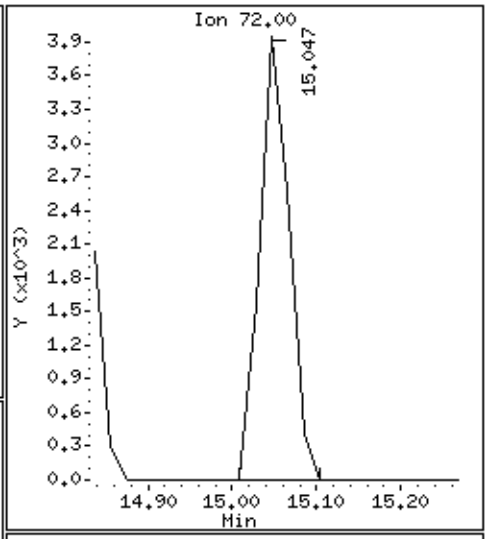
Concentration: 1.448 PPBV

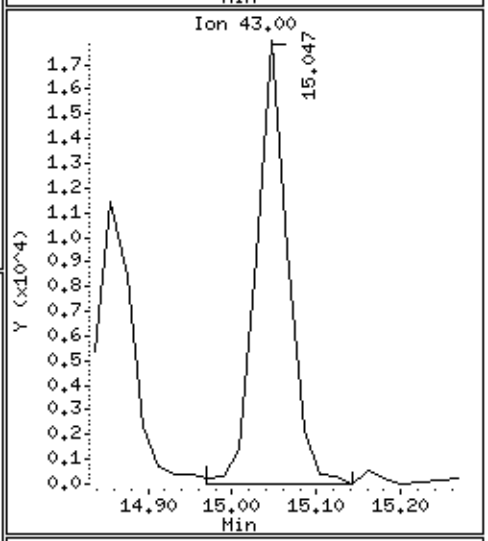


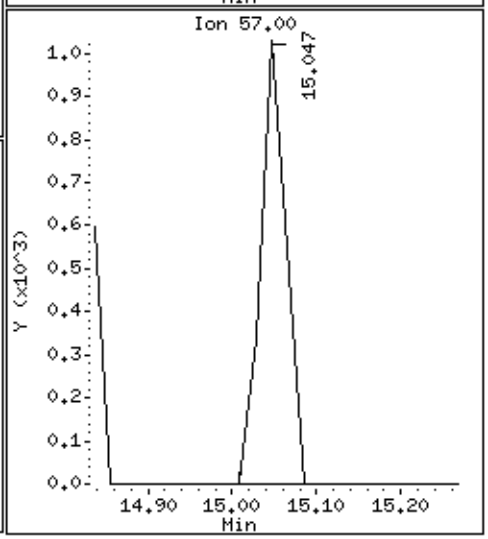












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

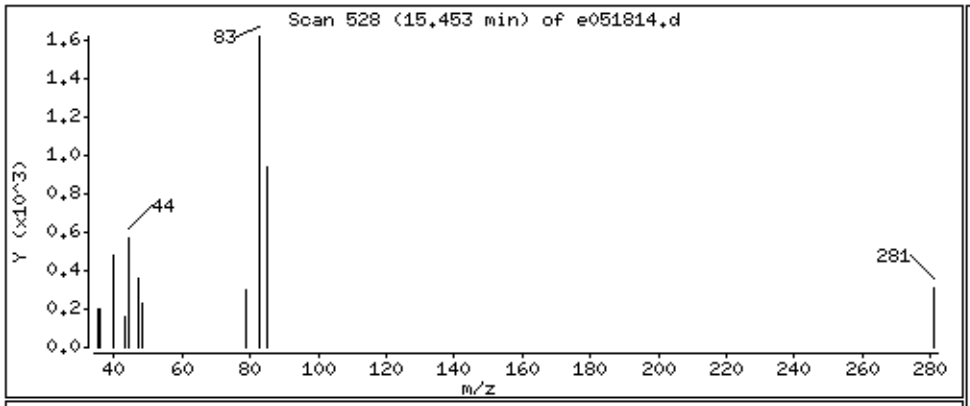
Operator: ea

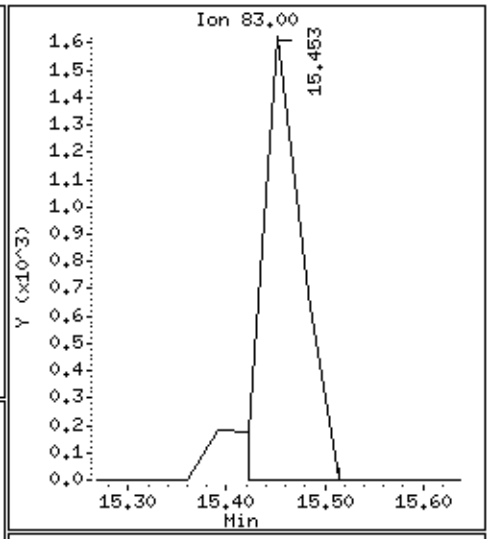
Column phase: RTX-624

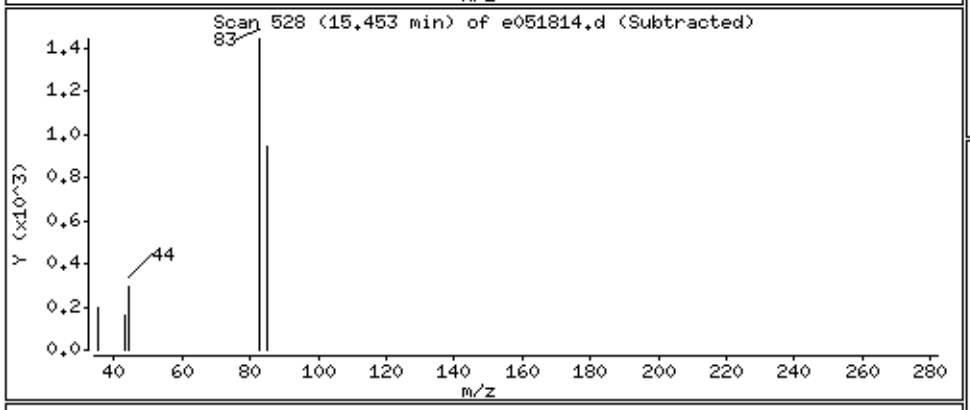
Column diameter: 0.32

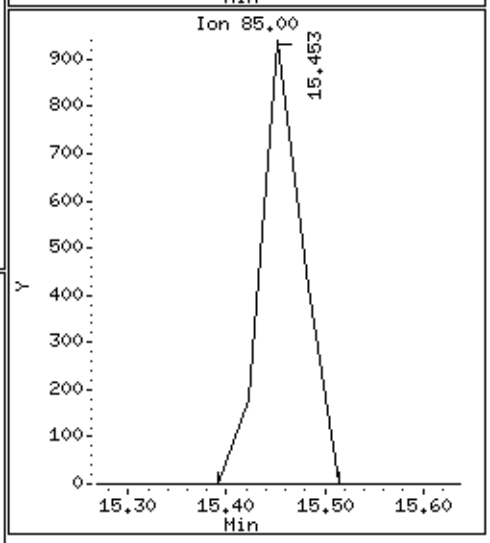
100 Chloroform

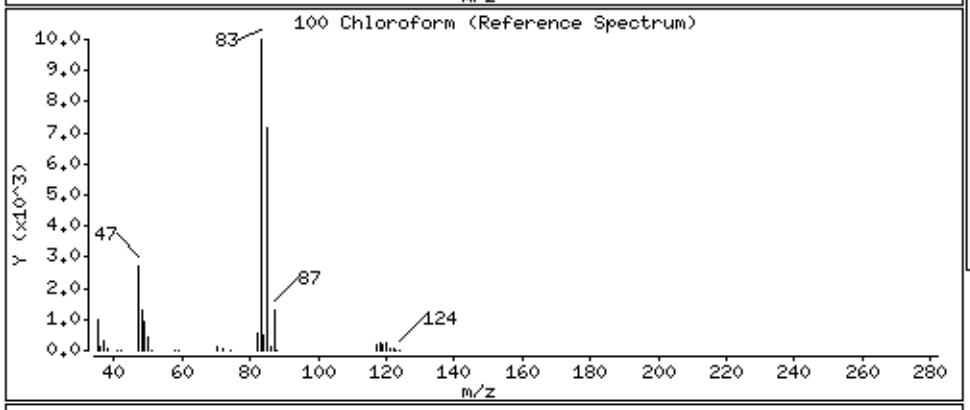
Concentration: 0.1263 PPBV

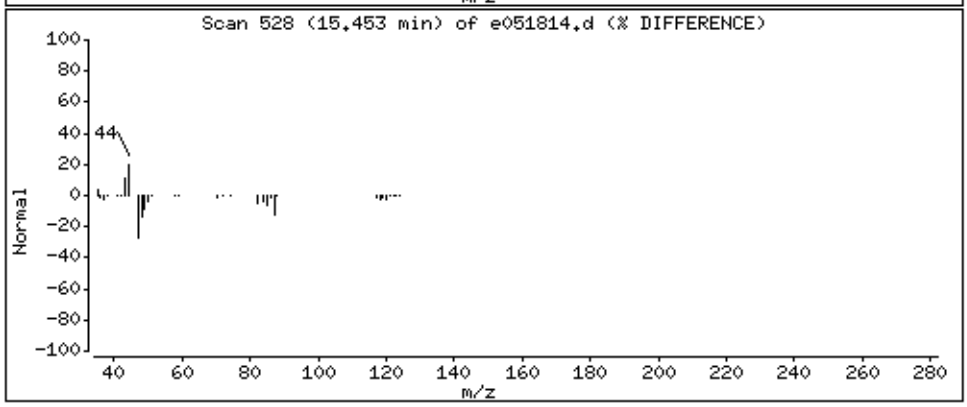












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

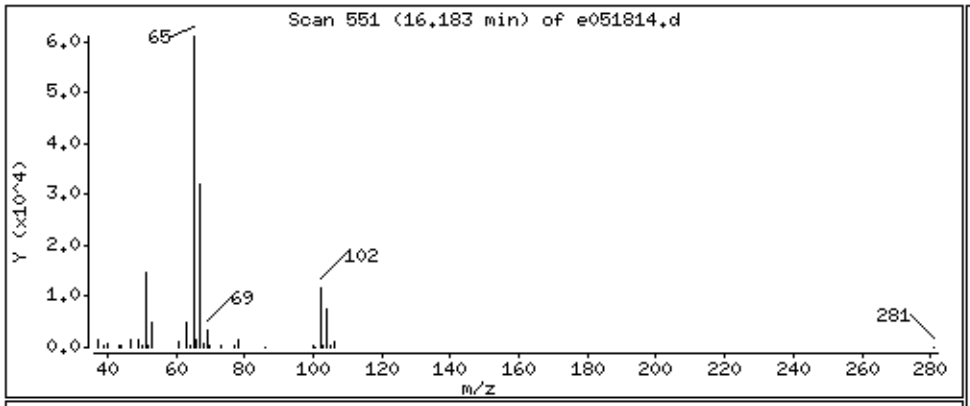
Operator: ea

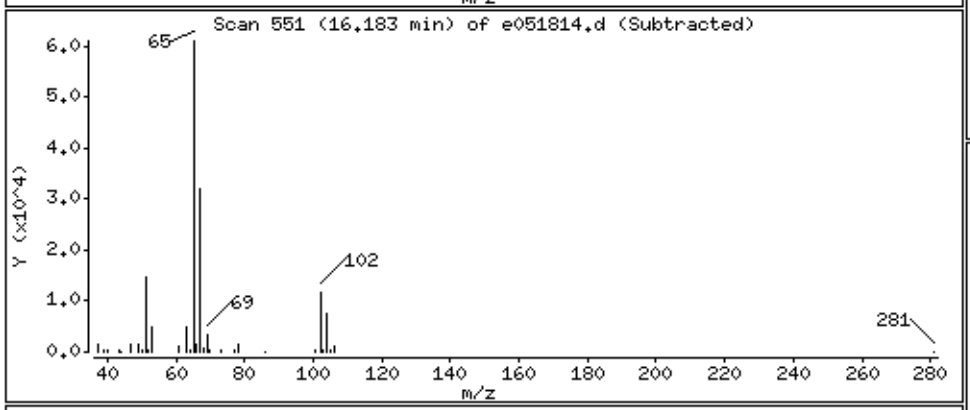
Column phase: RTX-624

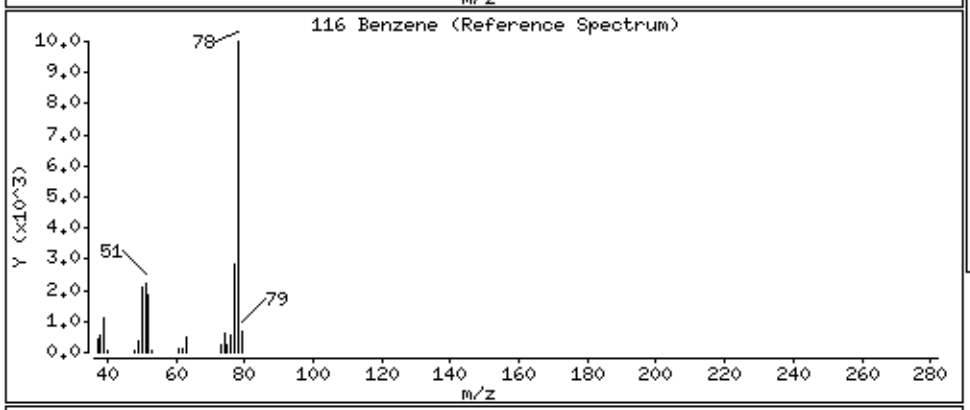
Column diameter: 0.32

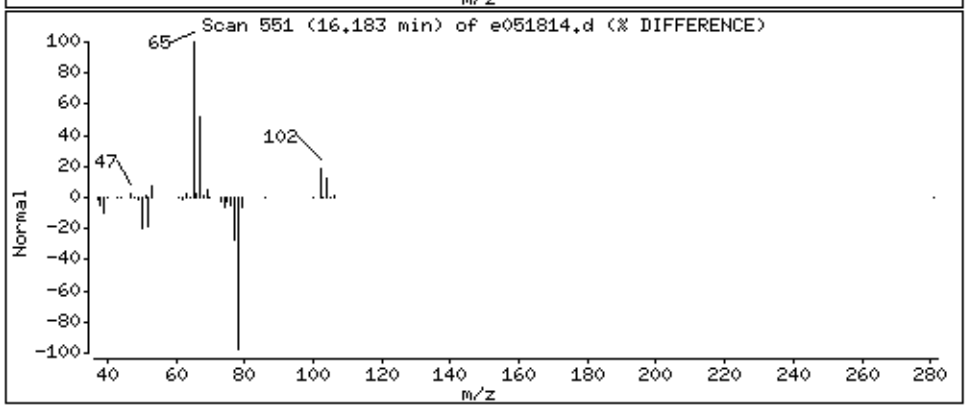
116 Benzene

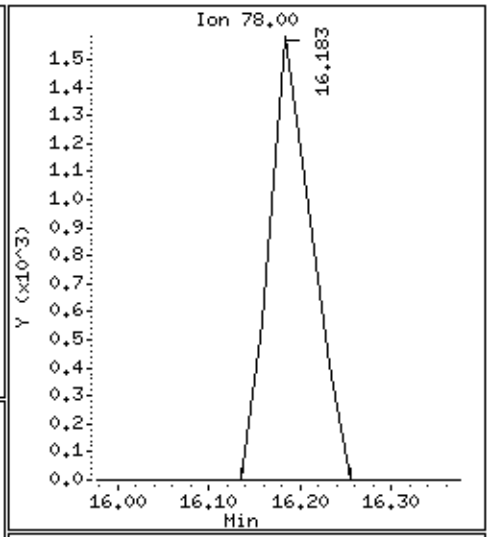
Concentration: 0.1171 PPBV

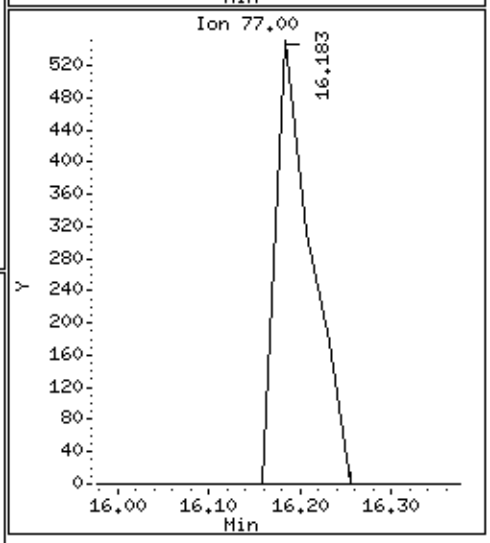












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

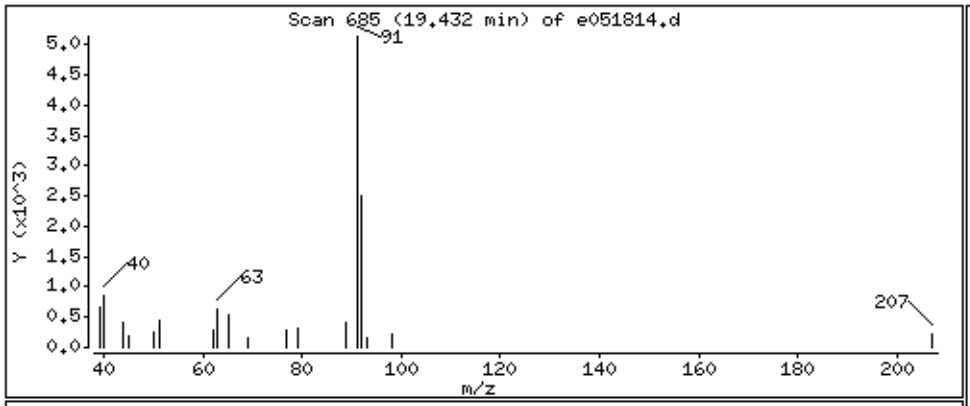
Operator: ea

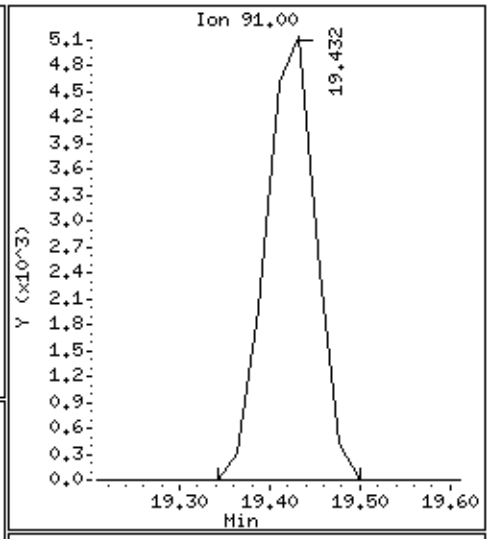
Column phase: RTX-624

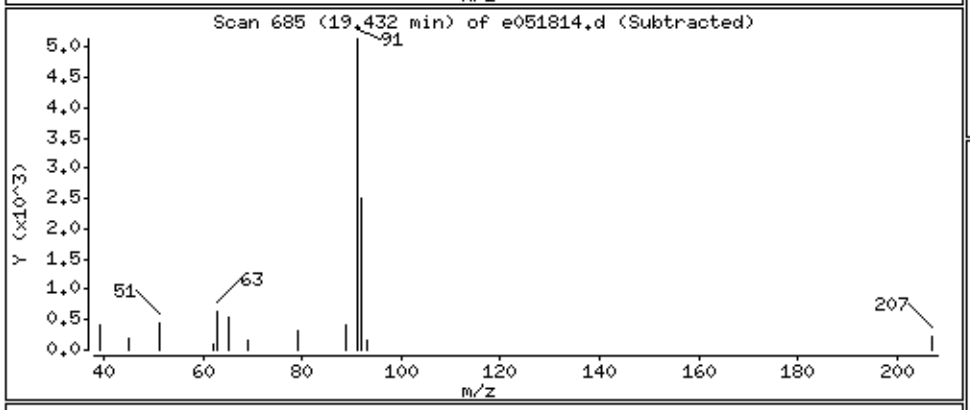
Column diameter: 0.32

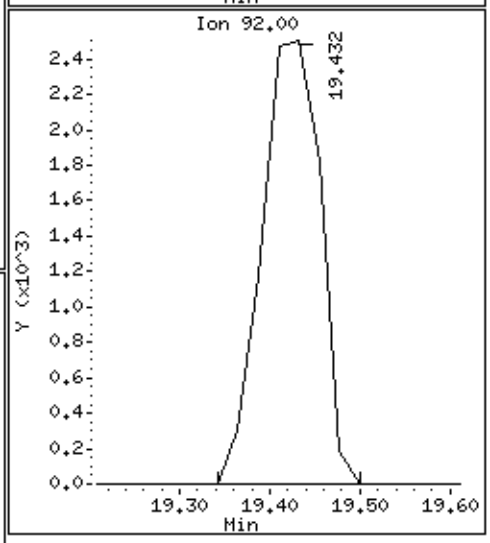
147 Toluene

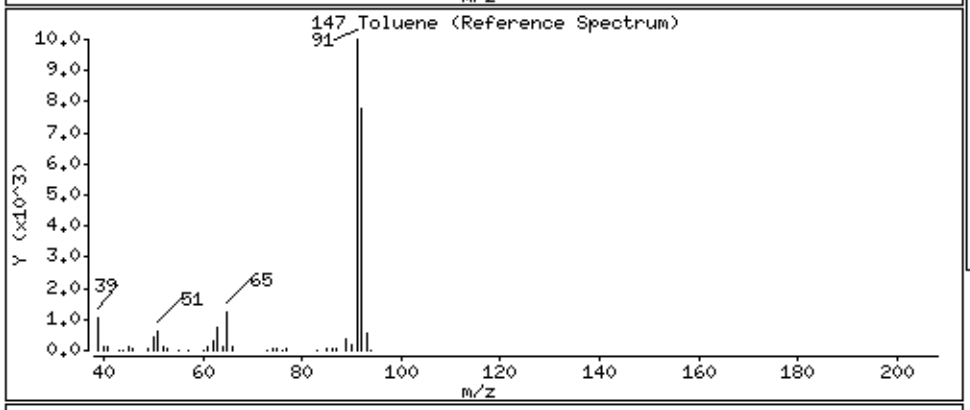
Concentration: 0.3800 PPBV

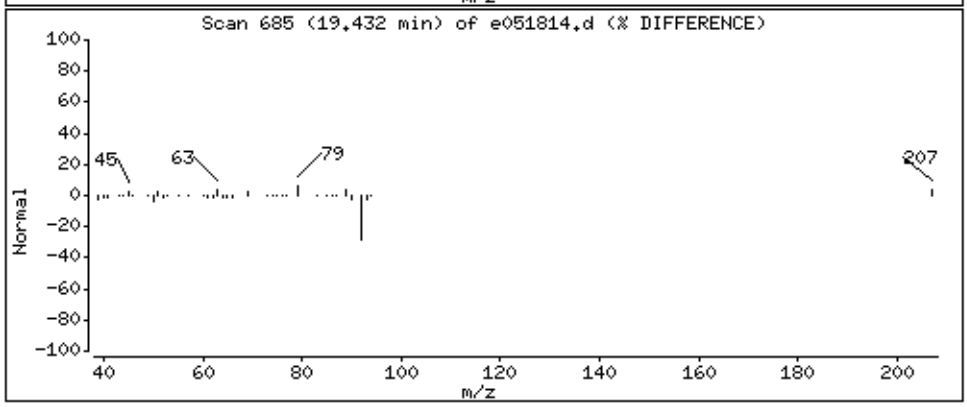












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

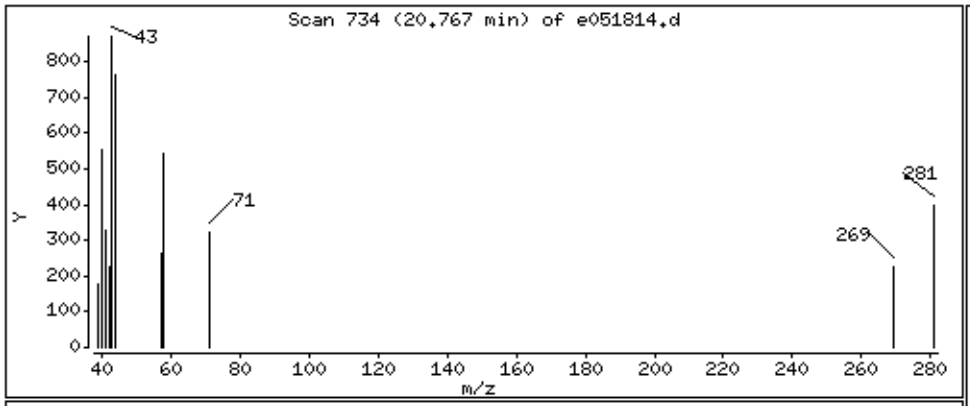
Operator: ea

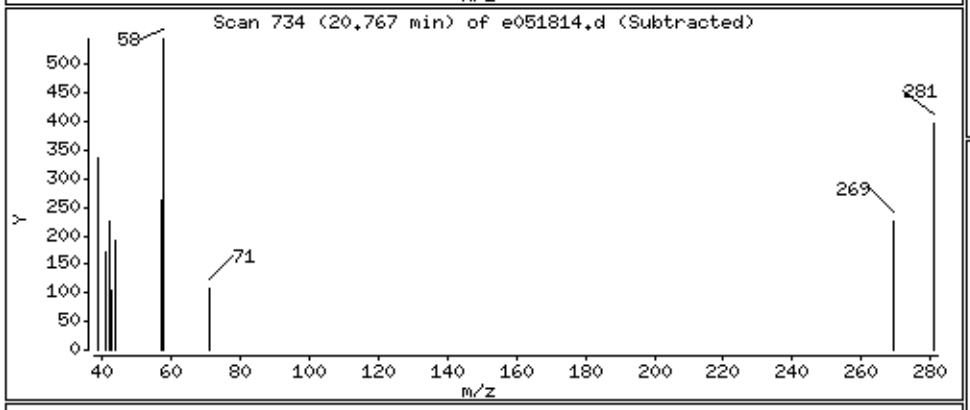
Column phase: RTX-624

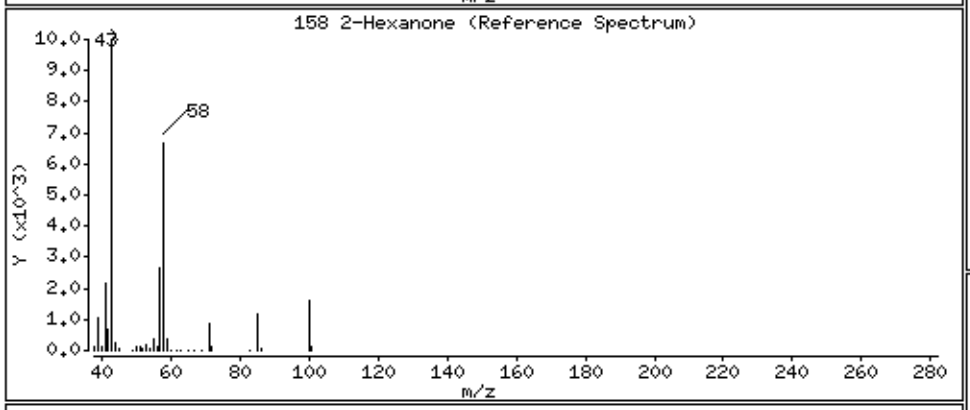
Column diameter: 0.32

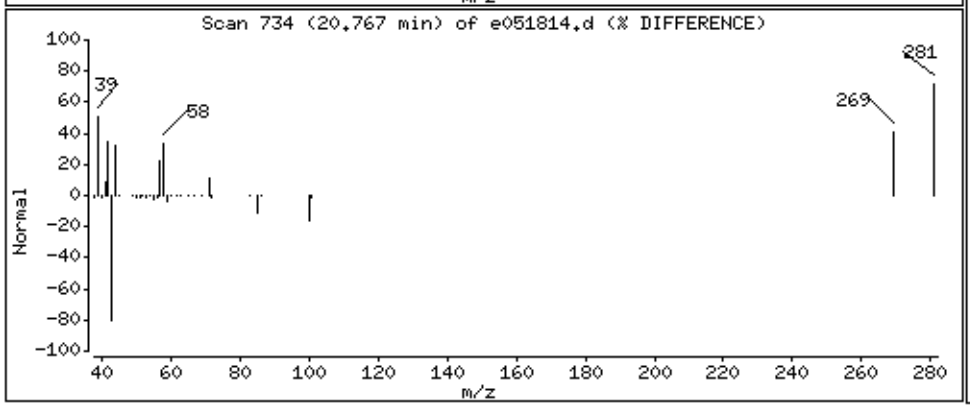
158 2-Hexanone

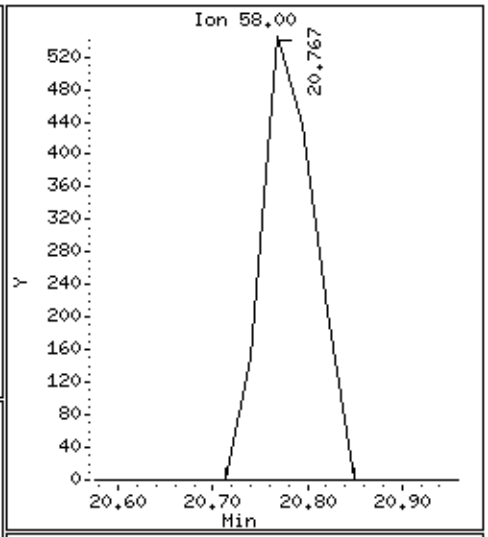
Concentration: 0.1629 PPBV

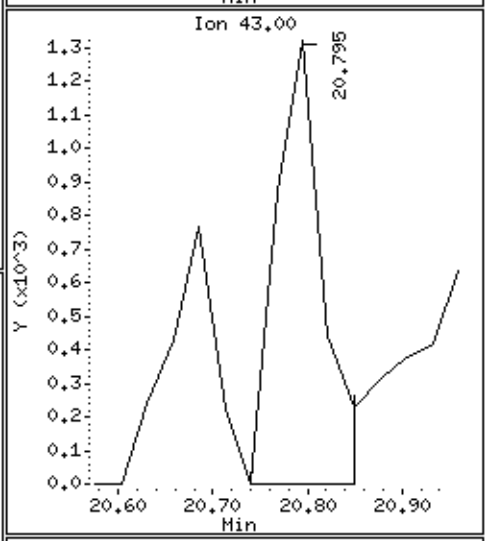


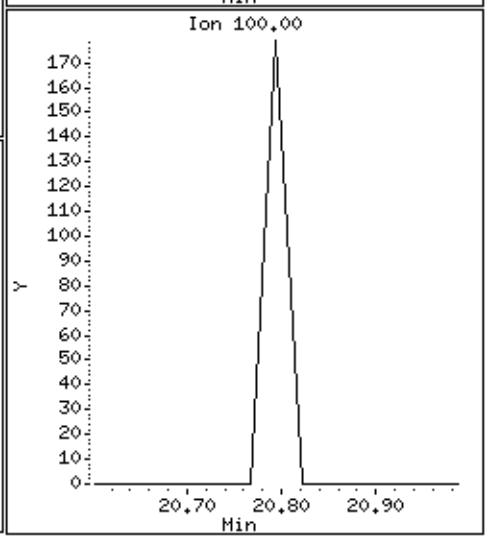












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

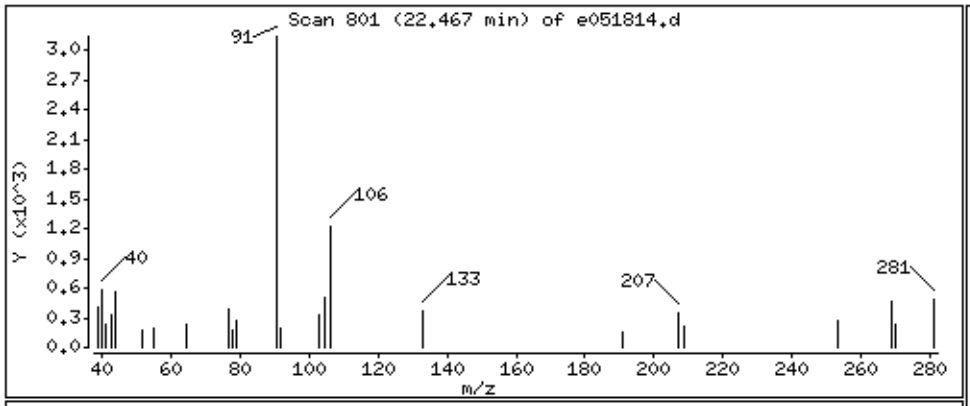
Operator: ea

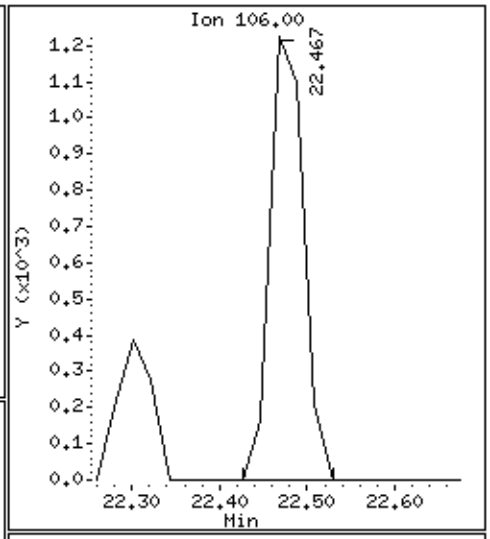
Column phase: RTX-624

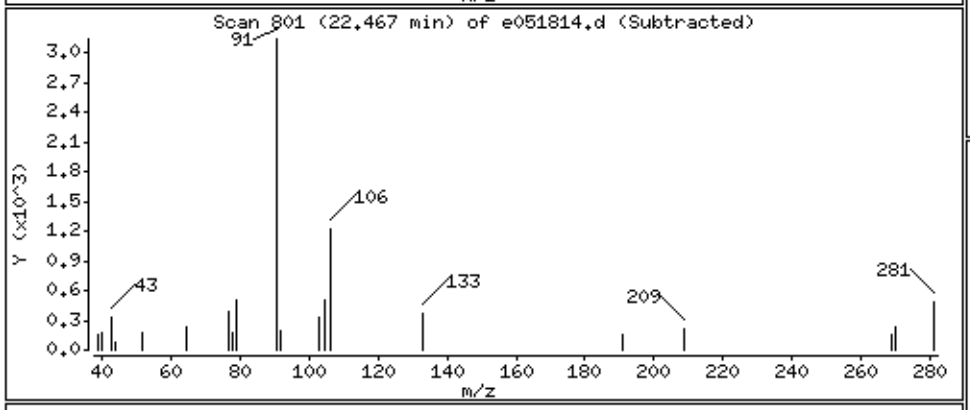
Column diameter: 0.32

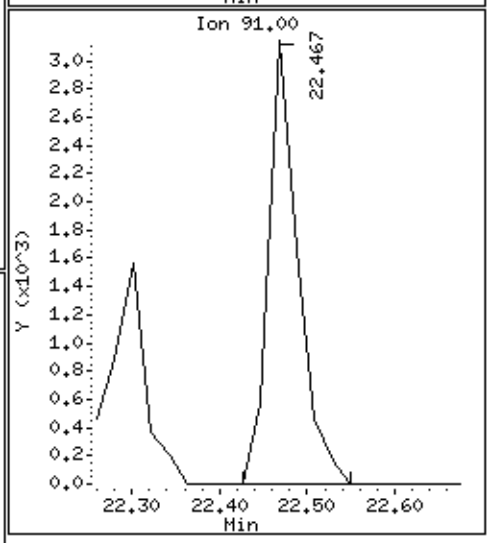
169 m,p-Xylene

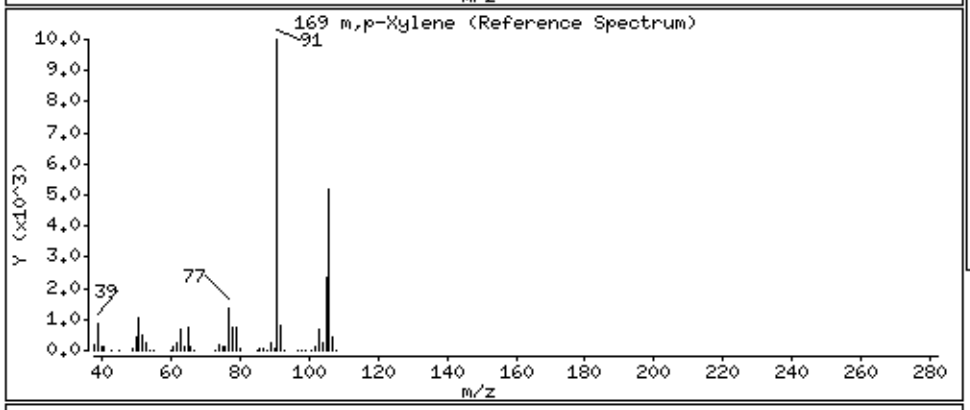
Concentration: 0.1252 PPBV

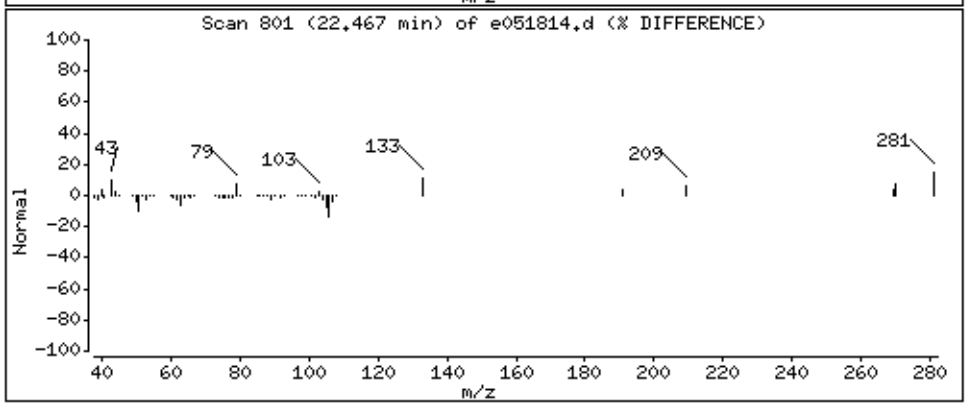












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

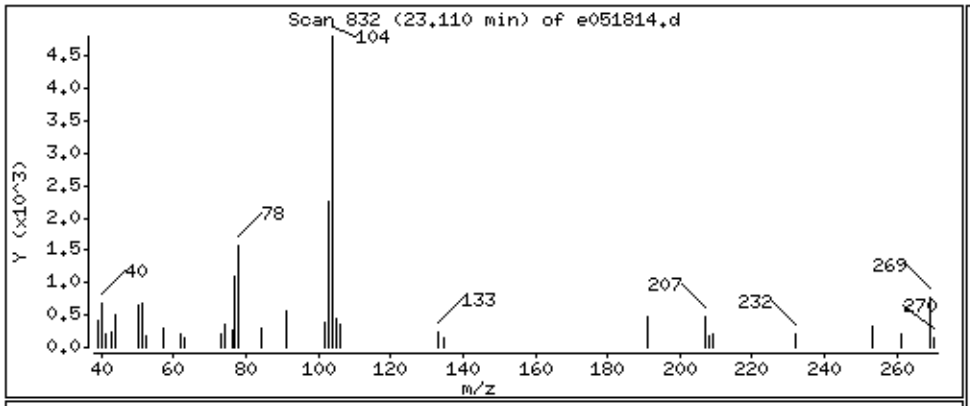
Operator: ea

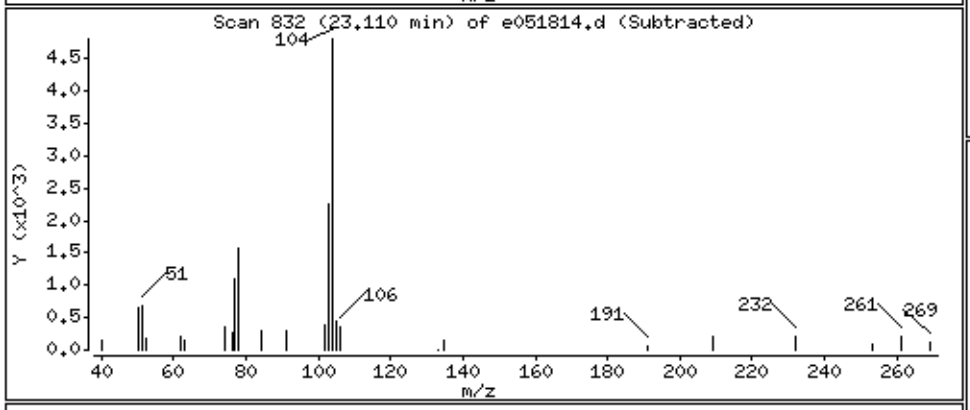
Column phase: RTX-624

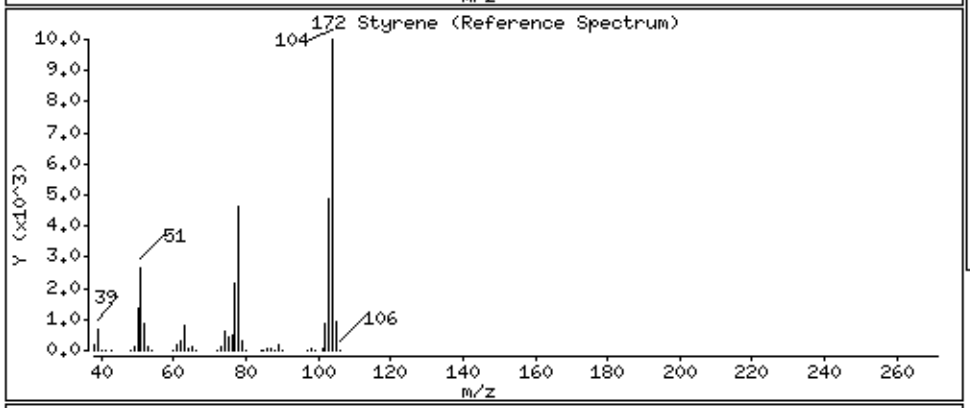
Column diameter: 0.32

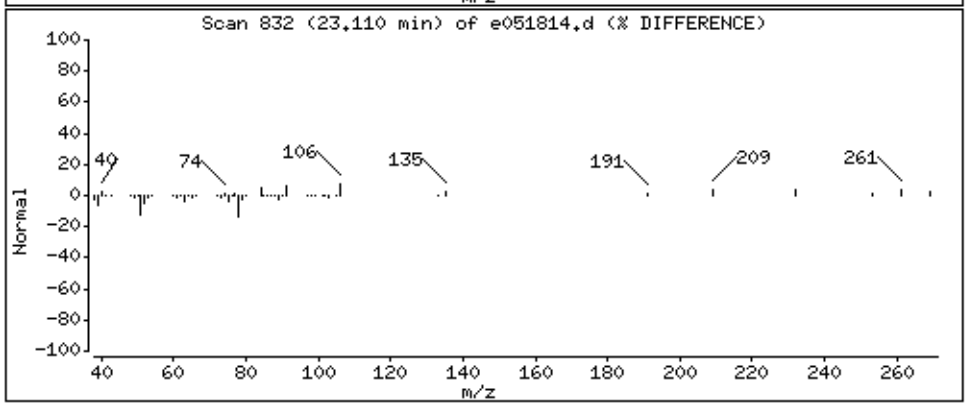
172 Styrene

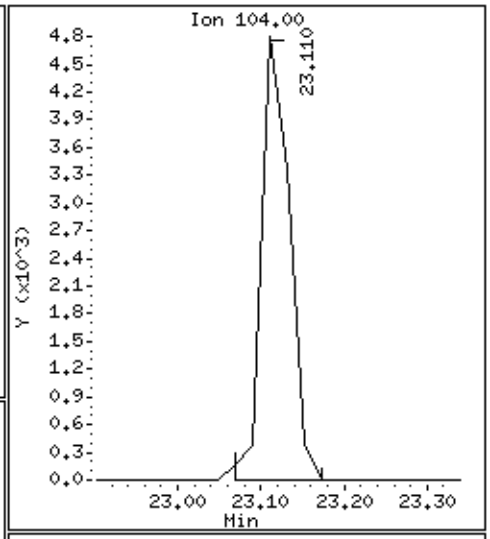
Concentration: 0.2724 PPBV

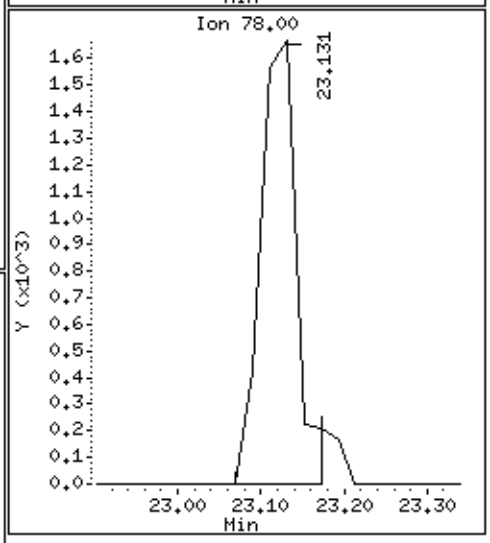












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

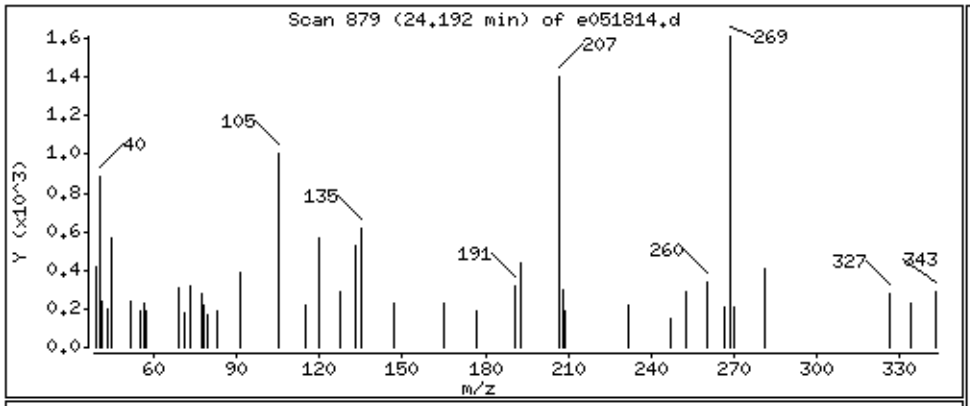
Operator: ea

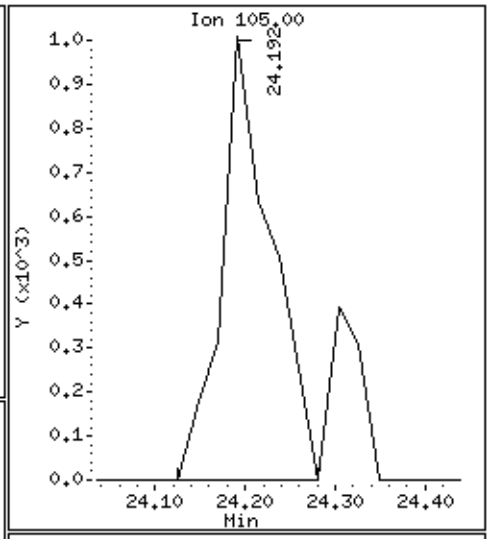
Column phase: RTX-624

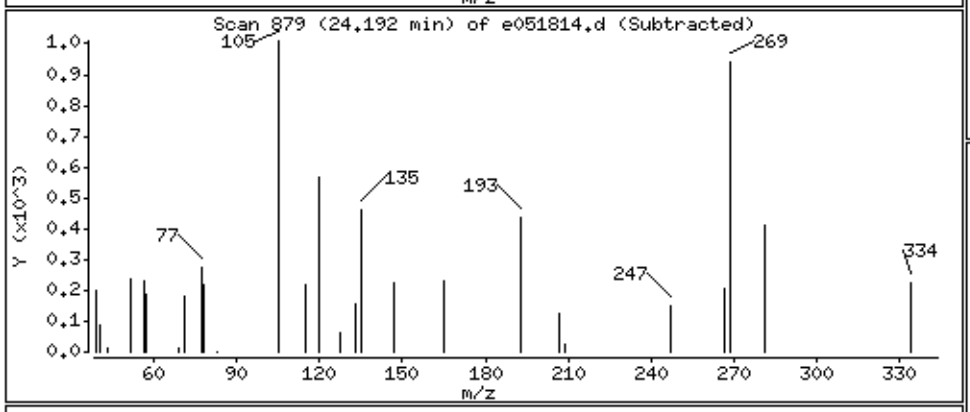
Column diameter: 0.32

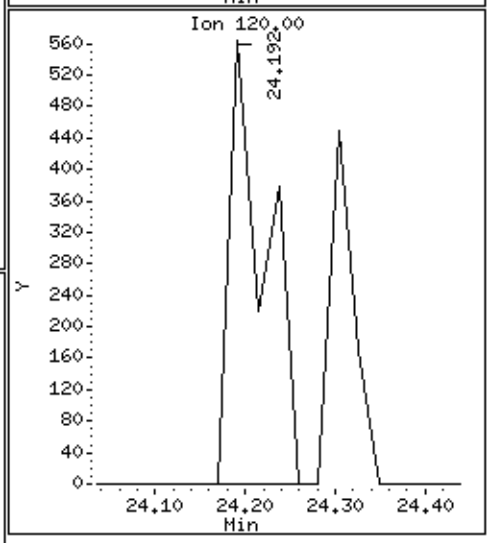
188 4-Ethyltoluene

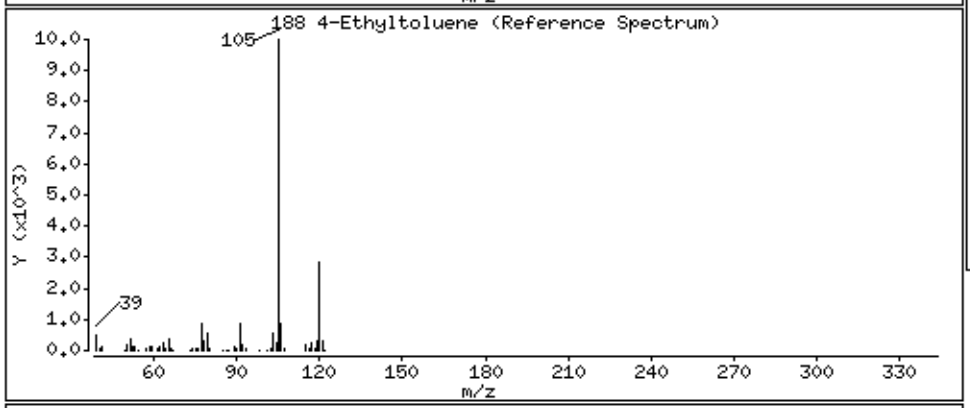
Concentration: 0.05232 PPBV

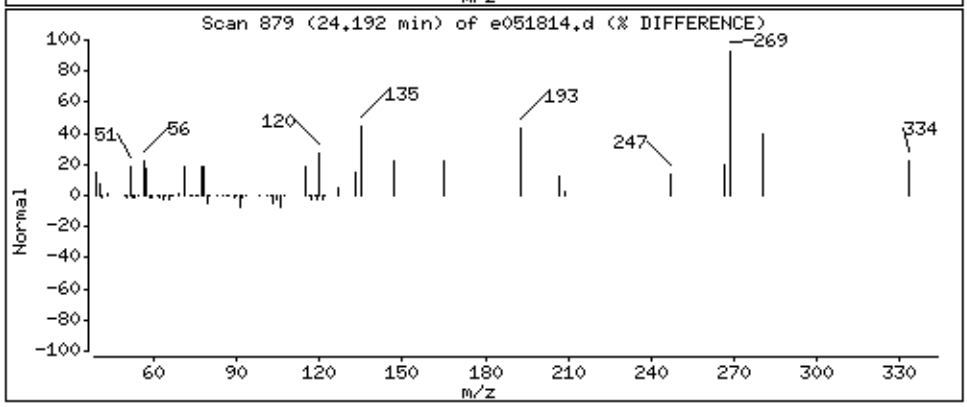












Data File: /chem/msde.i/18May2016.b/e051814.d

Date : 18-MAY-2016 18:31

Client ID:

Instrument: msde.i

Sample Info: 250mL#00316

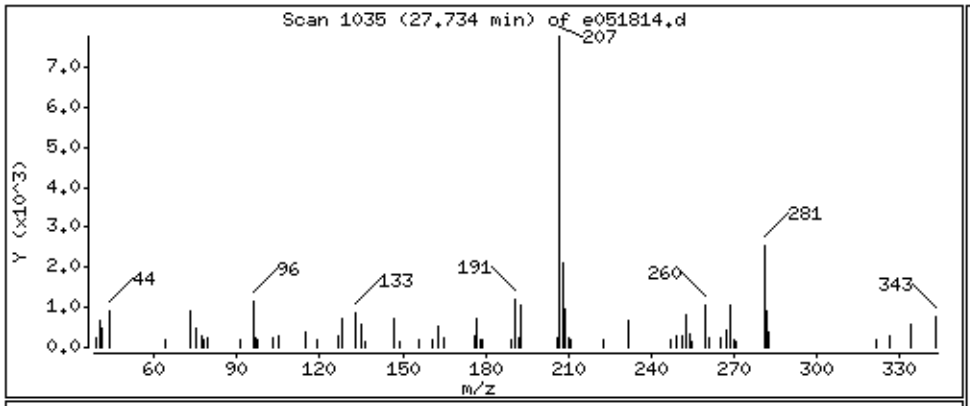
Operator: ea

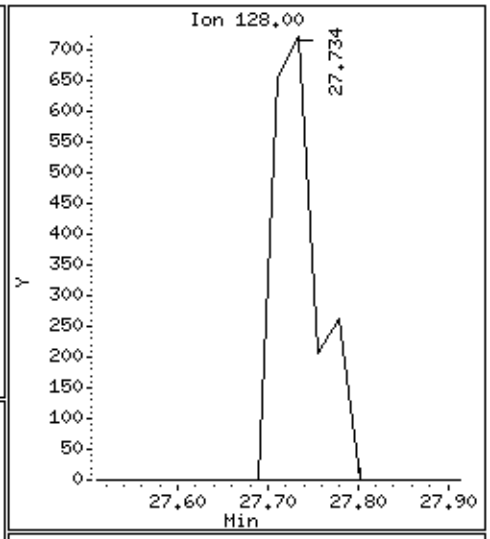
Column phase: RTX-624

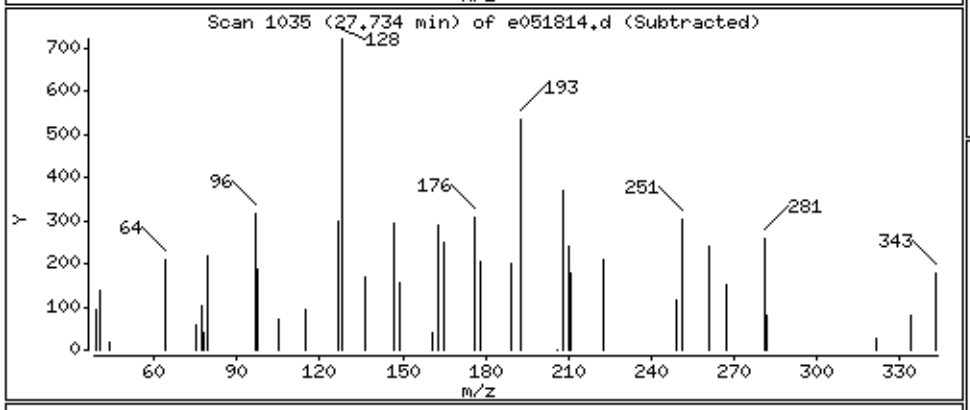
Column diameter: 0.32

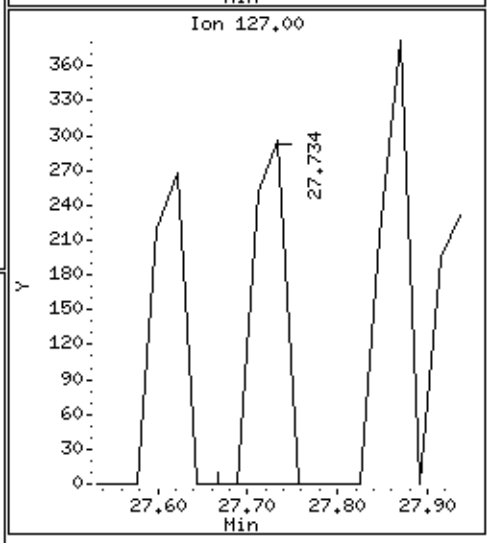
228 Naphthalene

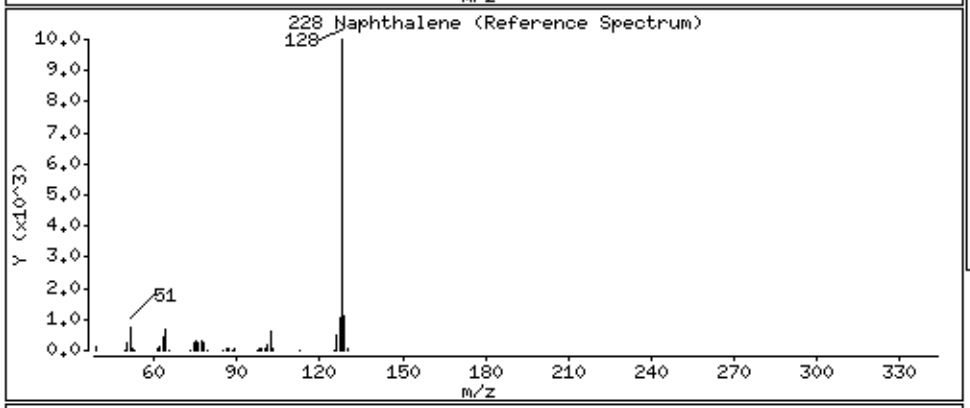
Concentration: 0.09227 PPBV

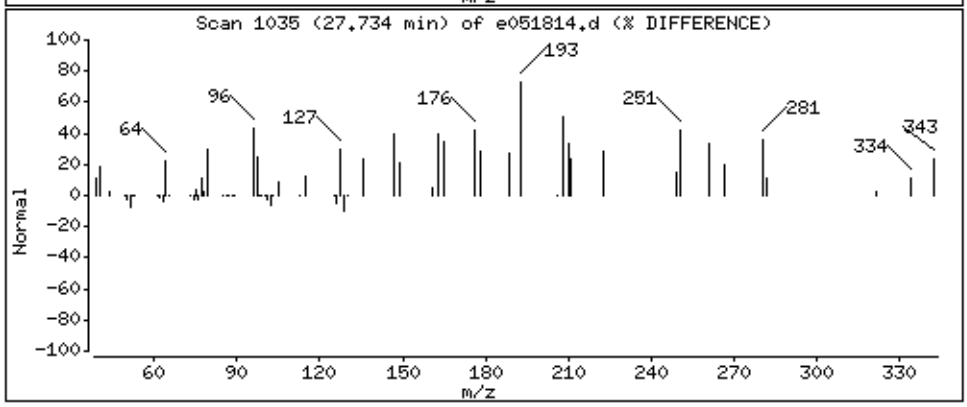












QC Results and Raw Data

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Client Sample ID: Lab Blank

Lab ID#: 1605308D-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051806a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 11:34 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	0.19 J	1.2	0.45 J
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	0.23 J	1.6	0.72 J
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected UJ	1.5	Not Detected UJ
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	0.030 J	0.32	0.096 J
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	0.026 J	0.45	0.12 J
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#: 1605308D-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051806a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 11:34 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 UJ	0.49	Not Detected UJ
1,3-Dichlorobenzene	0.10	0.018 J	0.60	0.11 J
1,4-Dichlorobenzene	0.10	0.024 J	0.60	0.15 J
alpha-Chlorotoluene	0.10	0.029 J	0.52	0.15 J
1,2-Dichlorobenzene	0.10	0.023 J	0.60	0.14 J
1,2,4-Trichlorobenzene	0.50	0.12 J	3.7	0.93 J
Hexachlorobutadiene	0.50	0.043 J	5.3	0.45 J
Naphthalene	0.50	Not Detected	2.6	Not Detected

J = Estimated value.
UJ = Analyte associated with low bias in the CCV.
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051806a.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 18-MAY-2016 11:34
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 35248
Misc Info : Humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1
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
52 Acetone						CAS #: 67-64-1		
12.385	12.366	(0.805)	58	2587	0.19106	0.1910	80.00- 120.00	100.00(a)
12.366	12.366	(0.803)	43	9565			321.47- 381.47	369.66
56 Carbon Disulfide						CAS #: 75-15-0		
12.443	12.442	(0.808)	76	24035	0.23290	0.2329	80.00- 120.00	100.00(a)
* 98 Bromochloromethane						CAS #: 74-97-5		
15.391	15.391	(1.000)	130	122348	5.00000		80.00- 120.00	100.00
15.391	15.391	(1.000)	128	92934			52.25- 112.25	75.96
15.391	15.391	(1.000)	49	91672			89.81- 149.81	74.93
116 Benzene						CAS #: 71-43-2		
16.207	16.183	(0.968)	78	3280	0.03017	0.03016	80.00- 120.00	100.00(a)
16.183	16.183	(0.967)	77	1245			0.00- 53.97	37.97
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
16.183	16.183	(1.051)	65	165556	4.71354	4.714	80.00- 120.00	100.00
16.183	16.183	(1.051)	67	78860			21.16- 81.16	47.63

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	453741	5.00000		80.00- 120.00	100.00
16.737	16.713 (1.000)	88	67141			0.00- 45.20	14.80
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	439480	4.93172	4.932	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	45709			0.00- 40.11	10.40
19.275	19.275 (1.152)	100	294415			37.58- 97.58	66.99
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.902)	75	1672	0.02614	0.02614	80.00- 120.00	100.00(a)
19.998	19.998 (0.902)	77	954			0.55- 60.55	57.05
0.000	19.998 (0.000)	39	0			8.25- 68.25	0.00
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	413045	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	202259			20.64- 80.64	48.97
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	280743	4.95349	4.953	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	283820			77.42- 137.42	101.10
23.856	23.856 (1.076)	176	271097			65.38- 125.38	96.56
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.156 (1.134)	146	2017	0.01804	0.01804	80.00- 120.00	100.00(a)
25.157	25.156 (1.134)	148	953			35.51- 95.51	47.27
25.157	25.156 (1.134)	111	856			9.35- 69.35	42.47
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.268 (1.139)	146	2558	0.02439	0.02439	80.00- 120.00	100.00(a)
25.269	25.268 (1.139)	148	1963			32.61- 92.61	76.76
25.269	25.268 (1.139)	111	606			6.90- 66.90	23.71
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	3784	0.02868	0.02868	80.00- 120.00	100.00(a)
0.000	25.403 (0.000)	126	0			0.00- 51.82	0.00
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.695	25.694 (1.159)	146	2178	0.02270	0.02270	80.00- 120.00	100.00(a)
25.695	25.694 (1.159)	148	911			33.69- 93.69	41.85
25.717	25.694 (1.160)	111	650			8.96- 68.96	29.88
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	5451	0.12531	0.1253	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	5178			66.05- 126.05	94.99

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
227 Hexachlorobutadiene						CAS #: 87-68-3		
27.488	27.488	(1.239)	225	2520	0.04261	0.04260	80.00- 120.00	100.00(a)
27.488	27.488	(1.239)	223	2445			33.78- 93.78	97.01

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051806a.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: Humid

Calibration Date: 18-MAY-2016
Calibration Time: 08:43
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	122348	-21.26
123 1,4-Difluorobenze	603874	362324	845424	453741	-24.86
163 Chlorobenzene-d5	522912	313747	732077	413045	-21.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-May-2016 17:31

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 18May2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09Bromo.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.714	94.27	70-130
$ 146 Toluene-d8	5.000	4.932	98.63	70-130
$ 177 4-Bromofluorobenze	5.000	4.953	99.07	70-130

Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

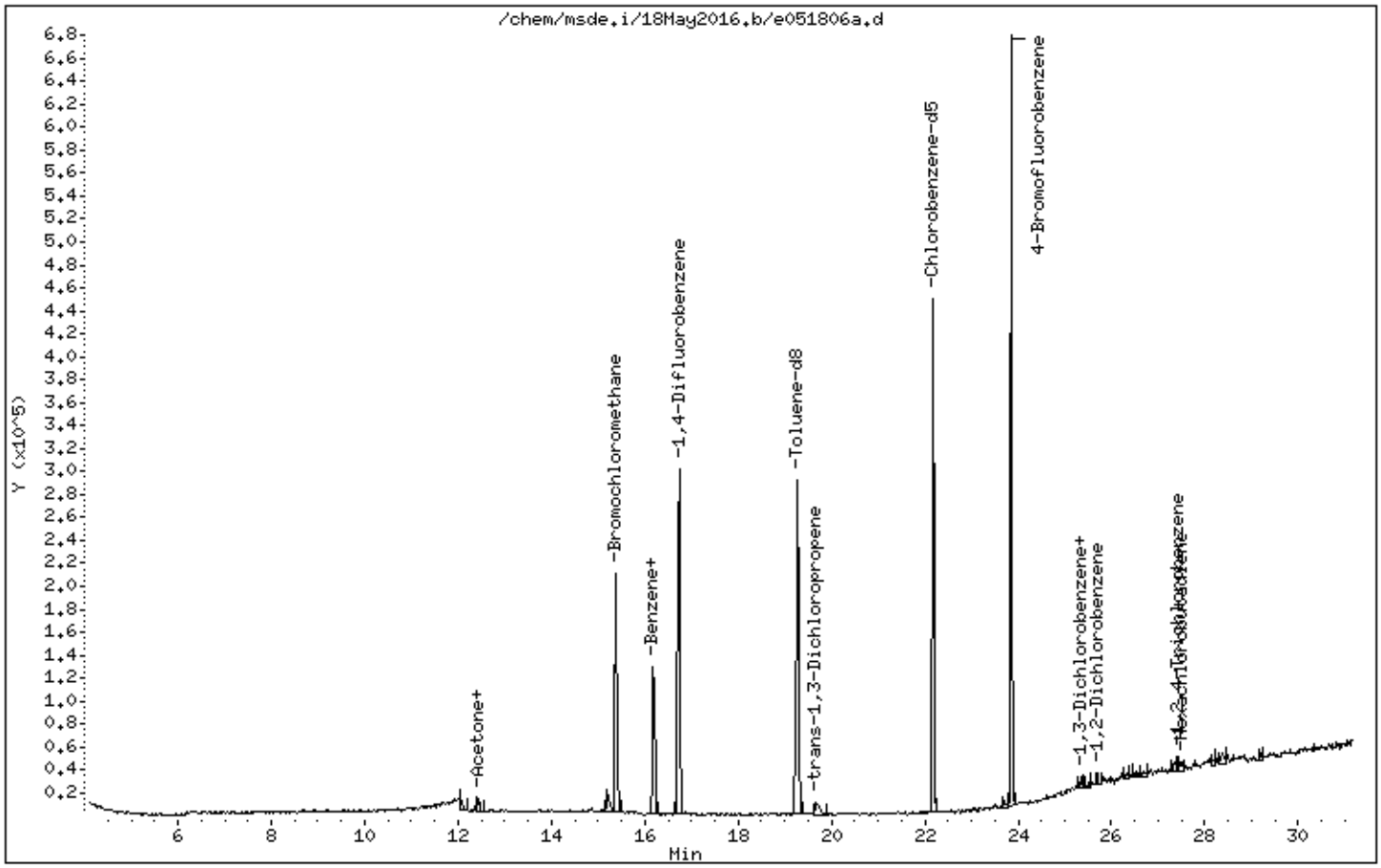
Instrument: msde.i

Sample Info: 250mL# 35248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

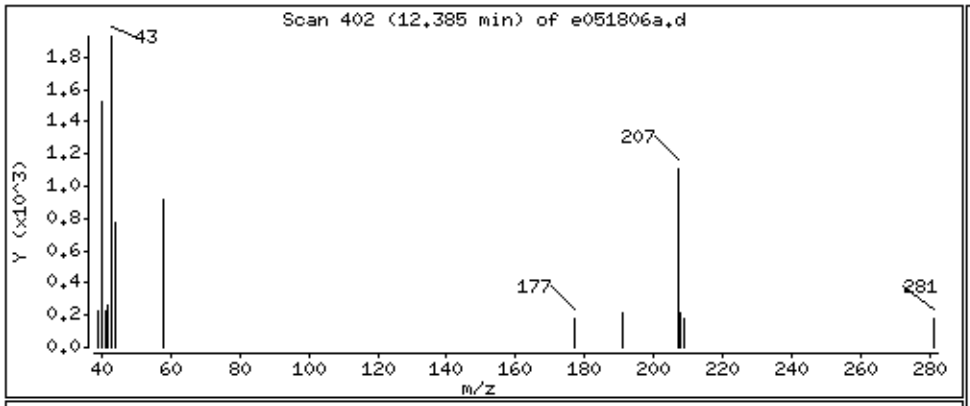
Operator: ef

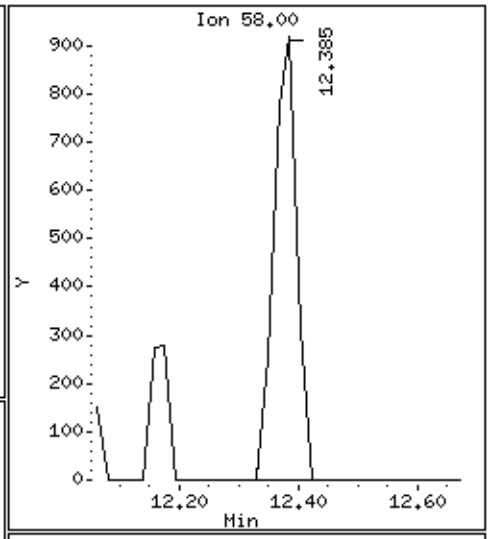
Column phase: RTX-624

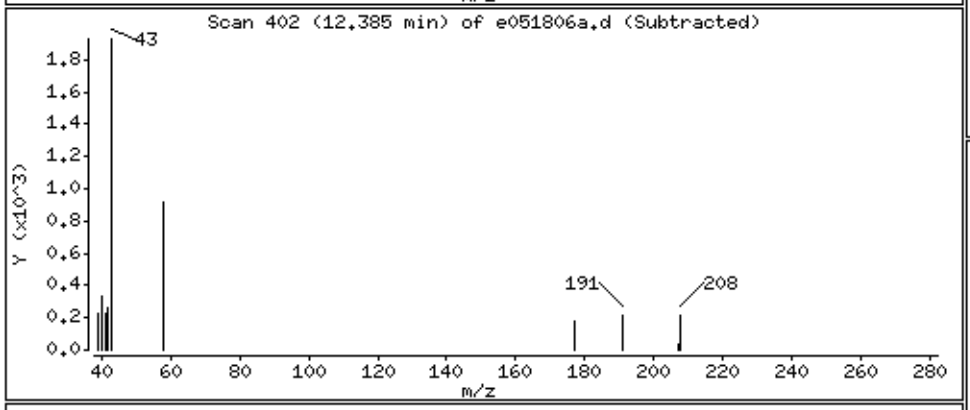
Column diameter: 0.32

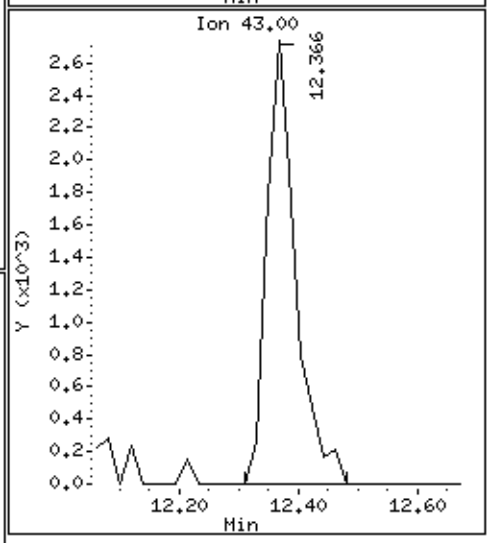
52 Acetone

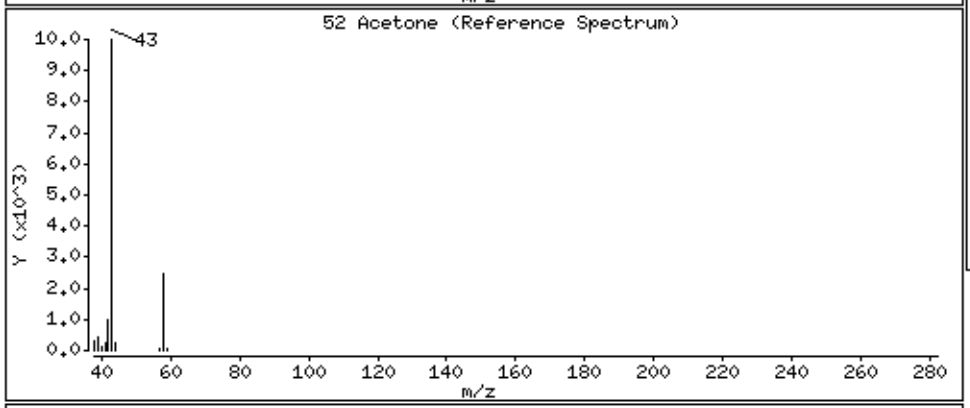
Concentration: 0.1910 PPBV

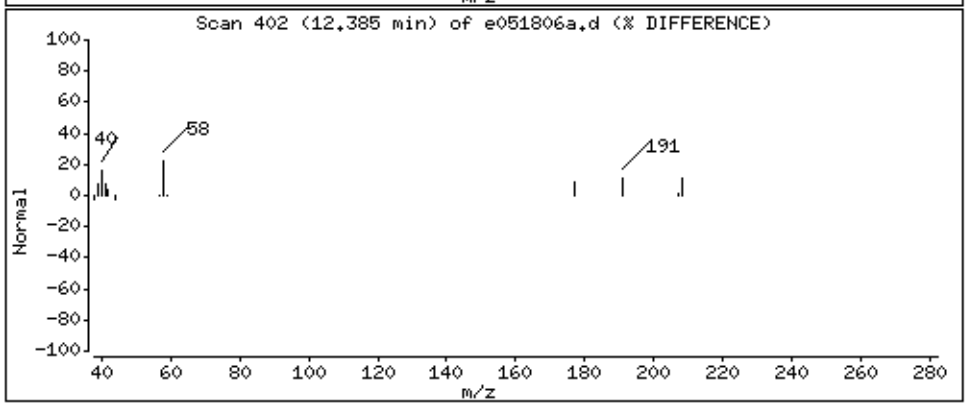












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

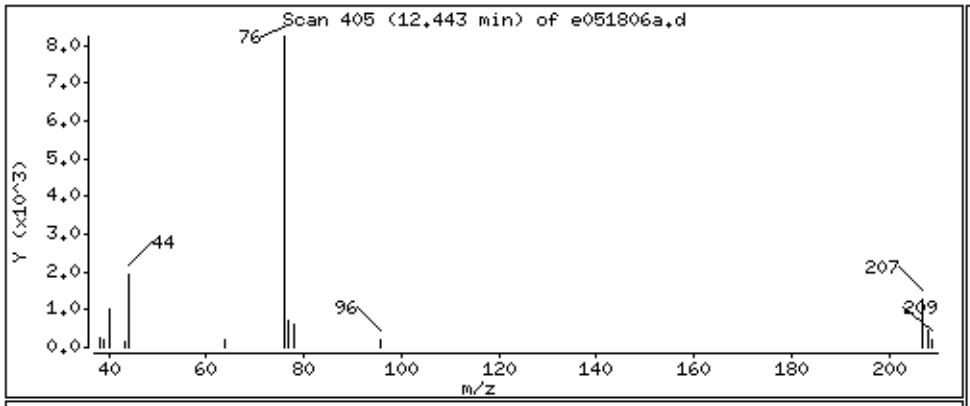
Operator: ef

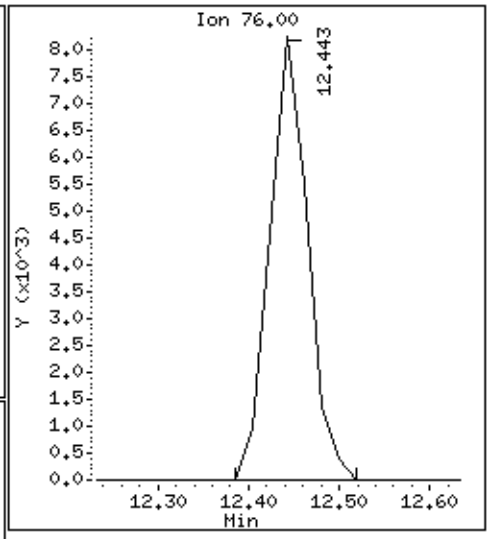
Column phase: RTX-624

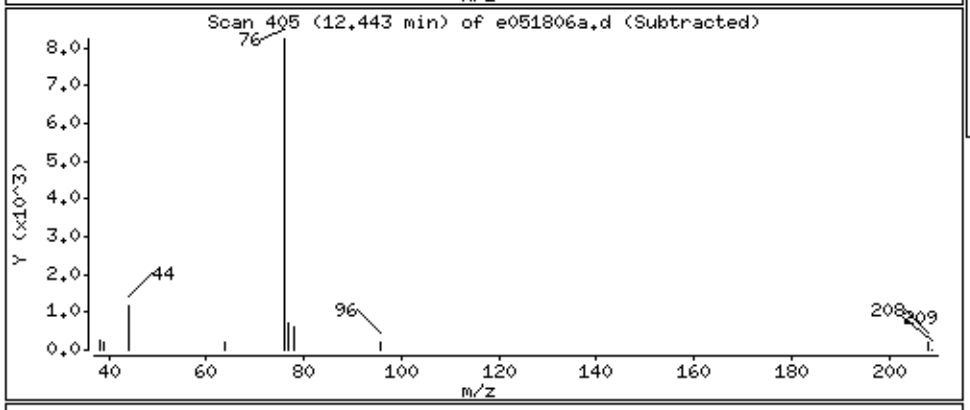
Column diameter: 0.32

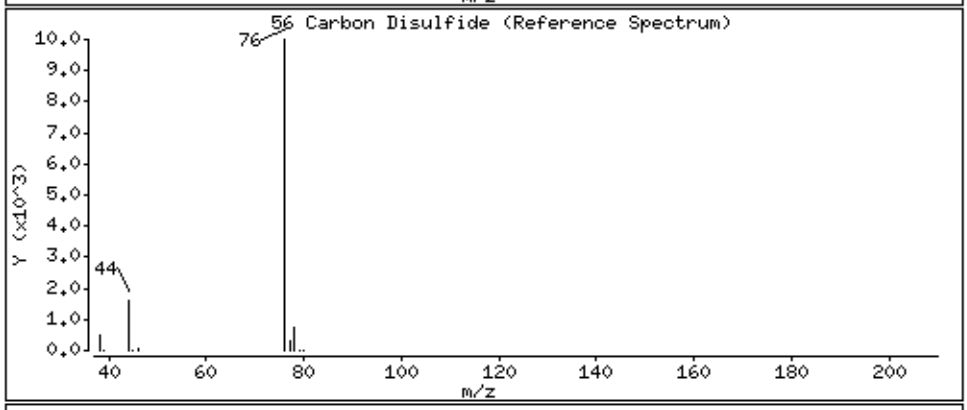
56 Carbon Disulfide

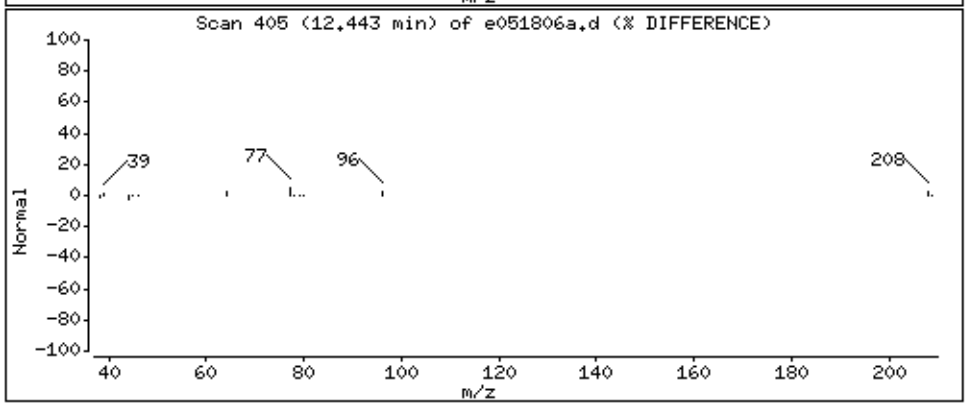
Concentration: 0.2329 PPBV











Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

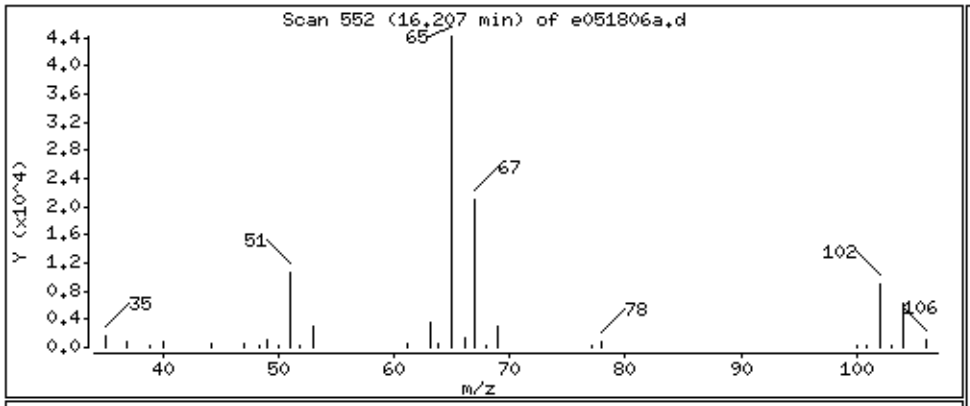
Operator: ef

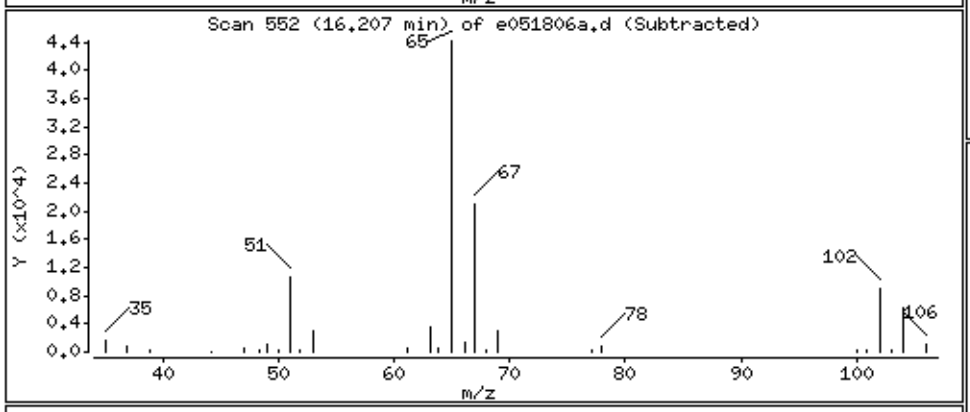
Column phase: RTX-624

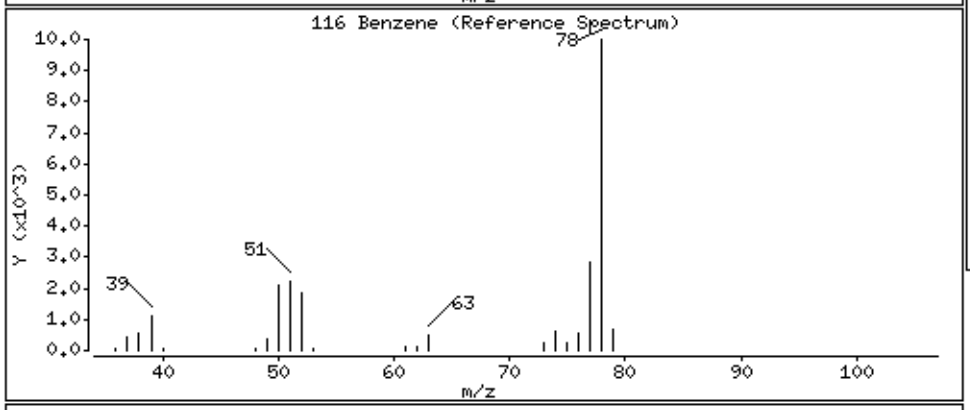
Column diameter: 0.32

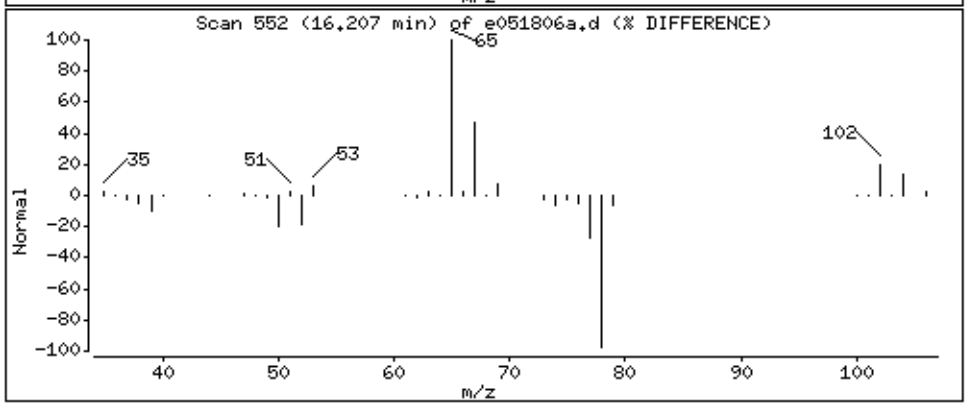
116 Benzene

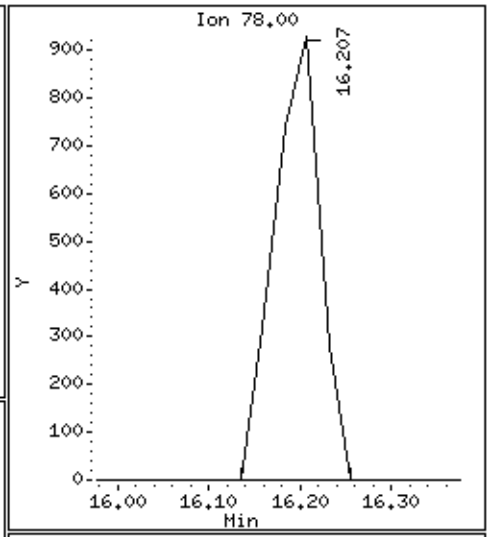
Concentration: 0.03016 PPBV

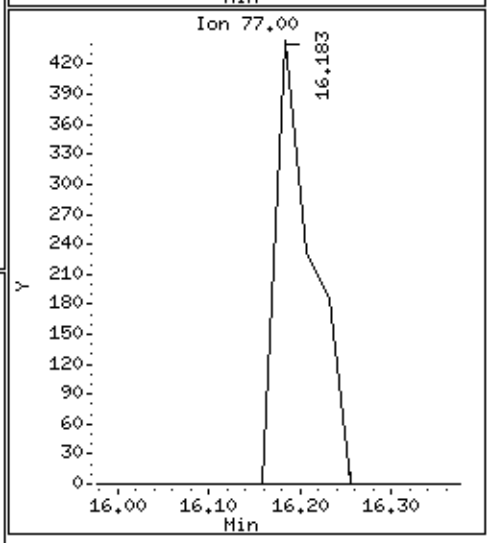












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

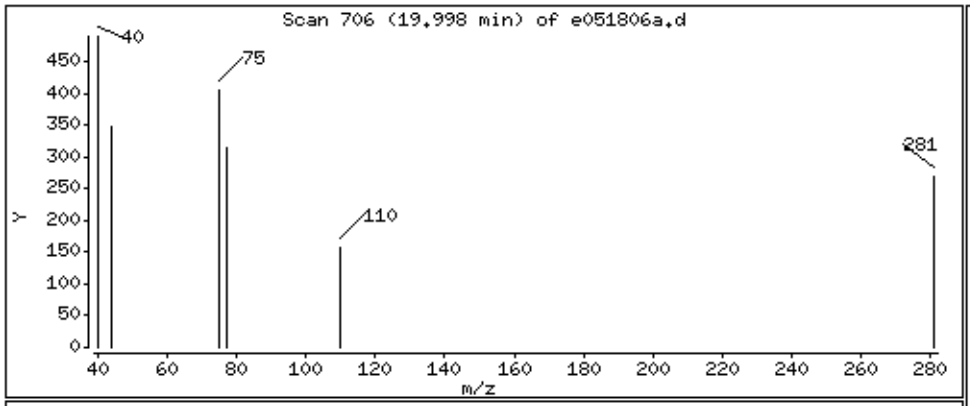
Operator: ef

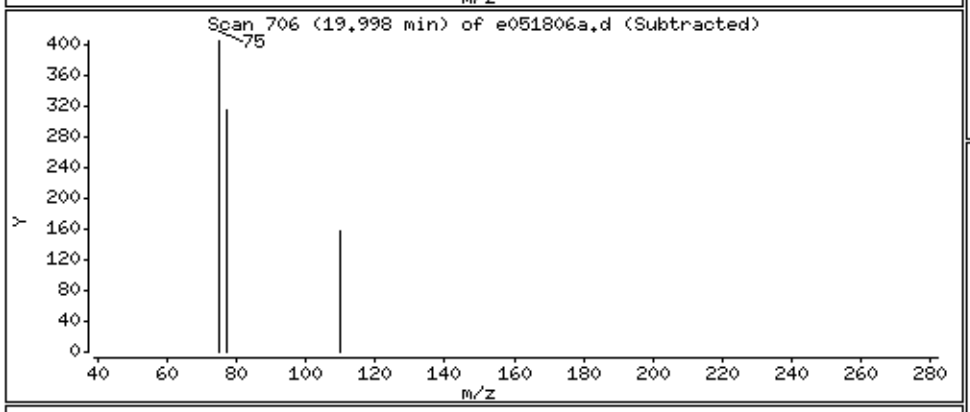
Column phase: RTX-624

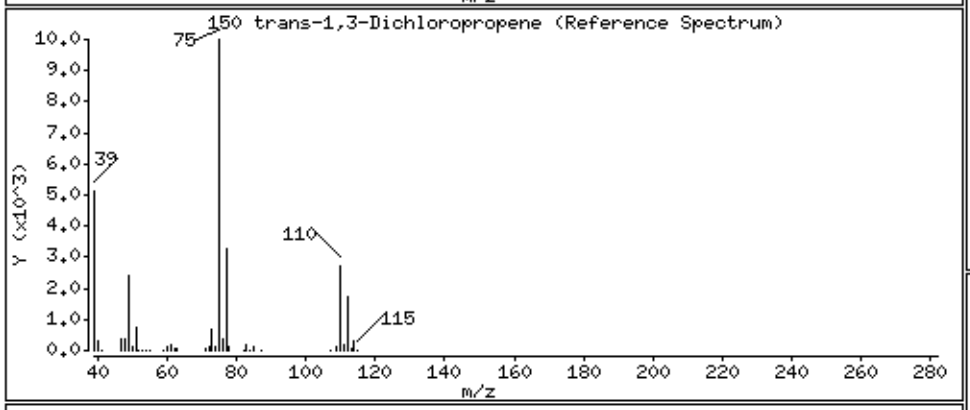
Column diameter: 0.32

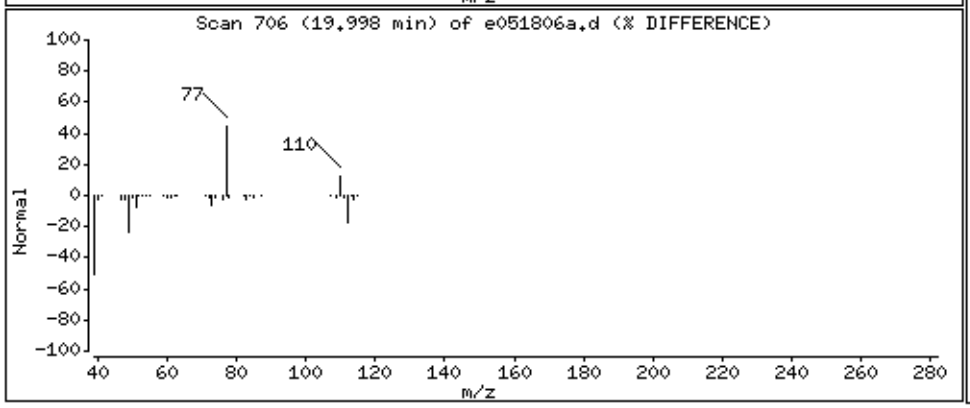
150 trans-1,3-Dichloropropene

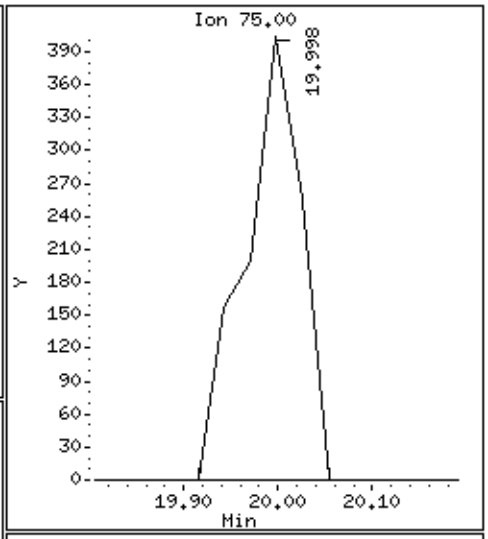
Concentration: 0.02614 PPBV

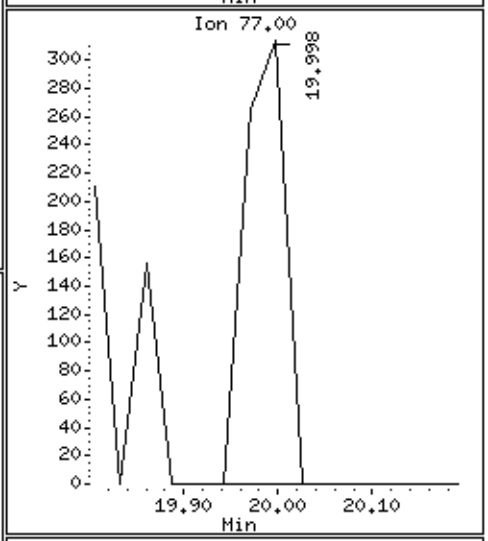


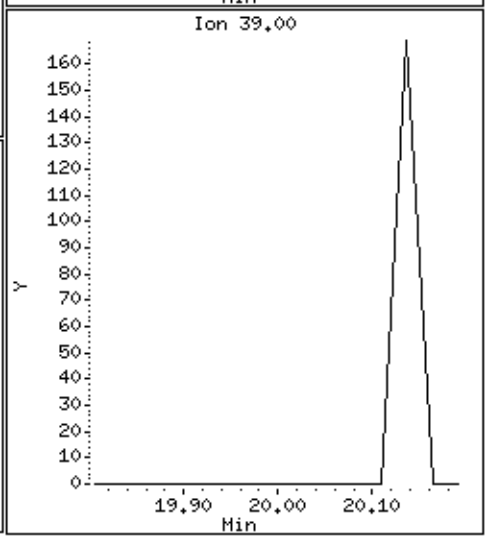












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

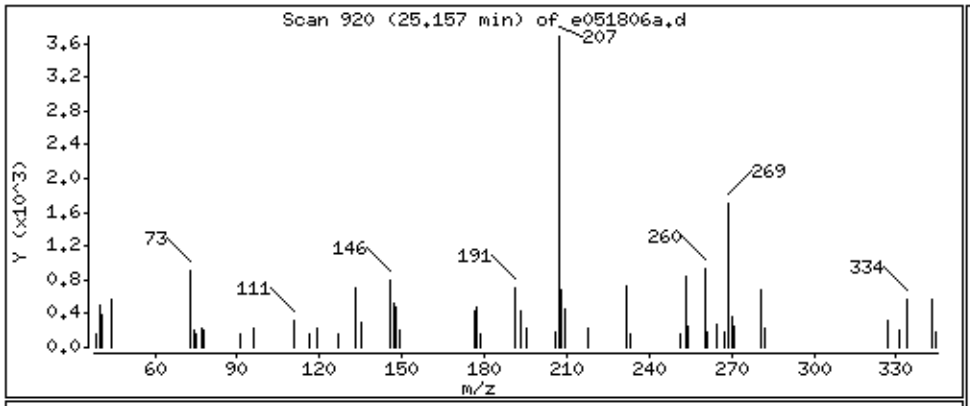
Operator: ef

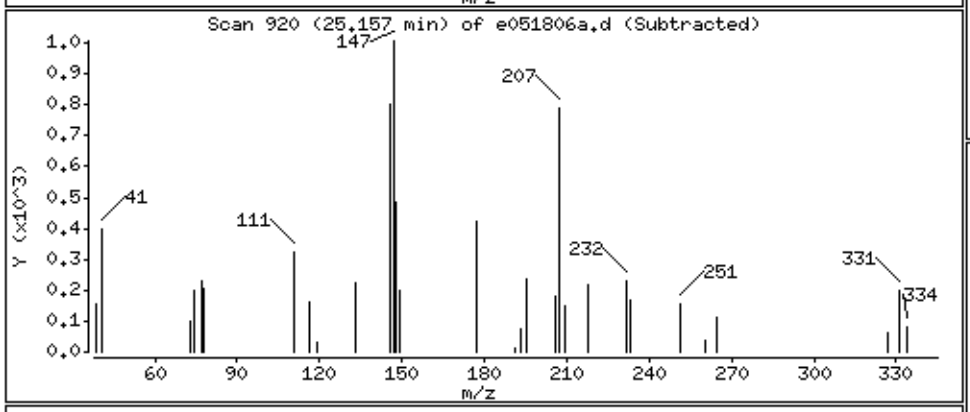
Column phase: RTX-624

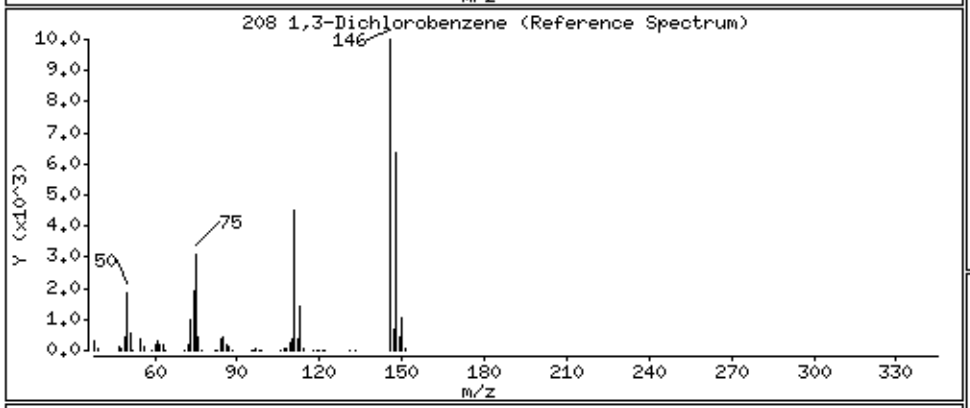
Column diameter: 0.32

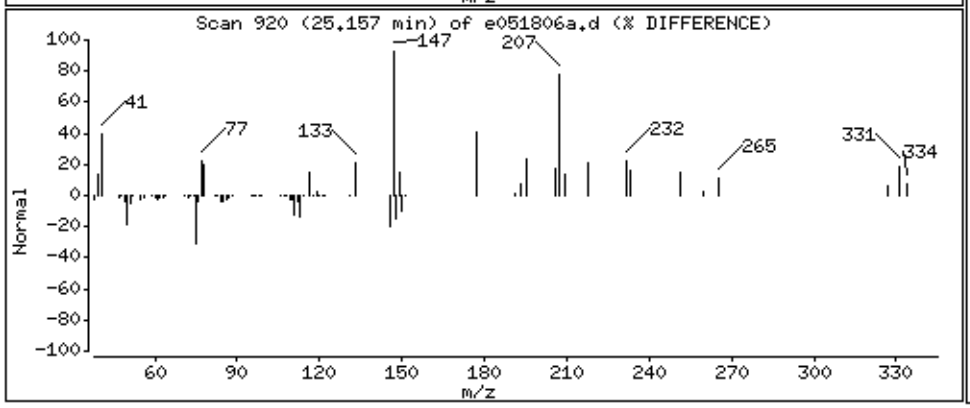
208 1,3-Dichlorobenzene

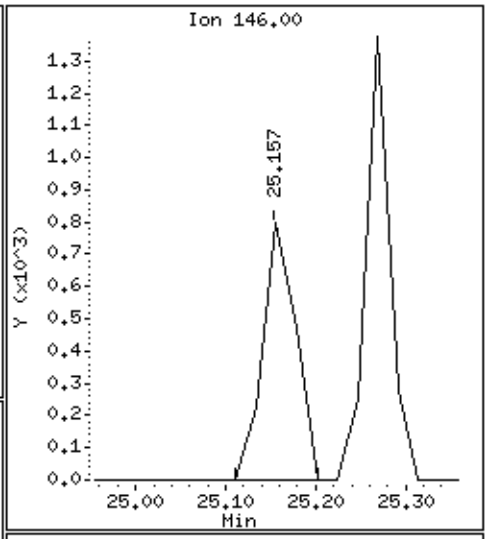
Concentration: 0.01804 PPBV

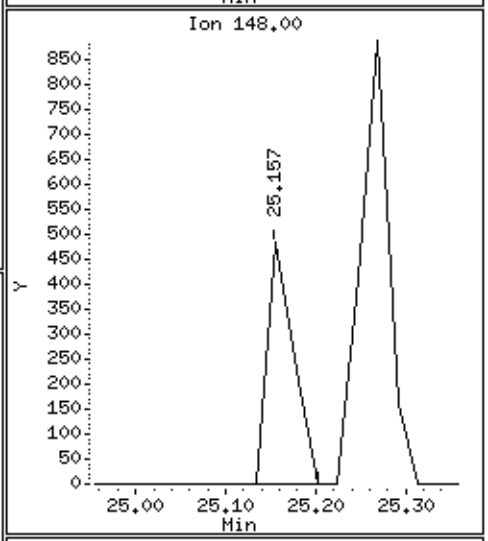


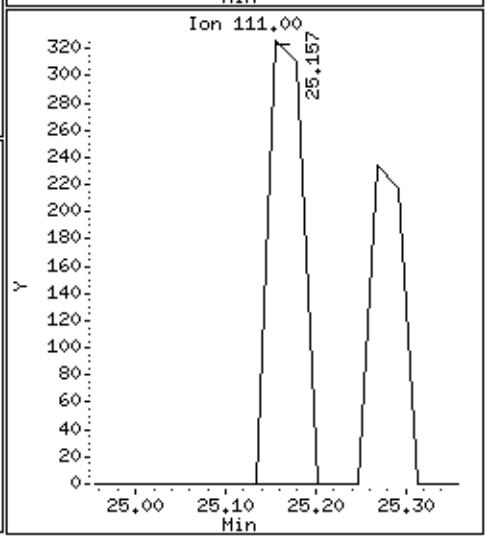












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

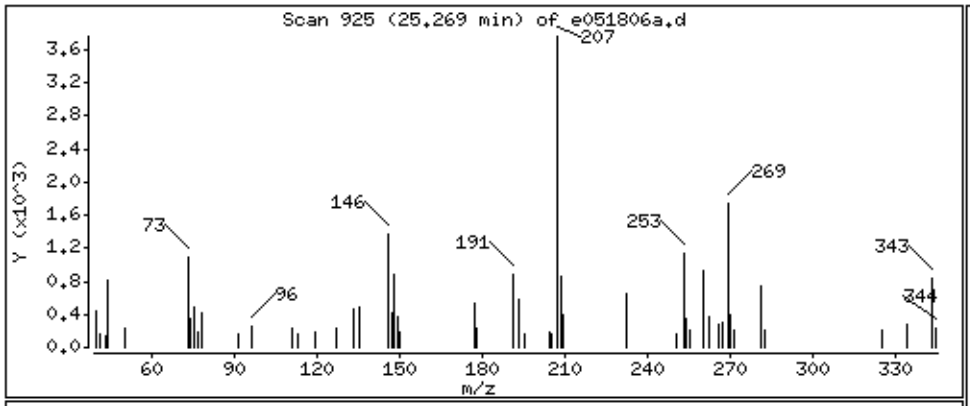
Operator: ef

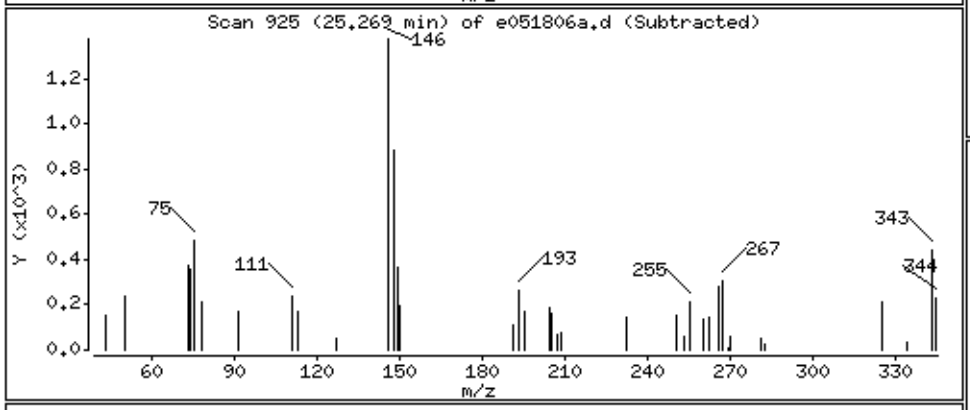
Column phase: RTX-624

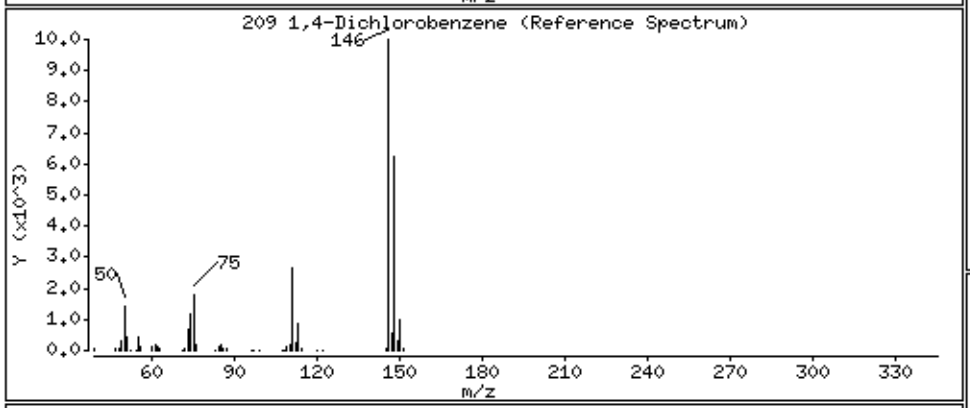
Column diameter: 0.32

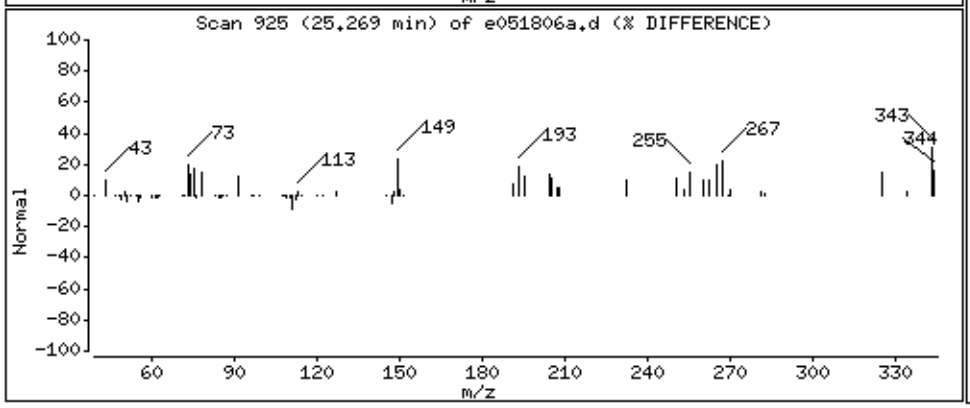
209 1,4-Dichlorobenzene

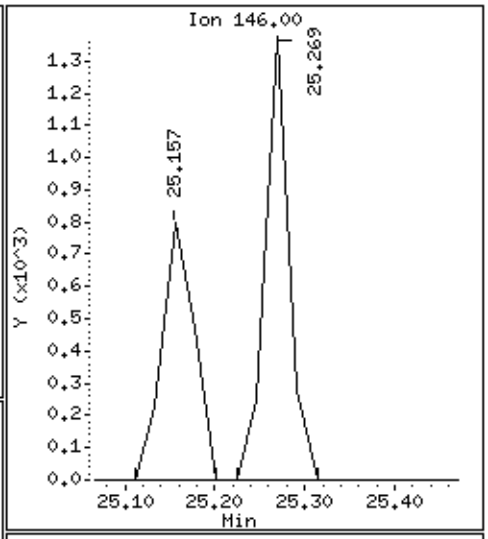
Concentration: 0.02439 PPBV

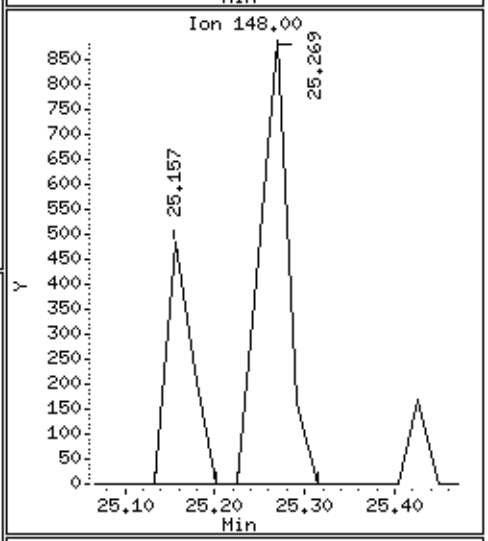


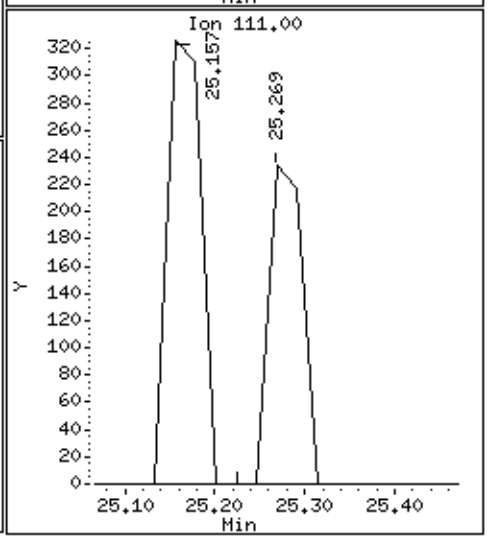












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

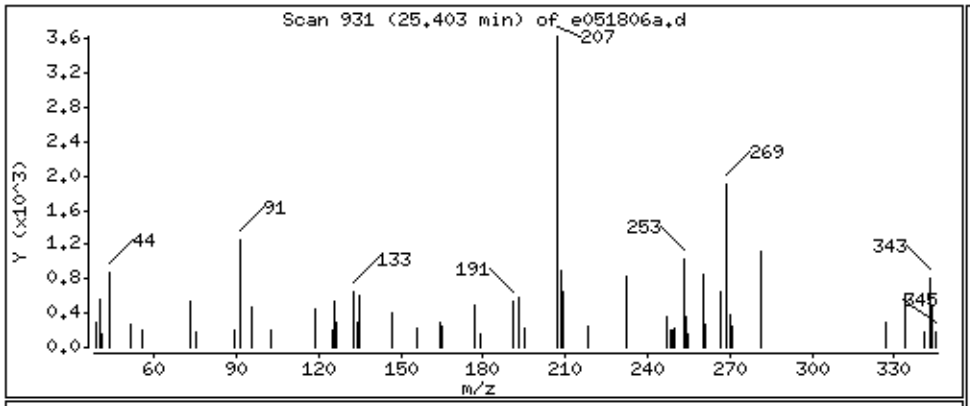
Operator: ef

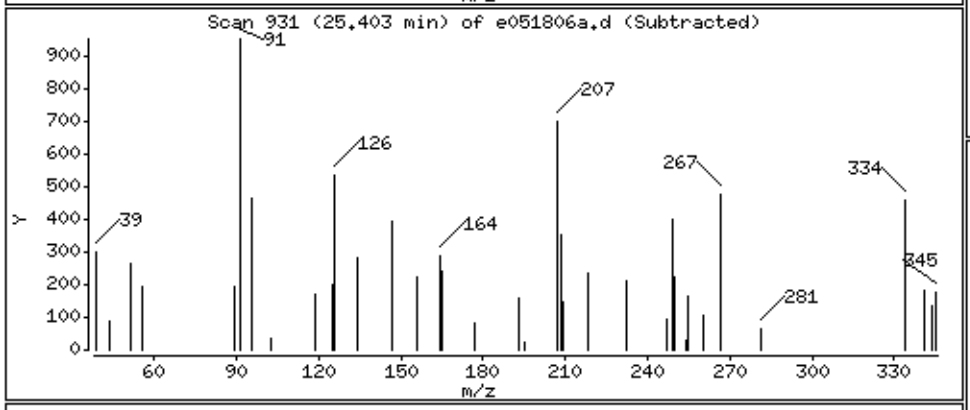
Column phase: RTX-624

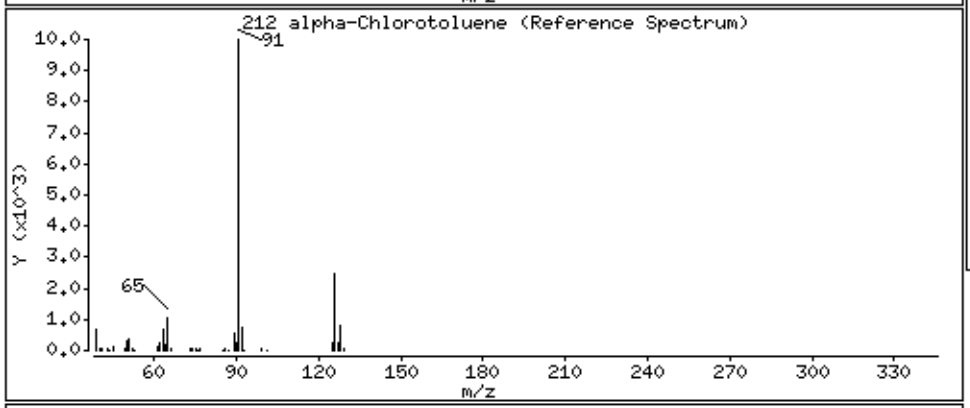
Column diameter: 0.32

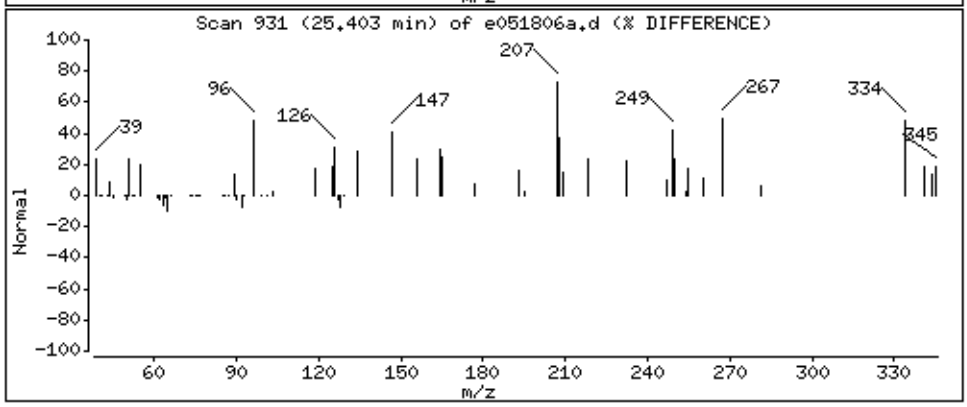
212 alpha-Chlorotoluene

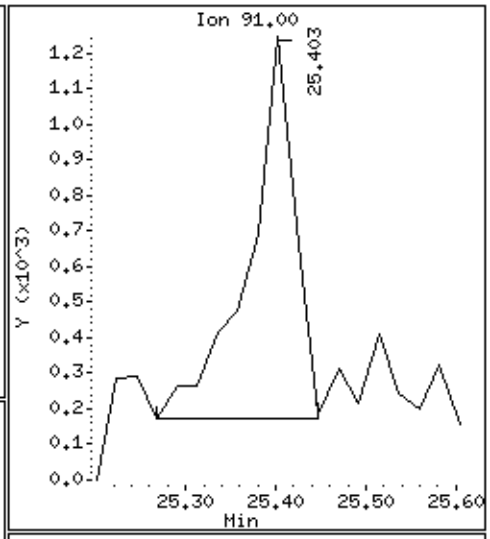
Concentration: 0.02868 PPBV

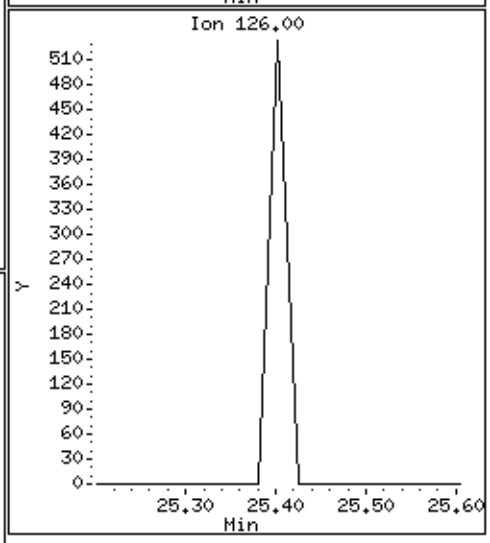












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

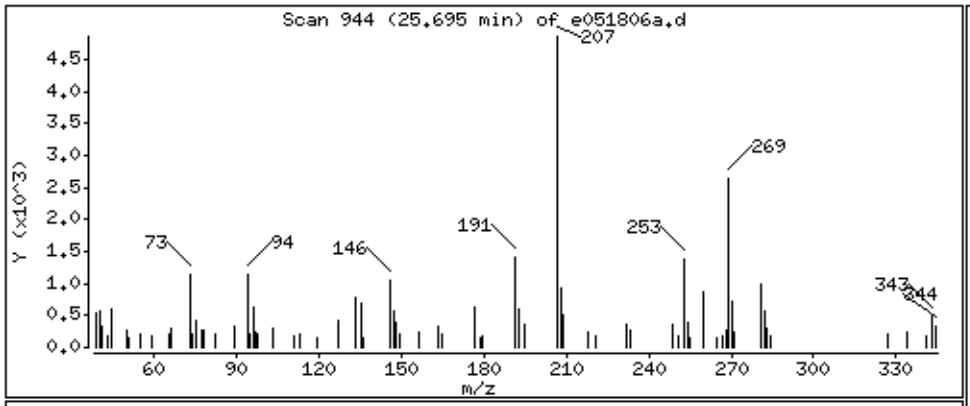
Operator: ef

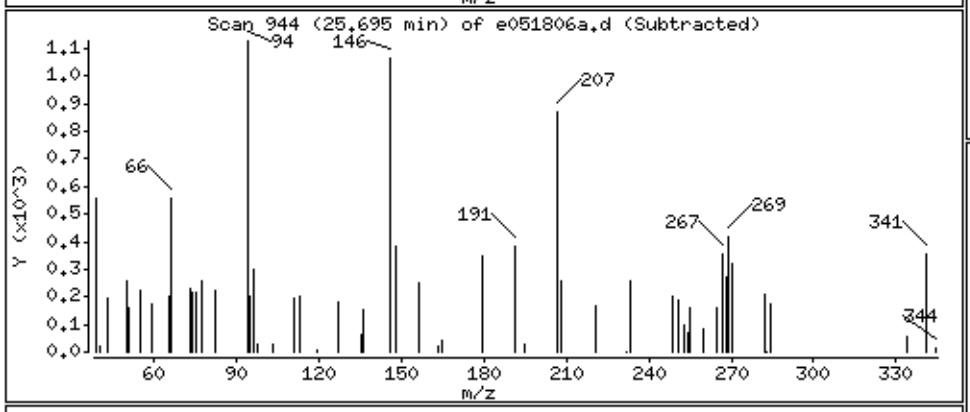
Column phase: RTX-624

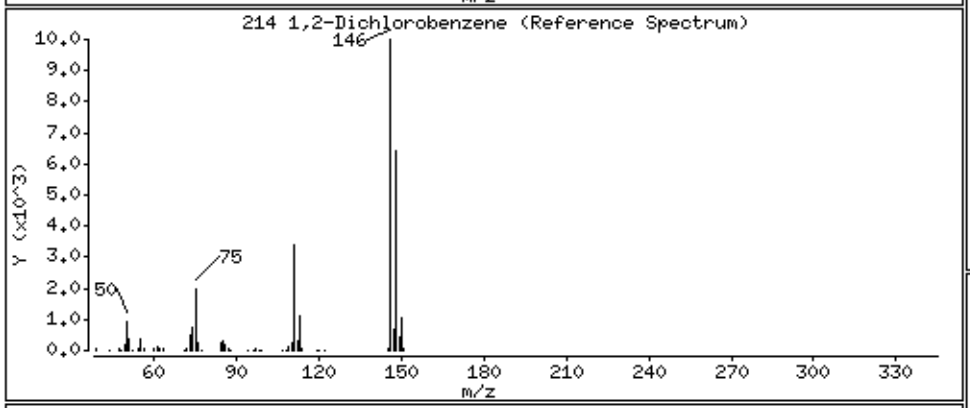
Column diameter: 0.32

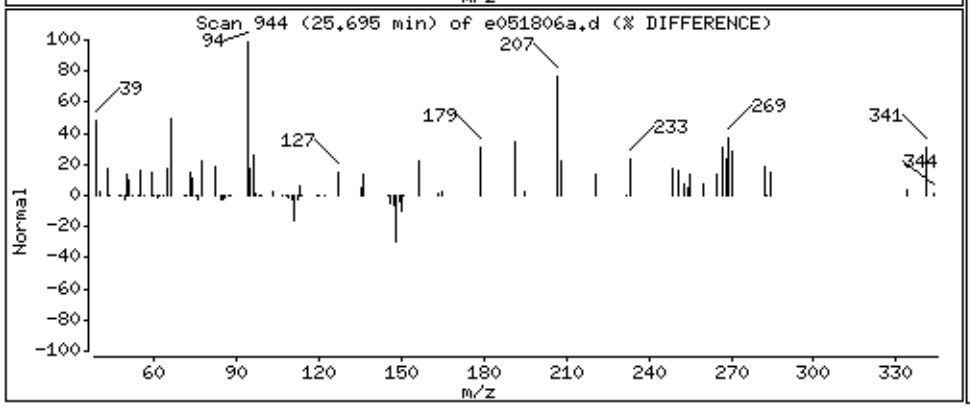
214 1,2-Dichlorobenzene

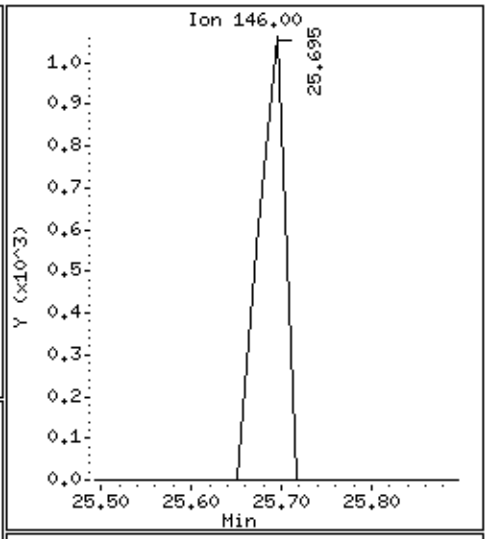
Concentration: 0.02270 PPBV

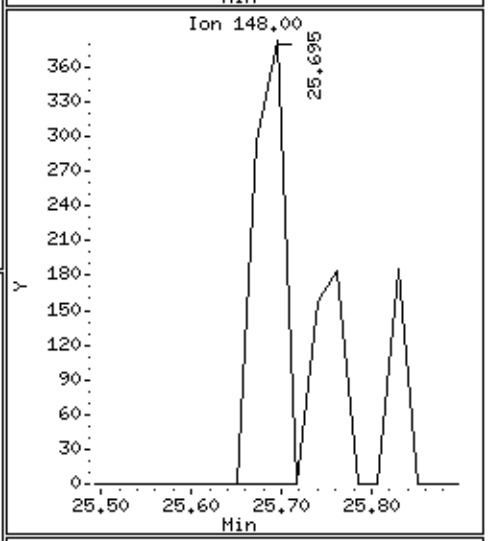


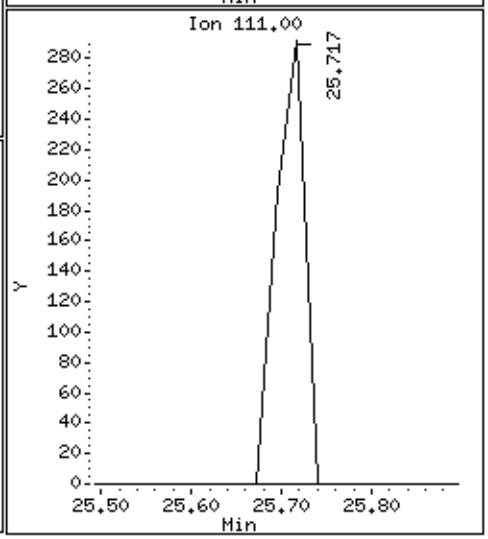












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

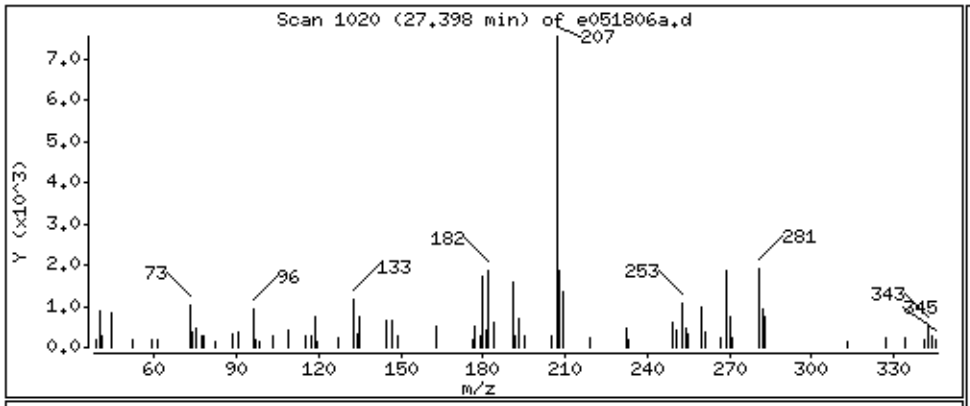
Operator: ef

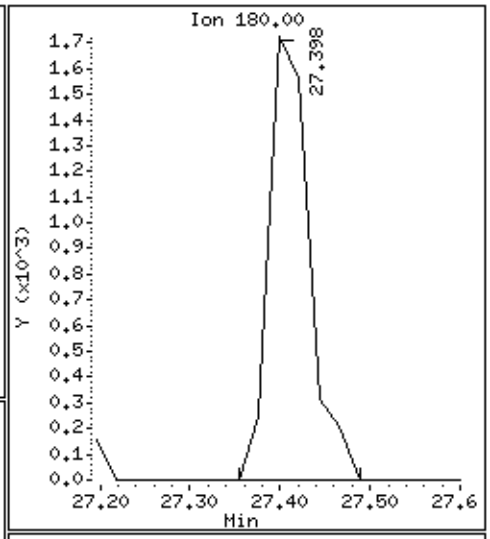
Column phase: RTX-624

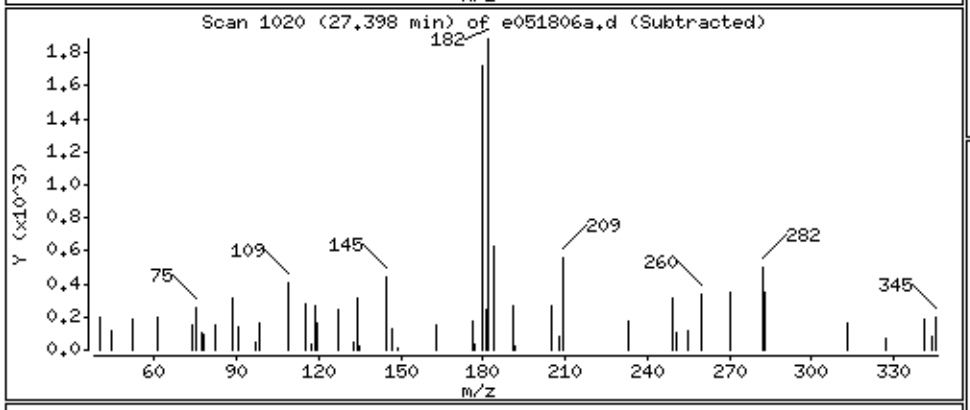
Column diameter: 0.32

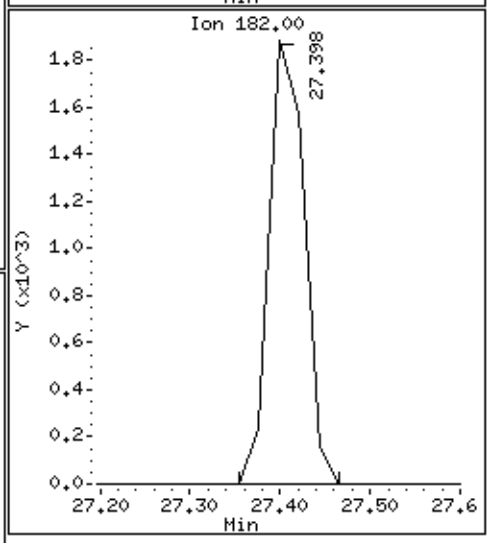
226 1,2,4-Trichlorobenzene

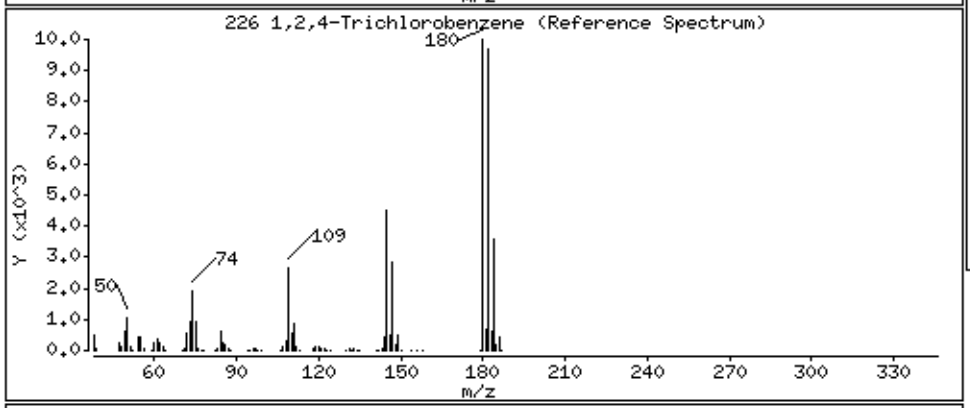
Concentration: 0.1253 PPBV

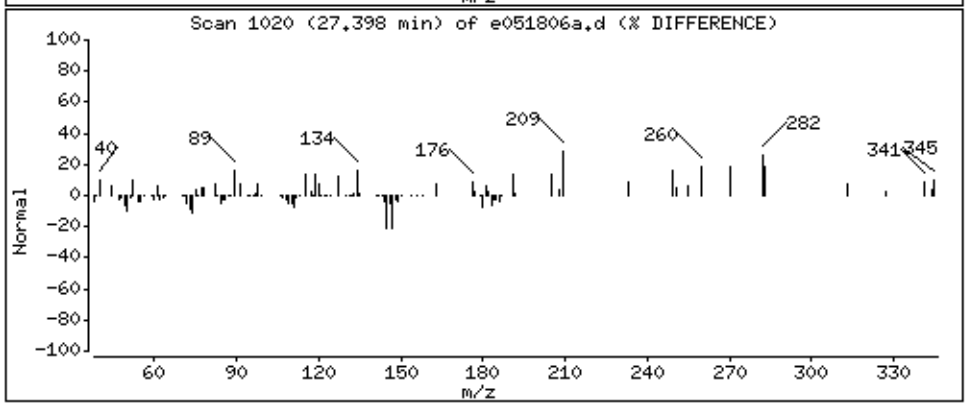












Data File: /chem/msde.i/18May2016.b/e051806a.d

Date : 18-MAY-2016 11:34

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 35248

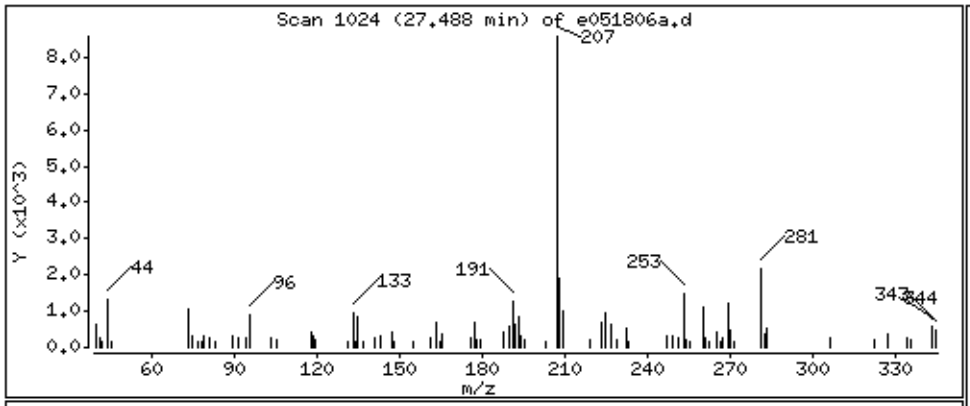
Operator: ef

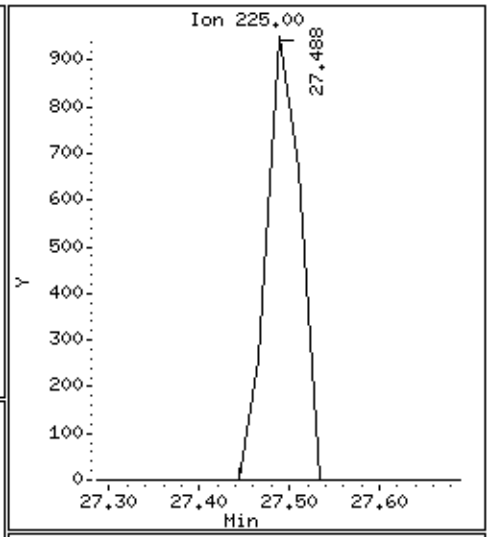
Column phase: RTX-624

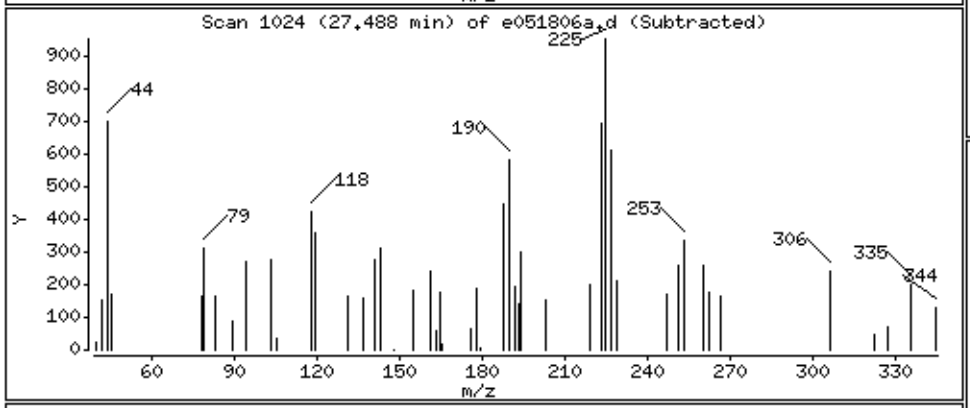
Column diameter: 0.32

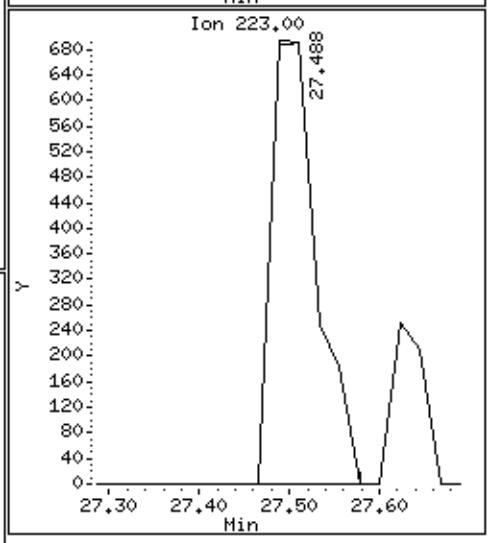
227 Hexachlorobutadiene

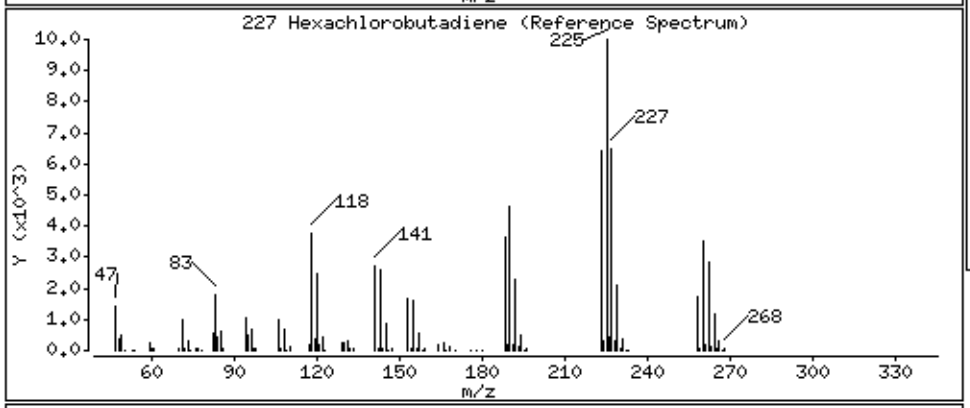
Concentration: 0.04260 PPBV

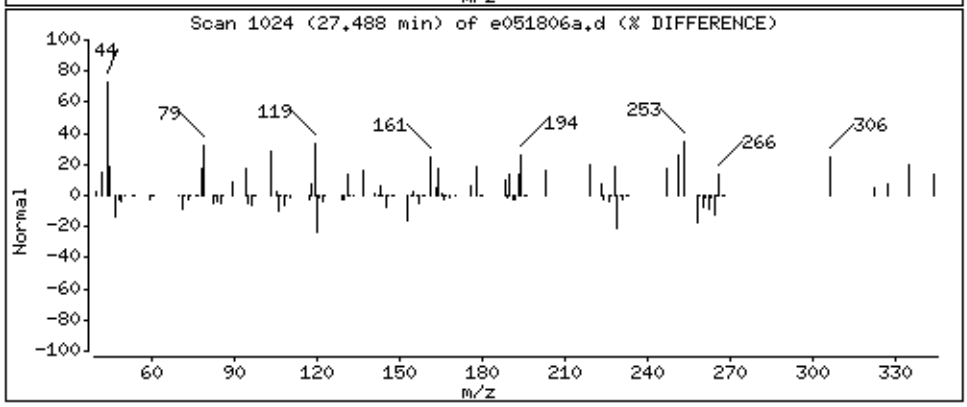












LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1605308D

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B7IA-1	98		100		99				0
02	B7IA-2	96		98		100				0
03	B7IA-6	96		98		99				0
04	Lab Blank	94		99		99				0
05	CCV	87		97		100				0
06	LCS	84		99		98				0
07	LCSD	91		97		101				0
08										0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

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: 1605308D

Lab File ID: e051802.d

Date Analyzed: 05/18/2016

Instrument ID: msde.i

Time Analyzed: 08:43 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	522912		22.18		603874		16.74		155392		15.39	
	UPPER LIMIT	732077		22.51		845424		17.07		217549		15.72	
	LOWER LIMIT	313747		21.85		362324		16.41		93235		15.06	
	CLIENT SAMPLE NO												
01	B7IA-1	473472		22.18		504809		16.74		135096		15.39	
02	B7IA-2	471417		22.18		502525		16.74		135509		15.39	
03	B7IA-6	468562		22.18		494963		16.74		135130		15.39	
04	Lab Blank	413045		22.18		453741		16.74		122348		15.39	
05	CCV	522912		22.18		603874		16.74		155392		15.39	
06	LCS	485753		22.18		545947		16.74		149252		15.39	
07	LCSD	485988		22.18		548017		16.74		136101		15.39	
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

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

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

RT Upper Limit=+0.33 minutes of internal standard RT

RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e051804.d & e051803.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 5/18/16 & 5/18/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
71-55-6	1,1,1-Trichloroethane	80		87		8.4	
79-34-5	1,1,2,2-Tetrachloroethane	74		76		2.7	
79-00-5	1,1,2-Trichloroethane	87		89		2.3	
75-34-3	1,1-Dichloroethane	82		91		10	
75-35-4	1,1-Dichloroethene	85		94		10	
120-82-1	1,2,4-Trichlorobenzene	106		95		11	
95-63-6	1,2,4-Trimethylbenzene	74		73		1.4	
106-93-4	1,2-Dibromoethane (EDB)	94		95		1.0	
95-50-1	1,2-Dichlorobenzene	84		82		2.4	
107-06-2	1,2-Dichloroethane	78		78		0	
78-87-5	1,2-Dichloropropane	87		88		1.1	
108-67-8	1,3,5-Trimethylbenzene	75		82		8.9	
106-99-0	1,3-Butadiene	83		88		5.8	
541-73-1	1,3-Dichlorobenzene	78		78		0	
106-46-7	1,4-Dichlorobenzene	78		80		2.5	
123-91-1	1,4-Dioxane	85		85		0	
540-84-1	2,2,4-Trimethylpentane	89		96		7.6	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	80		93		15	
591-78-6	2-Hexanone	85		83		2.4	
67-63-0	2-Propanol	83		89		7.0	
107-05-1	3-Chloropropene	105		115		9.1	
622-96-8	4-Ethyltoluene	87		78		11	
108-10-1	4-Methyl-2-pentanone	84		84		0	
67-64-1	Acetone	79		86		8.5	
100-44-7	alpha-Chlorotoluene	67		67		0	
71-43-2	Benzene	86		84		2.4	
75-27-4	Bromodichloromethane	88		89		1.1	
75-25-2	Bromoform	99		98		1.0	
74-83-9	Bromomethane	95		104		9.0	
75-15-0	Carbon Disulfide	74		82		10	
56-23-5	Carbon Tetrachloride	81		86		6.0	
108-90-7	Chlorobenzene	92		94		2.2	
75-00-3	Chloroethane	104		112		7.4	
67-66-3	Chloroform	80		90		12	
74-87-3	Chloromethane	83		89		7.0	
156-59-2	cis-1,2-Dichloroethene	85		91		6.8	
10061-01-5	cis-1,3-Dichloropropene	81		84		3.6	
98-82-8	Cumene	89		88		1.1	
110-82-7	Cyclohexane	88		100		13	
124-48-1	Dibromochloromethane	93		96		3.2	
64-17-5	Ethanol	88		102		15	
100-41-4	Ethyl Benzene	92		93		1.1	
75-69-4	Freon 11	86		97		12	
76-13-1	Freon 113	81		86		6.0	
76-14-2	Freon 114	94		102		8.2	

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: e051804.d & e051803.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 5/18/16 & 5/18/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-71-8	Freon 12	83		92		10	
142-82-5	Heptane	89		87		2.3	
87-68-3	Hexachlorobutadiene	112		108		3.6	
110-54-3	Hexane	84		94		11	
108-38-3	m,p-Xylene	97		97		0	
1634-04-4	Methyl tert-butyl ether	83		88		5.8	
75-09-2	Methylene Chloride	80		92		14	
91-20-3	Naphthalene	74		67		9.9	
95-47-6	o-Xylene	98		97		1.0	
103-65-1	Propylbenzene	82		82		0	
100-42-5	Styrene	95		94		1.0	
127-18-4	Tetrachloroethene	96		95		1.0	
109-99-9	Tetrahydrofuran	66		72		8.7	
108-88-3	Toluene	90		88		2.2	
156-60-5	trans-1,2-Dichloroethene	88		96		8.7	
10061-02-6	trans-1,3-Dichloropropene	88		85		3.5	
79-01-6	Trichloroethene	94		94		0	
75-01-4	Vinyl Chloride	86		96		11	

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 : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/17Mar2016.b/e031706.d
Level 6: /chem/msde.i/17Mar2016.b/e031707.d
Level 7: /chem/msde.i/09May2016.b/e050907.d
Level 8: /chem/msde.i/09May2016.b/e050908.d
Level 9: /chem/msde.i/09May2016.b/e050909.d
Level 11: /chem/msde.i/09May2016.b/e050912.d
Level 12: /chem/msde.i/09May2016.b/e050913.d
Level 13: /chem/msde.i/17Mar2016.b/e031711.d
Level 15: /chem/msde.i/17Mar2016.b/e031712.d
Level 16: /chem/msde.i/17Mar2016.b/e031713.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
7 Freon 134a	+++++	+++++	+++++	+++++	0.41473	0.42129		
	0.38615	+++++	+++++	+++++			0.40739	4.586
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
9 Propylene	+++++	+++++	+++++	0.65636	+++++	+++++		
	0.69625	0.67394	0.59210	0.62813			0.64936	6.247
10 1,1-Difluoroethane	+++++	+++++	+++++	0.20524	0.15752	0.16041		
	0.16479	+++++	+++++	+++++			0.17199	13.005
11 Freon 12	+++++	5.12006	4.10953	4.00056	+++++	+++++		
	4.53383	4.16601	3.72304	3.78487			4.20541	11.514
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
13 Chlorodifluoromethane	+++++	+++++	0.48150	0.44538	0.47328	0.40228		
	0.41265	+++++	+++++	+++++			0.44302	7.968
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
15 Freon 114	3.04054	3.74214	2.99528	2.91420	+++++	+++++		
	3.22969	3.03570	2.81081	2.85426			3.07783	9.688
16 Freon 142b	+++++	+++++	0.95463	0.90227	0.91463	0.87295		
	0.84882	+++++	+++++	+++++			0.89866	4.501

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
17 Chloromethane	+++++	0.89598	0.80271	0.83008	+++++	+++++		
	0.82977	0.78391	0.71156	0.73148			0.79793	7.886
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
23 Butane	+++++	+++++	0.20216	0.19760	+++++	+++++		
	0.22324	0.21314	0.19217	0.21179			0.20668	5.539
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
25 Vinyl Chloride	1.17455	1.32551	1.07263	1.03349	+++++	+++++		
	1.16793	1.13320	1.01360	1.05974			1.12258	9.054
26 1,3-Butadiene	+++++	0.88279	0.65846	0.76541	+++++	+++++		
	0.79294	0.74711	0.70180	0.73672			0.75503	9.432

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
29 Bromomethane	+++++	1.61625	1.12080	1.19140	+++++	+++++		
	1.28406	1.21154	1.05906	1.09156			1.22495	15.420
30 Chloroethane	+++++	+++++	0.49367	0.51242	+++++	+++++		
	0.58805	0.56670	0.51111	0.51020			0.53036	7.102
31 Isopentane	+++++	+++++	0.85650	0.74527	+++++	+++++		
	0.80950	0.76033	0.71285	0.72858			0.76884	7.057
32 Vinyl Bromide	+++++	+++++	0.96076	0.94455	+++++	+++++		
	0.95528	+++++	+++++	+++++			0.95353	0.865
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
34 Pentane	+++++	+++++	1.69548	1.45652	1.39617	1.32596		
	1.26008	+++++	+++++	+++++			1.42684	11.726
35 Freon 11	5.32386	5.21038	4.47573	4.30647	+++++	+++++		
	4.64783	4.30713	3.96331	3.99171			4.52830	11.262
36 1-Pentene	+++++	+++++	0.92877	0.76770	0.81866	0.81261		
	0.74214	+++++	+++++	+++++			0.81398	8.796

Eurofins Air Toxics Inc.

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Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
37 Dichlorofluoromethane	+++++	+++++	1.07501	0.88651	0.90482	0.93031		
	0.89584	+++++	+++++	+++++			0.93850	8.315
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
42 Ethanol	+++++	+++++	0.38554	0.36555	+++++	+++++		
	0.36172	0.29161	0.28270	0.28164			0.32813	14.541
43 1,2-Dichloro-1-fluoroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
44 Ethyl Ether	+++++	+++++	0.70230	0.72733	0.65391	0.63915		
	0.58469	+++++	+++++	+++++			0.66148	8.436
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
46 Acrolein	+++++	+++++	0.31567	0.29942	+++++	+++++		
	0.25047	+++++	+++++	+++++			0.28852	11.762

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
48 Freon 123	+++++	+++++	1.53572	1.50104	1.39390	1.43541		
	1.38044	+++++	+++++	+++++			1.44930	4.648
49 Freon 113	3.77652	3.98245	3.17023	3.06291	+++++	+++++		
	3.22635	3.45679	3.19789	3.27477			3.39349	9.562
50 1,1-Dichloroethene	+++++	1.16629	0.95408	0.93919	+++++	+++++		
	0.96344	0.91006	0.82919	0.86193			0.94631	11.491
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
52 Acetone	+++++	+++++	0.68940	0.62153	+++++	+++++		
	0.52666	0.52391	0.47398	0.48462			0.55335	15.284
53 Iodomethane	+++++	+++++	4.60765	4.17771	4.02710	4.02394		
	3.68501	+++++	+++++	+++++			4.10428	8.145
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
56 Carbon Disulfide	+++++	+++++	5.08838	4.49862	+++++	+++++		
	4.40737	3.99789	3.66589	3.64653			4.21745	13.210

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
57 2-Propanol	+++++	+++++	1.66071	1.65813	+++++	+++++		
	1.81940	1.70040	1.61933	1.69853			1.69275	4.071
58 3-Chloropropene	+++++	0.59765	0.69152	0.65355	+++++	+++++		
	0.65844	0.63373	0.57676	0.60144			0.63044	6.430
59 Cyclopentene	+++++	+++++	3.15715	2.77885	2.77976	2.71571		
	2.48967	+++++	+++++	+++++			2.78423	8.623
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
64 Cyclopentane	+++++	+++++	0.85651	0.67777	0.68509	0.69459		
	0.67804	+++++	+++++	+++++			0.71840	10.789
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
66 Methylene Chloride	+++++	1.87437	1.31192	1.27128	+++++	+++++		
	1.32693	1.25948	1.09940	1.13833			1.32596	19.348

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
71 tert-Butyl alcohol	+++++	+++++	3.17828	3.43808	+++++	+++++		
	2.95256	3.30101	2.74633	2.96407			3.09672	8.246
72 Methyl tert-butyl ether	+++++	4.95062	4.13935	3.98352	+++++	+++++		
	4.54432	4.24444	3.85262	3.96530			4.24002	9.130
73 trans-1,2-Dichloroethene	+++++	1.10234	0.89999	0.93074	+++++	+++++		
	1.04937	0.94937	0.88689	0.90946			0.96116	8.570
74 Acrylonitrile	+++++	+++++	0.94328	0.90324	0.83969	0.78338		
	0.71968	+++++	+++++	+++++			0.83785	10.730
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
76 1-Hexene	+++++	+++++	0.86347	0.70113	0.66133	0.72858		
	0.69321	+++++	+++++	+++++			0.72954	10.775

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
78 Hexane	+++++	1.93733	1.55177	1.53817	+++++	+++++		
	1.78717	1.66845	1.52334	1.57178			1.65400	9.429
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
82 1,1-Dichloroethane	+++++	2.69024	2.45244	2.73570	+++++	+++++		
	2.71402	2.49231	2.22594	2.29764			2.51547	8.184
83 Isopropyl ether	+++++	+++++	2.99372	2.83284	+++++	+++++		
	3.33969	3.14518	2.86014	2.92951			3.01685	6.415
84 1-Propanol	+++++	+++++	0.18242	0.21285	0.24978	0.25588		
	0.23464	+++++	+++++	+++++			0.22711	13.207
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
86 Vinyl Acetate	+++++	+++++	0.39671	0.39911	+++++	+++++		
	0.41572	0.40228	0.35889	0.37530			0.39134	5.254

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
88 Ethyl-tert-butyl ether	+++++	+++++	3.51883	3.56297	+++++	+++++		
	4.30713	4.13284	3.74977	3.83274			3.85071	8.141
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
90 2,2-Dichloropropane	+++++	+++++	3.55176	3.36224	3.21760	3.19536		
	2.91851	+++++	+++++	+++++			3.24909	7.178
91 cis-1,2-Dichloroethene	+++++	1.25991	1.02141	1.03678	+++++	+++++		
	1.08460	1.03814	0.93871	0.98020			1.05139	9.795
92 2-Butanone	+++++	+++++	0.64410	0.65010	+++++	+++++		
	0.73733	0.68219	0.62684	0.65867			0.66654	5.875
93 Methyl Acrylate	+++++	+++++	2.28761	2.13389	2.13720	2.17337		
	2.06537	+++++	+++++	+++++			2.15949	3.778
94 Ethyl Acetate	+++++	+++++	0.29688	0.28671	0.25618	0.28402		
	0.27809	+++++	+++++	+++++			0.28038	5.399
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
99 Tetrahydrofuran	+++++	+++++	1.08081	1.21670	+++++	+++++		
	1.33716	1.25892	1.18591	1.25953			1.22317	7.060
100 Chloroform	+++++	4.78448	3.48851	3.44218	+++++	+++++		
	3.72316	3.43887	3.16350	3.22895			3.60995	15.210
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
102 Cyclohexane	+++++	1.97754	1.81719	1.72787	+++++	+++++		
	2.02036	1.94115	1.78685	1.84262			1.87337	5.758
103 1,1,1-Trichloroethane	5.07168	4.75349	3.88746	4.15085	+++++	+++++		
	4.40274	4.00231	3.62668	3.69808			4.19916	12.166
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
106 Carbon Tetrachloride	4.82772	4.07508	3.62459	3.65485	+++++	+++++		
	4.56136	4.33329	3.88074	3.94190			4.11244	10.453
107 1,1-Dichloropropene	+++++	+++++	1.08054	0.88134	0.89724	0.93160		
	0.88002	+++++	+++++	+++++			0.93415	9.039

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
113 2,2,4-Trimethylpentane	+++++	2.82473	2.02878	2.11284	+++++	+++++		
	2.14077	1.98599	1.75904	1.80898			2.09445	16.834
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
115 Isobutanol	+++++	+++++	1.31664	0.98605	0.90345	0.97080		
	0.83123	+++++	+++++	+++++			1.00163	18.618
116 Benzene	+++++	1.77869	1.16573	1.12317	+++++	+++++		
	1.19266	1.07964	1.04163	1.00570			1.19817	22.063
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
119 tert-Amyl methyl ether	+++++	+++++	0.34291	0.26393	+++++	+++++		
	0.33619	0.30905	0.30103	0.29276			0.30765	9.461

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120 1,2-Dichloroethane	0.55304	0.83119	0.63749	0.58943	+++++	+++++		
	0.66829	0.60152	0.56742	0.54767			0.62451	14.927
121 Heptane	+++++	0.36350	0.26569	0.25009	+++++	+++++		
	0.29317	0.28088	0.26946	0.26529			0.28401	13.222
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
124 n-Butanol	+++++	+++++	0.46765	0.44398	0.44786	0.44685		
	0.44055	+++++	+++++	+++++			0.44938	2.359
125 Trichloroethene	0.55811	0.72579	0.63220	0.61998	+++++	+++++		
	0.64913	0.62225	0.59001	0.57439			0.62148	8.380
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
127 Methylcyclohexane	+++++	+++++	0.66667	0.61556	+++++	+++++		
	0.73059	0.68212	0.66054	0.64704			0.66709	5.751
128 Ethyl acrylate	+++++	+++++	0.08476	0.07847	0.07133	0.06864		
	0.07049	+++++	+++++	+++++			0.07474	9.003
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
131 2-Pentanone	+++++	+++++	0.83872	0.76141	0.76358	0.76608		
	0.74445	+++++	+++++	+++++			0.77485	4.737
132 1,2-Dichloropropane	+++++	0.49479	0.34374	0.37715	+++++	+++++		
	0.40057	0.38071	0.35535	0.34818			0.38578	13.514
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
134 Methyl Methacrylate	+++++	+++++	0.40583	0.41307	0.39358	0.40409		
	0.40540	+++++	+++++	+++++			0.40439	1.728
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
136 1,4-Dioxane	+++++	0.33485	0.29020	0.28555	+++++	+++++		
	0.29637	0.27812	0.27211	0.26523			0.28892	7.916
137 Dibromomethane	+++++	+++++	0.81469	0.74134	0.74481	0.73171		
	0.70527	+++++	+++++	+++++			0.74756	5.431
138 Bromodichloromethane	0.85036	1.12173	1.02065	1.03009	+++++	+++++		
	1.04984	0.99645	0.95419	0.93127			0.99432	8.293
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
140 bis(chloromethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
143 2-Chloroethyl Vinyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
144 cis-1,3-Dichloropropene	+++++	0.77501	0.74057	0.70277	+++++	+++++		
	0.79805	0.74135	0.71848	0.71044			0.74095	4.712
145 4-Methyl-2-pentanone	+++++	0.68605	0.58879	0.55944	+++++	+++++		
	0.65873	0.62434	0.61146	0.59933			0.61831	6.926
147 Toluene	+++++	1.72268	1.42747	1.33669	+++++	+++++		
	1.49343	1.38186	1.33106	1.29709			1.42718	10.239
148 Octane	+++++	+++++	0.28296	0.25280	0.24534	0.24877		
	0.22852	+++++	+++++	+++++			0.25168	7.859
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
150 trans-1,3-Dichloropropene	+++++	0.86752	0.71739	0.73834	+++++	+++++		
	0.82746	0.77859	0.75828	0.73170			0.77418	7.102
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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152 1-Chloro-2-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
155 1,1,2-Trichloroethane	0.82922	0.71158	0.54764	0.54579	+++++	+++++		
	0.60068	0.55351	0.53276	0.50016			0.60267	18.527
156 Tetrachloroethene	0.84062	1.15457	0.93725	0.89585	+++++	+++++		
	0.99469	0.89262	0.87963	0.83384			0.92863	11.293
157 1,3-Dichloropropane	+++++	+++++	0.97514	0.86766	0.84348	0.80586		
	0.81813	+++++	+++++	+++++			0.86206	7.836
158 2-Hexanone	+++++	+++++	0.34209	0.38128	+++++	+++++		
	0.41450	0.40140	0.39732	0.39046			0.38784	6.449
159 Butyl Acetate	+++++	+++++	0.09579	0.07085	0.08453	0.08534		
	0.08421	+++++	+++++	+++++			0.08414	10.529
160 Dibromochloromethane	1.13509	1.35827	1.21370	1.20779	+++++	+++++		
	1.32964	1.23232	1.18971	1.12096			1.22343	6.861
161 1,2-Dibromoethane (EDB)	0.91461	1.05600	0.90524	0.88768	+++++	+++++		
	0.99492	0.91216	0.88283	0.84531			0.92484	7.338

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162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
165 Chlorobenzene	+++++	1.62401	1.33249	1.27529	+++++	+++++		
	1.42898	1.31371	1.27351	1.22152			1.35279	10.047
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
167 Ethyl Benzene	+++++	0.83822	0.63666	0.56139	+++++	+++++		
	0.69087	0.64524	0.63425	0.60527			0.65884	13.412
168 1,1,1,2-Tetrachloroethane	+++++	+++++	1.22059	0.95918	0.97804	0.91730		
	0.91993	+++++	+++++	+++++			0.99901	12.667
169 m,p-Xylene	+++++	0.79226	0.73966	0.71273	+++++	+++++		
	0.84181	0.78428	0.75932	0.72746			0.76536	5.802
170 Nonane	+++++	+++++	0.55249	0.47591	0.49451	0.49445		
	0.48558	+++++	+++++	+++++			0.50059	5.995
171 o-Xylene	+++++	0.64964	0.67013	0.69703	+++++	+++++		
	0.77627	0.72124	0.71636	0.68342			0.70201	5.879
172 Styrene	+++++	1.23221	1.07737	1.10226	+++++	+++++		
	1.30763	1.22708	1.20928	1.15964			1.18792	6.755

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173 2-Heptanone	+++++	+++++	0.58237	0.49728	0.47279	0.51104		
	0.52408	+++++	+++++	+++++			0.51751	7.909
174 Bromoform	1.12313	1.29015	1.14569	1.13013	+++++	+++++		
	1.33478	1.27750	1.23022	1.16550			1.21214	6.758
175 Cumene	+++++	2.65632	2.23518	2.26236	+++++	+++++		
	2.58051	2.40146	2.36134	2.21060			2.38682	7.268
176 Cyclohexanone	+++++	+++++	0.45860	0.41451	0.44764	0.41318		
	0.42090	+++++	+++++	+++++			0.43097	4.826
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
179 alpha-Pinene	+++++	+++++	2.08725	1.93313	1.97717	1.98009		
	1.99170	+++++	+++++	+++++			1.99387	2.846
180 Bromobenzene	+++++	+++++	1.17580	1.00188	0.98688	0.92611		
	0.93379	+++++	+++++	+++++			1.00489	10.051
181 1,1,2,2-Tetrachloroethane	1.24738	1.29072	1.02927	1.01815	+++++	+++++		
	1.15356	1.08719	1.06739	0.99888			1.11157	9.799
182 Propylbenzene	+++++	2.61332	2.52811	2.39376	+++++	+++++		
	2.67489	2.54068	2.50112	2.34573			2.51395	4.582
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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184 trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
185 1,2,3-Trichloropropane	+++++	+++++	0.46967	0.40895	0.39751	0.36468		
	0.37683	+++++	+++++	+++++			0.40353	10.114
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
187 Decane	+++++	+++++	0.44353	0.39676	0.39410	0.39894		
	0.40695	+++++	+++++	+++++			0.40805	5.000
188 4-Ethyltoluene	2.40545	2.33407	1.95031	1.95348	+++++	+++++		
	2.22952	2.12360	2.09179	1.95776			2.13075	8.358
189 2-Chlorotoluene	+++++	+++++	0.74253	0.65590	0.62484	0.58706		
	0.61373	+++++	+++++	+++++			0.64481	9.296
190 1,3,5-Trimethylbenzene	1.59193	1.84798	1.54624	1.64332	+++++	+++++		
	1.75893	1.68858	1.61769	1.54285			1.65469	6.424
191 4-Chlorotoluene	+++++	+++++	0.62175	0.60979	0.59592	0.56872		
	0.59226	+++++	+++++	+++++			0.59769	3.344
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
195 tert-Butylbenzene	+++++	+++++	1.87933	1.66426	1.65208	1.62171		
	1.60705	+++++	+++++	+++++			1.68489	6.593
196 1,2,4-Trimethylbenzene	1.84267	1.58681	1.24330	1.26583	+++++	+++++		
	1.45476	1.39453	1.39981	1.28118			1.43361	13.989
197 Pentachloroethane	+++++	+++++	0.77936	0.70091	0.65926	0.63262		
	0.64222	+++++	+++++	+++++			0.68287	8.777
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
199 D-Limonene	+++++	+++++	0.69441	0.60117	0.63321	0.62578		
	0.62062	+++++	+++++	+++++			0.63504	5.550
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
203 sec-Butylbenzene	+++++	+++++	3.57695	3.16374	3.08626	3.01567		
	3.05051	+++++	+++++	+++++			3.17863	7.215

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204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
206 bis(2-Chloroethyl) Ether	+++++	+++++	1.67390	1.53175	1.58397	1.54797		
	1.55759	+++++	+++++	+++++			1.57904	3.566
207 p-Cymene	+++++	+++++	2.03789	1.92953	1.94282	1.89865		
	1.89757	+++++	+++++	+++++			1.94129	2.959
208 1,3-Dichlorobenzene	1.68497	1.62078	1.28850	1.18919	+++++	+++++		
	1.33476	1.27804	1.26242	1.17154			1.35377	14.236
209 1,4-Dichlorobenzene	1.69357	1.25285	1.17392	1.17321	+++++	+++++		
	1.28955	1.22177	1.21895	1.13243			1.26953	14.045
210 1,2,3-Trimethylbenzene	+++++	+++++	0.71000	0.61964	0.59593	0.59307		
	0.58939	+++++	+++++	+++++			0.62161	8.175
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
212 alpha-Chlorotoluene	+++++	1.55199	1.46953	1.50801	+++++	+++++		
	1.71700	1.67461	1.67783	1.58295			1.59742	5.903
213 Butylbenzene	+++++	+++++	0.55969	0.46819	0.47703	0.46576		
	0.46411	+++++	+++++	+++++			0.48696	8.412

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214 1,2-Dichlorobenzene	1.31633	1.25970	1.14520	1.09352	+++++	+++++		
	1.18443	1.14137	1.11159	1.03823			1.16130	7.779
215 Undecane	+++++	+++++	0.31578	0.25944	0.30991	0.29345		
	0.29996	+++++	+++++	+++++			0.29571	7.454
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	+++++	+++++	0.82195	0.76027	0.77847	0.78435		
	0.80287	+++++	+++++	+++++			0.78958	2.993
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
225 Dodecane	+++++	+++++	0.11206	0.08728	0.08810	0.07135		
	0.08169	+++++	+++++	+++++			0.08810	16.993
226 1,2,4-Trichlorobenzene	0.71300	0.33652	0.51866	0.51748	+++++	+++++		
	0.51142	0.54926	0.54917	0.51713			0.52658	19.308
227 Hexachlorobutadiene	+++++	0.60454	0.70456	0.75395	+++++	+++++		
	0.74371	0.74884	0.74554	0.71076			0.71599	7.377
228 Naphthalene	+++++	+++++	0.71295	0.80868	+++++	+++++		
	0.77651	0.78779	0.79025	0.73737			0.76893	4.717
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

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244 TPH reference to Gasoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
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 C5 + C6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
263 C6-C8 Aliphatic ref Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
264 C8-C10 Aliphatic ref Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
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	1.53017	1.48774	1.42716	1.41807	+++++	+++++		
	1.42005	1.38536	1.41883	1.39578			1.43539	3.400
$ 146 Toluene-d8	0.97414	0.96053	0.97380	0.97096	+++++	+++++		
	0.99484	0.99287	0.99302	0.99567			0.98198	1.390

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e16l0317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
$ 177 4-Bromofluorobenzene	0.67332	0.68733	0.68241	0.67820	+++++	+++++		
	0.69032	0.69273	0.70440	0.67988			0.68607	1.432

Calibration History

Method : /chem/msde.i/09May2016.b/e16l0317d.m
Start Cal Date: 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
17-MAR-2016 14:00	Level5	/chem/msde.i/17Mar2016.b/e031706.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 0.10000		
17-MAR-2016 15:07	Level6	/chem/msde.i/17Mar2016.b/e031707.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 0.50000		
09-MAY-2016 11:01	ComboICAL-VB	/chem/msde.i/09May2016.b/e050907.d
30-MAR-2016 14:41	AcroleinICAL	/chem/msde.i/30Mar2016.b/e033007.d
25-MAR-2016 12:18	Combo-AT1ICAL	/chem/msde.i/25Mar2016.b/e032505.d
22-MAR-2016 12:05	AT1	/chem/msde.i/22Mar2016.b/e032205.d
17-MAR-2016 15:49	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031708.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 1.00000		
09-MAY-2016 12:03	ComboICAL-VB	/chem/msde.i/09May2016.b/e050908.d
30-MAR-2016 15:43	AcroleinICAL	/chem/msde.i/30Mar2016.b/e033008.d
25-MAR-2016 13:02	Combo-AT1ICAL	/chem/msde.i/25Mar2016.b/e032506.d
22-MAR-2016 13:20	AT1	/chem/msde.i/22Mar2016.b/e032206.d
17-MAR-2016 16:31	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031709.d

Injection Date	Sublist	Calibration File
Cal Level: 9 , Cal Amount: 2.00000		
09-MAY-2016 12:56	ComboICAL-VB	/chem/msde.i/09May2016.b/e050909.d
22-MAR-2016 14:04	AT1	/chem/msde.i/22Mar2016.b/e032207.d

Injection Date	Sublist	Calibration File
Cal Level: 11, Cal Amount: 4.00000		
09-MAY-2016 14:40	ComboICAL-VB	/chem/msde.i/09May2016.b/e050912.d
22-MAR-2016 14:50	AT1	/chem/msde.i/22Mar2016.b/e032208.d

Cal Level: 12, Cal Amount: 5.00000		
09-MAY-2016 15:22	ComboICAL-VB	/chem/msde.i/09May2016.b/e050913.d
30-MAR-2016 16:25	AcroleinICAL	/chem/msde.i/30Mar2016.b/e033009.d
25-MAR-2016 13:44	Combo-AT1ICAL	/chem/msde.i/25Mar2016.b/e032507.d
22-MAR-2016 15:32	AT1	/chem/msde.i/22Mar2016.b/e032209.d
17-MAR-2016 17:24	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031710.d

Cal Level: 13, Cal Amount: 10.00000		
17-MAR-2016 18:10	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031711.d

Cal Level: 15, Cal Amount: 20.00000		
17-MAR-2016 19:01	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031712.d

Cal Level: 16, Cal Amount: 40.00000		
17-MAR-2016 19:49	HILOcrvFULL	/chem/msde.i/17Mar2016.b/e031713.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 12

Ccal Level: 12, Ccal Amount: 5.000		
09-MAY-2016 07:51	AT09	/chem/msde.i/09May2016.b/e050903.d

Ccal Level: 8 , Ccal Amount: 1.000		
09-MAY-2016 12:03	ComboCCV-VB	/chem/msde.i/09May2016.b/e050908a.d

Ccal Level: 12, Ccal Amount: 5.000		
09-MAY-2016 15:22	ComboICAL-VB	/chem/msde.i/09May2016.b/e050913.d

Ccal Level: 12, Ccal Amount: 5.000		
09-MAY-2016 07:51	CNTRL62616	/chem/msde.i/09May2016.b/e050903a.d

Curve Name: $E16_L0317D$

Initial Calibration Narrative

An initial calibration curve was analyzed on 03/17/16 on MSD-E.

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

Tune File: E031701, E032201, E032501, E033001, E050901.
ICAL: Zero (0) out.
ICV: Zero (0) out. File E031716.
In-house control limits: Zero (0) out.
DOD Control limits: Zero (0) out.
BTEX RL Spike: Zero (0) out 50-150. File E031707x.

Naphthalene was calibrated from 0.05ppbv-4.0ppbv. See note below regarding Naphthalene.

The following compounds are good for special RL of 0.05ppbv:

Freon 114	Bromodichloromethane	1,3,5-Trimethylbenzene
Vinyl Chloride	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene
Freon 11	Tetrachloroethene	1,3-Dichlorobenzene
Freon 113	Dibromochloromethane	1,4-Dichlorobenzene
1,1,1-Trichloroethane	1,2-Dibromomethane (EDB)	1,2-Dichlorobenzene
Carbon Tetrachloride	Bromoform	1,2,4-Trichlorobenzene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane	
Trichloroethene	4-Ethyltoluene	

*The quantitation ion peak (128 amu) is sufficiently resolved for accurate quantification of Naphthalene at the special reporting limit of 0.05ppbv. However, the secondary mass ion peak (127 amu) for Naphthalene is not completely baseline-resolved. Identification of Naphthalene based on the presence and abundance ratio of confirmation ion is reliable at the lowest concentrations even when insufficient baseline resolution of the secondary mass ion peak (127 amu). The spectrum of Naphthalene in this ICAL point will be used as the reference to determine the ion ratio target in the samples for this ICAL.

A five (5) point initial calibration for the AT-1 special was analyzed on 3/22/16 at levels 0.5ppbv, 1.0ppbv, 2.0ppbv, 4.0ppbv, and 5.0ppbv. Freon 134 was calibrated from 2.0ppbv to 5.0ppbv due to poor peak quality at the lower levels. Freon 152a was calibrated from 1.0ppbv to 5.0ppbv due to poor peak quality at the 0.5ppbv level.

~~**A three (3) point initial calibration for the Combination special (minus the AT-1 specials) was analyzed on 3/25/16 at levels 0.5ppbv, 1.0ppbv, and 5.0ppbv.** Zero (0) out, all points included.~~

A three (3) point initial calibration for Acrolein was analyzed on 3/30/16 at levels 0.5ppbv, 1.0ppbv, and 5.0ppbv.

The Combination special was recalibrated on 5/9/16 at levels 0.5ppbv, 1.0ppbv, 2.0ppbv, 4.0ppbv, and 5.0ppbv. Includes alpha-Pinene and D-Limonene. The Vinyl Bromide ICAL from 3/25/16 and the Freon ICAL from 3/22/16 were retained. Acetonitrile and trans-1,4-Dichloro-2-Butene were removed from the ICAL due to interference from coeluting compounds. **AT-1 ICV:** Zero (0) out.

MDL was run 10/19/15 – 10/23/15.

Important Note: The MDL for Hexane and Cyclohexane is greater than ½ the RL.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 17-MAR-2016 19:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/17Mar2016.b/e1610317a.m
Cal Date : 23-Mar-2016 15:56 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/17Mar2016.b/e031706.d
Level 6: /chem/msde.i/17Mar2016.b/e031707.d
Level 7: /chem/msde.i/17Mar2016.b/e031708.d
Level 8: /chem/msde.i/17Mar2016.b/e031709.d
Level 12: /chem/msde.i/17Mar2016.b/e031710.d
Level 13: /chem/msde.i/17Mar2016.b/e031711.d
Level 15: /chem/msde.i/17Mar2016.b/e031712.d
Level 16: /chem/msde.i/17Mar2016.b/e031713.d

3/24/16

3/24/16

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

Compound	0.05000 Level 5 / 20.000 Level 15	0.10000 Level 6 / 40.000 Level 16	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
9 Propylene	+++++	+++++	+++++	0.65636	0.69625	0.67394		
	0.59210	0.62813					0.64936	6.247
11 Freon 12	+++++	5.12006	4.10953	4.00056	4.53383	4.16601		
	3.72304	3.78487					4.20541	11.514
15 Freon 114	3.04054	3.74214	2.99528	2.91420	3.22969	3.03570		
	2.81081	2.85426					3.07783	9.688
17 Chloromethane	+++++	0.89598	0.80271	0.83008	0.82977	0.78391		
	0.71156	0.73148					0.79793	7.886
23 Butane	+++++	+++++	0.20216	0.19760	0.22324	0.21314		
	0.19217	0.21179					0.20668	5.539
25 Vinyl Chloride	1.17455	1.32551	1.07263	1.03349	1.16793	1.13320		
	1.01360	1.05974					1.12258	9.054
26 1,3-Butadiene	+++++	0.88279	0.65846	0.76541	0.79294	0.74711		
	0.70180	0.73672					0.75503	9.432

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 25-MAR-2016 13:44
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/22Mar2016.b/e1610317b.m
Cal Date : 25-Mar-2016 15:46 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/17Mar2016.b/e031706.d
Level 6: /chem/msde.i/17Mar2016.b/e031707.d
Level 7: /chem/msde.i/25Mar2016.b/e032505.d
Level 8: /chem/msde.i/25Mar2016.b/e032506.d
Level 9: /chem/msde.i/22Mar2016.b/e032207.d
Level 11: /chem/msde.i/22Mar2016.b/e032208.d
Level 12: /chem/msde.i/25Mar2016.b/e032507.d
Level 13: /chem/msde.i/17Mar2016.b/e031711.d
Level 15: /chem/msde.i/17Mar2016.b/e031712.d
Level 16: /chem/msde.i/17Mar2016.b/e031713.d

EF 3/25/16

Compound	0.05000 Level 5 / 5.000 Level 12	0.10000 Level 6 / 10.000 Level 13	0.50000 Level 7 / 20.000 Level 15	1.000 Level 8 / 40.000 Level 16	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
7 Freon 134a	+++++	+++++	+++++	+++++	0.41473	0.42129		
	0.38615	+++++	+++++	+++++			0.40739	4.586
10 1,1-Difluoroethane	+++++	+++++	+++++	0.20524	0.15752	0.16041		
	0.16479	+++++	+++++	+++++			0.17199	13.005
13 Chlorodifluoromethane	+++++	+++++	0.48150	0.44538	0.47328	0.40228		
	0.41265	+++++	+++++	+++++			0.44302	7.968
16 Freon 142b	+++++	+++++	0.95463	0.90227	0.91463	0.87295		
	0.84882	+++++	+++++	+++++			0.89866	4.501
37 Dichlorofluoromethane	+++++	+++++	1.07501	0.88651	0.90482	0.93031		
	0.89584	+++++	+++++	+++++			0.93850	8.315
48 Freon 123	+++++	+++++	1.53572	1.50104	1.39390	1.43541		
	1.38044	+++++	+++++	+++++			1.44930	4.648

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 25-MAR-2016 13:44
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/25Mar2016.b/e16l0317b.m
Cal Date : 25-Mar-2016 15:49 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/17Mar2016.b/e031706.d
Level 6: /chem/msde.i/17Mar2016.b/e031707.d
Level 7: /chem/msde.i/25Mar2016.b/e032505.d
Level 8: /chem/msde.i/25Mar2016.b/e032506.d
Level 9: /chem/msde.i/22Mar2016.b/e032207.d
Level 11: /chem/msde.i/22Mar2016.b/e032208.d
Level 12: /chem/msde.i/25Mar2016.b/e032507.d
Level 13: /chem/msde.i/17Mar2016.b/e031711.d
Level 15: /chem/msde.i/17Mar2016.b/e031712.d
Level 16: /chem/msde.i/17Mar2016.b/e031713.d

35 3/25/16

8? 3/26/16

Compound	0.05000 Level 5 / 5.000 Level 12	0.10000 Level 6 / 10.000 Level 13	0.50000 Level 7 / 20.000 Level 15	1.000 Level 8 / 40.000 Level 16	2.000 Level 9	4.000 Level 11	RRF	% RSD
32 Vinyl Bromide	+++++	+++++	0.96076	0.94455	+++++	+++++		
	0.95528	+++++	+++++	+++++			0.95353	0.865
36 1-Pentene	+++++	+++++	0.73685	0.75065	+++++	+++++		
	0.69800	+++++	+++++	+++++			0.72850	3.748
34 Pentane	+++++	+++++	1.20757	1.37543	+++++	+++++		
	1.31490	+++++	+++++	+++++			1.29930	6.543
44 Ethyl Ether	+++++	+++++	0.55213	0.48697	+++++	+++++		
	0.43861	+++++	+++++	+++++			0.49257	11.565
53 Iodomethane	+++++	+++++	2.85200	3.33388	+++++	+++++		
	3.02822	+++++	+++++	+++++			3.07136	7.938
63 Acetonitrile	+++++	+++++	0.52787	0.64569	+++++	+++++		
	0.64914	+++++	+++++	+++++			0.60757	11.363

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2016 14:00
End Cal Date : 09-MAY-2016 15:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/09May2016.b/e1610317d.m
Cal Date : 10-May-2016 10:48 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/17Mar2016.b/e031706.d
Level 6: /chem/msde.i/17Mar2016.b/e031707.d
Level 7: /chem/msde.i/09May2016.b/e050907.d
Level 8: /chem/msde.i/09May2016.b/e050908.d
Level 9: /chem/msde.i/09May2016.b/e050909.d
Level 11: /chem/msde.i/09May2016.b/e050912.d
Level 12: /chem/msde.i/09May2016.b/e050913.d
Level 13: /chem/msde.i/17Mar2016.b/e031711.d
Level 15: /chem/msde.i/17Mar2016.b/e031712.d
Level 16: /chem/msde.i/17Mar2016.b/e031713.d

5/10/16

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

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
36 1-Pentene	+++++	+++++	0.92877	0.76770	0.81866	0.81261		
	0.74214	+++++	+++++	+++++			0.81398	8.796
34 Pentane	+++++	+++++	1.69548	1.45652	1.39617	1.32596		
	1.26008	+++++	+++++	+++++			1.42684	11.726
44 Ethyl Ether	+++++	+++++	0.70230	0.72733	0.65391	0.63915		
	0.58469	+++++	+++++	+++++			0.66148	8.436
53 Iodomethane	+++++	+++++	4.60765	4.17771	4.02710	4.02394		
	3.68501	+++++	+++++	+++++			4.10428	8.145
59 Cyclopentene	+++++	+++++	3.15715	2.77885	2.77976	2.71571		
	2.48967	+++++	+++++	+++++			2.78423	8.623
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2755**

BFB Verification of 176/174 m/z Ratio: (6274456/6492466)x100= 96.65	
Tekmar Purge Flow:	
Vacuum:	3/17/16

IS/S Std. #:	2787-17	Exp. Date:	3/31/16 6/17/16
BCM	LL: 1641946	Exp:	170470
1,4-DFB	6269735		700553
CB-d5	5671678		6128356

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

File ID:	F031710
Compound:	Toluene-d8
Initials:	

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (623703) x (5.000) = 5.066

(~~6269735~~ 6269735) (0.98198)

SOP# (Circle one): 6 / 83 / 88 / 91 / 109

Method (Circle one): TO-14A/TO-15/TO-17

Reported Result: 5.066

Method Name: E1614.05317A / E1605.0317A

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By:Initials	Date Analyzed	Time Analyzed	Reviewed By:Initials	Comments/Standard Expiration Date
1	✓	F031701	BFB Tune criteria	2009-1484	5psig	2.0mL		1.00		3/17/16	1044		
2	✓	02	ICAL level 1	2787-13	0.005ppbv	15mL		1.00			1111		Exp 4/16/16
3	✓	03	2		0.025ppbv	75mL		1.00			1155		
4	✓	04	3		0.01ppbv	50mL		1.00			1236		
5	✓	05	4		0.02ppbv	100mL		1.00			1318		
6	✓	06	5		0.05ppbv	250mL		1.00			1400		
7	✓	07	6	2787-14	0.1ppbv	25mL		1.00			1507		Exp 4/16/16
8	✓	08	7		0.5ppbv	125mL		1.00			1549	EA	
9	✓	09	8		1.0ppbv	250mL		1.00			1631	EA	
10	✓	10	12	2759-223	5.0ppbv ✓	25mL	EA	1.00	EA		1724	EA	Exp 4/6/16
11	✓	11	13		10ppbv	50mL	EA	1.00	EA		1810	EA	
12	✓	12	15		20ppbv	100mL	EA	1.00	EA		1901	EA	
13	✓	13	16		40ppbv	200mL	EA	1.00	EA		1949	EA	
14	X	14	System Blank	35248	Humid	250mL		1.00	EA		2031	EA	

Reviewed

3/23/16
Date

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2755

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
		E03171	System Blank	35248	Humid	250ml	EA	1.00	EA	3/17/16	2118	EA	
15	X	1176	ICV (50ppbv)	2789-16	5.0ppbv	25ml		1.00	EA	3/17/16	2208	EA	6/11/16
16	✓	17	System Blank	House Line	Dry	250ml	EA	1.00	EA	3/22/16	0943	EA	
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36											EA 3/22/16		

Reviewed

3/22/16
Date

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2755

0155 of 0469

BFB Verification of 176/174 m/z Ratio:	(1097324)/(1092096) x 100 = 96.78
Tekmar Purge Flow:	
Vacuum:	EF 3/22/16

IS/S Std. #:	2789-17	Exp. Date: 6/17/16
BCM	Lot: 190421	Lot: 1956013
1,4-DFB	736283	820272
CB-d5	6506233	7306611

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

File ID:	E032201
Compound:	Toluene-d8
Initials:	EF

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (728723) x (5.000) = 5.039
(736283) (0.98198)

SOP# (Circle one): 6 / 83 / 38 / 91 / 109

Method (Circle one): TO-14A/TO-15/TO-17

Method Name: E16L0317A / E16S0317A

Reported Result: 5.039

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	E032201	BFB Tune check	2789-14	50psig	2.0 µL	EF 1.00 EF 3/22/16	1.00	EF	3/22/16	0924	EF	
2	/	02	CCV (50ppbv)	2769-226	5.0ppbv	25mL	EF 1.00 EF 3/22/16	1.00	EF		0947	EF	Exp. 4/6/16 Ø SMT LC 1045
3	/	03	LCS (50ppbv)	2789-8	5.0ppbv	25mL	EF	1.00	EF		1032	EF	Exp. 6/11/16 SMT 3/22/16
4	/	04	Lab Blank	3476	Humid	250mL	EF	1.00	EF		1121	EF	
5	/	05	ICAL Lev 7	2769-138	0.5ppbv	25mL	EF	1.00	EF		1205	EF	Exp. 5/5/15 Ar. 1
6	/	06	8		1.0ppbv	50mL	EF	1.00	EF		1320	EF	
7	/	07	9		2.0ppbv	100mL	EF	1.00	EF		1404	EF	
8	/	08	11		4.0ppbv	200mL	EF	1.00	EF		1480	EF	
9	/	09	12		5.0ppbv	250mL	EF	1.00	EF		1632	EF	
10	~~Yes~~	~~10~~	~~Extsp (50ppbv)~~	~~2789-4~~	~~0.5ppbv~~	~~25mL~~	~~EF~~	~~1.00~~	~~EF~~				
11													
12													
13													
14													

EF 3/24/16

Reviewed

3/24/16

Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2755**

BFB Verification of 176/174 m/z Ratio:	(206088/728064) x 100 = 16.24
Tekmar Purge Flow:	
Vacuum:	EF 3/25/16

IS/S Std. #:	2789-17	Exp. Date:	6/12/16
BCM	4: 1966631		6.0 ml 2001624
1,4-DFB	760212		3386688
CB-d5	688500		7488924

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

File ID:	E032501
Compound:	Toluene-d8
Initials:	EF

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (733691) x (5.000) = 4.914
(760212) (0.98198)

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 Method (Circle one) TO-14A/TO-15/TO-17 Reported Result: 4.914

Method Name: E16L0317A / E16S0317A EF 3/25/16

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E032501	BFB Tune check	2789-1484	60 psi	2.0 ml	EF	1.00	EF	3/25/16	0902	EF	
2	✓	02	CCV (60 ppbv)	2789-225	5.0 ppbv	25 ml	EF	1.00	EF	3/25/16	0925	EF	Exp. 4/6/16
3	✓	03	LCS (60 ppbv)	2789-8	5.0 ppbv	25 ml	EF	1.00	EF		1029	EF	Exp. 6/11/16
4	✓	04	LCSD (60 ppbv)	2789-8	5.0 ppbv	25 ml	EF	1.00	EF		1114	EF	Exp. 6/11/16
5	✓	05	ICAL Level 7	2789-4	0.5 ppbv	25 ml	EF	1.00	EF		1218	EF	Exp 5/16/16 COMBO
6	✓	06	8	9	1.0 ppbv	50 ml	EF	1.00	EF		1305	EF	CCV
7	✓	07	12		5.0 ppbv	250 ml	EF	1.00	EF		1344	EF	
8	✓	08	LAB BLANK	34764	Humid	250 ml	EF	1.00	EF		1448	EF	
9		09	1603238-01A	36570	1.6" Hg; 14.7 psi	250 ml	EF	2.12	EF				
10													
11													
12													
13													
14													EF 3/25/16

Reviewed 3/25/16 Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2755**

BFB Verification of 176/174 m/z Ratio:	(890112/916928)x100 = 97.0%
Tekmar Purge Flow:	
Vacuum:	3/30/16

IS/S Std. #:	2789-17	Exp. Date:	6/17/16
BCM	lot: 190719	Sm:	192890
1,4-DFB	726285		809780
CB-d5	688854		717749

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

File ID:	E033002
Compound:	Toluene-d8
Initials:	✓

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (712176) x (5.000) / (726285) (0.98198) = 5.000

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 Method (Circle one): TO-14A/TO-15/TO-17 Reported Result: 5.000

Method Name: E16L03178/ E16S03174

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By:Initials	Date Analyzed	Time Analyzed	Reviewed By:Initials	Comments/Standard Expiration Date
1	✓	E033001	BFB tune check	2789-1484	50mg	2.0mL	✓	1.00	✓	3/30/16	1046	✓	
2	✓	02	CCV (50ppbv)	2795-215	5.0ppbv	25mL	✓	1.00	✓		1107	✓	Exp. 4/6/16 ∅ out
3	✓	03	LCS (50ppbv)	2789-3	5.0ppbv	25mL	✓	1.00	✓		1150	✓	Exp. 6/11/16 ∅ out
4	✓	04	LCSD (50ppbv)	2789-8	5.0ppbv	25mL	✓	1.00	✓		1233	✓	Exp. 6/11/16
5	Mp ✓	05	CCVsp (5.0ppbv)	2789-238	1.0ppbv	50mL	✓	1.00	✓		1315	✓	Exp. 6/15/16 CAN CLOSED. ✓ 3/30/16 COMBO
6	✓	06	CCVsp (5.0ppbv)	2789-238	1.0ppbv	50mL	✓	1.00	✓		1359	✓	Exp. 6/5/16
7	✓	07	ICAL Level 7	2789-46	0.5ppbv	25mL	✓	1.00	✓		1441	✓	Exp. 4/28/16 Accounting
8	✓	08	8	|	1.0ppbv	50mL	✓	1.00	✓		1543	✓	|
9	✓	09	12		5.0ppbv	250mL	✓	1.00	✓		1628	✓	
10		10	LAB BLANK	34764	Humid	250mL	✓	1.00	✓				
11													
12													
13													
14													✓ 3/30/16

Reviewed 3/30/16 Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2755**

BFB Verification of 176/174 m/z Ratio: (677184/693056) X100: 97.71%	
Tekmar Purge Flow:	
Vacuum:	

IS/S Std. #:	2789-17	Exp. Date:	6/17/16
BCM LL:	159373	SIM:	160010
1,4-DFB	624905		678475
CB-d5	549919		605473

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

File ID:	
Compound:	
Initials:	

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (_____) x (_____) = _____ 5/9/16 AcT

( ) ( ) ~~5/19~~ AcT 5/9/16

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

Method Name: E16L0317B/E16S0317A

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E050901	BFB Tune Check	2099-1484	50ng	2.0µl	AcT	1.00	AcT	5/9/16	0645	AcT	
2	✓	02	System Blank	HouseLine	D.I	250mL	AcT		AcT		0708	AcT	
3	✓	03	CCV (50 ppbv)	2789-51	5.0ppbv	25mL	AcT		AcT		0751	EF	Exp 7/1/16 ϕ ϕ
4	✓	04	LCS (25 ppbv)	2789-8A	5.0ppbv	50mL	EF	1.00	EF		0838	EF	Exp. 6/4/16 ϕ ϕ
5	✓	05	LCSD (25 ppbv)	2789-8A	5.0ppbv	50mL	EF	1.00	EF		0921	EF	Exp. 6/4/16
6	✓	06	CCV sp (5.0 ppbv)	2789-126	1.0ppbv	50mL	EF	1.00	EF		1006	EF	Exp. 6/3/16 ACROLEIN
7	✓	07	ICAL Vial 7	2789-105	0.5ppbv	25mL	EF	1.00	EF		1101	EF	Exp. 8/3/16 COMBO
8	✓	08	8		1.0ppbv	50mL	EF	1.00	EF		1203	EF	
9	✓	09	9		2.0ppbv	100mL	EF	1.00	EF		1256	EF	
10	N/A	16	11		4.0ppbv	200mL	EF	1.00	EF		N/A	N/A	NOT RUN: TEKMAR ERROR
11	✓	11	System Blank	35448	Humid	250mL	EF	1.00	EF		1357	EF	
12	✓	12	ICAL Vial 11	2789-105	4.0ppbv	200mL	EF	1.00	EF		1446	EF	Exp. 8/3/16 COMBO
13	✓	13	12	1	5.0ppbv	250mL	EF	1.00	EF		1522	EF	
14	✓	14	System Blank	35448	Humid	250mL	EF	1.00	EF		1605	EF	

Reviewed _____ Date 5/9/16

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
15	X	E050915	1CX sp (5.0ppbv)	2759-241	1.0 ppbv	50mL	[illegible]	1.00	[illegible]	5/9/16	1719	[illegible]	exp 5/9/16 AT-1
16	✓	↓ -16	FCV sp (5.0ppbv)	2789-128	1.0 ppbv	50mL	TAR	1.00	TAR	5-9-16	2123	TAR/[illegible]	exp 89-16 AT1
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													TAR 5-9-16

TA Rhodes
Reviewed

5-9-16
Date

Sample: ICAL Type: SAMPLE Inj.Date: 17-MAR-2016 14:00

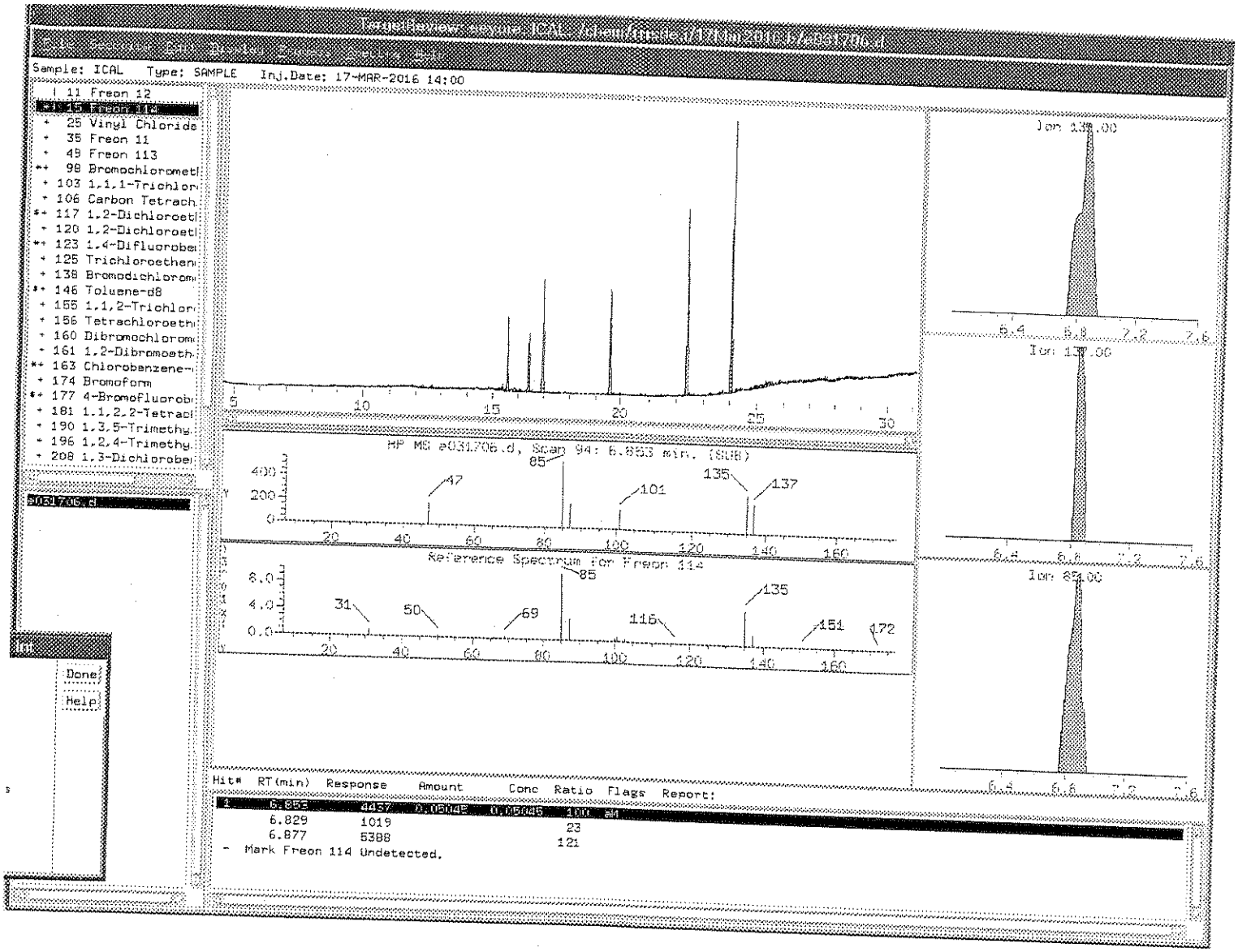
	11	Freon 12
*	15	Freon 114
+	25	Vinyl Chloride
+	35	Freon 11
+	49	Freon 113
*+	98	Bromochloromethane
+	103	1,1,1-Trichloroethane
+	106	Carbon Tetrachloride
$+	117	1,2-Dichloroethane-d4
+	120	1,2-Dichloroethane
*+	123	1,4-Difluorobenzene
+	125	Trichloroethene
+	139	Bromodichloromethane
$+	146	Toluene-d8
+	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
+	190	1,3,5-Trimethylbenzene
+	196	1,2,4-Trimethylbenzene
+	208	1,3-Dichlorobenzene

HP MS e031706.d, Scan 94: 6.853 min. (SUB)

Reference Spectrum for Freon 114

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	6.853	3586	0.04190	0.04191	100	a	
	6.829	1019			28		
	6.877	5388			146		

- Mark Freon 114 Undetected.



857/23/16

After

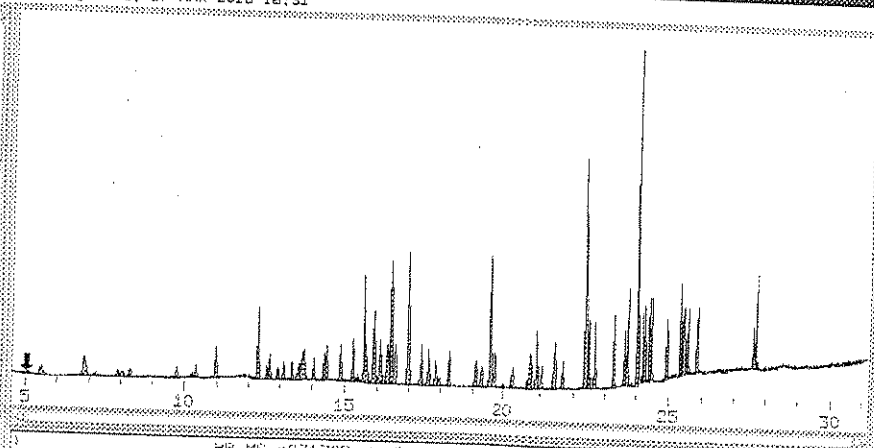
Correct Baseline	8/23/16
Split Peak	X
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

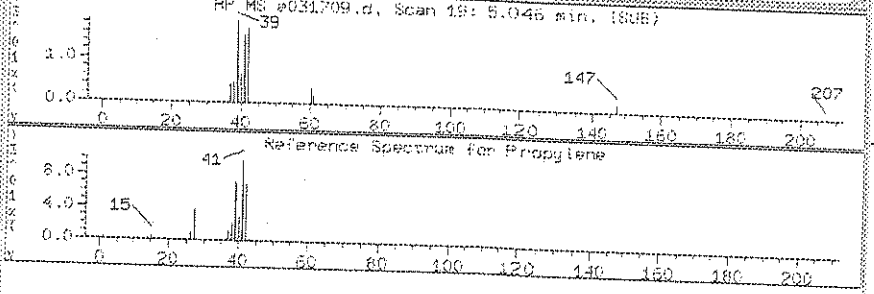
TargetReport - Sample: ICAL /chem/ms.d/17Mar2016/031709.d

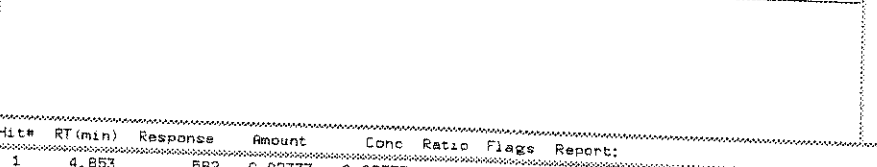
Sample: ICAL Type: SAMPLE Inj.Date: 17-MAR-2016 16:31

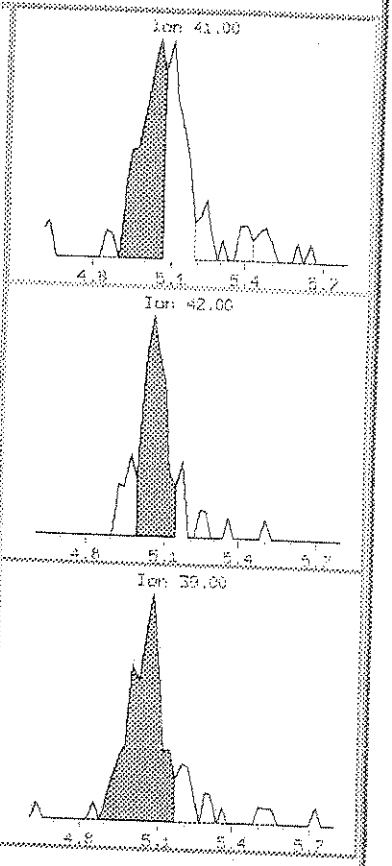
- 5 Propylene
- 11 Freon 12
- 15 Freon 114
- 17 Chloromethane
- 23 Butane
- 25 Vinyl Chloride
- 26 1,3-Butadiene
- 29 Bromomethane
- 30 Chloroethane
- 31 Isopentane
- 35 Freon 11
- 42 Ethanol
- 49 Freon 113
- 50 1,1-Dichloroeth
- 52 Acetone
- 56 Carbon Disulfi
- 57 2-Propanol
- 58 3-Chloropropen
- 66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

031709.d



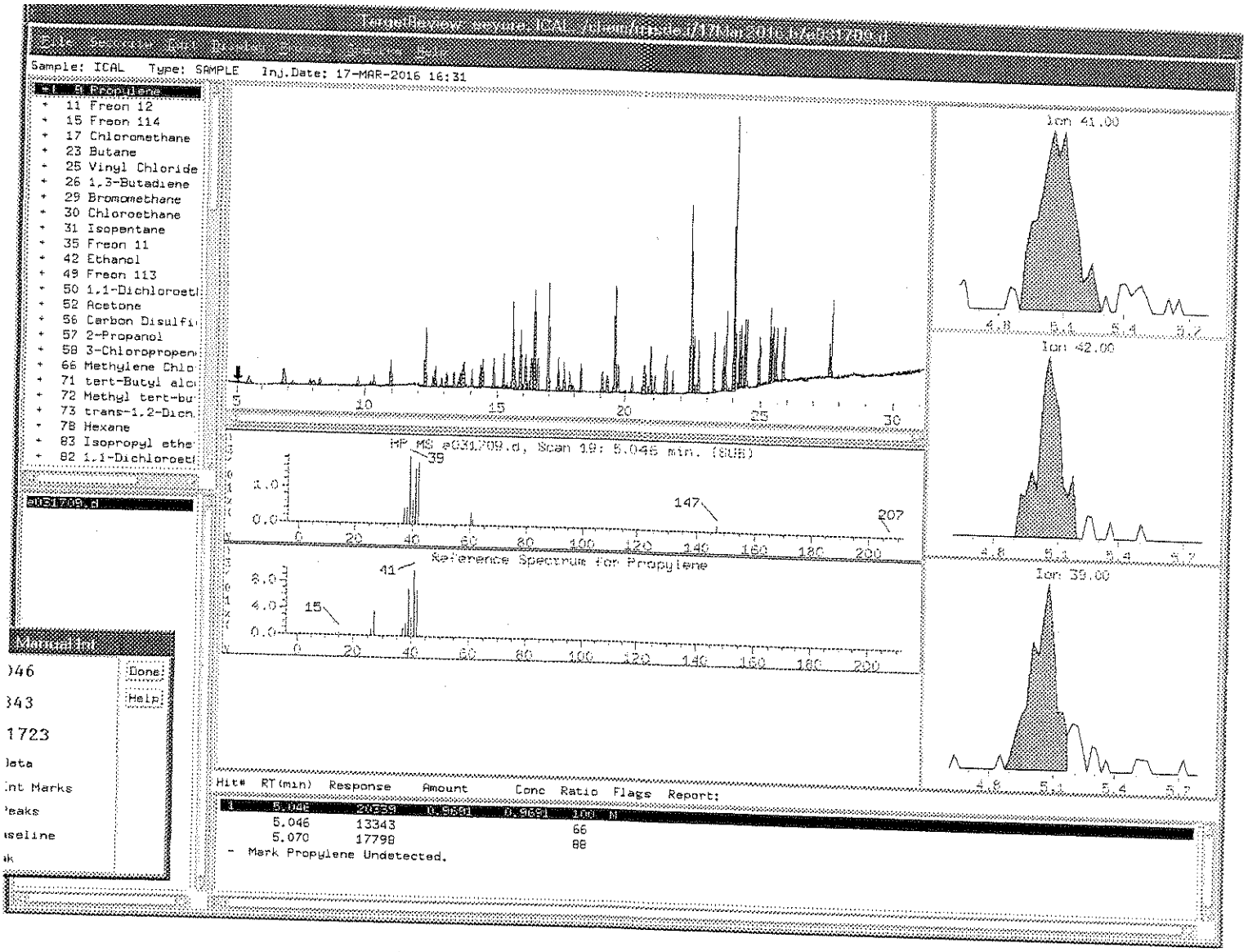






Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	4.853	582	0.02777	0.02777	100	a	
	4.973	2717			466		
	4.853	250			43		
2	5.046	11646	0.5550	0.5550	100		
	5.046	10434			90		
	5.070	17798			153		

Before



ES 3/23/16

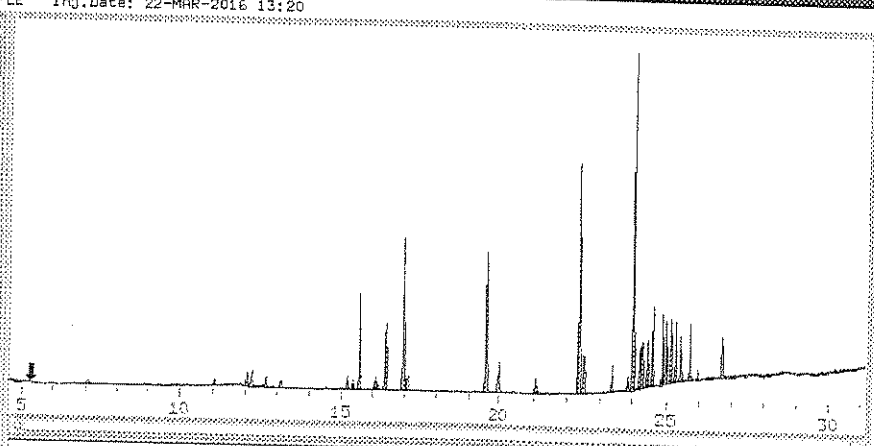
After

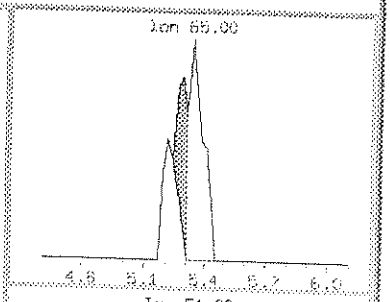
ES 3/28/16

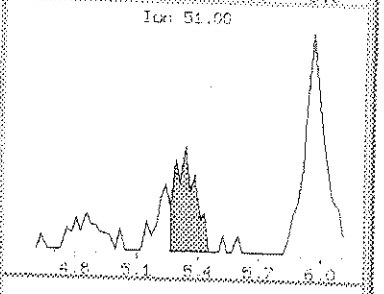
Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

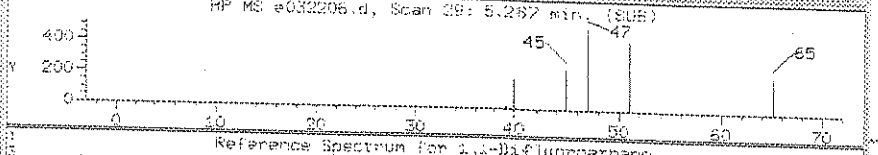
Sample: ICAL Type: SAMPLE Inj.Date: 22-MAR-2016 13:20

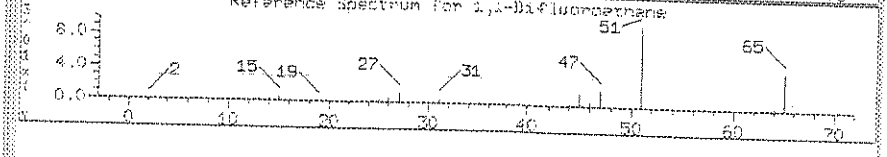
- 7 Freon 134a
- 10 1,1-Difluoroet
- 13 Chlorodifluoro
- 16 Freon 142b
- 37 Dichlorofluoro
- 48 Freon 123
- 59 Cyclopentene
- 84 1-Propanol
- 90 2,2-Dichloropr
- 98 Bromochlorometh
- 107 1,1-Dichloropr
- 115 Isobutanol
- 123 1,4-Difluorobe
- 124 n-Butanol
- 157 1,3-Dichloropr
- 159 Butyl Acetate
- 163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











Manual Int

.877

1601

1114

Data

Int Marks

Peaks

Baseline

Peak

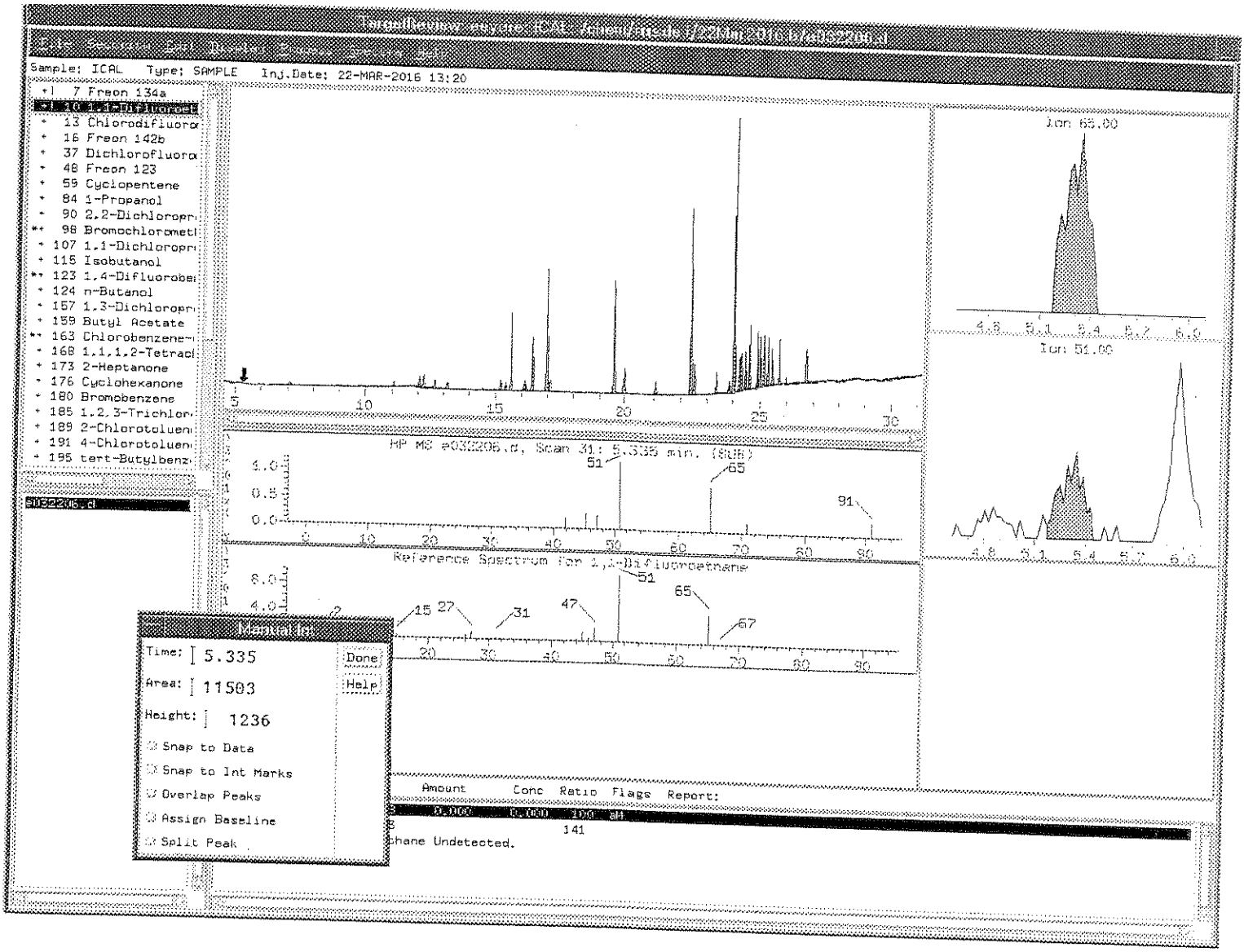
Done

Help

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.267	2195	0.000	0.000	100	a	
	5.335	8736			398		
2	5.335	4499	0.000	0.000	100	a	
	5.335	8736			194		

- Mark 1,1-Difluoroethane Undetected.

Before



3/23/16

After

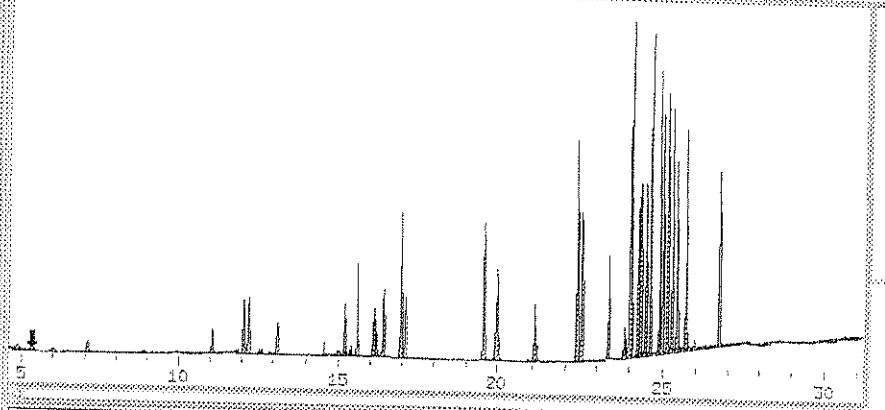
3/23/16

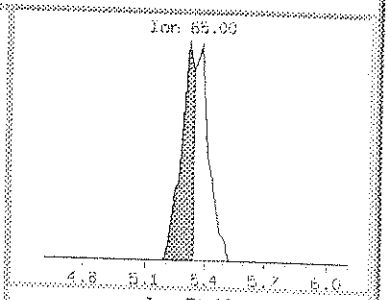
Correct Baseline	
Split Peak	X
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

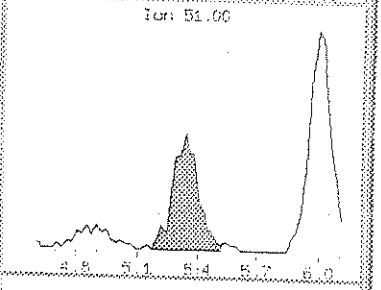
Sample: ICAL Type: SAMPLE Inj.Date: 22-MAR-2016 14:50

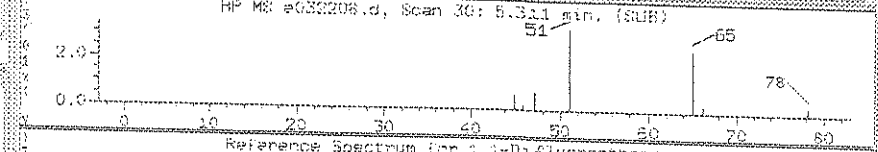
- 7 Freon 134a
- 10 1,1-Difluoroet
- 13 Chlorodifluoro
- 16 Freon 142b
- 37 Dichlorofluoro
- 48 Freon 123
- 59 Cyclopentene
- 84 1-Propanol
- 90 2,2-Dichloropr
- 98 Bromochlorometh
- 107 1,1-Dichloropr
- 115 Isobutanol
- 123 1,4-Difluorobe
- 124 n-Butanol
- 157 1,3-Dichloropr
- 159 Butyl Acetate
- 163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

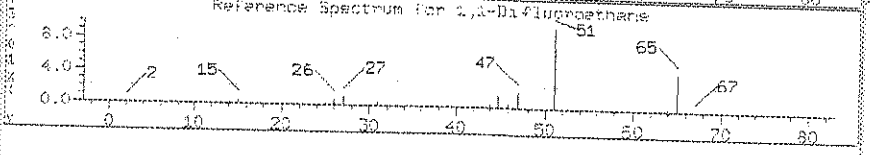
5032208.d







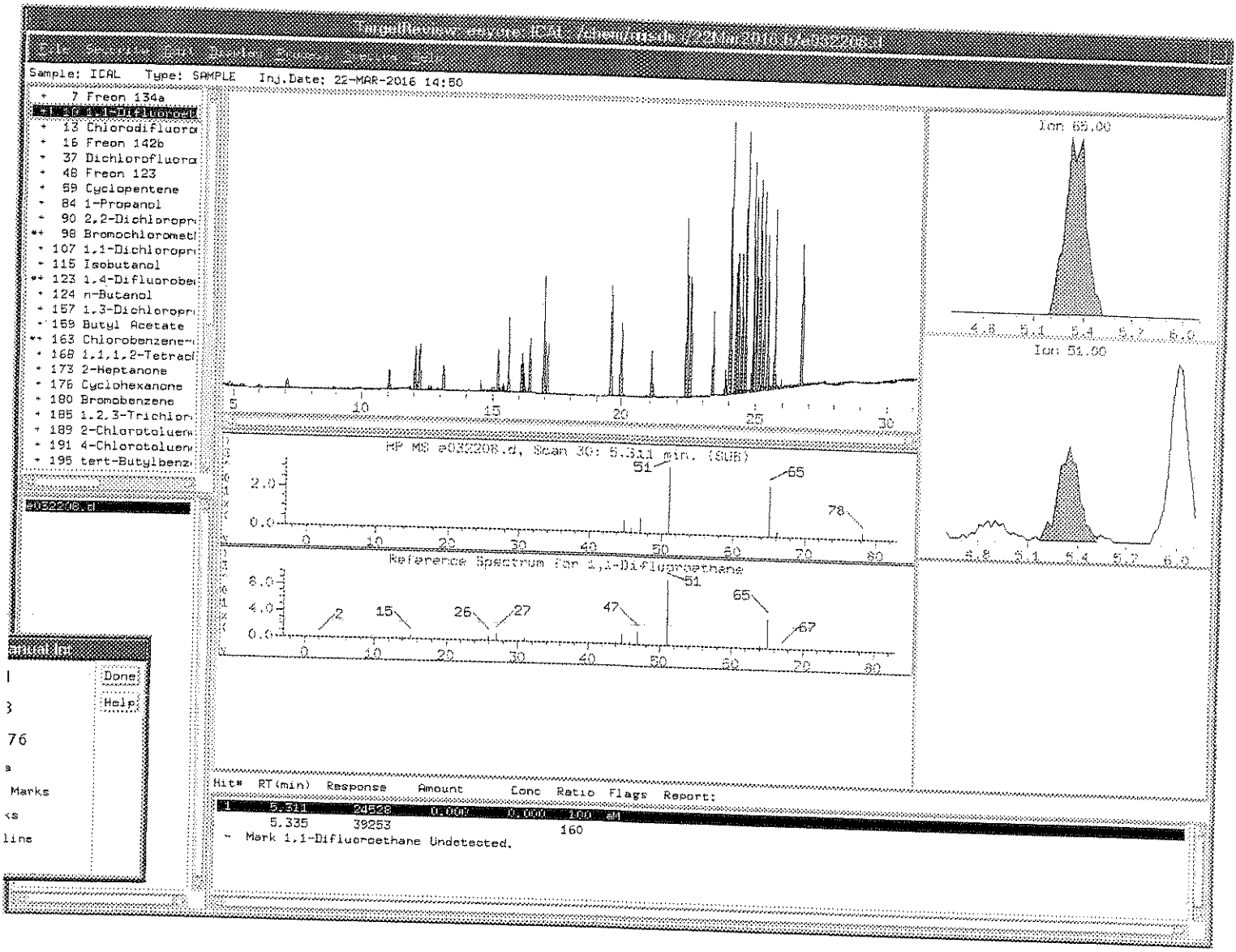




Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.311	12185	0.000	0.000	100	a	
	5.335	39253			322		
2	5.383	15550	0.000	0.000	100	a	
	5.335	39253			252		

- Mark 1,1-Difluoroethane Undetected.

B5800



3/23/16

After

3/23/16

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

Sample: ICAL Type: SAMPLE Inj.Date: 22-MAR-2016 15:32

- 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-Dichlorop
- 98 Bromochlorometh
- 107 1,1-Dichlorop
- 115 Isobutanol
- 123 1,4-Difluorobe
- 124 n-Butanol
- 157 1,3-Dichlorop
- 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-Chlorotolue
- 191 4-Chlorotolue
- 195 tert-Butylbenz

Ion 65.00

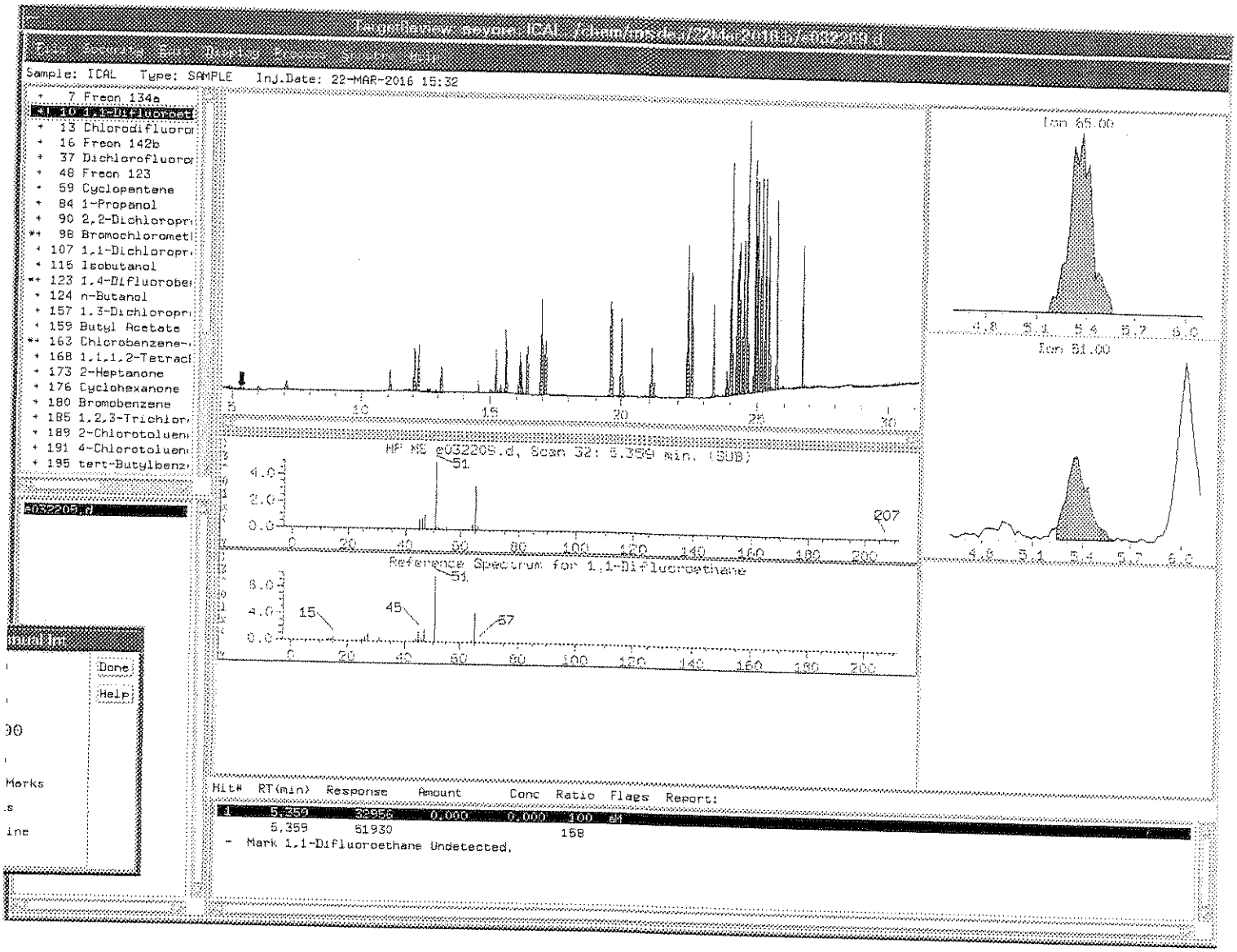
Ion 51.00

HP MS e0302209.d, Scan 32: 5.3589 min. (SUB)

Reference Spectrum for 1,1-Difluoroethane

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.359	24625	0.000	0.000	100	a	
	5.359	51930			213		
2	5.479	4003	0.000	0.000	100	a	
	5.359	51930			1297		

- Mark 1,1-Difluoroethane Undetected.



03/23/16

After

	3/23/16
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/msde.i/17Mar2016.b/e031716.d
Lab Smp Id: ICV
Inj Date : 17-MAR-2016 22:08
Operator : ea Inst ID: msde.i
Smp Info : 25mL#2789-6
Misc Info : 5.0ppbv(50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:53 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 19:49 Cal File: e031713.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene						CAS #: 115-07-1		
4.997	5.070	(0.321)	41	116224	5.29046	5.290	80.00- 120.00	100.00
5.045	5.046	(0.324)	42	79005			38.73- 98.73	67.98
4.997	5.070	(0.321)	39	94807			55.81- 115.81	81.57
11 Freon 12						CAS #: 75-71-8		
5.455	5.479	(0.350)	85	759207	5.33619	5.336	80.00- 120.00	100.00
5.479	5.479	(0.352)	87	248784			2.00- 62.00	32.77
15 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.438)	135	585293	5.62094	5.621	80.00- 120.00	100.00
6.829	6.829	(0.438)	137	197788			1.31- 61.31	33.79
6.829	6.829	(0.438)	85	662219			93.88- 153.88	113.14
17 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.460)	50	145495	5.38972	5.390	80.00- 120.00	100.00
7.167	7.167	(0.460)	52	47121			5.50- 65.50	32.39

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.871	7.872 (0.505)	58	38895	5.56256	5.562	80.00- 120.00	100.00
7.871	7.872 (0.505)	43	240748			588.57- 648.57	618.96
25 Vinyl Chloride					CAS #: 75-01-4		
8.010	8.010 (0.514)	62	208743	5.49634	5.496	80.00- 120.00	100.00
8.010	8.010 (0.514)	64	72818			3.14- 63.14	34.88
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	131461	5.14651	5.146	80.00- 120.00	100.00
8.236	8.236 (0.529)	39	127875			65.21- 125.21	97.27
29 Bromomethane					CAS #: 74-83-9		
9.711	9.711 (0.623)	94	224650	5.42085	5.421	80.00- 120.00	100.00
9.711	9.711 (0.623)	96	203966			64.16- 124.16	90.79
30 Chloroethane					CAS #: 75-00-3		
10.195	10.176 (0.654)	64	106146	5.91586	5.916	80.00- 120.00	100.00
10.195	10.176 (0.654)	49	25731			0.00- 54.91	24.24
10.195	10.176 (0.654)	66	35451			3.62- 63.62	33.40
31 Isopentane					CAS #: 78-78-4		
10.328	10.309 (0.663)	57	142773	5.48900	5.489	80.00- 120.00	100.00
10.328	10.309 (0.663)	43	162082			82.69- 142.69	113.52
10.328	10.309 (0.663)	42	140375			68.65- 128.65	98.32
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	797145	5.20333	5.203	80.00- 120.00	100.00
10.938	10.938 (0.702)	103	529394			37.17- 97.17	66.41
42 Ethanol					CAS #: 64-17-5		
11.852	11.852 (0.761)	45	68124	6.13677	6.137	80.00- 120.00	100.00
11.852	11.852 (0.761)	46	26949			6.61- 66.61	39.56
11.852	11.852 (0.761)	43	17088			0.00- 54.66	25.08
49 Freon 113					CAS #: 76-13-1		
12.271	12.252 (0.788)	151	635878	5.53869	5.539	80.00- 120.00	100.00
12.271	12.252 (0.788)	153	398933			33.64- 93.64	62.74
12.271	12.252 (0.788)	101	695761			80.40- 140.40	109.42
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.290	12.271 (0.789)	98	169271	5.28724	5.287	80.00- 120.00	100.00
12.290	12.271 (0.789)	61	392434			204.89- 264.89	231.84
12.290	12.271 (0.789)	96	263375			127.69- 187.69	155.59
52 Acetone					CAS #: 67-64-1		
12.556	12.537 (0.806)	58	96533	5.15650	5.156	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.556  12.537 (0.806)    43    314097                   321.47- 381.47   325.38
-------------------------------------------------------------------------------
   56 Carbon Disulfide                               CAS #: 75-15-0
 12.652  12.633 (0.812)    76    645621 4.52489    4.525  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                     CAS #: 67-63-0
 12.899  12.899 (0.828)    45    327167 5.71291    5.713  80.00- 120.00   100.00
 12.899  12.899 (0.828)    43     75716                    0.00-  54.09    23.14
 12.899  12.899 (0.828)    59     15496                    0.00-  34.43     4.74
-------------------------------------------------------------------------------
   58 3-Chloropropene                                CAS #: 107-05-1
 13.071  13.071 (0.839)    76    112259 5.26331    5.263  80.00- 120.00   100.00
 13.071  13.071 (0.839)    41    205097                   163.76- 223.76   182.70
-------------------------------------------------------------------------------
   66 Methylene Chloride                             CAS #: 75-09-2
 13.356  13.337 (0.857)    84    227846 5.07917    5.079  80.00- 120.00   100.00
 13.337  13.337 (0.856)    49    213781                   63.99- 123.99    93.83
 13.356  13.337 (0.857)    51     69089                    0.29-  60.29    30.32
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                        CAS #: 1634-04-4
 13.674  13.674 (0.878)    73    748001 5.21451    5.214  80.00- 120.00   100.00
 13.674  13.674 (0.878)    57    136765                    0.00-  48.26    18.28
 13.674  13.674 (0.878)    41    120274                    0.00-  45.58    16.08
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                       CAS #: 156-60-5
 13.729  13.729 (0.881)    98    149744 4.60503    4.605  80.00- 120.00   100.00
 13.729  13.729 (0.881)    61    295050                   155.28- 215.28   197.04
 13.729  13.729 (0.881)    96    236733                   126.18- 186.18   158.09
-------------------------------------------------------------------------------
   78 Hexane                                         CAS #: 110-54-3
 14.003  14.003 (0.899)    57    309068 5.52330    5.523  80.00- 120.00   100.00
 14.003  14.003 (0.899)    43    160636                   21.48-  81.48    51.97
 14.003  14.003 (0.899)    86     62388                    0.00-  51.51    20.19
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                             CAS #: 75-34-3
 14.415  14.415 (0.925)    63    450825 5.29748    5.297  80.00- 120.00   100.00
 14.415  14.415 (0.925)    65    146640                    1.78-  61.78    32.53
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                  CAS #: 108-05-4
 14.442  14.442 (0.927)    86     69016 5.21291    5.213  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42     49925                   44.70- 104.70    72.34
 14.442  14.442 (0.927)    43    506928                   757.33- 817.33   734.51
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                         CAS #: 156-59-2
 15.240  15.240 (0.978)    98    209962 5.90277    5.903  80.00- 120.00   100.00
```

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

   91 cis-1,2-Dichloroethene (continued)
 15.240  15.240 (0.978)    61    362417                   145.90- 205.90   172.61
 15.240  15.240 (0.978)    96    321228                   125.53- 185.53   152.99
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.240  15.221 (0.978)    72    125390 5.56058    5.560  80.00- 120.00   100.00
 15.221  15.221 (0.977)    43    356701                   262.26- 322.26   284.47
 15.221  15.221 (0.977)    57     34057                     0.00-  55.71    27.16
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42    230798 5.57731    5.577  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71    135962                    26.85-  86.85    58.91
 15.580  15.580 (1.000)    72    152869                    32.22-  92.22    66.24
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    169157 5.00000            80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    137393                    52.25- 112.25    81.22
 15.580  15.641 (1.000)    49    211163                    89.81- 149.81   124.83
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.641  15.641 (1.004)    83    633461 5.18679    5.187  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85    412634                    33.97-  93.97    65.14
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.888  15.888 (1.020)    84    350235 5.52607    5.526  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56    315557                    58.69- 118.69    90.10
 15.888  15.888 (1.020)    41    168916                    18.98-  78.98    48.23
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.888  15.888 (1.020)    97    727659 5.12206    5.122  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99    461247                    34.21-  94.21    63.39
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 16.073  16.073 (1.032)   119    764828 5.49723    5.497  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117    800337                    74.09- 134.09   104.64
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.313  16.313 (1.047)    56    359076 5.06753    5.068  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57   1210470                   306.64- 366.64   337.11
 16.313  16.313 (1.047)    41    328703                    64.14- 124.14    91.54
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.409  16.409 (0.969)    78    782572 5.00241    5.002  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77    181577                     0.00-  53.97    23.20
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    230674 4.75015    4.750  80.00- 120.00   100.00
```

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

$ 117 1,2-Dichloroethane-d4 (continued)
 16.409  16.409 (1.053)    67    125519                    21.16-  81.16    54.41
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.505  16.505 (0.974)    62    415127 5.09119    5.091  80.00- 120.00   100.00
 16.505  16.505 (0.974)    64    144877                     1.03-  61.03    34.90
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.554  16.554 (0.977)    57    196896 5.30980    5.310  80.00- 120.00   100.00
 16.554  16.554 (0.977)   100    114578                    28.67-  88.67    58.19
 16.554  16.554 (0.977)    43    306694                   128.92- 188.92   155.76
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    652823 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     94311                    0.00-  45.20    14.45
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.373  17.349 (1.026)   130    432411 5.32897    5.329  80.00- 120.00   100.00
 17.373  17.349 (1.026)    95    391577                    63.99- 123.99    90.56
 17.373  17.349 (1.026)    97    251255                    29.21-  89.21    58.11
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.590  17.590 (1.038)    83    482807 5.54328    5.543  80.00- 120.00   100.00
 17.590  17.590 (1.038)    55    302321                    31.29-  91.29    62.62
 17.590  17.590 (1.038)    56     95335                    0.00-  48.78    19.75
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.806  17.806 (1.051)    63    259404 5.15001    5.150  80.00- 120.00   100.00
 17.806  17.806 (1.051)    62    168436                    34.19-  94.19    64.93
 17.806  17.806 (1.051)    41    148736                    27.38-  87.38    57.34
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.927  17.927 (1.058)    88    192076 5.09179    5.092  80.00- 120.00   100.00
 17.927  17.927 (1.058)    58    106548                    25.03-  85.03    55.47
 17.927  17.927 (1.058)    57     35925                    0.00-  50.67    18.70
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83    697441 5.37224    5.372  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85    450344                    35.15-  95.15    64.57
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.086  19.063 (1.127)    75    476570 4.92618    4.926  80.00- 120.00   100.00
 19.086  19.086 (1.127)    77    154496                    0.45-  60.45    32.42
 19.086  19.063 (1.127)    39    198807                    13.69-  73.69    41.72
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43    427897 5.30043    5.300  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
145 4-Methyl-2-pentanone (continued)							
19.265	19.265 (1.137)	58	195202			15.64- 75.64	45.62
19.265	19.265 (1.137)	85	112616			0.00- 56.71	26.32
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.556	19.556 (1.155)	98	635224	4.95449	4.954	80.00- 120.00	100.00
19.579	19.556 (1.156)	70	67109			0.00- 40.11	10.56
19.556	19.556 (1.155)	100	421637			37.58- 97.58	66.38
147 Toluene					CAS #: 108-88-3		
19.713	19.713 (1.164)	91	963209	5.16911	5.169	80.00- 120.00	100.00
19.713	19.713 (1.164)	92	569302			28.92- 88.92	59.10
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.276	20.276 (0.907)	75	496809	5.46662	5.467	80.00- 120.00	100.00
20.276	20.276 (0.907)	77	152415			0.55- 60.55	30.68
20.276	20.276 (0.907)	39	177791			8.25- 68.25	35.79
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.688	20.688 (0.925)	97	350340	4.95206	4.952	80.00- 120.00	100.00
20.688	20.688 (0.925)	99	222924			32.91- 92.91	63.63
20.688	20.688 (0.925)	83	282375			47.93- 107.93	80.60
156 Tetrachloroethene					CAS #: 127-18-4		
20.853	20.853 (0.932)	166	573157	5.25778	5.258	80.00- 120.00	100.00
20.853	20.853 (0.932)	129	414882			42.31- 102.31	72.39
20.853	20.853 (0.932)	131	418933			40.11- 100.11	73.09
158 2-Hexanone					CAS #: 591-78-6		
21.018	21.018 (0.940)	58	254565	5.59135	5.591	80.00- 120.00	100.00
21.018	21.018 (0.940)	43	419572			140.44- 200.44	164.82
21.018	21.018 (0.940)	100	68514			0.00- 59.62	26.91
160 Dibromochloromethane					CAS #: 124-48-1		
21.430	21.430 (0.958)	129	775632	5.40067	5.401	80.00- 120.00	100.00
21.430	21.430 (0.958)	127	598968			46.82- 106.82	77.22
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.677	21.677 (0.969)	107	590995	5.44364	5.444	80.00- 120.00	100.00
21.677	21.677 (0.969)	109	544972			65.45- 125.45	92.21
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.366 (1.000)	117	586945	5.00000		80.00- 120.00	100.00
22.365	22.366 (1.000)	82	294565			20.64- 80.64	50.19
165 Chlorobenzene					CAS #: 108-90-7		
22.407	22.407 (1.002)	112	823817	5.18769	5.188	80.00- 120.00	100.00

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

  165 Chlorobenzene (continued)
 22.407  22.407 (1.002)   114    269357                     2.42-  62.42    32.70
 22.407  22.407 (1.002)    77    435716                    23.54-  83.54    52.89
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.490  22.490 (1.006)   106    392171 5.07068    5.071  80.00- 120.00   100.00
 22.490  22.490 (1.006)    91   1260593                  282.51- 342.51   321.44
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.656  22.656 (1.013)   106    497840 5.54111    5.541  80.00- 120.00   100.00
 22.656  22.656 (1.013)    91    974635                  166.46- 226.46   195.77
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.257  23.257 (1.040)   106    459807 5.57960    5.580  80.00- 120.00   100.00
 23.257  23.257 (1.040)    91    994546                  184.01- 244.01   216.30
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.298  23.298 (1.042)   104    774064 5.55087    5.551  80.00- 120.00   100.00
 23.278  23.278 (1.041)    78    384577                   20.27-  80.27    49.68
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.639  23.639 (1.057)   173   1024346 7.19892    7.199  80.00- 120.00   100.00
 23.639  23.639 (1.057)   171    518922                   20.88-  80.88    50.66
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.728  23.728 (1.061)   105   1517599 5.41638    5.416  80.00- 120.00   100.00
 23.728  23.728 (1.061)   120    419494                    0.00-  57.47    27.64
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 24.020  24.020 (1.074)   174    396891 4.92804    4.928  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    420081                   77.42- 137.42   105.84
 24.020  24.020 (1.074)   176    386544                   65.38- 125.38    97.39
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.199  24.199 (1.082)    83    698007 5.34930    5.349  80.00- 120.00   100.00
 24.199  24.199 (1.082)    85    454731                   35.73-  95.73    65.15
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.267  24.267 (1.085)    91   1597044 5.41170    5.412  80.00- 120.00   100.00
 24.267  24.267 (1.085)   120    394439                    0.00-  55.24    24.70
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.401  24.401 (1.091)   105   1305575 5.21966    5.220  80.00- 120.00   100.00
 24.401  24.401 (1.091)   120    397334                    1.08-  61.08    30.43
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.468  24.469 (1.094)   105   1028663 5.29577    5.296  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.468	24.469 (1.094)	120	512304			18.44- 78.44	49.80
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.917	24.917 (1.114)	105	838509	4.98251	4.982	80.00- 120.00	100.00
24.917	24.917 (1.114)	120	380400			16.20- 76.20	45.37
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.321	25.321 (1.132)	146	802773	5.05149	5.051	80.00- 120.00	100.00
25.321	25.321 (1.132)	148	506635			35.51- 95.51	63.11
25.321	25.321 (1.132)	111	303740			9.35- 69.35	37.84
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.433	25.433 (1.137)	146	747382	5.01502	5.015	80.00- 120.00	100.00
25.433	25.433 (1.137)	148	468727			32.61- 92.61	62.72
25.433	25.433 (1.137)	111	268700			6.90- 66.90	35.95
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.567	25.567 (1.143)	91	1038709	5.53922	5.539	80.00- 120.00	100.00
25.567	25.567 (1.143)	126	240904			0.00- 51.82	23.19
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.859	25.859 (1.156)	146	674763	4.94972	4.950	80.00- 120.00	100.00
25.859	25.859 (1.156)	148	425275			33.69- 93.69	63.03
25.859	25.859 (1.156)	111	269555			8.96- 68.96	39.95
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	291657	4.71826	4.718	80.00- 120.00	100.00
27.607	27.607 (1.234)	182	281766			66.05- 126.05	96.61
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	415709	4.94605	4.946	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	252383			33.78- 93.78	60.71
228 Naphthalene					CAS #: 91-20-3		
27.921	27.921 (1.248)	128	29963	0.33196	0.3320	80.00- 120.00	100.00(a)
27.921	27.921 (1.248)	127	6168			0.00- 46.39	20.59

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031716.d
Lab Smp Id: ICV
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 5.0ppbv(50ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	169157	2.55
123 1,4-Difluorobenze	626935	376161	877709	652823	4.13
163 Chlorobenzene-d5	567678	340607	794749	586945	3.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	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: 23-Mar-2016 08:55

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17Mar2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: ICV
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09Bromo.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 5.0ppbv(50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	5.000	5.290	105.81	60-140
11 Freon 12	5.000	5.336	106.72	70-130
15 Freon 114	5.000	5.621	112.42	70-130
17 Chloromethane	5.000	5.390	107.79	70-130
23 Butane	5.000	5.562	111.25	60-140
25 Vinyl Chloride	5.000	5.496	109.93	70-130
26 1,3-Butadiene	5.000	5.146	102.93	70-130
29 Bromomethane	5.000	5.421	108.42	70-130
30 Chloroethane	5.000	5.916	118.32	70-130
31 Isopentane	5.000	5.489	109.78	60-140
35 Freon 11	5.000	5.203	104.07	70-130
42 Ethanol	5.000	6.137	122.74	70-130
49 Freon 113	5.000	5.539	110.77	70-130
50 1,1-Dichloroethene	5.000	5.287	105.74	70-130
52 Acetone	5.000	5.156	103.13	70-130
56 Carbon Disulfide	5.000	4.525	90.50	70-130
57 2-Propanol	5.000	5.713	114.26	70-130
58 3-Chloropropene	5.000	5.263	105.27	70-130
66 Methylene Chloride	5.000	5.079	101.58	70-130
72 Methyl tert-butyl	5.000	5.214	104.29	70-130
73 trans-1,2-Dichloro	4.250	4.605	108.35	70-130
78 Hexane	5.000	5.523	110.47	70-130
82 1,1-Dichloroethane	5.000	5.297	105.95	70-130
86 Vinyl Acetate	5.000	5.213	104.26	60-140
91 cis-1,2-Dichloroet	5.650	5.903	104.47	70-130
92 2-Butanone	5.000	5.560	111.21	70-130
99 Tetrahydrofuran	5.000	5.577	111.55	70-130
100 Chloroform	5.000	5.187	103.74	70-130
103 1,1,1-Trichloroeth	5.000	5.122	102.44	70-130
106 Carbon Tetrachlori	5.000	5.497	109.94	70-130
102 Cyclohexane	5.000	5.526	110.52	70-130
113 2,2,4-Trimethylpen	5.000	5.068	101.35	70-130
116 Benzene	5.000	5.002	100.05	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	5.000	5.091	101.82	70-130
121 Heptane	5.000	5.310	106.20	70-130
125 Trichloroethene	5.000	5.329	106.58	70-130
127 Methylcyclohexane	5.000	5.543	110.87	60-140
132 1,2-Dichloropropan	5.000	5.150	103.00	70-130
136 1,4-Dioxane	5.000	5.092	101.84	70-130
138 Bromodichlorometha	5.000	5.372	107.44	70-130
144 cis-1,3-Dichloropr	5.000	4.926	98.52	70-130
145 4-Methyl-2-pentano	5.000	5.300	106.01	70-130
147 Toluene	5.000	5.169	103.38	70-130
150 trans-1,3-Dichloro	5.000	5.467	109.33	70-130
155 1,1,2-Trichloroeth	5.000	4.952	99.04	70-130
156 Tetrachloroethene	5.000	5.258	105.16	70-130
158 2-Hexanone	5.000	5.591	111.83	70-130
160 Dibromochlorometha	5.000	5.401	108.01	70-130
161 1,2-Dibromoethane	5.000	5.444	108.87	70-130
165 Chlorobenzene	5.000	5.188	103.75	70-130
167 Ethyl Benzene	5.000	5.071	101.41	70-130
169 m,p-Xylene	5.000	5.541	110.82	70-130
171 o-Xylene	5.000	5.580	111.59	70-130
172 Styrene	5.000	5.551	111.02	70-130
174 Bromoform	6.500	7.199	110.75	70-130
175 Cumene	5.000	5.416	108.33	70-130
181 1,1,2,2-Tetrachlor	5.000	5.349	106.99	70-130
182 Propylbenzene	5.000	5.412	108.23	70-130
188 4-Ethyltoluene	5.000	5.220	104.39	70-130
190 1,3,5-Trimethylben	5.000	5.296	105.92	70-130
196 1,2,4-Trimethylben	5.000	4.982	99.65	70-130
208 1,3-Dichlorobenzen	5.000	5.051	101.03	70-130
209 1,4-Dichlorobenzen	5.000	5.015	100.30	70-130
212 alpha-Chlorotoluen	5.000	5.539	110.78	70-130
214 1,2-Dichlorobenzen	5.000	4.950	98.99	70-130
226 1,2,4-Trichloroben	5.000	4.718	94.37	70-130
227 Hexachlorobutadien	5.000	4.946	98.92	70-130
228 Naphthalene	0.5000	0.3320	66.39	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.750	95.00	70-130
$ 146 Toluene-d8	5.000	4.954	99.09	70-130
$ 177 4-Bromofluorobenze	5.000	4.928	98.56	70-130

Data File: /chem/msde.i/17Mar2016.b/e031716.d

Date : 17-MAR-2016 22:08

Client ID:

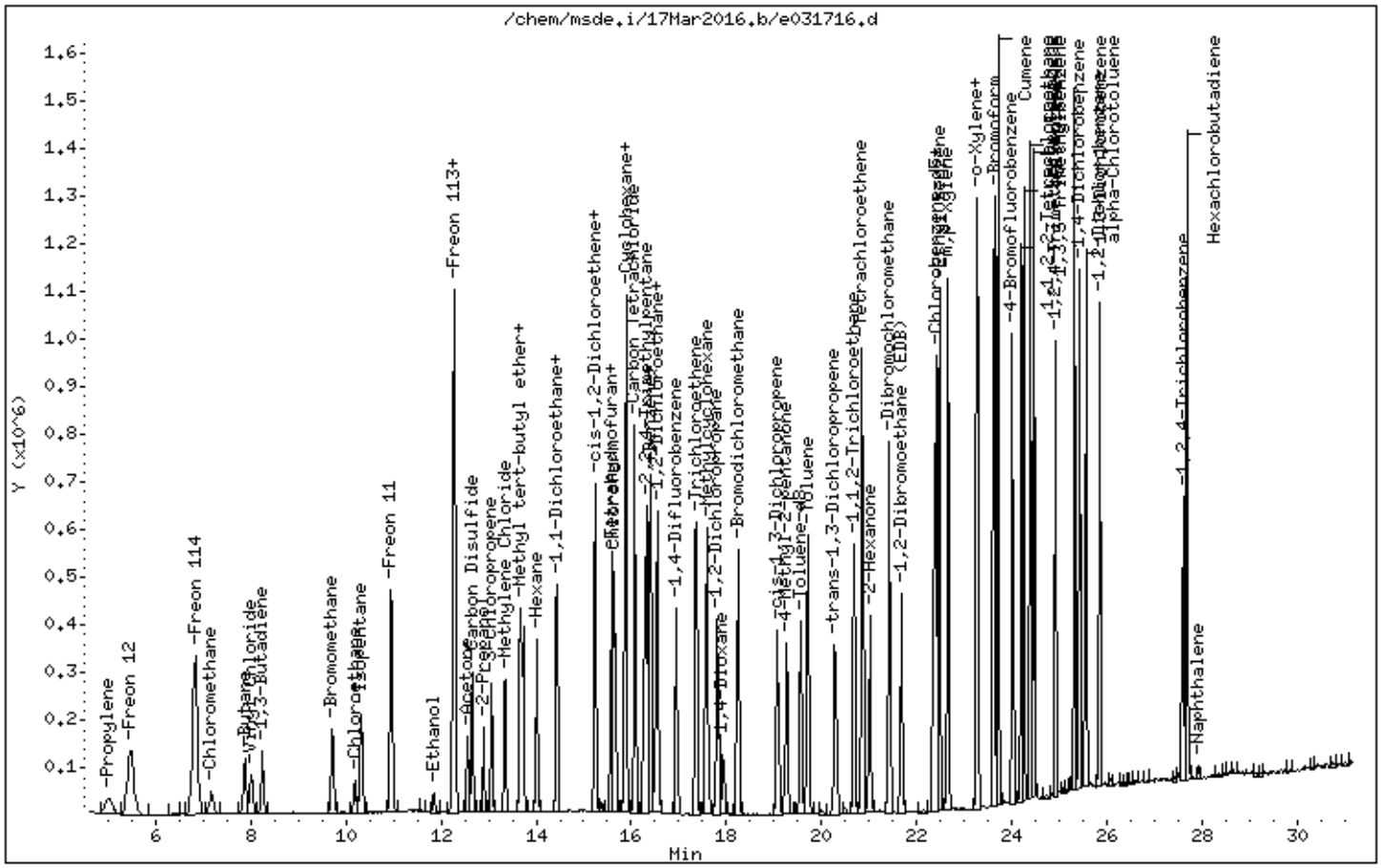
Instrument: msde.i

Sample Info: 25mL#2789-6

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050916.d
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 09-MAY-2016 21:23
Operator : tar Inst ID: msde.i
Smp Info : 50mL #2789-128
Misc Info : 1.0ppbv (5.0ppbv) AT-1
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 10-May-2016 10:48 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 12:03 Cal File: e050908.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1CCV.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE		RATIO
13 Chlorodifluoromethane					CAS #: 75-45-6			
6.353	5.962 (0.413)	51	705	0.05878	0.05878	0.00-	0.00	100.00(a)
0.000	5.962 (0.000)	67	0			0.00-	0.00	0.00
0.000	5.962 (0.000)	85	0			0.00-	0.00	0.00
59 Cyclopentene					CAS #: 142-29-0			
12.899	12.900 (0.838)	67	72416	0.96078	0.9608	0.00-	0.00	100.00(a)
12.899	12.900 (0.838)	68	31038			0.00-	0.00	42.86
12.919	12.900 (0.839)	53	12612			0.00-	0.00	17.42
84 1-Propanol					CAS #: 71-23-8			
14.384	14.357 (0.935)	59	5945	0.96695	0.9669	0.00-	0.00	100.00(a)
14.384	14.357 (0.935)	42	3792			0.00-	0.00	63.78
14.384	14.385 (0.935)	41	3117			0.00-	0.00	52.43
90 2,2-Dichloropropane					CAS #: 594-20-7			
15.008	15.009 (0.975)	77	77495	0.88106	0.8811	0.00-	0.00	100.00(a)
15.008	15.009 (0.975)	79	24128			0.00-	0.00	31.13
15.008	15.009 (0.975)	97	14605			0.00-	0.00	18.85

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	135355	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	102471			52.25- 112.25	75.71
15.391	15.391 (1.000)	49	94823			89.81- 149.81	70.06
107 1,1-Dichloropropene						CAS #: 563-58-6	
15.884	15.885 (1.032)	110	22653	0.89579	0.8958	0.00- 0.00	100.00(a)
15.884	15.885 (1.032)	75	54120			0.00- 0.00	238.91
115 Isobutanol						CAS #: 78-83-1	
15.977	15.977 (1.038)	43	20433	0.75356	0.7536	0.00- 0.00	100.00(a)
15.977	15.977 (1.038)	41	15071			0.00- 0.00	73.76
15.977	15.977 (1.038)	55	2198			0.00- 0.00	10.76
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	176118	4.53240	4.532	80.00- 120.00	100.00
16.207	16.183 (1.053)	67	83304			21.16- 81.16	47.30
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	491123	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	68885			0.00- 45.20	14.03
124 n-Butanol						CAS #: 71-36-3	
16.906	16.882 (1.010)	56	30544	0.69198	0.6920	0.00- 0.00	100.00(a)
16.906	16.906 (1.010)	41	22915			0.00- 0.00	75.02
16.906	16.882 (1.010)	43	17173			0.00- 0.00	56.22
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.275	19.276 (1.152)	98	461753	4.78726	4.787	80.00- 120.00	100.00
19.275	19.276 (1.152)	70	48959			0.00- 40.11	10.60
19.275	19.276 (1.152)	100	302057			37.58- 97.58	65.42
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.795 (0.939)	76	62106	0.81703	0.8170	0.00- 0.00	100.00(a)
20.822	20.795 (0.939)	41	31641			0.00- 0.00	50.95
20.795	20.795 (0.938)	78	21112			0.00- 0.00	33.99
159 Butyl Acetate						CAS #: 123-86-4	
20.905	20.905 (0.943)	56	10195	1.37408	1.374	0.00- 0.00	100.00(a)
20.905	20.905 (0.943)	73	5959			0.00- 0.00	58.45
20.905	20.905 (0.943)	43	20173			0.00- 0.00	197.87
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	440891	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	214966			20.64- 80.64	48.76

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

  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 22.343  22.343 (1.007)   131     71901 0.81622   0.8162   0.00-   0.00   100.00(a)
 22.343  22.343 (1.007)   117     43579                    0.00-   0.00    60.61
 22.343  22.343 (1.007)    95     26486                    0.00-   0.00    36.84
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 23.214  23.214 (1.047)    58     34861 0.76394   0.7639   0.00-   0.00   100.00(a)
 23.214  23.214 (1.047)    43     49421                    0.00-   0.00   141.77
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 23.811  23.811 (1.074)    55     25263 0.66478   0.6648   0.00-   0.00   100.00(a)
 23.811  23.811 (1.074)    98     21856                    0.00-   0.00    86.51
 23.811  23.811 (1.074)    42     18092                    0.00-   0.00    71.61
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    308018 5.09149    5.091  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    306680                   77.42- 137.42    99.57
 23.856  23.856 (1.076)   176    297131                   65.38- 125.38    96.47
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 24.080  24.080 (1.086)   156     72331 0.81629   0.8163   0.00-   0.00   100.00(a)
 24.080  24.080 (1.086)   158     72296                    0.00-   0.00    99.95
 24.080  24.080 (1.086)    77     84008                    0.00-   0.00   116.14
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 24.125  24.125 (1.088)   110     30299 0.85152   0.8515   0.00-   0.00   100.00(a)
 24.125  24.125 (1.088)    75     70264                    0.00-   0.00   231.90
 24.125  24.125 (1.088)    61     14975                    0.00-   0.00    49.42
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 24.282  24.282 (1.095)   126     48045 0.84500   0.8450   0.00-   0.00   100.00(a)
 24.282  24.282 (1.095)    91    120041                    0.00-   0.00   249.85
 24.282  24.282 (1.095)    65     11051                    0.00-   0.00    23.00
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 24.416  24.417 (1.101)   126     43606 0.82739   0.8274   0.00-   0.00   100.00(a)
 24.416  24.417 (1.101)    91    116181                    0.00-   0.00   266.43
 24.416  24.417 (1.101)    63     14358                    0.00-   0.00    32.93
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                            CAS #: 98-06-6
 24.708  24.708 (1.114)   119    121525 0.81796   0.8180   0.00-   0.00   100.00(a)
 24.708  24.708 (1.114)   134     30795                    0.00-   0.00    25.34
 24.708  24.686 (1.114)    91     74251                    0.00-   0.00    61.10
-------------------------------------------------------------------------------
  197 Pentachloroethane                            CAS #: 76-01-7
 24.798  24.798 (1.118)   167     49293 0.81862   0.8186   0.00-   0.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
197 Pentachloroethane (continued)							
24.798	24.798 (1.118)	117	42145			0.00- 0.00	85.50
24.798	24.798 (1.118)	169	24625			0.00- 0.00	49.96
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	232187	0.82839	0.8284	0.00- 0.00	100.00(a)
24.955	24.955 (1.125)	134	39342			0.00- 0.00	16.94
24.955	24.955 (1.125)	91	37877			0.00- 0.00	16.31
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	133780	0.78152	0.7815	0.00- 0.00	100.00(a)
25.089	25.089 (1.131)	134	37689			0.00- 0.00	28.17
25.089	25.089 (1.131)	91	31764			0.00- 0.00	23.74
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.268	25.269 (1.139)	120	41361	0.75460	0.7546	0.00- 0.00	100.00(a)
25.268	25.269 (1.139)	105	97325			0.00- 0.00	235.31
25.268	25.246 (1.139)	77	11671			0.00- 0.00	28.22
213 Butylbenzene					CAS #: 104-51-8		
25.537	25.538 (1.152)	134	33258	0.77454	0.7745	0.00- 0.00	100.00(a)
25.537	25.538 (1.152)	91	112055			0.00- 0.00	336.93
25.537	25.538 (1.152)	92	59165			0.00- 0.00	177.90
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	58102	0.83451	0.8345	0.00- 0.00	100.00(a)
26.546	26.546 (1.197)	75	39555			0.00- 0.00	68.08
26.546	26.546 (1.197)	155	45092			0.00- 0.00	77.61

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e050916.d
Lab Smp Id: ICV
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 1.0ppbv (5.0ppbv) AT-1

Calibration Date: 09-MAY-2016
Calibration Time: 07:51
Client Smp ID: ICV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	135355	-15.07
123 1,4-Difluorobenze	624905	374943	874867	491123	-21.41
163 Chlorobenzene-d5	549919	329951	769887	440891	-19.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 10-May-2016 10:48

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 09May2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: ICV
Client Smp ID: ICV
Level: LOW
Operator: tar
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT1.spk
Quant Type: ISTD
Sublist File: AT1CCV.sub
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 1.0ppbv (5.0ppbv) AT-1

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Cyclopentene	1.000	0.9608	96.08	60-140
84 1-Propanol	1.000	0.9669	96.69	60-140
90 2,2-Dichloropropan	1.000	0.8811	88.11	60-140
107 1,1-Dichloropropen	1.000	0.8958	89.58	60-140
115 Isobutanol	1.000	0.7536	75.36	60-140
124 n-Butanol	1.000	0.6920	69.20	60-140
157 1,3-Dichloropropan	1.000	0.8170	81.70	60-140
159 Butyl Acetate	1.000	1.374	137.41	60-140
168 1,1,1,2-Tetrachlor	1.000	0.8162	81.62	60-140
173 2-Heptanone	1.000	0.7639	76.39	60-140
176 Cyclohexanone	1.000	0.6648	66.48	60-140
180 Bromobenzene	1.000	0.8163	81.63	60-140
185 1,2,3-Trichloropro	1.000	0.8515	85.15	60-140
189 2-Chlorotoluene	1.000	0.8450	84.50	60-140
191 4-Chlorotoluene	1.000	0.8274	82.74	60-140
195 tert-Butylbenzene	1.000	0.8180	81.80	60-140
197 Pentachloroethane	1.000	0.8186	81.86	60-140
203 sec-Butylbenzene	1.000	0.8284	82.84	60-140
207 p-Cymene	1.000	0.7815	78.15	60-140
210 1,2,3-Trimethylben	1.000	0.7546	75.46	60-140
213 Butylbenzene	1.000	0.7745	77.45	60-140
221 1,2-Dibromo-3-chlo	1.000	0.8345	83.45	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.532	90.65	70-130
$ 146 Toluene-d8	5.000	4.787	95.75	70-130
$ 177 4-Bromofluorobenze	5.000	5.091	101.83	70-130

Data File: /chem/msde.i/09May2016.b/e050916.d

Date : 09-MAY-2016 21:23

Client ID: ICV

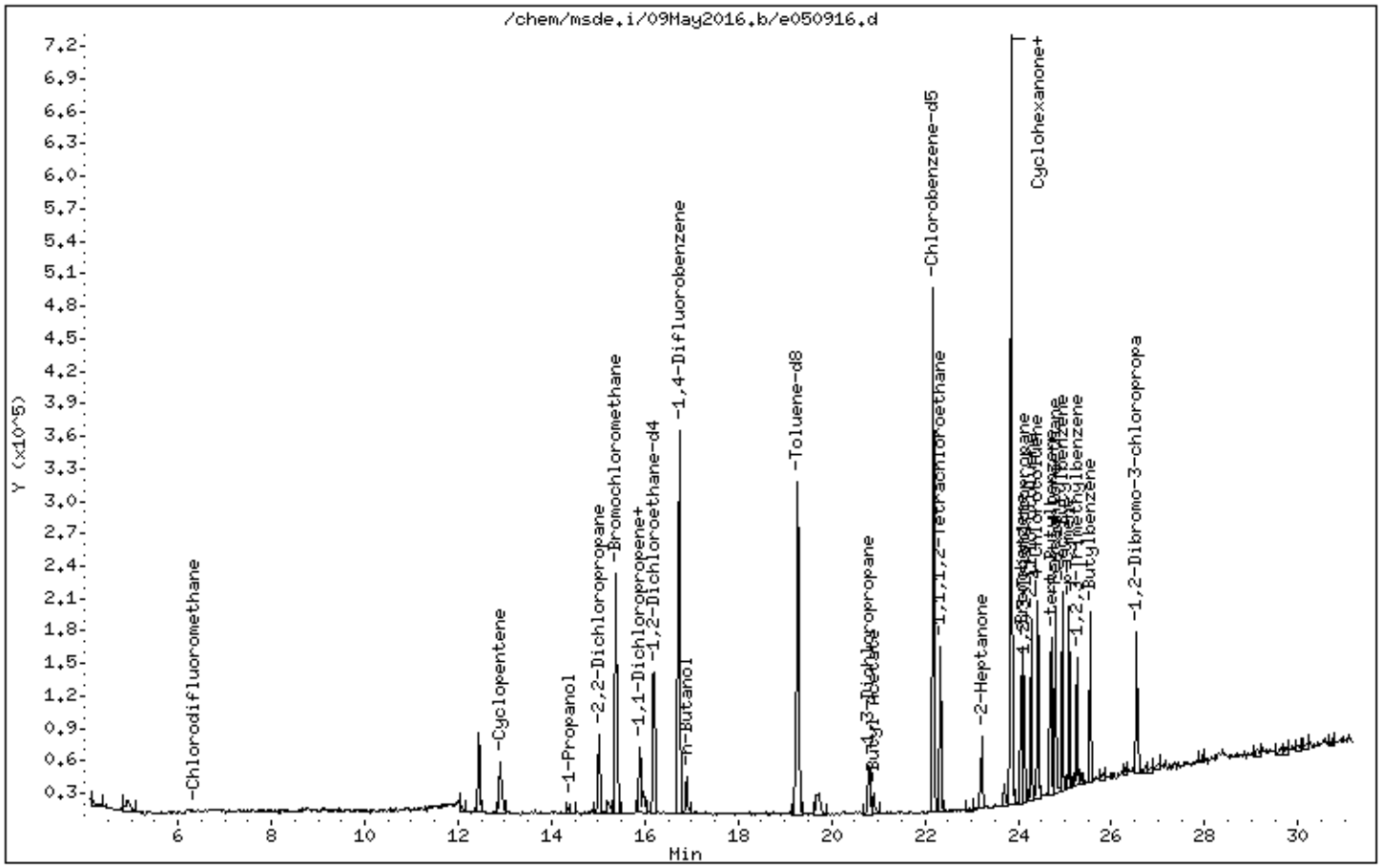
Instrument: msde.i

Sample Info: 50mL #2789-128

Operator: tar

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031706.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 17-MAR-2016 14:00
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2789-13
Misc Info : 0.05ppbv (0.05ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 14:00 Cal File: e031706.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

Name	Value	Description
DF	1.00000	Dilution Factor

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		
6.853	6.853 (0.440)	135	4437	0.05000	0.04939	80.00- 120.00	100.00(aM)
6.829	6.829 (0.438)	137	1019			1.31- 61.31	22.97
6.877	6.877 (0.441)	85	5388			93.88- 153.88	121.43
25 Vinyl Chloride					CAS #: 75-01-4		
8.010	8.010 (0.514)	62	1714	0.05000	0.05231	80.00- 120.00	100.00(Ta)
0.000	1.000 (0.000)	64	0			3.14- 63.14	0.00
35 Freon 11					CAS #: 75-69-4		
10.976	10.976 (0.704)	101	7769	0.05000	0.05878	80.00- 120.00	100.00(a)
10.957	10.957 (0.703)	103	5523			37.17- 97.17	71.09
49 Freon 113					CAS #: 76-13-1		
12.271	12.271 (0.788)	151	5511	0.05000	0.05564	80.00- 120.00	100.00(a)
12.271	12.271 (0.788)	153	3064			33.64- 93.64	55.60
12.271	12.271 (0.788)	101	4978			80.40- 140.40	90.33

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

*  98 Bromochloromethane                          CAS #: 74-97-5
 15.580  15.580 (1.000)   130    145928 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    120155                   52.25- 112.25    82.34
 15.580  15.580 (1.000)    49    112169                   89.81- 149.81    76.87
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                         CAS #: 71-55-6
 15.888  15.888 (1.020)    97      7401 0.05000  0.06039  80.00- 120.00   100.00(a)
 15.888  15.888 (1.020)    99      3732                   34.21-  94.21    50.43
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 16.073  16.073 (1.032)   119      7045 0.05000  0.05870  80.00- 120.00   100.00(a)
 16.073  16.073 (1.032)   117      6622                   74.09- 134.09    94.00
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    223295 5.00000    5.330  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    113990                   21.16-  81.16    51.05
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.529  16.529 (0.976)    62      3164 0.05000  0.04428  80.00- 120.00   100.00(a)
 16.505  16.505 (0.974)    64      1177                    1.03-  61.03    37.20
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.939  16.939 (1.000)   114    572111 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     84310                    0.00-  45.20    14.74
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.373  17.373 (1.026)   130      3193 0.05000  0.04490  80.00- 120.00   100.00(a)
 17.373  17.373 (1.026)    95      3283                   63.99- 123.99   102.82
 17.349  17.349 (1.024)    97      2417                   29.21-  89.21    75.70
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 18.240  18.240 (1.077)    83      4865 0.05000  0.04276  80.00- 120.00   100.00(a)
 18.264  18.264 (1.078)    85      3652                   35.15-  95.15    75.07
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    557316 5.00000    4.960  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     60940                    0.00-  40.11    10.93
 19.556  19.556 (1.155)   100    367356                   37.58-  97.58    65.92
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.688  20.688 (0.925)    97      4438 0.05000  0.06880  80.00- 120.00   100.00(a)
 20.688  20.688 (0.925)    99      2109                   32.91-  92.91    47.52
 20.688  20.688 (0.925)    83      2785                   47.93- 107.93    62.75
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.881  20.881 (0.934)   166      4499 0.05000  0.04526  80.00- 120.00   100.00(a)
```

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

  156 Tetrachloroethene (continued)
 20.853  20.853 (0.932)   129      3982                    42.31- 102.31    88.51
 20.853  20.853 (0.932)   131      3669                    40.11- 100.11    81.55
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.430  21.430 (0.958)   129      6075 0.05000  0.04639  80.00- 120.00   100.00(a)
 21.430  21.430 (0.958)   127      4659                    46.82- 106.82    76.69
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.677  21.677 (0.969)   107      4895 0.05000  0.04945  80.00- 120.00   100.00(a)
 21.677  21.677 (0.969)   109      4954                    65.45- 125.45   101.21
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.365  22.365 (1.000)   117    535201 5.00000           80.00- 120.00   100.00
 22.365  22.365 (1.000)    82    272131                    20.64-  80.64    50.85
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.639  23.639 (1.057)   173      6011 0.05000  0.04633  80.00- 120.00   100.00(a)
 23.639  23.639 (1.057)   171      3802                    20.88-  80.88    63.25
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 24.020  24.020 (1.074)   174    360362 5.00000    4.907  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    388817                    77.42- 137.42   107.90
 24.020  24.020 (1.074)   176    350335                    65.38- 125.38    97.22
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.199  24.199 (1.082)    83      6676 0.05000  0.05611  80.00- 120.00   100.00(a)
 24.199  24.199 (1.082)    85      4717                    35.73-  95.73    70.66
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.401  24.401 (1.091)   105     12874 0.05000  0.05645  80.00- 120.00   100.00(a)
 24.401  24.401 (1.091)   120      2729                     1.08-  61.08    21.20
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 24.469  24.469 (1.094)   105      8520 0.05000  0.04810  80.00- 120.00   100.00(a)
 24.469  24.469 (1.094)   120      3524                    18.44-  78.44    41.36
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 24.917  24.917 (1.114)   105      9862 0.05000  0.06427  80.00- 120.00   100.00(a)
 24.939  24.939 (1.115)   120      3472                    16.20-  76.20    35.21
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 25.321  25.321 (1.132)   146      9018 0.05000  0.06223  80.00- 120.00   100.00(a)
 25.321  25.321 (1.132)   148      6515                    35.51-  95.51    72.24
 25.321  25.321 (1.132)   111      2878                     9.35-  69.35    31.91
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.433	25.433 (1.137)	146	9064	0.05000	0.06670	80.00- 120.00	100.00(a)
25.433	25.433 (1.137)	148	5129			32.61- 92.61	56.59
25.433	25.433 (1.137)	111	3592			6.90- 66.90	39.63
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.859	25.859 (1.156)	146	7045	0.05000	0.05667	80.00- 120.00	100.00(a)
25.859	25.859 (1.156)	148	5549			33.69- 93.69	78.77
25.859	25.859 (1.156)	111	2782			8.96- 68.96	39.49
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	3816	0.05000	0.06770	80.00- 120.00	100.00(a)
27.607	27.607 (1.234)	182	3642			66.05- 126.05	95.44

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031706.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	145928	-11.53
123 1,4-Difluorobenze	626935	376161	877709	572111	-8.74
163 Chlorobenzene-d5	567678	340607	794749	535201	-5.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031706.d

Date : 17-MAR-2016 14:00

Client ID: Level 5

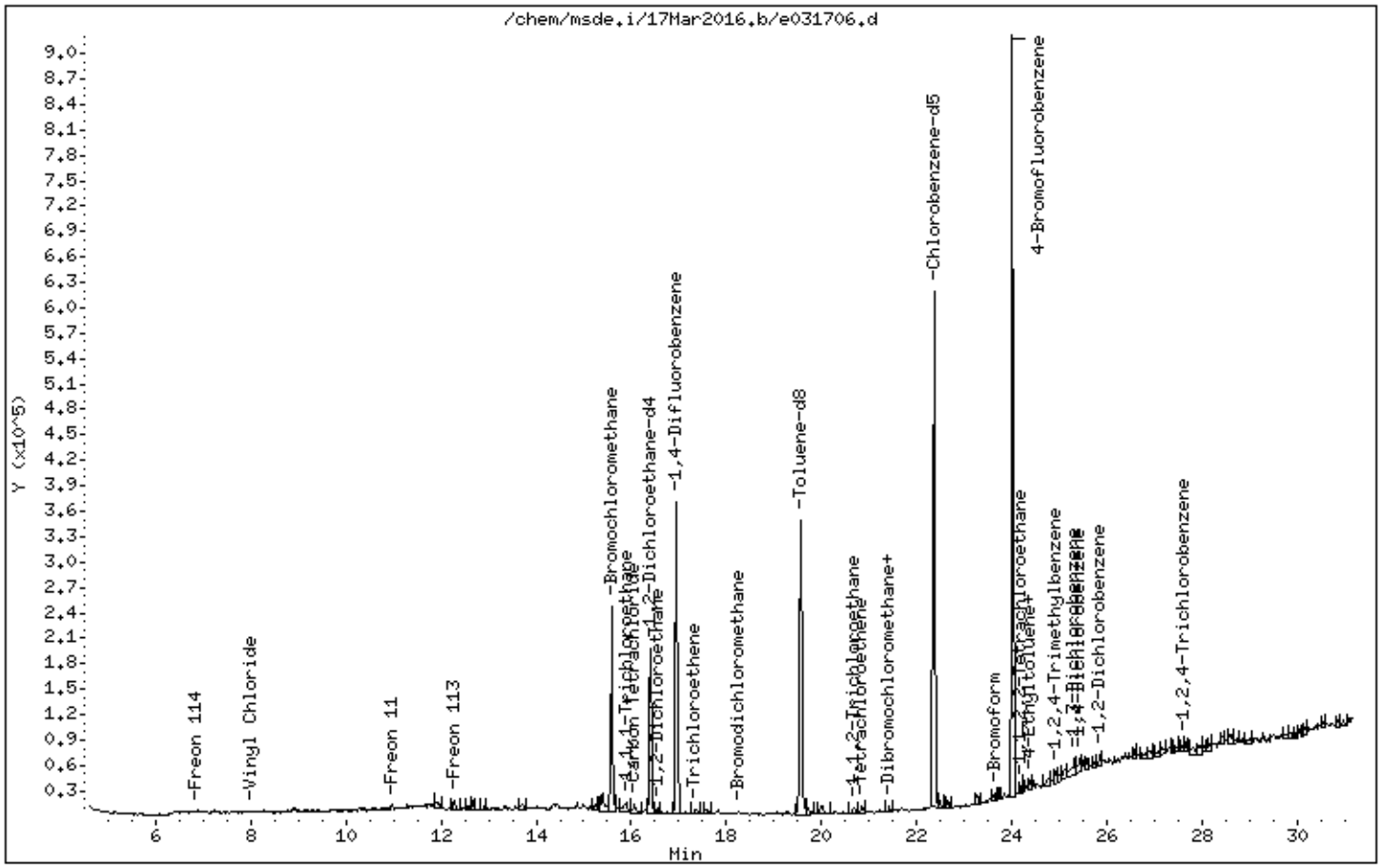
Instrument: msde.i

Sample Info: 250mL# 2789-13

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031707.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 17-MAR-2016 15:07
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2789-14
Misc Info : 0.1ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 15:07 Cal File: e031707.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.503	5.503 (0.353)	85	15532	0.10000	0.1217	80.00- 120.00	100.00(a)
5.479	5.479 (0.352)	87	2362			2.00- 62.00	15.21
15 Freon 114					CAS #: 76-14-2		
6.829	6.829 (0.438)	135	11352	0.10000	0.1216	80.00- 120.00	100.00(a)
6.805	6.805 (0.437)	137	2959			1.31- 61.31	26.07
6.805	6.805 (0.437)	85	12892			93.88- 153.88	113.57
17 Chloromethane					CAS #: 74-87-3		
7.167	7.167 (0.460)	50	2718	0.10000	0.1123	80.00- 120.00	100.00(a)
7.215	7.215 (0.463)	52	1236			5.50- 65.50	45.47
25 Vinyl Chloride					CAS #: 75-01-4		
8.010	8.010 (0.514)	62	4021	0.10000	0.1181	80.00- 120.00	100.00(a)
7.993	7.993 (0.513)	64	1986			3.14- 63.14	49.39

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
26 1,3-Butadiene					CAS #: 106-99-0		
8.271	8.271 (0.531)	54	2678	0.10000	0.1169	80.00- 120.00	100.00(a)
8.253	8.253 (0.530)	39	2419			65.21- 125.21	90.33
29 Bromomethane					CAS #: 74-83-9		
9.729	9.729 (0.624)	94	4903	0.10000	0.1319	80.00- 120.00	100.00(a)
9.729	9.729 (0.624)	96	5609			64.16- 124.16	114.40
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	15806	0.10000	0.1151	80.00- 120.00	100.00(a)
10.957	10.957 (0.703)	103	10474			37.17- 97.17	66.27
49 Freon 113					CAS #: 76-13-1		
12.271	12.271 (0.788)	151	12081	0.10000	0.1174	80.00- 120.00	100.00(a)
12.271	12.271 (0.788)	153	7680			33.64- 93.64	63.57
12.271	12.271 (0.788)	101	12864			80.40- 140.40	106.48
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.290	12.290 (0.789)	98	3538	0.10000	0.1232	80.00- 120.00	100.00(a)
12.290	12.290 (0.789)	61	8394			204.89- 264.89	237.25
12.290	12.290 (0.789)	96	7675			127.69- 187.69	216.93
58 3-Chloropropene					CAS #: 107-05-1		
13.071	13.071 (0.839)	76	1813	0.10000	0.09480	80.00- 120.00	100.00(a)
13.071	13.071 (0.839)	41	3663			163.76- 223.76	202.04
66 Methylene Chloride					CAS #: 75-09-2		
13.337	13.337 (0.856)	84	5686	0.10000	0.1414	80.00- 120.00	100.00(a)
13.337	13.337 (0.856)	49	4600			63.99- 123.99	80.90
13.337	13.337 (0.856)	51	1797			0.29- 60.29	31.60
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.674	13.674 (0.878)	73	15018	0.10000	0.1168	80.00- 120.00	100.00(a)
13.674	13.674 (0.878)	57	2111			0.00- 48.26	14.06
13.674	13.674 (0.878)	41	2851			0.00- 45.58	18.98
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.729	13.729 (0.881)	98	3344	0.10000	0.1147	80.00- 120.00	100.00(a)
13.729	13.729 (0.881)	61	6065			155.28- 215.28	181.37
13.729	13.729 (0.881)	96	5831			126.18- 186.18	174.37
78 Hexane					CAS #: 110-54-3		
14.031	14.031 (0.901)	57	5877	0.10000	0.1171	80.00- 120.00	100.00(a)
14.003	14.003 (0.899)	43	3467			21.48- 81.48	58.99
14.031	14.031 (0.901)	86	1377			0.00- 51.51	23.43

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

   82 1,1-Dichloroethane                            CAS #: 75-34-3
 14.415  14.415 (0.925)    63      8161 0.10000   0.1069  80.00- 120.00   100.00(a)
 14.415  14.415 (0.925)    65      3398                    1.78-  61.78    41.64
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.240  15.240 (0.978)    98      3822 0.10000   0.1198  80.00- 120.00   100.00(a)
 15.240  15.240 (0.978)    61      7885                  145.90- 205.90   206.31
 15.240  15.240 (0.978)    96      6419                  125.53- 185.53   167.95
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    151678 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    124531                   52.25- 112.25    82.10
 15.580  15.580 (1.000)    49    118326                   89.81- 149.81    78.01
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.641  15.641 (1.004)    83     14514 0.10000   0.1325  80.00- 120.00   100.00(a)
 15.641  15.641 (1.004)    85      8573                   33.97-  93.97    59.07
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.888  15.888 (1.020)    84      5999 0.10000   0.1056  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56      5736                   58.69- 118.69    95.62
 15.888  15.888 (1.020)    41      4124                   18.98-  78.98    68.74
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.888  15.888 (1.020)    97     14420 0.10000   0.1132  80.00- 120.00   100.00(a)
 15.888  15.888 (1.020)    99      9245                   34.21-  94.21    64.11
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 16.073  16.073 (1.032)   119     12362 0.10000  0.09909  80.00- 120.00   100.00(a)
 16.073  16.073 (1.032)   117     14459                   74.09- 134.09   116.96
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.313  16.313 (1.047)    56      8569 0.10000   0.1349  80.00- 120.00   100.00(a)
 16.313  16.313 (1.047)    57     22019                  306.64- 366.64   256.96
 16.313  16.313 (1.047)    41      7926                   64.14- 124.14    92.50
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.409  16.409 (0.969)    78     20674 0.10000   0.1484  80.00- 120.00   100.00(a)
 16.409  16.409 (0.969)    77      5049                    0.00-  53.97    24.42
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    225657 5.00000    5.182  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    111012                   21.16-  81.16    49.20
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                          CAS #: 107-06-2
 16.505  16.505 (0.974)    62      9661 0.10000   0.1331  80.00- 120.00   100.00
```

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

  120 1,2-Dichloroethane (continued)
 16.505  16.505 (0.974)    64      2336                     1.03-  61.03    24.18
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.554  16.554 (0.977)    57      4225 0.10000   0.1280  80.00- 120.00   100.00(a)
 16.554  16.554 (0.977)   100      1996                   28.67-  88.67    47.24
 16.554  16.554 (0.977)    43      6368                  128.92- 188.92   150.72
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    581157 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     87386                    0.00-  45.20    15.04
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.373  17.373 (1.026)   130      8436 0.10000   0.1168  80.00- 120.00   100.00(a)
 17.373  17.373 (1.026)    95      7276                   63.99- 123.99    86.25
 17.349  17.349 (1.024)    97      5800                   29.21-  89.21    68.75
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.806  17.806 (1.051)    63      5751 0.10000   0.1282  80.00- 120.00   100.00(a)
 17.806  17.806 (1.051)    62      3381                   34.19-  94.19    58.79
 17.806  17.806 (1.051)    41      5102                   27.38-  87.38    88.72
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.951  17.951 (1.060)    88      3892 0.10000   0.1159  80.00- 120.00   100.00(a)
 17.927  17.927 (1.058)    58      2661                   25.03-  85.03    68.37
 17.951  17.951 (1.060)    57       617                    0.00-  50.67    15.85
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83     13038 0.10000   0.1128  80.00- 120.00   100.00(a)
 18.240  18.240 (1.077)    85      8550                   35.15-  95.15    65.58
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.086  19.086 (1.127)    75      9008 0.10000   0.1046  80.00- 120.00   100.00(a)
 19.108  19.108 (1.128)    77      3755                    0.45-  60.45    41.69
 19.086  19.086 (1.127)    39      4222                   13.69-  73.69    46.87
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43      7974 0.10000   0.1110  80.00- 120.00   100.00(a)
 19.265  19.265 (1.137)    58      3008                   15.64-  75.64    37.72
 19.265  19.265 (1.137)    85      2195                    0.00-  56.71    27.53
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    558217 5.00000    4.891  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     59804                    0.00-  40.11    10.71
 19.556  19.556 (1.155)   100    372369                   37.58-  97.58    66.71
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
147 Toluene					CAS #: 108-88-3		
19.713	19.713 (1.164)	91	20023	0.10000	0.1207	80.00- 120.00	100.00(a)
19.713	19.713 (1.164)	92	12037			28.92- 88.92	60.12
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.304	20.304 (0.908)	75	9118	0.10000	0.1120	80.00- 120.00	100.00(a)
20.276	20.276 (0.907)	77	5077			0.55- 60.55	55.68
20.276	20.276 (0.907)	39	5238			8.25- 68.25	57.45
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.688	20.688 (0.925)	97	7479	0.10000	0.1181	80.00- 120.00	100.00(a)
20.688	20.688 (0.925)	99	4557			32.91- 92.91	60.93
20.688	20.688 (0.925)	83	5862			47.93- 107.93	78.38
156 Tetrachloroethene					CAS #: 127-18-4		
20.853	20.853 (0.932)	166	12135	0.10000	0.1243	80.00- 120.00	100.00(a)
20.853	20.853 (0.932)	129	8765			42.31- 102.31	72.23
20.853	20.853 (0.932)	131	8190			40.11- 100.11	67.49
160 Dibromochloromethane					CAS #: 124-48-1		
21.430	21.430 (0.958)	129	14276	0.10000	0.1110	80.00- 120.00	100.00(a)
21.430	21.430 (0.958)	127	12542			46.82- 106.82	87.85
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.677	21.677 (0.969)	107	11099	0.10000	0.1142	80.00- 120.00	100.00(a)
21.677	21.677 (0.969)	109	10655			65.45- 125.45	96.00
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	525520	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	266443			20.64- 80.64	50.70
165 Chlorobenzene					CAS #: 108-90-7		
22.407	22.407 (1.002)	112	17069	0.10000	0.1200	80.00- 120.00	100.00(a)
22.407	22.407 (1.002)	114	5403			2.42- 62.42	31.65
22.407	22.407 (1.002)	77	13966			23.54- 83.54	81.82
167 Ethyl Benzene					CAS #: 100-41-4		
22.490	22.490 (1.006)	106	8810	0.10000	0.1272	80.00- 120.00	100.00(a)
22.490	22.490 (1.006)	91	24513			282.51- 342.51	278.24
169 m,p-Xylene					CAS #: 108-38-3		
22.656	22.656 (1.013)	106	8327	0.10000	0.1035	80.00- 120.00	100.00(a)
22.656	22.656 (1.013)	91	19172			166.46- 226.46	230.24
171 o-Xylene					CAS #: 95-47-6		
23.257	23.257 (1.040)	106	6828	0.10000	0.09254	80.00- 120.00	100.00(a)

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

  171 o-Xylene (continued)
 23.257  23.257 (1.040)    91     19359                  184.01- 244.01   283.52
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.298  23.298 (1.042)   104     12951 0.10000   0.1037  80.00- 120.00   100.00(a)
 23.298  23.298 (1.042)    78      6242                   20.27-  80.27    48.20
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.639  23.639 (1.057)   173     13560 0.10000   0.1064  80.00- 120.00   100.00(a)
 23.639  23.639 (1.057)   171      7383                   20.88-  80.88    54.45
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.728  23.728 (1.061)   105     27919 0.10000   0.1113  80.00- 120.00   100.00(a)
 23.728  23.728 (1.061)   120      7113                    0.00-  57.47    25.48
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 24.020  24.020 (1.074)   174    361205 5.00000    5.009  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    379821                   77.42- 137.42   105.15
 24.020  24.020 (1.074)   176    343883                   65.38- 125.38    95.20
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.199  24.199 (1.082)    83     13566 0.10000   0.1161  80.00- 120.00   100.00(a)
 24.199  24.199 (1.082)    85     10331                   35.73-  95.73    76.15
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.267  24.267 (1.085)    91     27467 0.10000   0.1040  80.00- 120.00   100.00(a)
 24.267  24.267 (1.085)   120      6686                    0.00-  55.24    24.34
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.401  24.401 (1.091)   105     24532 0.10000   0.1095  80.00- 120.00   100.00(a)
 24.401  24.401 (1.091)   120      6993                    1.08-  61.08    28.51
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.469  24.469 (1.094)   105     19423 0.10000   0.1117  80.00- 120.00   100.00(a)
 24.469  24.469 (1.094)   120      8148                   18.44-  78.44    41.95
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.917  24.917 (1.114)   105     16678 0.10000   0.1107  80.00- 120.00   100.00(a)
 24.939  24.939 (1.115)   120      6394                   16.20-  76.20    38.34
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.321  25.321 (1.132)   146     17035 0.10000   0.1197  80.00- 120.00   100.00(a)
 25.321  25.321 (1.132)   148     11334                   35.51-  95.51    66.53
 25.321  25.321 (1.132)   111      5841                    9.35-  69.35    34.29
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.433  25.433 (1.137)   146     13168 0.10000  0.09869  80.00- 120.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
209 1,4-Dichlorobenzene (continued)							
25.433	25.433 (1.137)	148	9584			32.61- 92.61	72.78
25.410	25.410 (1.136)	111	5420			6.90- 66.90	41.16
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.567	25.567 (1.143)	91	16312	0.10000	0.09716	80.00- 120.00	100.00(a)
25.567	25.567 (1.143)	126	4975			0.00- 51.82	30.50
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.859	25.859 (1.156)	146	13240	0.10000	0.1085	80.00- 120.00	100.00(a)
25.859	25.859 (1.156)	148	9306			33.69- 93.69	70.29
25.859	25.859 (1.156)	111	6349			8.96- 68.96	47.95
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	3537	0.10000	0.06391	80.00- 120.00	100.00(a)
27.607	27.607 (1.234)	182	4603			66.05- 126.05	130.14
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	6354	0.10000	0.08444	80.00- 120.00	100.00(a)
27.697	27.697 (1.238)	223	5078			33.78- 93.78	79.92

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031707.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 0.1ppbv (1.0ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	151678	-8.04
123 1,4-Difluorobenze	626935	376161	877709	581157	-7.30
163 Chlorobenzene-d5	567678	340607	794749	525520	-7.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031707.d

Date : 17-MAR-2016 15:07

Client ID: Level 6

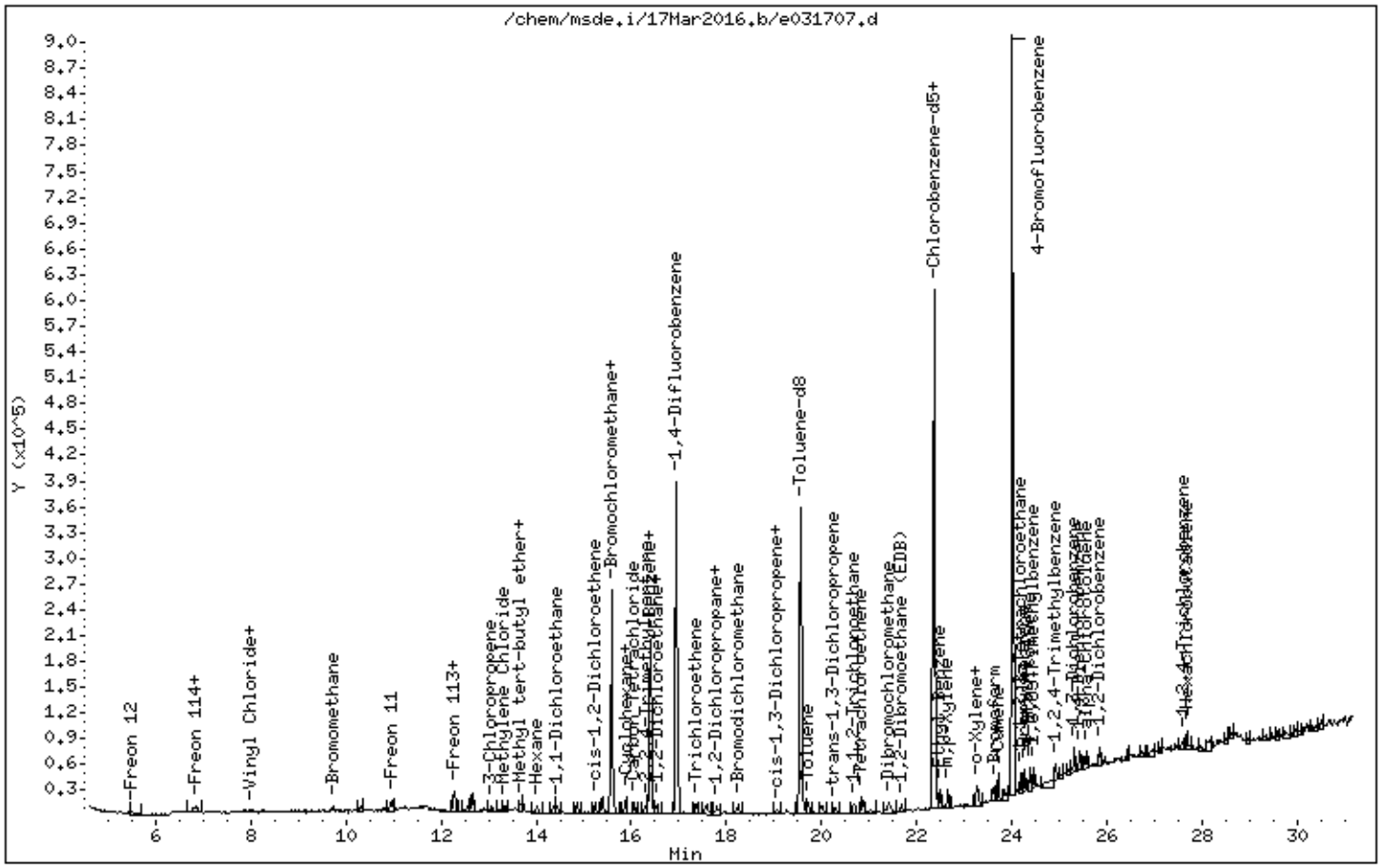
Instrument: msde.i

Sample Info: 25mL# 2789-14

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050907.d
Lab Smp Id: ICAL Level 7
Inj Date : 09-MAY-2016 11:01
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2789-105
Misc Info : 0.5ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 09-May-2016 17:07 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 11:01 Cal File: e050907.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.823	10.823 (0.703)	55	12545	0.50000	0.5705	0.00- 0.00	100.00
10.823	10.823 (0.703)	42	15066			0.00- 0.00	120.10
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	22901	0.50000	0.5941	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	3717			0.00- 0.00	16.23
10.957	10.957 (0.712)	72	3554			0.00- 0.00	15.52
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	9486	0.50000	0.5308	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	10912			0.00- 0.00	115.03
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	62236	0.50000	0.5613	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	28198			0.00- 0.00	45.31
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	42644	0.50000	0.5670	0.00- 0.00	100.00

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

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68     17506                     0.00-   0.00    41.05
 12.900  12.900 (0.838)    53      6743                     0.00-   0.00    15.81
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.094  13.094 (0.851)    70     11569 0.50000   0.5961   0.00-   0.00   100.00
 13.066  13.066 (0.849)    55     13067                     0.00-   0.00   112.95
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.671  13.671 (0.888)    53     12741 0.50000   0.5629   0.00-   0.00   100.00
 13.643  13.643 (0.886)    52     11439                     0.00-   0.00    89.78
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.725  13.725 (0.892)    55     11663 0.50000   0.5918   0.00-   0.00   100.00
 13.725  13.725 (0.892)    41     13853                     0.00-   0.00   118.78
 13.725  13.725 (0.892)    84      6139                     0.00-   0.00    52.64
-------------------------------------------------------------------------------
   84 1-Propanol                                    CAS #: 71-23-8
 14.357  14.357 (0.933)    59      2464 0.50000   0.4016   0.00-   0.00   100.00(a)
 14.357  14.357 (0.933)    42      2083                     0.00-   0.00    84.54
 14.384  14.384 (0.935)    41      1756                     0.00-   0.00    71.27
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.008  15.008 (0.975)    77     47974 0.50000   0.5466   0.00-   0.00   100.00
 15.008  15.008 (0.975)    79     16500                     0.00-   0.00    34.39
 15.008  15.008 (0.975)    97     10802                     0.00-   0.00    22.52
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.047  15.047 (0.978)    70      4010 0.50000   0.5294   0.00-   0.00   100.00
 15.047  15.047 (0.978)    43     30872                     0.00-   0.00   769.88
 15.008  15.008 (0.975)    61     10394                     0.00-   0.00   259.20
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.123  15.123 (0.983)    55     30899 0.50000   0.5297   0.00-   0.00   100.00
 15.123  15.123 (0.983)    85      7485                     0.00-   0.00    24.22
 15.123  15.123 (0.983)    58      3337                     0.00-   0.00    10.80
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    135071 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105261                    52.25- 112.25    77.93
 15.391  15.391 (1.000)    49     96231                    89.81- 149.81    71.24
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                          CAS #: 563-58-6
 15.884  15.884 (1.032)   110     14595 0.50000   0.5784   0.00-   0.00   100.00
 15.884  15.884 (1.032)    75     36527                     0.00-   0.00   250.27
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	17784	0.50000	0.6572	0.00- 0.00	100.00
15.977	15.977 (1.038)	41	15234			0.00- 0.00	85.66
15.977	15.977 (1.038)	55	2101			0.00- 0.00	11.81
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	500953	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	71239			0.00- 45.20	14.22
124 n-Butanol					CAS #: 71-36-3		
16.882	16.882 (1.009)	56	23427	0.50000	0.5203	0.00- 0.00	100.00
16.882	16.882 (1.009)	41	14387			0.00- 0.00	61.41
16.882	16.882 (1.009)	43	11620			0.00- 0.00	49.60
128 Ethyl acrylate					CAS #: 140-88-5		
17.171	17.171 (1.026)	99	4246	0.50000	0.5670	0.00- 0.00	100.00
17.171	17.171 (1.026)	45	2879			0.00- 0.00	67.80
17.171	17.171 (1.026)	55	33102			0.00- 0.00	779.60
131 2-Pentanone					CAS #: 107-87-9		
17.388	17.388 (1.039)	43	42016	0.50000	0.5412	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	4020			0.00- 0.00	9.57
17.388	17.388 (1.039)	86	12328			0.00- 0.00	29.34
134 Methyl Methacrylate					CAS #: 80-62-6		
17.556	17.556 (1.049)	41	20330	0.50000	0.5018	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	23151			0.00- 0.00	113.88
17.556	17.556 (1.049)	100	10495			0.00- 0.00	51.62
137 Dibromomethane					CAS #: 74-95-3		
17.797	17.797 (1.063)	174	40812	0.50000	0.5449	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	32308			0.00- 0.00	79.16
17.797	17.797 (1.063)	95	27948			0.00- 0.00	68.48
148 Octane					CAS #: 111-65-9		
19.320	19.320 (1.154)	57	14175	0.50000	0.5621	0.00- 0.00	100.00
19.320	19.320 (1.154)	85	19479			0.00- 0.00	137.42
19.320	19.320 (1.154)	43	26777			0.00- 0.00	188.90
157 1,3-Dichloropropane					CAS #: 142-28-9		
20.795	20.795 (0.938)	76	43082	0.50000	0.5656	0.00- 0.00	100.00
20.795	20.795 (0.938)	41	19546			0.00- 0.00	45.37
20.795	20.795 (0.938)	78	13754			0.00- 0.00	31.93
159 Butyl Acetate					CAS #: 123-86-4		
20.905	20.905 (0.943)	56	4232	0.50000	0.5692	0.00- 0.00	100.00

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

  159 Butyl Acetate (continued)
 20.905  20.905 (0.943)    73      2267                     0.00-   0.00    53.57
 20.905  20.905 (0.943)    43      9465                     0.00-   0.00   223.65
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    441801 5.00000            80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    224872                    20.64-  80.64    50.90
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                     CAS #: 630-20-6
 22.343  22.343 (1.007)   131     53926 0.50000   0.6109   0.00-   0.00   100.00
 22.343  22.343 (1.007)   117     32406                    0.00-   0.00    60.09
 22.343  22.343 (1.007)    95     17304                    0.00-   0.00    32.09
-------------------------------------------------------------------------------
  170 Nonane                                        CAS #: 111-84-2
 22.301  22.301 (1.006)    43     24409 0.50000   0.5518   0.00-   0.00   100.00
 22.301  22.301 (1.006)    57     22963                    0.00-   0.00    94.08
 22.301  22.301 (1.006)    85     11765                    0.00-   0.00    48.20
-------------------------------------------------------------------------------
  173 2-Heptanone                                   CAS #: 110-43-0
 23.214  23.214 (1.047)    58     25729 0.50000   0.5626   0.00-   0.00   100.00
 23.214  23.214 (1.047)    43     33964                    0.00-   0.00   132.01
-------------------------------------------------------------------------------
  176 Cyclohexanone                                 CAS #: 108-94-1
 23.811  23.811 (1.074)    55     20261 0.50000   0.5321   0.00-   0.00   100.00
 23.811  23.811 (1.074)    98     12845                    0.00-   0.00    63.40
 23.811  23.811 (1.074)    42     13203                    0.00-   0.00    65.16
-------------------------------------------------------------------------------
  179 alpha-Pinene                                  CAS #: 80-56-8
 23.497  23.497 (1.060)    93     92215 0.50000   0.5234   0.00-   0.00   100.00
 23.497  23.497 (1.060)   121     14183                    0.00-   0.00    15.38
 23.497  23.497 (1.060)    92     39789                    0.00-   0.00    43.15
-------------------------------------------------------------------------------
  180 Bromobenzene                                  CAS #: 108-86-1
 24.080  24.080 (1.086)   156     51947 0.50000   0.5850   0.00-   0.00   100.00
 24.080  24.080 (1.086)   158     49824                    0.00-   0.00    95.91
 24.080  24.080 (1.086)    77     58476                    0.00-   0.00   112.57
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                        CAS #: 96-18-4
 24.125  24.125 (1.088)   110     20750 0.50000   0.5820   0.00-   0.00   100.00
 24.125  24.125 (1.088)    75     65384                    0.00-   0.00   315.10
 24.125  24.125 (1.088)    61     10318                    0.00-   0.00    49.73
-------------------------------------------------------------------------------
  187 Decane                                        CAS #: 124-18-5
 24.170  24.170 (1.090)    57     19595 0.50000   0.5435   0.00-   0.00   100.00
 24.170  24.170 (1.090)    71     10319                    0.00-   0.00    52.66
 24.170  24.170 (1.090)   142      1417                    0.00-   0.00     7.23
-------------------------------------------------------------------------------
```

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

  189 2-Chlorotoluene                                CAS #: 95-49-8
 24.282  24.282 (1.095)   126     32805 0.50000   0.5758   0.00-   0.00   100.00
 24.282  24.282 (1.095)    91     83847                    0.00-   0.00   255.59
 24.282  24.282 (1.095)    65      7267                    0.00-   0.00    22.15
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                                CAS #: 106-43-4
 24.416  24.416 (1.101)   126     27469 0.50000   0.5201   0.00-   0.00   100.00
 24.416  24.416 (1.101)    91     75110                    0.00-   0.00   273.44
 24.416  24.416 (1.101)    63      8459                    0.00-   0.00    30.79
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                              CAS #: 98-06-6
 24.708  24.708 (1.114)   119     83029 0.50000   0.5577   0.00-   0.00   100.00
 24.708  24.708 (1.114)   134     20948                    0.00-   0.00    25.23
 24.685  24.685 (1.113)    91     51429                    0.00-   0.00    61.94
-------------------------------------------------------------------------------
  197 Pentachloroethane                              CAS #: 76-01-7
 24.798  24.798 (1.118)   167     34432 0.50000   0.5706   0.00-   0.00   100.00
 24.798  24.798 (1.118)   117     29645                    0.00-   0.00    86.10
 24.798  24.798 (1.118)   169     16398                    0.00-   0.00    47.62
-------------------------------------------------------------------------------
  199 D-Limonene                                     CAS #: 5989-27-5
 25.022  25.022 (1.128)    68     30679 0.50000   0.5467   0.00-   0.00   100.00
 25.044  25.044 (1.129)    93     74885                    0.00-   0.00   244.09
-------------------------------------------------------------------------------
  203 sec-Butylbenzene                               CAS #: 135-98-8
 24.955  24.955 (1.125)   105    158030 0.50000   0.5626   0.00-   0.00   100.00
 24.955  24.955 (1.125)   134     23571                    0.00-   0.00    14.92
 24.955  24.955 (1.125)    91     22007                    0.00-   0.00    13.93
-------------------------------------------------------------------------------
  206 bis(2-Chloroethyl) Ether                       CAS #: 111-44-4
 25.044  25.044 (1.129)    93     73953 0.50000   0.5300   0.00-   0.00   100.00
 25.044  25.044 (1.129)    95     18558                    0.00-   0.00    25.09
 25.044  25.044 (1.129)    63     31253                    0.00-   0.00    42.26
-------------------------------------------------------------------------------
  207 p-Cymene                                       CAS #: 99-87-6
 25.089  25.089 (1.131)   119     90034 0.50000   0.5249   0.00-   0.00   100.00
 25.089  25.089 (1.131)   134     24777                    0.00-   0.00    27.52
 25.089  25.089 (1.131)    91     21248                    0.00-   0.00    23.60
-------------------------------------------------------------------------------
  210 1,2,3-Trimethylbenzene                         CAS #: 526-73-8
 25.268  25.268 (1.139)   120     31368 0.50000   0.5711   0.00-   0.00   100.00
 25.268  25.268 (1.139)   105     67192                    0.00-   0.00   214.21
 25.268  25.268 (1.139)    77      9384                    0.00-   0.00    29.92
-------------------------------------------------------------------------------
  213 Butylbenzene                                   CAS #: 104-51-8
 25.537  25.537 (1.152)   134     24727 0.50000   0.5747   0.00-   0.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
213 Butylbenzene (continued)							
25.537	25.537 (1.152)	91	76081			0.00- 0.00	307.68
25.537	25.537 (1.152)	92	40609			0.00- 0.00	164.23
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	13951	0.50000	0.5339	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	9725			0.00- 0.00	69.71
25.515	25.515 (1.151)	85	6115			0.00- 0.00	43.83
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	36314	0.50000	0.5205	0.00- 0.00	100.00
26.546	26.546 (1.197)	75	26559			0.00- 0.00	73.14
26.546	26.546 (1.197)	155	28351			0.00- 0.00	78.07
225 Dodecane					CAS #: 112-40-3		
26.613	26.613 (1.200)	85	4951	0.50000	0.6360	0.00- 0.00	100.00
26.613	26.613 (1.200)	57	10256			0.00- 0.00	207.15
26.613	26.613 (1.200)	43	7461			0.00- 0.00	150.70

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e050907.d
Lab Smp Id: ICAL Level 7
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 0.5ppbv (5.0ppbv) Combo

Calibration Date: 09-MAY-2016
Calibration Time: 07:51

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	135071	-15.25
123 1,4-Difluorobenze	624905	374943	874867	500953	-19.84
163 Chlorobenzene-d5	549919	329951	769887	441801	-19.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/09May2016.b/e050907.d

Date : 09-MAY-2016 11:01

Client ID:

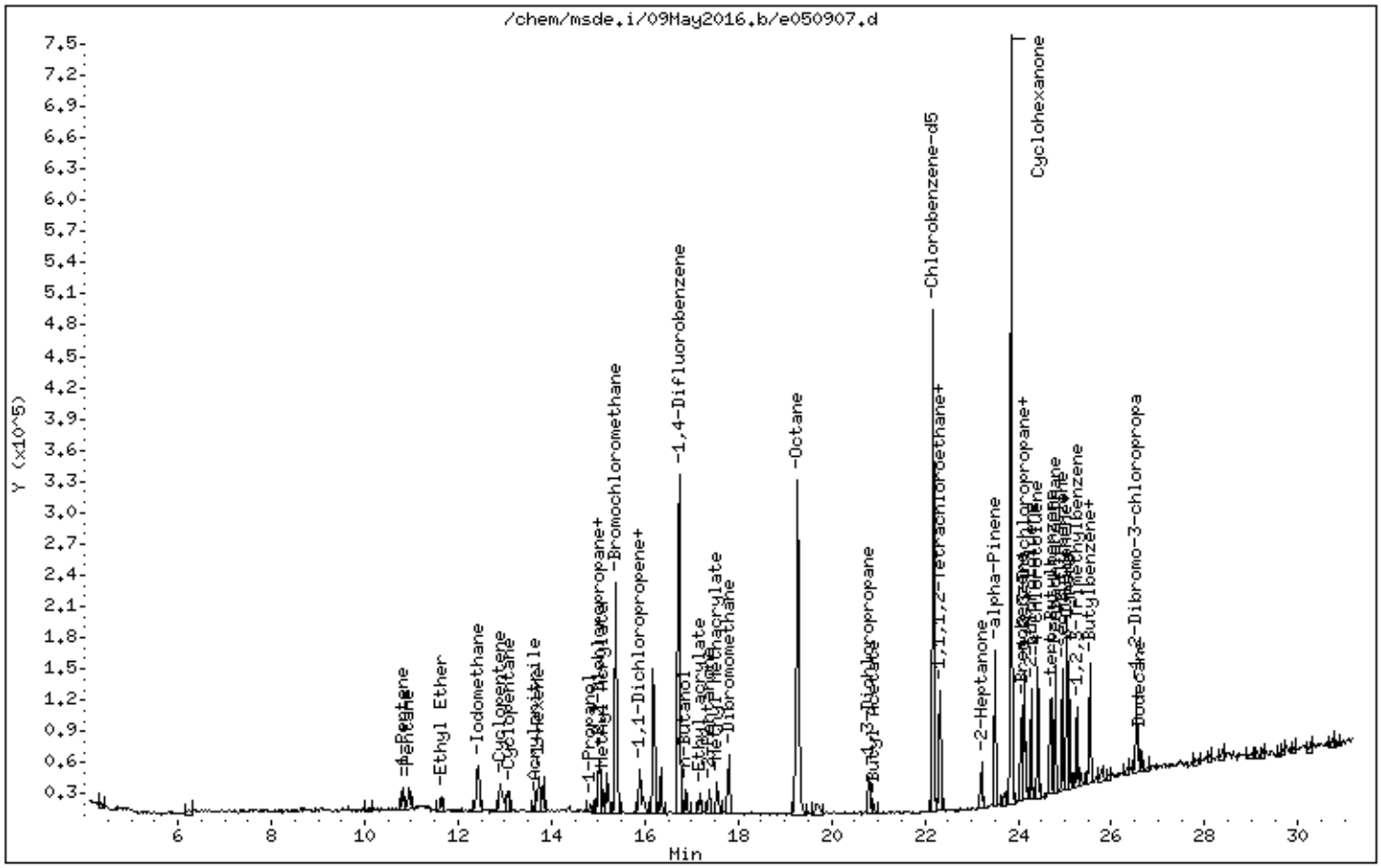
Instrument: msde.i

Sample Info: 25mL# 2789-105

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/30Mar2016.b/e033007.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 30-MAR-2016 14:41
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2789-45
Misc Info : 0.5ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/30Mar2016.b/e16l0317c.m
Meth Date : 30-Mar-2016 17:06 ealcan Quant Type: ISTD
Cal Date : 30-MAR-2016 14:41 Cal File: e033007.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.233	12.233 (0.785)	56	5072	0.50000	0.5470	0.00- 0.00	100.00
12.233	12.233 (0.785)	55	3491			0.00- 0.00	68.83
* 98 Bromochloromethane					CAS #: 74-97-5		
15.580	15.580 (1.000)	130	160675	5.00000		80.00- 120.00	100.00
15.580	15.580 (1.000)	128	122937			52.25- 112.25	76.51
15.580	15.580 (1.000)	49	122426			89.81- 149.81	76.19
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.939	16.939 (1.000)	114	583618	5.00000		80.00- 120.00	100.00
16.939	16.939 (1.000)	88	86106			0.00- 45.20	14.75
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	538362	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	280990			20.64- 80.64	52.19

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e033007.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/30Mar2016.b/e16l0317c.m
Misc Info: 0.5ppbv (5.0ppbv) Acrolein

Calibration Date: 30-MAR-2016
Calibration Time: 11:07
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190719	114431	267007	160675	-15.75
123 1,4-Difluorobenze	725285	435171	1015399	583618	-19.53
163 Chlorobenzene-d5	658854	395312	922396	538362	-18.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/30Mar2016.b/e033007.d

Date : 30-MAR-2016 14:41

Client ID: Level 7

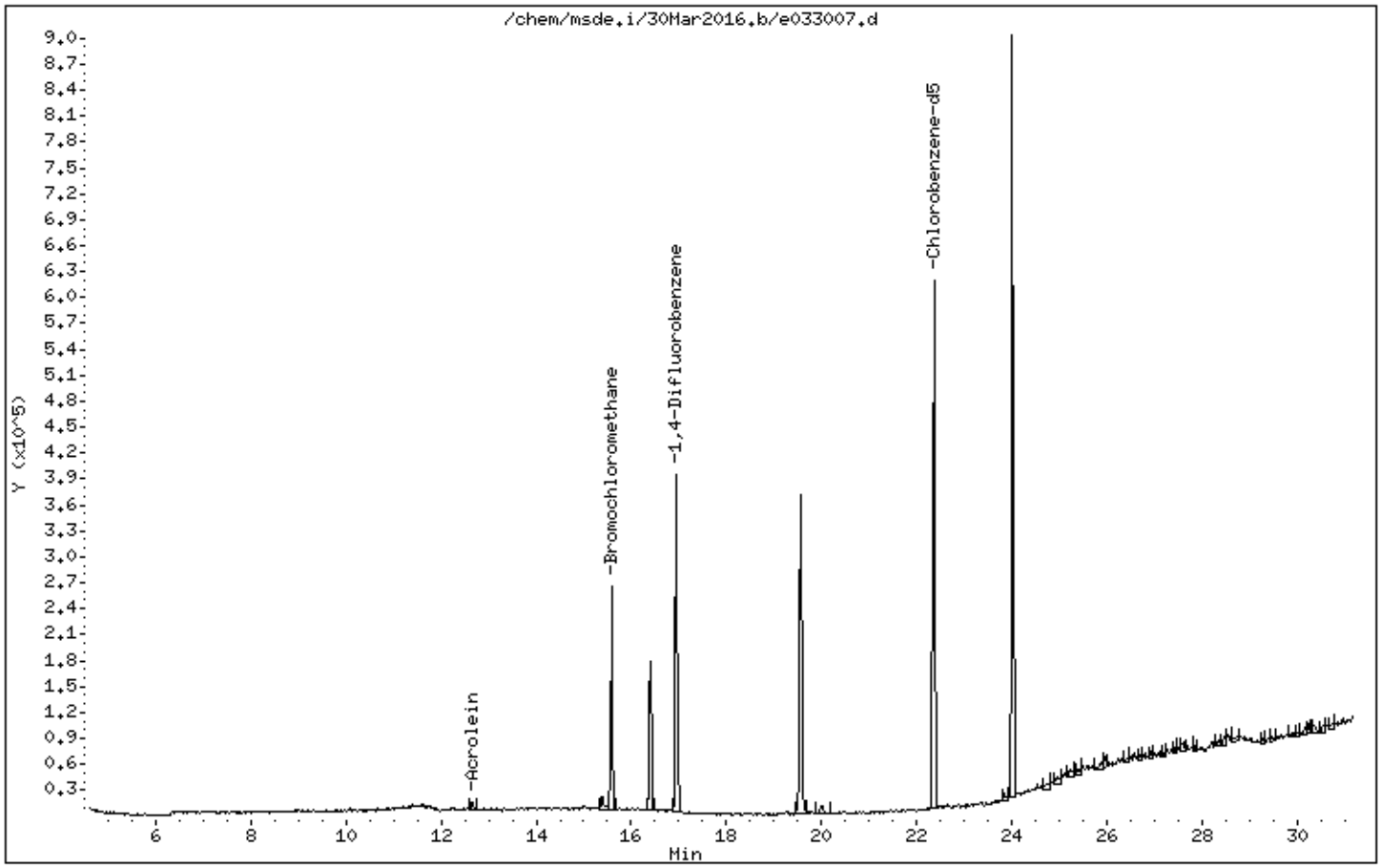
Instrument: msde.i

Sample Info: 25mL# 2789-45

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/25Mar2016.b/e032505.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 25-MAR-2016 12:18
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2789-4
Misc Info : 0.5ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/25Mar2016.b/e16l0317b.m
Meth Date : 25-Mar-2016 15:05 efinn Quant Type: ISTD
Cal Date : 25-MAR-2016 12:18 Cal File: e032505.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Combo-AT1ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
10.786	10.786 (0.692)	106	21029	0.50000	0.5038	0.00- 0.00	100.00
10.786	10.786 (0.692)	108	18049			0.00- 0.00	85.83
36 1-Pentene					CAS #: 109-67-1		
11.014	11.014 (0.707)	55	16128	0.50000	0.5057	0.00- 0.00	100.00
11.014	11.014 (0.707)	42	17081			0.00- 0.00	105.91
34 Pentane					CAS #: 109-66-0		
11.147	11.147 (0.715)	43	26431	0.50000	0.4647	0.00- 0.00	100.00(a)
11.166	11.166 (0.717)	57	4681			0.00- 0.00	17.71
11.147	11.147 (0.715)	72	4082			0.00- 0.00	15.44
44 Ethyl Ether					CAS #: 60-29-7		
11.833	11.833 (0.759)	74	12085	0.50000	0.5604	0.00- 0.00	100.00(T)
11.833	11.833 (0.759)	59	12751			0.00- 0.00	105.51
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00

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

   53 Iodomethane                                   CAS #: 74-88-4
 12.614  12.614 (0.810)   142     62424 0.50000   0.4643   0.00-   0.00   100.00(a)
 12.614  12.614 (0.810)   127     29979                    0.00-   0.00    48.02
-------------------------------------------------------------------------------
   63 Acetonitrile                                  CAS #: 75-05-8
 13.185  13.185 (0.846)    41     11554 0.50000   0.4344   0.00-   0.00   100.00(a)
 13.185  13.185 (0.846)    40      7909                    0.00-   0.00    68.45
 13.185  13.185 (0.846)    39      2478                    0.00-   0.00    21.45
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.280  13.280 (0.852)    70     12859 0.50000   0.4684   0.00-   0.00   100.00(a)
 13.280  13.280 (0.852)    55     12297                    0.00-   0.00    95.63
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.838  13.838 (0.888)    53     13449 0.50000   0.4605   0.00-   0.00   100.00(a)
 13.838  13.838 (0.888)    52     11693                    0.00-   0.00    86.94
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.921  13.921 (0.894)    55     14001 0.50000   0.5167   0.00-   0.00   100.00
 13.921  13.921 (0.894)    41     18178                    0.00-   0.00   129.83
 13.921  13.921 (0.894)    84      6440                    0.00-   0.00    46.00
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.221  15.221 (0.977)    70      3856 0.50000   0.4392   0.00-   0.00   100.00(a)
 15.221  15.221 (0.977)    43     30291                    0.00-   0.00   785.55
 15.202  15.202 (0.976)    61     11197                    0.00-   0.00   290.38
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.316  15.316 (0.983)    55     28307 0.50000   0.4627   0.00-   0.00   100.00(a)
 15.316  15.316 (0.983)    85      5739                    0.00-   0.00    20.27
 15.316  15.316 (0.983)    58      2663                    0.00-   0.00     9.41
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    218878 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    136361                   52.25- 112.25    62.30
 15.580  15.580 (1.000)    49    166797                   89.81- 149.81    76.21
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    679944 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    104204                    0.00-  45.20    15.33
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                CAS #: 140-88-5
 17.397  17.397 (1.027)    99      2819 0.50000   0.5553   0.00-   0.00   100.00
 17.397  17.397 (1.027)    45      2551                    0.00-   0.00    90.49
 17.397  17.397 (1.027)    55     25777                    0.00-   0.00   914.40
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE		RATIO
131 2-Pentanone					CAS #: 107-87-9			
17.614	17.614 (1.040)	43	33285	0.50000	0.5214	0.00-	0.00	100.00
17.614	17.614 (1.040)	58	3270			0.00-	0.00	9.82
17.614	17.614 (1.040)	86	8440			0.00-	0.00	25.36
134 Methyl Methacrylate					CAS #: 80-62-6			
17.782	17.782 (1.050)	41	17123	0.50000	0.5376	0.00-	0.00	100.00
17.782	17.782 (1.050)	69	15233			0.00-	0.00	88.96
17.782	17.782 (1.050)	100	7284			0.00-	0.00	42.54
137 Dibromomethane					CAS #: 74-95-3			
18.047	18.047 (1.065)	174	25362	0.50000	0.5264	0.00-	0.00	100.00
18.047	18.047 (1.065)	93	22219			0.00-	0.00	87.61
18.047	18.047 (1.065)	95	18107			0.00-	0.00	71.39
148 Octane					CAS #: 111-65-9			
19.601	19.601 (1.157)	57	19810	0.50000	0.5422	0.00-	0.00	100.00
19.624	19.624 (1.158)	85	27203			0.00-	0.00	137.32
19.624	19.624 (1.158)	43	41315			0.00-	0.00	208.56
* 163 Chlorobenzene-d5					CAS #: 3114-55-4			
22.365	22.365 (1.000)	117	614814	5.00000		80.00-	120.00	100.00
22.365	22.365 (1.000)	82	320182			20.64-	80.64	52.08
170 Nonane					CAS #: 111-84-2			
22.490	22.490 (1.006)	43	37181	0.50000	0.5410	0.00-	0.00	100.00
22.490	22.490 (1.006)	57	38130			0.00-	0.00	102.55
22.490	22.490 (1.006)	85	17244			0.00-	0.00	46.38
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6			
24.289	24.289 (1.086)	75	49675	0.50000	0.5321	0.00-	0.00	100.00
24.289	24.289 (1.086)	89	4890			0.00-	0.00	9.84
24.267	24.267 (1.085)	53	7822			0.00-	0.00	15.75
187 Decane					CAS #: 124-18-5			
24.581	24.581 (1.099)	57	33845	0.50000	0.5216	0.00-	0.00	100.00
24.581	24.581 (1.099)	71	631			0.00-	0.00	1.86
24.603	24.603 (1.100)	142	6779			0.00-	0.00	20.03
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4			
25.186	25.186 (1.126)	93	41182	0.50000	0.5312	0.00-	0.00	100.00
25.186	25.186 (1.126)	95	9523			0.00-	0.00	23.12
25.186	25.186 (1.126)	63	23115			0.00-	0.00	56.13
215 Undecane					CAS #: 1120-21-4			
25.657	25.657 (1.147)	57	13932	0.50000	0.5166	0.00-	0.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
215 Undecane (continued)								
25.657	25.657	(1.147)	43	9219			0.00- 0.00	66.17
25.657	25.657	(1.147)	85	4842			0.00- 0.00	34.75
225 Dodecane						CAS #: 112-40-3		
26.800	26.800	(1.198)	85	1238	0.50000	0.3231	0.00- 0.00	100.00(a)
26.800	26.800	(1.198)	57	2628			0.00- 0.00	212.28
26.800	26.800	(1.198)	43	4515			0.00- 0.00	364.70

QC Flag Legend

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

Report Date: 25-Mar-2016 15:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032505.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/25Mar2016.b/e16l0317b.m
Misc Info: 0.5ppbv (5.0ppbv) Combo

Calibration Date: 25-MAR-2016
Calibration Time: 09:25
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	196631	117979	275283	218878	11.31
123 1,4-Difluorobenze	760212	456127	1064297	679944	-10.56
163 Chlorobenzene-d5	680500	408300	952700	614814	-9.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/25Mar2016.b/e032505.d

Date : 25-MAR-2016 12:18

Client ID: Level 7

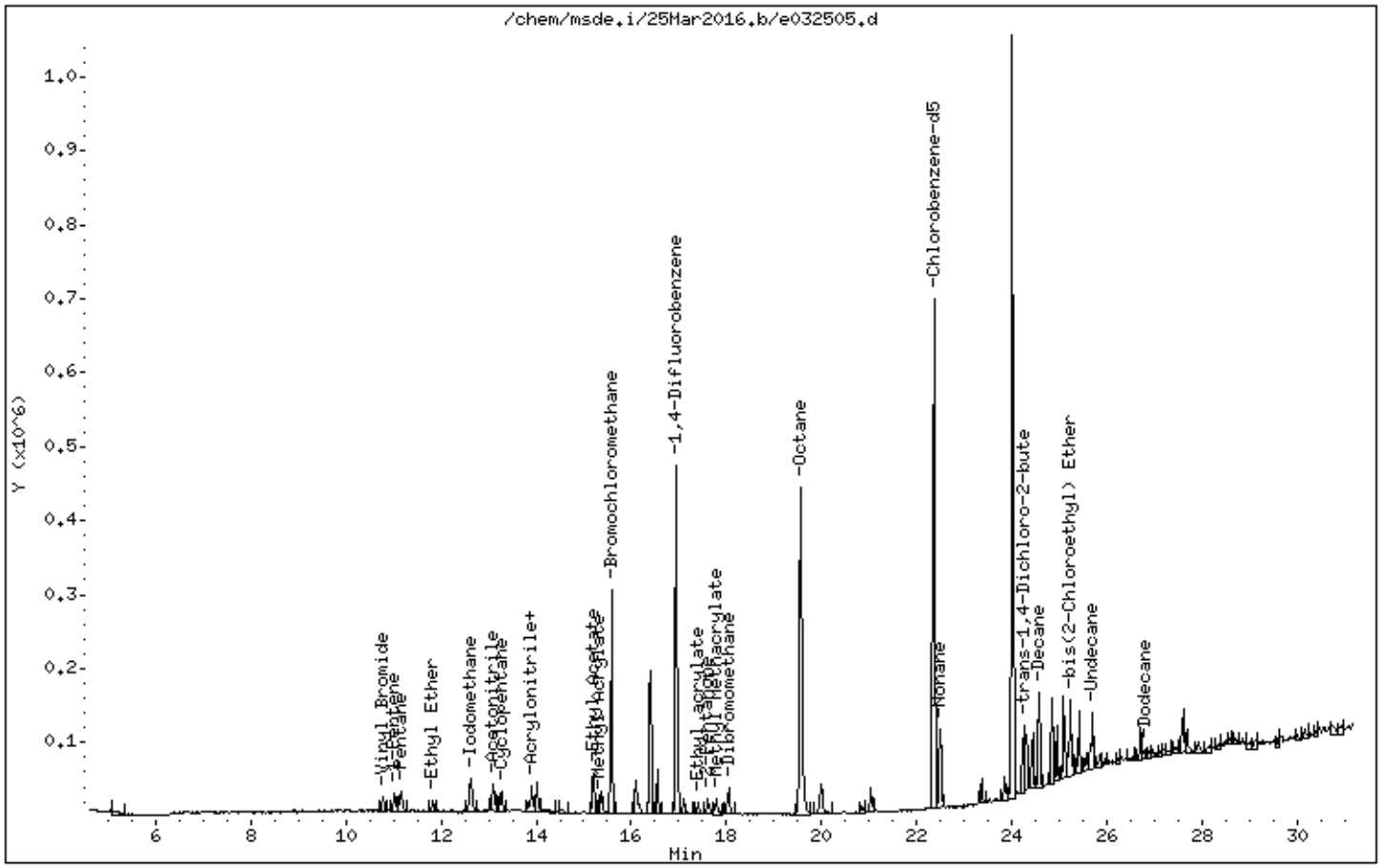
Instrument: msde.i

Sample Info: 25mL# 2789-4

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/22Mar2016.b/e032205.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 22-MAR-2016 12:05
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2759-238
Misc Info : 0.5ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/22Mar2016.b/e16l0317a.m
Meth Date : 24-Mar-2016 08:33 efinn Quant Type: ISTD
Cal Date : 22-MAR-2016 12:05 Cal File: e032205.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE		RATIO
13 Chlorodifluoromethane						CAS #: 75-45-6		
5.962	5.962 (0.383)	51	9267	0.50000	0.5434	0.00-	0.00	100.00(Ta)
5.937	5.937 (0.381)	67	2452			0.00-	0.00	26.46
0.000	1.000 (0.000)	85	0			0.00-	0.00	0.00
16 Freon 142b						CAS #: 75-68-3		
7.070	7.070 (0.454)	65	18373	0.50000	0.5311	0.00-	0.00	100.00(a)
7.070	7.070 (0.454)	45	5069			0.00-	0.00	27.59
7.094	7.094 (0.455)	81	1319			0.00-	0.00	7.18
37 Dichlorofluoromethane						CAS #: 75-43-4		
11.071	11.071 (0.711)	67	20690	0.50000	0.5727	0.00-	0.00	100.00(a)
11.052	11.052 (0.709)	69	8098			0.00-	0.00	39.14
11.071	11.071 (0.711)	47	1883			0.00-	0.00	9.10
48 Freon 123						CAS #: 306-83-2		
12.214	12.214 (0.784)	83	29557	0.50000	0.5298	0.00-	0.00	100.00(a)

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

   48 Freon 123 (continued)
 12.214  12.214 (0.784)   133     10902                     0.00-   0.00    36.88
 12.214  12.214 (0.784)    85     20051                     0.00-   0.00    67.84
-------------------------------------------------------------------------------
   59 Cyclopentene                                  CAS #: 142-29-0
 13.090  13.090 (0.840)    67     14133 0.50000   0.5514   0.00-   0.00   100.00(a)
 13.109  13.109 (0.841)    68      5945                     0.00-   0.00    42.06
 13.090  13.090 (0.840)    53      2628                     0.00-   0.00    18.59
-------------------------------------------------------------------------------
   84 1-Propanol                                    CAS #: 71-23-8
 14.552  14.552 (0.934)    59      2979 0.50000   0.4143   0.00-   0.00   100.00(a)
 14.552  14.552 (0.934)    42      2826                     0.00-   0.00    94.86
 14.552  14.552 (0.934)    41      3572                     0.00-   0.00   119.91
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.202  15.202 (0.976)    77     23752 0.50000   0.5242   0.00-   0.00   100.00(a)
 15.202  15.202 (0.976)    79      8681                     0.00-   0.00    36.55
 15.202  15.202 (0.976)    97      3915                     0.00-   0.00    16.48
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    192463 5.00000            80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    151465                    52.25- 112.25    78.70
 15.580  15.580 (1.000)    49    149562                    89.81- 149.81    77.71
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                           CAS #: 563-58-6
 16.104  16.104 (1.034)   110      6292 0.50000   0.5326   0.00-   0.00   100.00(a)
 16.104  16.104 (1.034)    75     18702                     0.00-   0.00   297.23
-------------------------------------------------------------------------------
  115 Isobutanol                                    CAS #: 78-83-1
 16.166  16.166 (1.038)    43     18773 0.50000   0.5402   0.00-   0.00   100.00(a)
 16.166  16.166 (1.038)    41     13114                     0.00-   0.00    69.86
 16.166  16.166 (1.038)    55      1703                     0.00-   0.00     9.07
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    745012 5.00000            80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    117815                     0.00-  45.20    15.81
-------------------------------------------------------------------------------
  124 n-Butanol                                     CAS #: 71-36-3
 17.108  17.108 (1.010)    56     21650 0.50000   0.4598   0.00-   0.00   100.00(a)
 17.108  17.108 (1.010)    41     14122                     0.00-   0.00    65.23
 17.108  17.108 (1.010)    43     11513                     0.00-   0.00    53.18
-------------------------------------------------------------------------------
  157 1,3-Dichloropropane                           CAS #: 142-28-9
 21.046  21.046 (0.941)    76     28348 0.50000   0.4992   0.00-   0.00   100.00(a)
 21.046  21.046 (0.941)    41     17177                     0.00-   0.00    60.59
 21.046  21.046 (0.941)    78      9427                     0.00-   0.00    33.25
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
159 Butyl Acetate					CAS #: 123-86-4		
21.128	21.128 (0.945)	56	3101	0.50000	0.4646	0.00- 0.00	100.00(a)
21.128	21.128 (0.945)	73	2689			0.00- 0.00	86.71
21.128	21.128 (0.945)	43	9258			0.00- 0.00	298.55
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	668249	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	345142			20.64- 80.64	51.65
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.511	22.511 (1.006)	131	33708	0.50000	0.4972	0.00- 0.00	100.00(a)
22.511	22.511 (1.006)	117	26328			0.00- 0.00	78.11
22.511	22.511 (1.006)	95	13212			0.00- 0.00	39.20
173 2-Heptanone					CAS #: 110-43-0		
23.381	23.381 (1.045)	58	23124	0.50000	0.4706	0.00- 0.00	100.00(a)
23.381	23.381 (1.045)	43	32464			0.00- 0.00	140.39
176 Cyclohexanone					CAS #: 108-94-1		
23.975	23.975 (1.072)	55	21636	0.50000	0.5212	0.00- 0.00	100.00(a)
23.975	23.975 (1.072)	98	13327			0.00- 0.00	61.60
23.975	23.975 (1.072)	42	11932			0.00- 0.00	55.15
180 Bromobenzene					CAS #: 108-86-1		
24.244	24.244 (1.084)	156	39767	0.50000	0.5430	0.00- 0.00	100.00(a)
24.244	24.244 (1.084)	158	38643			0.00- 0.00	97.17
24.222	24.222 (1.083)	77	53589			0.00- 0.00	134.76
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.289	24.289 (1.086)	110	18955	0.50000	0.5216	0.00- 0.00	100.00(a)
24.289	24.289 (1.086)	75	47259			0.00- 0.00	249.32
24.289	24.289 (1.086)	61	9344			0.00- 0.00	49.30
189 2-Chlorotoluene					CAS #: 95-49-8		
24.446	24.446 (1.093)	126	25270	0.50000	0.5082	0.00- 0.00	100.00(a)
24.446	24.446 (1.093)	91	70935			0.00- 0.00	280.71
24.446	24.446 (1.093)	65	6930			0.00- 0.00	27.42
191 4-Chlorotoluene					CAS #: 106-43-4		
24.581	24.581 (1.099)	126	27876	0.50000	0.5615	0.00- 0.00	100.00(a)
24.581	24.581 (1.099)	91	67532			0.00- 0.00	242.26
24.581	24.581 (1.099)	63	8195			0.00- 0.00	29.40
195 tert-Butylbenzene					CAS #: 98-06-6		
24.850	24.850 (1.111)	119	81174	0.50000	0.5238	0.00- 0.00	100.00(a)
24.850	24.850 (1.111)	134	21539			0.00- 0.00	26.53

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
195 tert-Butylbenzene (continued)							
24.850	24.850 (1.111)	91	53405			0.00- 0.00	65.79
197 Pentachloroethane					CAS #: 76-01-7		
24.962	24.962 (1.116)	167	28618	0.50000	0.5152	0.00- 0.00	100.00(a)
24.962	24.962 (1.116)	117	25778			0.00- 0.00	90.08
24.962	24.962 (1.116)	169	12242			0.00- 0.00	42.78
203 sec-Butylbenzene					CAS #: 135-98-8		
25.097	25.097 (1.122)	105	106628	0.50000	0.5122	0.00- 0.00	100.00(a)
25.097	25.097 (1.122)	134	25413			0.00- 0.00	23.83
25.097	25.097 (1.122)	91	18784			0.00- 0.00	17.62
207 p-Cymene					CAS #: 99-87-6		
25.253	25.253 (1.129)	119	80868	0.50000	0.4928	0.00- 0.00	100.00(a)
25.253	25.253 (1.129)	134	25683			0.00- 0.00	31.76
25.253	25.253 (1.129)	91	19488			0.00- 0.00	24.10
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.410	25.410 (1.136)	120	24614	0.50000	0.4848	0.00- 0.00	100.00(a)
25.410	25.410 (1.136)	105	60754			0.00- 0.00	246.83
25.410	25.410 (1.136)	77	7429			0.00- 0.00	30.18
213 Butylbenzene					CAS #: 104-51-8		
25.702	25.702 (1.149)	134	20130	0.50000	0.5473	0.00- 0.00	100.00(a)
25.702	25.702 (1.149)	91	65379			0.00- 0.00	324.78
25.702	25.702 (1.149)	92	33177			0.00- 0.00	164.81
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.711	26.711 (1.194)	157	34549	0.50000	0.5229	0.00- 0.00	100.00(a)
26.711	26.711 (1.194)	75	27187			0.00- 0.00	78.69
26.711	26.711 (1.194)	155	25099			0.00- 0.00	72.65

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032205.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/22Mar2016.b/e16l0317a.m
Misc Info: 0.5ppbv (5.0ppbv)

Calibration Date: 22-MAR-2016
Calibration Time: 09:49
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190421	114253	266589	192463	1.07
123 1,4-Difluorobenze	736283	441770	1030796	745012	1.19
163 Chlorobenzene-d5	650623	390374	910872	668249	2.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/22Mar2016.b/e032205.d

Date : 22-MAR-2016 12:05

Client ID: Level 7

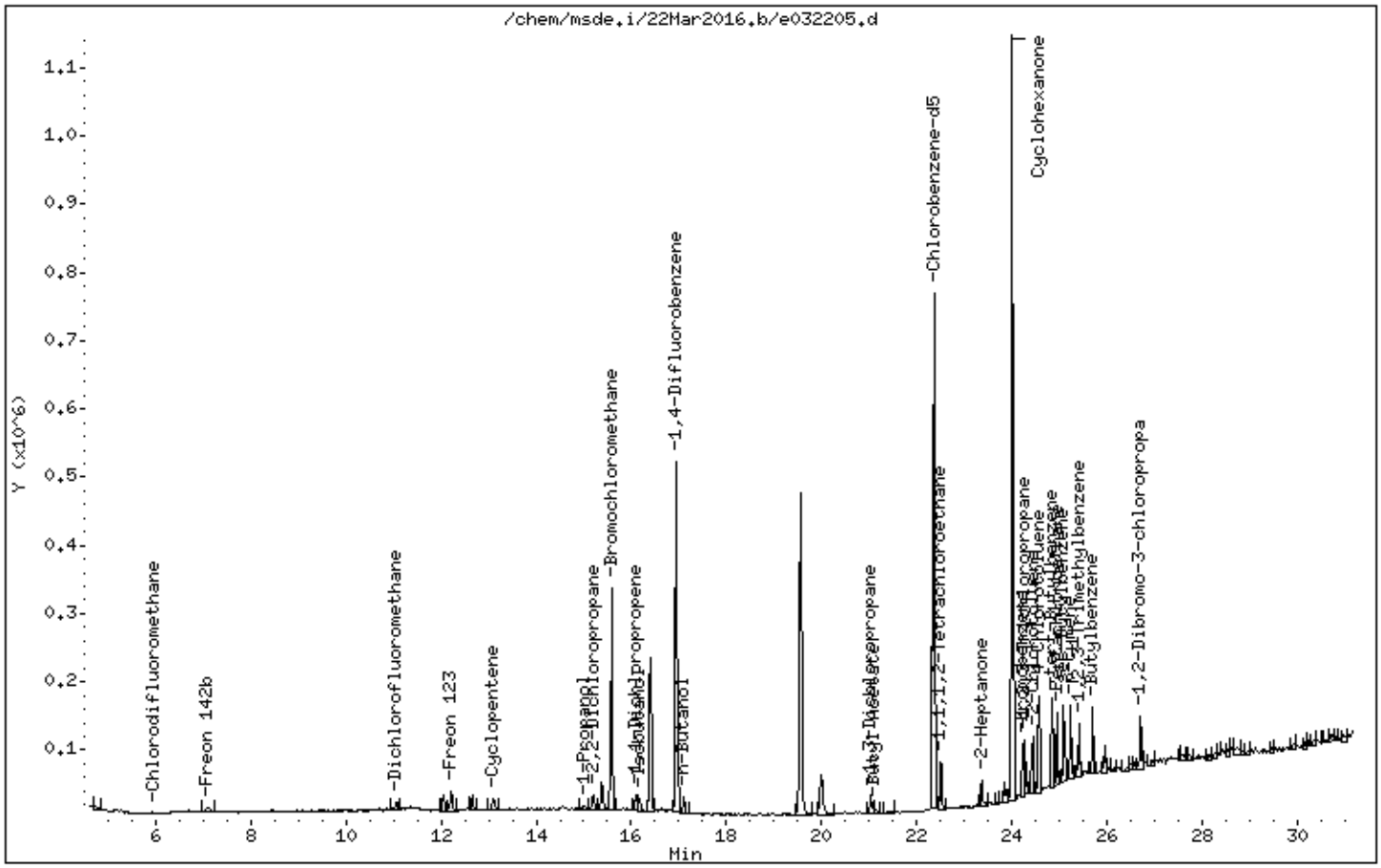
Instrument: msde.i

Sample Info: 25mL# 2759-238

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031708.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 17-MAR-2016 15:49
Operator : ef Inst ID: msde.i
Smp Info : 125mL# 2789-14
Misc Info : 0.5ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 15:49 Cal File: e031708.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.479	5.479 (0.352)	85	65863	0.50000	0.4886	80.00- 120.00	100.00
5.455	5.455 (0.350)	87	11796			2.00- 62.00	17.91
15 Freon 114					CAS #: 76-14-2		
6.829	6.829 (0.438)	135	48005	0.50000	0.4866	80.00- 120.00	100.00
6.853	6.853 (0.440)	137	16207			1.31- 61.31	33.76
6.829	6.829 (0.438)	85	61866			93.88- 153.88	128.87
17 Chloromethane					CAS #: 74-87-3		
7.191	7.191 (0.462)	50	12865	0.50000	0.5030	80.00- 120.00	100.00
7.191	7.191 (0.462)	52	4013			5.50- 65.50	31.19
23 Butane					CAS #: 106-97-8		
7.871	7.871 (0.505)	58	3240	0.50000	0.4890	80.00- 120.00	100.00
7.889	7.889 (0.506)	43	22050			588.57- 648.57	680.56

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
25 Vinyl Chloride					CAS #: 75-01-4		
8.010	8.010 (0.514)	62	17191	0.50000	0.4778	80.00- 120.00	100.00
8.028	8.028 (0.515)	64	6804			3.14- 63.14	39.58
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	10553	0.50000	0.4360	80.00- 120.00	100.00
8.253	8.253 (0.530)	39	11479			65.21- 125.21	108.77
29 Bromomethane					CAS #: 74-83-9		
9.711	9.711 (0.623)	94	17963	0.50000	0.4575	80.00- 120.00	100.00
9.729	9.729 (0.624)	96	16493			64.16- 124.16	91.82
30 Chloroethane					CAS #: 75-00-3		
10.195	10.195 (0.654)	64	7912	0.50000	0.4654	80.00- 120.00	100.00
10.195	10.195 (0.654)	49	2714			0.00- 54.91	34.30
10.214	10.214 (0.656)	66	3526			3.62- 63.62	44.57
31 Isopentane					CAS #: 78-78-4		
10.328	10.328 (0.663)	57	13727	0.50000	0.5570	80.00- 120.00	100.00
10.328	10.328 (0.663)	43	16333			82.69- 142.69	118.98
10.328	10.328 (0.663)	42	14683			68.65- 128.65	106.96
35 Freon 11					CAS #: 75-69-4		
10.957	10.957 (0.703)	101	71732	0.50000	0.4942	80.00- 120.00	100.00
10.957	10.957 (0.703)	103	45080			37.17- 97.17	62.85
42 Ethanol					CAS #: 64-17-5		
11.852	11.852 (0.761)	45	6179	0.50000	0.5875	80.00- 120.00	100.00
11.852	11.852 (0.761)	46	2212			6.61- 66.61	35.80
11.871	11.871 (0.762)	43	1269			0.00- 54.66	20.54
49 Freon 113					CAS #: 76-13-1		
12.271	12.271 (0.788)	151	50809	0.50000	0.4671	80.00- 120.00	100.00
12.271	12.271 (0.788)	153	32638			33.64- 93.64	64.24
12.252	12.252 (0.786)	101	52073			80.40- 140.40	102.49
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.290	12.290 (0.789)	98	15291	0.50000	0.5041	80.00- 120.00	100.00
12.290	12.290 (0.789)	61	32072			204.89- 264.89	209.74
12.290	12.290 (0.789)	96	27183			127.69- 187.69	177.77
52 Acetone					CAS #: 67-64-1		
12.556	12.556 (0.806)	58	11049	0.50000	0.6229	80.00- 120.00	100.00
12.556	12.556 (0.806)	43	37354			321.47- 381.47	338.08
56 Carbon Disulfide					CAS #: 75-15-0		
12.652	12.652 (0.812)	76	81551	0.50000	0.6032	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					CAS #: 67-63-0		
12.899	12.899 (0.828)	45	26616	0.50000	0.4905	80.00- 120.00	100.00
12.918	12.918 (0.829)	43	7294			0.00- 54.09	27.40
12.899	12.899 (0.828)	59	1062			0.00- 34.43	3.99
58 3-Chloropropene					CAS #: 107-05-1		
13.071	13.071 (0.839)	76	11083	0.50000	0.5484	80.00- 120.00	100.00
13.071	13.071 (0.839)	41	18332			163.76- 223.76	165.41
66 Methylene Chloride					CAS #: 75-09-2		
13.356	13.356 (0.857)	84	21026	0.50000	0.4947	80.00- 120.00	100.00
13.356	13.356 (0.857)	49	19793			63.99- 123.99	94.14
13.356	13.356 (0.857)	51	5085			0.29- 60.29	24.18
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.564	13.564 (0.871)	59	50938	0.50000	0.5132	80.00- 120.00	100.00
13.564	13.564 (0.871)	41	10281			0.00- 51.66	20.18
13.564	13.564 (0.871)	57	5356			0.00- 43.50	10.51
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.674	13.674 (0.878)	73	66341	0.50000	0.4881	80.00- 120.00	100.00
13.674	13.674 (0.878)	57	11347			0.00- 48.26	17.10
13.674	13.674 (0.878)	41	11703			0.00- 45.58	17.64
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.728	13.728 (0.881)	98	14424	0.50000	0.4682	80.00- 120.00	100.00
13.728	13.728 (0.881)	61	30977			155.28- 215.28	214.76
13.728	13.728 (0.881)	96	28787			126.18- 186.18	199.58
78 Hexane					CAS #: 110-54-3		
14.003	14.003 (0.899)	57	24870	0.50000	0.4691	80.00- 120.00	100.00
14.003	14.003 (0.899)	43	16635			21.48- 81.48	66.89
14.003	14.003 (0.899)	86	6568			0.00- 51.51	26.41
83 Isopropyl ether					CAS #: 108-20-3		
14.360	14.360 (0.922)	45	47980	0.50000	0.4962	80.00- 120.00	100.00
14.360	14.360 (0.922)	87	21297			9.88- 69.88	44.39
14.360	14.360 (0.922)	59	6200			0.00- 42.70	12.92
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.415	14.415 (0.925)	63	39305	0.50000	0.4875	80.00- 120.00	100.00
14.415	14.415 (0.925)	65	14597			1.78- 61.78	37.14
86 Vinyl Acetate					CAS #: 108-05-4		
14.442	14.442 (0.927)	86	6358	0.50000	0.5069	80.00- 120.00	100.00
14.442	14.442 (0.927)	42	5047			44.70- 104.70	79.38

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

   86 Vinyl Acetate (continued)
 14.442  14.442 (0.927)    43     42791                  757.33- 817.33   673.03
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59     56396 0.50000   0.4569  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87     32355                   19.74-  79.74    57.37
 14.859  14.859 (0.954)    41     10148                    0.00-  46.34    17.99
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.240  15.240 (0.978)    98     16370 0.50000   0.4857  80.00- 120.00   100.00
 15.240  15.240 (0.978)    61     30060                  145.90- 205.90   183.63
 15.240  15.240 (0.978)    96     27852                  125.53- 185.53   170.14
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.240  15.240 (0.978)    72     10323 0.50000   0.4832  80.00- 120.00   100.00
 15.240  15.240 (0.978)    43     33949                  262.26- 322.26   328.87
 15.240  15.240 (0.978)    57      3372                    0.00-  55.71    32.66
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42     17322 0.50000   0.4418  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71      9116                   26.85-  86.85    52.63
 15.580  15.580 (1.000)    72      9066                   32.22-  92.22    52.34
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.580  15.580 (1.000)   130    160269 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    123651                   52.25- 112.25    77.15
 15.580  15.580 (1.000)    49    130750                   89.81- 149.81    81.58
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.641  15.641 (1.004)    83     55910 0.50000   0.4832  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85     40228                   33.97-  93.97    71.95
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.888  15.888 (1.020)    84     29124 0.50000   0.4850  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56     25780                   58.69- 118.69    88.52
 15.888  15.888 (1.020)    41     16174                   18.98-  78.98    55.53
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.888  15.888 (1.020)    97     62304 0.50000   0.4629  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99     41465                   34.21-  94.21    66.55
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 16.073  16.073 (1.032)   119     58091 0.50000   0.4407  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117     61776                   74.09- 134.09   106.34
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.313  16.313 (1.047)    56     32515 0.50000   0.4843  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane (continued)
 16.313  16.313 (1.047)    57    100557                   306.64- 366.64   309.26
 16.313  16.313 (1.047)    41     30898                    64.14- 124.14    95.03
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.409  16.409 (0.969)    78     67573 0.50000   0.4865  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77     16104                     0.00-  53.97    23.83
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    228730 5.00000    4.971  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    116209                    21.16-  81.16    50.81
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                       CAS #: 994-05-8
 16.433  16.433 (0.970)    87     19877 0.50000   0.5573  80.00- 120.00   100.00
 16.433  16.433 (0.970)    73     66562                   338.86- 398.86   334.87
 16.433  16.433 (0.970)    55     13779                    44.52- 104.52    69.32
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.505  16.505 (0.974)    62     36953 0.50000   0.5104  80.00- 120.00   100.00
 16.505  16.505 (0.974)    64     14071                     1.03-  61.03    38.08
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.553  16.553 (0.977)    57     15401 0.50000   0.4677  80.00- 120.00   100.00
 16.553  16.553 (0.977)   100      9707                    28.67-  88.67    63.03
 16.553  16.553 (0.977)    43     25968                   128.92- 188.92   168.61
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    579661 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     87795                     0.00-  45.20    15.15
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.373  17.373 (1.026)   130     36646 0.50000   0.5086  80.00- 120.00   100.00
 17.373  17.373 (1.026)    95     35493                    63.99- 123.99    96.85
 17.373  17.373 (1.026)    97     20508                    29.21-  89.21    55.96
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.590  17.590 (1.038)    83     38644 0.50000   0.4997  80.00- 120.00   100.00
 17.590  17.590 (1.038)    55     24891                    31.29-  91.29    64.41
 17.590  17.590 (1.038)    56      8129                     0.00-  48.78    21.04
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.806  17.806 (1.051)    63     19925 0.50000   0.4455  80.00- 120.00   100.00
 17.806  17.806 (1.051)    62     14997                    34.19-  94.19    75.27
 17.806  17.806 (1.051)    41     13836                    27.38-  87.38    69.44
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.951  17.951 (1.060)    88     16822 0.50000   0.5022  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  136 1,4-Dioxane (continued)
 17.927  17.927 (1.058)    58      8683                    25.03-  85.03    51.62
 17.927  17.927 (1.058)    57      3866                     0.00-  50.67    22.98
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 18.240  18.240 (1.077)    83     59163 0.50000   0.5132  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85     36683                    35.15-  95.15    62.00
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 19.086  19.086 (1.127)    75     42928 0.50000   0.4997  80.00- 120.00   100.00
 19.086  19.086 (1.127)    77     12905                     0.45-  60.45    30.06
 19.063  19.063 (1.125)    39     18050                    13.69-  73.69    42.05
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 19.265  19.265 (1.137)    43     34130 0.50000   0.4761  80.00- 120.00   100.00
 19.265  19.265 (1.137)    58     14887                    15.64-  75.64    43.62
 19.265  19.265 (1.137)    85      8101                     0.00-  56.71    23.74
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    564476 5.00000    4.958  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     62501                     0.00-  40.11    11.07
 19.556  19.556 (1.155)   100    373467                    37.58-  97.58    66.16
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 19.713  19.713 (1.164)    91     82745 0.50000   0.5001  80.00- 120.00   100.00
 19.713  19.713 (1.164)    92     47639                    28.92-  88.92    57.57
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                     CAS #: 10061-02-6
 20.304  20.304 (0.908)    75     38297 0.50000   0.4633  80.00- 120.00   100.00
 20.304  20.304 (0.908)    77     12107                     0.55-  60.55    31.61
 20.276  20.276 (0.907)    39     15380                     8.25-  68.25    40.16
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.688  20.688 (0.925)    97     29235 0.50000   0.4543  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99     18922                    32.91-  92.91    64.72
 20.688  20.688 (0.925)    83     25757                    47.93- 107.93    88.10
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.853  20.853 (0.932)   166     50034 0.50000   0.5046  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129     32964                    42.31- 102.31    65.88
 20.853  20.853 (0.932)   131     36148                    40.11- 100.11    72.25
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 21.018  21.018 (0.940)    58     18262 0.50000   0.4410  80.00- 120.00   100.00
 21.018  21.018 (0.940)    43     32894                   140.44- 200.44   180.12
 21.018  21.018 (0.940)   100      5378                     0.00-  59.62    29.45
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
160 Dibromochloromethane						CAS #: 124-48-1	
21.430	21.430 (0.958)	129	64792	0.50000	0.4960	80.00- 120.00	100.00
21.430	21.430 (0.958)	127	52098			46.82- 106.82	80.41
161 1,2-Dibromoethane (EDB)						CAS #: 106-93-4	
21.677	21.677 (0.969)	107	48325	0.50000	0.4894	80.00- 120.00	100.00
21.677	21.677 (0.969)	109	46737			65.45- 125.45	96.71
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.365	22.365 (1.000)	117	533837	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	273041			20.64- 80.64	51.15
165 Chlorobenzene						CAS #: 108-90-7	
22.407	22.407 (1.002)	112	71133	0.50000	0.4925	80.00- 120.00	100.00
22.407	22.407 (1.002)	114	22289			2.42- 62.42	31.33
22.407	22.407 (1.002)	77	45094			23.54- 83.54	63.39
167 Ethyl Benzene						CAS #: 100-41-4	
22.490	22.490 (1.006)	106	33987	0.50000	0.4832	80.00- 120.00	100.00
22.490	22.490 (1.006)	91	104532			282.51- 342.51	307.56
169 m,p-Xylene						CAS #: 108-38-3	
22.656	22.656 (1.013)	106	39486	0.50000	0.4832	80.00- 120.00	100.00
22.656	22.656 (1.013)	91	82293			166.46- 226.46	208.41
171 o-Xylene						CAS #: 95-47-6	
23.257	23.257 (1.040)	106	35774	0.50000	0.4773	80.00- 120.00	100.00
23.257	23.257 (1.040)	91	79785			184.01- 244.01	223.03
172 Styrene						CAS #: 100-42-5	
23.298	23.298 (1.042)	104	57514	0.50000	0.4535	80.00- 120.00	100.00
23.298	23.298 (1.042)	78	31788			20.27- 80.27	55.27
174 Bromoform						CAS #: 75-25-2	
23.639	23.639 (1.057)	173	61161	0.50000	0.4726	80.00- 120.00	100.00
23.639	23.639 (1.057)	171	30338			20.88- 80.88	49.60
175 Cumene						CAS #: 98-82-8	
23.728	23.728 (1.061)	105	119322	0.50000	0.4682	80.00- 120.00	100.00
23.728	23.728 (1.061)	120	32756			0.00- 57.47	27.45
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4	
24.020	24.020 (1.074)	174	364296	5.00000	4.973	80.00- 120.00	100.00
24.020	24.020 (1.074)	95	393023			77.42- 137.42	107.89
24.020	24.020 (1.074)	176	348893			65.38- 125.38	95.77

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.199	24.199 (1.082)	83	54946	0.50000	0.4630	80.00- 120.00	100.00
24.199	24.199 (1.082)	85	38975			35.73- 95.73	70.93
182 Propylbenzene					CAS #: 103-65-1		
24.267	24.267 (1.085)	91	134960	0.50000	0.5028	80.00- 120.00	100.00
24.267	24.267 (1.085)	120	30260			0.00- 55.24	22.42
188 4-Ethyltoluene					CAS #: 622-96-8		
24.401	24.401 (1.091)	105	104115	0.50000	0.4576	80.00- 120.00	100.00
24.401	24.401 (1.091)	120	34032			1.08- 61.08	32.69
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.468	24.468 (1.094)	105	82544	0.50000	0.4672	80.00- 120.00	100.00
24.468	24.468 (1.094)	120	44179			18.44- 78.44	53.52
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.917	24.917 (1.114)	105	66372	0.50000	0.4336	80.00- 120.00	100.00
24.917	24.917 (1.114)	120	32147			16.20- 76.20	48.43
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.320	25.320 (1.132)	146	68785	0.50000	0.4759	80.00- 120.00	100.00
25.320	25.320 (1.132)	148	45513			35.51- 95.51	66.17
25.320	25.320 (1.132)	111	26877			9.35- 69.35	39.07
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.433	25.433 (1.137)	146	62668	0.50000	0.4623	80.00- 120.00	100.00
25.433	25.433 (1.137)	148	38731			32.61- 92.61	61.80
25.433	25.433 (1.137)	111	24998			6.90- 66.90	39.89
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.567	25.567 (1.143)	91	78449	0.50000	0.4600	80.00- 120.00	100.00
25.567	25.567 (1.143)	126	17914			0.00- 51.82	22.84
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.858	25.858 (1.156)	146	61135	0.50000	0.4931	80.00- 120.00	100.00
25.858	25.858 (1.156)	148	39452			33.69- 93.69	64.53
25.858	25.858 (1.156)	111	25261			8.96- 68.96	41.32
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	27688	0.50000	0.4925	80.00- 120.00	100.00
27.607	27.607 (1.234)	182	29902			66.05- 126.05	108.00
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	37612	0.50000	0.4920	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	25813			33.78- 93.78	68.63

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.921	27.921	(1.248)	128	3806	0.05000	0.04636	80.00- 120.00	100.00(a)
27.898	27.898	(1.247)	127	2356			0.00- 46.39	61.90

QC Flag Legend

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

Report Date: 23-Mar-2016 08:52

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031708.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 0.5ppbv (1.0ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	160269	-2.84
123 1,4-Difluorobenze	626935	376161	877709	579661	-7.54
163 Chlorobenzene-d5	567678	340607	794749	533837	-5.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031708.d

Date : 17-MAR-2016 15:49

Client ID: Level 7

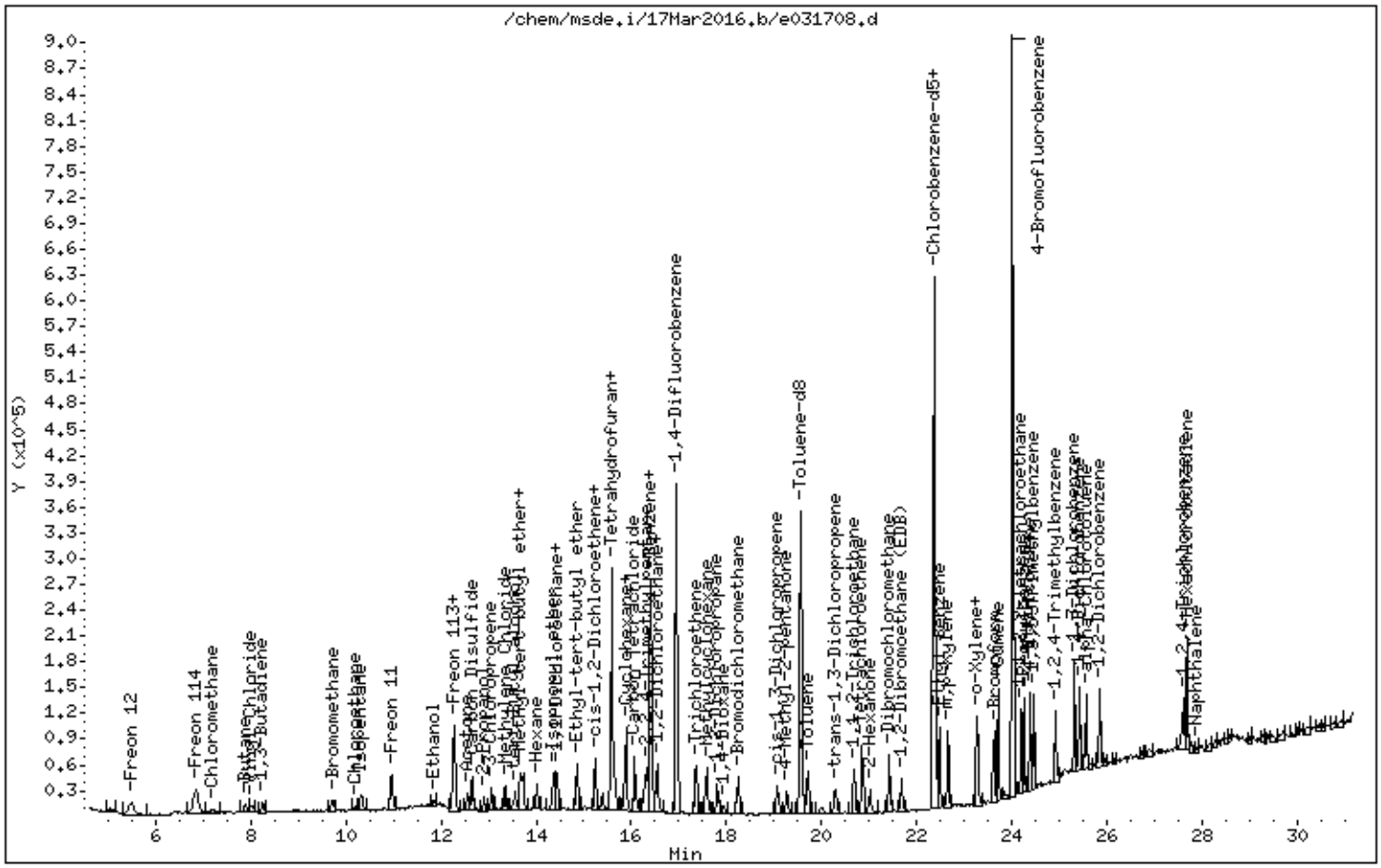
Instrument: msde.i

Sample Info: 125mL# 2789-14

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050908.d
Lab Smp Id: ICAL Level 8
Inj Date : 09-MAY-2016 12:03
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2789-105
Misc Info : 1.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 10-May-2016 10:48 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 12:03 Cal File: e050908.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.824	10.824 (0.703)	55	21035	1.00000	0.9431	0.00- 0.00	100.00
10.824	10.824 (0.703)	42	23586			0.00- 0.00	112.13
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	39909	1.00000	1.021	0.00- 0.00	100.00
10.957	10.957 (0.712)	57	7911			0.00- 0.00	19.82
10.957	10.957 (0.712)	72	6275			0.00- 0.00	15.72
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	19929	1.00000	1.100	0.00- 0.00	100.00(T)
11.623	11.623 (0.755)	59	22225			0.00- 0.00	111.52
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	114470	1.00000	1.018	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	49338			0.00- 0.00	43.10
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	76141	1.00000	0.9981	0.00- 0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
59 Cyclopentene (continued)							
12.900	12.900 (0.838)	68	29667			0.00- 0.00	38.96
12.900	12.900 (0.838)	53	13565			0.00- 0.00	17.82
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	18571	1.00000	0.9434	0.00- 0.00	100.00
13.067	13.067 (0.849)	55	19025			0.00- 0.00	102.44
74 Acrylonitrile					CAS #: 107-13-1		
13.643	13.643 (0.886)	53	24749	1.00000	1.078	0.00- 0.00	100.00
13.643	13.643 (0.886)	52	17855			0.00- 0.00	72.14
76 1-Hexene					CAS #: 592-41-6		
13.726	13.726 (0.892)	55	19211	1.00000	0.9610	0.00- 0.00	100.00
13.726	13.726 (0.892)	41	27074			0.00- 0.00	140.93
13.726	13.726 (0.892)	84	10876			0.00- 0.00	56.61
84 1-Propanol					CAS #: 71-23-8		
14.357	14.357 (0.933)	59	5832	1.00000	0.9372	0.00- 0.00	100.00
14.357	14.357 (0.933)	42	4556			0.00- 0.00	78.12
14.385	14.385 (0.935)	41	3518			0.00- 0.00	60.32
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.009	15.009 (0.975)	77	92126	1.00000	1.035	0.00- 0.00	100.00
15.009	15.009 (0.975)	79	29466			0.00- 0.00	31.98
15.009	15.009 (0.975)	97	17258			0.00- 0.00	18.73
94 Ethyl Acetate					CAS #: 141-78-6		
15.047	15.047 (0.978)	70	7856	1.00000	1.022	0.00- 0.00	100.00
15.047	15.047 (0.978)	43	54665			0.00- 0.00	695.84
15.047	15.047 (0.978)	61	20434			0.00- 0.00	260.11
93 Methyl Acrylate					CAS #: 96-33-3		
15.123	15.123 (0.983)	55	58469	1.00000	0.9881	0.00- 0.00	100.00
15.123	15.123 (0.983)	85	15014			0.00- 0.00	25.68
15.123	15.123 (0.983)	58	5333			0.00- 0.00	9.12
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	137001	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	99124			52.25- 112.25	72.35
15.391	15.391 (1.000)	49	97605			89.81- 149.81	71.24
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.885	15.885 (1.032)	110	24149	1.00000	0.9435	0.00- 0.00	100.00
15.885	15.885 (1.032)	75	63125			0.00- 0.00	261.40

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

  115 Isobutanol                                     CAS #: 78-83-1
 15.977  15.977 (1.038)    43     27018 1.00000   0.9844   0.00-   0.00   100.00
 15.977  15.977 (1.038)    41     22608                    0.00-   0.00    83.68
 15.977  15.977 (1.038)    55      2523                    0.00-   0.00     9.34
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    505929 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     76981                    0.00-  45.20    15.22
-------------------------------------------------------------------------------
  124 n-Butanol                                      CAS #: 71-36-3
 16.882  16.882 (1.009)    56     44924 1.00000   0.9880   0.00-   0.00   100.00
 16.906  16.906 (1.010)    41     31736                    0.00-   0.00    70.64
 16.882  16.882 (1.009)    43     22941                    0.00-   0.00    51.07
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                 CAS #: 140-88-5
 17.171  17.171 (1.026)    99      7940 1.00000    1.050   0.00-   0.00   100.00
 17.171  17.171 (1.026)    45      6247                    0.00-   0.00    78.68
 17.171  17.171 (1.026)    55     63631                    0.00-   0.00   801.40
-------------------------------------------------------------------------------
  131 2-Pentanone                                    CAS #: 107-87-9
 17.388  17.388 (1.039)    43     77044 1.00000   0.9826   0.00-   0.00   100.00
 17.388  17.388 (1.039)    58      7126                    0.00-   0.00     9.25
 17.388  17.388 (1.039)    86     20265                    0.00-   0.00    26.30
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                            CAS #: 80-62-6
 17.556  17.556 (1.049)    41     41797 1.00000    1.021   0.00-   0.00   100.00
 17.556  17.556 (1.049)    69     43916                    0.00-   0.00   105.07
 17.556  17.556 (1.049)   100     18544                    0.00-   0.00    44.37
-------------------------------------------------------------------------------
  137 Dibromomethane                                 CAS #: 74-95-3
 17.797  17.797 (1.063)   174     75013 1.00000   0.9917   0.00-   0.00   100.00
 17.797  17.797 (1.063)    93     55210                    0.00-   0.00    73.60
 17.797  17.797 (1.063)    95     51958                    0.00-   0.00    69.27
-------------------------------------------------------------------------------
  148 Octane                                         CAS #: 111-65-9
 19.343  19.343 (1.156)    57     25580 1.00000    1.004   0.00-   0.00   100.00
 19.320  19.320 (1.154)    85     35666                    0.00-   0.00   139.43
 19.320  19.320 (1.154)    43     49233                    0.00-   0.00   192.47
-------------------------------------------------------------------------------
  157 1,3-Dichloropropane                            CAS #: 142-28-9
 20.795  20.795 (0.938)    76     78463 1.00000    1.006   0.00-   0.00   100.00
 20.795  20.795 (0.938)    41     38871                    0.00-   0.00    49.54
 20.795  20.795 (0.938)    78     23073                    0.00-   0.00    29.41
-------------------------------------------------------------------------------
  159 Butyl Acetate                                  CAS #: 123-86-4
 20.905  20.905 (0.943)    56      6407 1.00000   0.8420   0.00-   0.00   100.00
```

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

  159 Butyl Acetate (continued)
 20.905  20.905 (0.943)    73      5262                     0.00-   0.00    82.13
 20.905  20.905 (0.943)    43     16832                     0.00-   0.00   262.71
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    452153 5.00000            80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    225263                    20.64-  80.64    49.82
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                     CAS #: 630-20-6
 22.343  22.343 (1.007)   131     86739 1.00000   0.9601   0.00-   0.00   100.00
 22.343  22.343 (1.007)   117     58679                     0.00-   0.00    67.65
 22.343  22.343 (1.007)    95     31643                     0.00-   0.00    36.48
-------------------------------------------------------------------------------
  170 Nonane                                        CAS #: 111-84-2
 22.302  22.302 (1.006)    43     43037 1.00000   0.9507   0.00-   0.00   100.00
 22.302  22.302 (1.006)    57     45683                     0.00-   0.00   106.15
 22.302  22.302 (1.006)    85     21786                     0.00-   0.00    50.62
-------------------------------------------------------------------------------
  173 2-Heptanone                                   CAS #: 110-43-0
 23.214  23.214 (1.047)    58     44969 1.00000   0.9609   0.00-   0.00   100.00
 23.214  23.214 (1.047)    43     66507                     0.00-   0.00   147.90
-------------------------------------------------------------------------------
  176 Cyclohexanone                                 CAS #: 108-94-1
 23.811  23.811 (1.074)    55     37484 1.00000   0.9618   0.00-   0.00   100.00
 23.811  23.811 (1.074)    98     22614                     0.00-   0.00    60.33
 23.811  23.811 (1.074)    42     26172                     0.00-   0.00    69.82
-------------------------------------------------------------------------------
  179 alpha-Pinene                                  CAS #: 80-56-8
 23.497  23.497 (1.060)    93    174814 1.00000   0.9695   0.00-   0.00   100.00
 23.497  23.497 (1.060)   121     25068                     0.00-   0.00    14.34
 23.497  23.497 (1.060)    92     65661                     0.00-   0.00    37.56
-------------------------------------------------------------------------------
  180 Bromobenzene                                  CAS #: 108-86-1
 24.080  24.080 (1.086)   156     90601 1.00000   0.9970   0.00-   0.00   100.00
 24.080  24.080 (1.086)   158     87027                     0.00-   0.00    96.06
 24.080  24.080 (1.086)    77    109509                     0.00-   0.00   120.87
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                        CAS #: 96-18-4
 24.125  24.125 (1.088)   110     36982 1.00000    1.013   0.00-   0.00   100.00
 24.125  24.125 (1.088)    75    123331                     0.00-   0.00   333.49
 24.125  24.125 (1.088)    61     20688                     0.00-   0.00    55.94
-------------------------------------------------------------------------------
  187 Decane                                        CAS #: 124-18-5
 24.170  24.170 (1.090)    57     35879 1.00000   0.9723   0.00-   0.00   100.00
 24.170  24.170 (1.090)    71     17931                     0.00-   0.00    49.98
 24.170  24.170 (1.090)   142      2314                     0.00-   0.00     6.45
-------------------------------------------------------------------------------
```

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

  189 2-Chlorotoluene                                CAS #: 95-49-8
 24.282  24.282 (1.095)   126     59313 1.00000    1.017   0.00-   0.00   100.00
 24.282  24.282 (1.095)    91    148786                     0.00-   0.00   250.85
 24.282  24.282 (1.095)    65     13277                     0.00-   0.00    22.38
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                                CAS #: 106-43-4
 24.417  24.417 (1.101)   126     55144 1.00000    1.020   0.00-   0.00   100.00
 24.417  24.417 (1.101)    91    142855                     0.00-   0.00   259.06
 24.417  24.417 (1.101)    63     15434                     0.00-   0.00    27.99
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                              CAS #: 98-06-6
 24.708  24.708 (1.114)   119    150500 1.00000   0.9878   0.00-   0.00   100.00
 24.708  24.708 (1.114)   134     37759                     0.00-   0.00    25.09
 24.686  24.686 (1.113)    91     97079                     0.00-   0.00    64.50
-------------------------------------------------------------------------------
  197 Pentachloroethane                              CAS #: 76-01-7
 24.798  24.798 (1.118)   167     63384 1.00000    1.026   0.00-   0.00   100.00
 24.798  24.798 (1.118)   117     52998                     0.00-   0.00    83.61
 24.798  24.798 (1.118)   169     31606                     0.00-   0.00    49.86
-------------------------------------------------------------------------------
  199 D-Limonene                                     CAS #: 5989-27-5
 25.022  25.022 (1.128)    68     54364 1.00000   0.9467   0.00-   0.00   100.00
 25.044  25.044 (1.129)    93    138517                     0.00-   0.00   254.80
-------------------------------------------------------------------------------
  203 sec-Butylbenzene                               CAS #: 135-98-8
 24.955  24.955 (1.125)   105    286099 1.00000   0.9953   0.00-   0.00   100.00
 24.955  24.955 (1.125)   134     63787                     0.00-   0.00    22.30
 24.955  24.955 (1.125)    91     45861                     0.00-   0.00    16.03
-------------------------------------------------------------------------------
  206 bis(2-Chloroethyl) Ether                       CAS #: 111-44-4
 25.044  25.044 (1.129)    93    138517 1.00000   0.9700   0.00-   0.00   100.00
 25.044  25.044 (1.129)    95     34864                     0.00-   0.00    25.17
 25.044  25.044 (1.129)    63     61293                     0.00-   0.00    44.25
-------------------------------------------------------------------------------
  207 p-Cymene                                       CAS #: 99-87-6
 25.089  25.089 (1.131)   119    174489 1.00000   0.9939   0.00-   0.00   100.00
 25.089  25.089 (1.131)   134     50563                     0.00-   0.00    28.98
 25.089  25.089 (1.131)    91     38095                     0.00-   0.00    21.83
-------------------------------------------------------------------------------
  210 1,2,3-Trimethylbenzene                         CAS #: 526-73-8
 25.269  25.269 (1.139)   120     56034 1.00000   0.9968   0.00-   0.00   100.00
 25.269  25.269 (1.139)   105    122416                     0.00-   0.00   218.47
 25.246  25.246 (1.138)    77     13523                     0.00-   0.00    24.13
-------------------------------------------------------------------------------
  213 Butylbenzene                                   CAS #: 104-51-8
 25.538  25.538 (1.152)   134     42339 1.00000   0.9615   0.00-   0.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
213 Butylbenzene (continued)							
25.538	25.538 (1.152)	91	142467			0.00- 0.00	336.49
25.538	25.538 (1.152)	92	74257			0.00- 0.00	175.39
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	23461	1.00000	0.8773	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	19467			0.00- 0.00	82.98
25.515	25.515 (1.151)	85	11162			0.00- 0.00	47.58
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	68752	1.00000	0.9629	0.00- 0.00	100.00
26.546	26.546 (1.197)	75	54169			0.00- 0.00	78.79
26.546	26.546 (1.197)	155	53210			0.00- 0.00	77.39
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	7893	1.00000	0.9908	0.00- 0.00	100.00
26.614	26.614 (1.200)	57	17201			0.00- 0.00	217.93
26.614	26.614 (1.200)	43	14647			0.00- 0.00	185.57

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e050908.d
Lab Smp Id: ICAL Level 8
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 1.0ppbv (5.0ppbv) Combo

Calibration Date: 09-MAY-2016
Calibration Time: 07:51

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	137001	-14.04
123 1,4-Difluorobenze	624905	374943	874867	505929	-19.04
163 Chlorobenzene-d5	549919	329951	769887	452153	-17.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/09May2016.b/e050908.d

Date : 09-MAY-2016 12:03

Client ID:

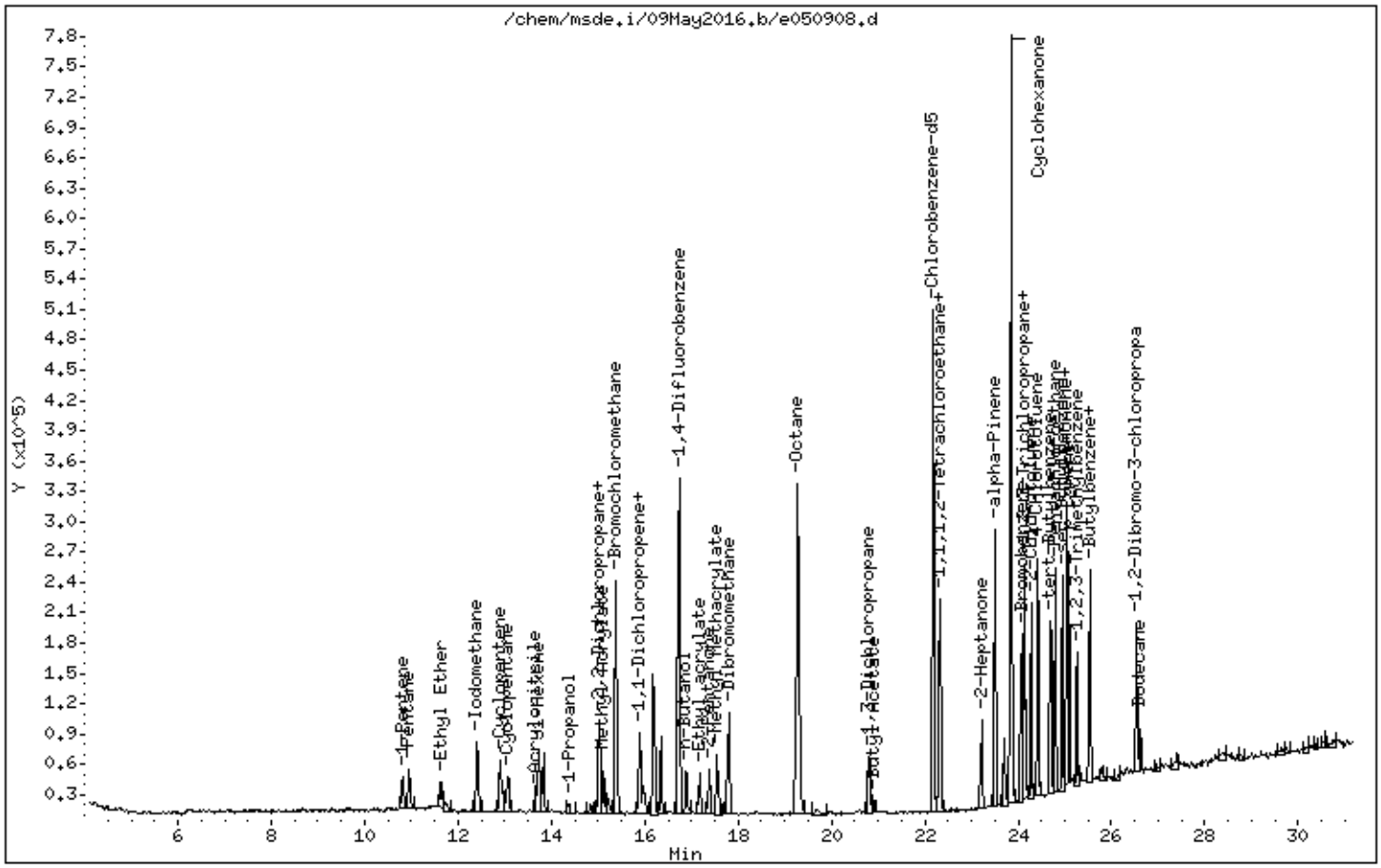
Instrument: msde.i

Sample Info: 50mL# 2789-105

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/30Mar2016.b/e033008.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 30-MAR-2016 15:43
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2789-45
Misc Info : 1.0ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/30Mar2016.b/e16l0317c.m
Meth Date : 30-Mar-2016 17:13 efinn Quant Type: ISTD
Cal Date : 30-MAR-2016 15:43 Cal File: e033008.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.233	12.233 (0.785)	56	8998	1.00000	1.038	0.00- 0.00	100.00
12.233	12.233 (0.785)	55	5581			0.00- 0.00	62.02
* 98 Bromochloromethane					CAS #: 74-97-5		
15.580	15.580 (1.000)	130	150258	5.00000		80.00- 120.00	100.00
15.580	15.580 (1.000)	128	116987			52.25- 112.25	77.86
15.580	15.580 (1.000)	49	122713			89.81- 149.81	81.67
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.939	16.939 (1.000)	114	587496	5.00000		80.00- 120.00	100.00
16.939	16.939 (1.000)	88	87269			0.00- 45.20	14.85
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.365 (1.000)	117	532033	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	273401			20.64- 80.64	51.39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e033008.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/30Mar2016.b/e16l0317c.m
Misc Info: 1.0ppbv (5.0ppbv) Acrolein

Calibration Date: 30-MAR-2016
Calibration Time: 11:07
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190719	114431	267007	150258	-21.21
123 1,4-Difluorobenze	725285	435171	1015399	587496	-19.00
163 Chlorobenzene-d5	658854	395312	922396	532033	-19.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/30Mar2016.b/e033008.d

Date : 30-MAR-2016 15:43

Client ID: Level 8

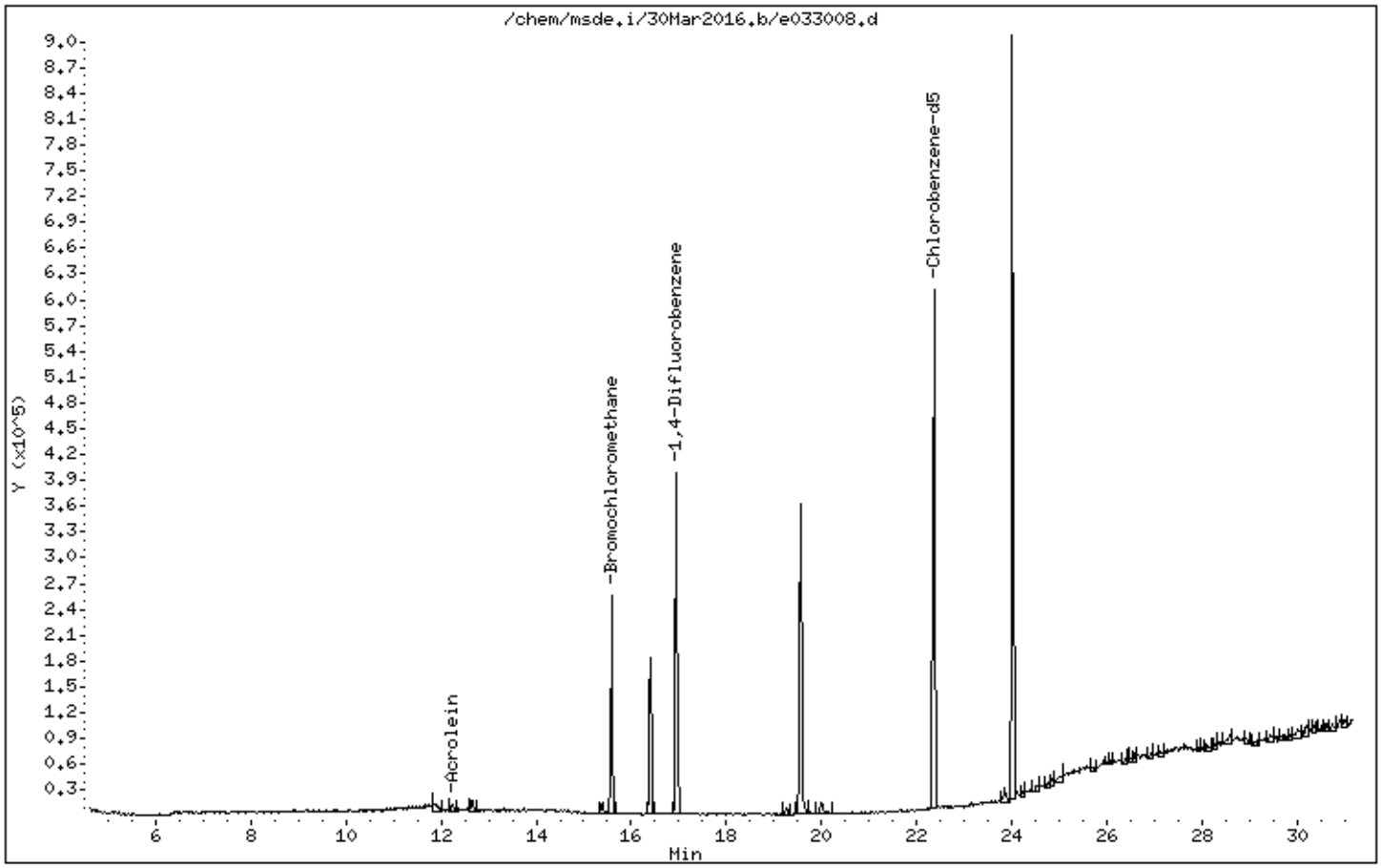
Instrument: msde.i

Sample Info: 50mL# 2789-45

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/25Mar2016.b/e032506.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 25-MAR-2016 13:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2789-4
Misc Info : 1.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/25Mar2016.b/e16l0317b.m
Meth Date : 25-Mar-2016 16:29 efinn Quant Type: ISTD
Cal Date : 25-MAR-2016 13:02 Cal File: e032506.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Combo-AT1ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
10.786	10.786 (0.692)	106	34231	1.00000	0.9906	0.00- 0.00	100.00
10.767	10.767 (0.691)	108	35076			0.00- 0.00	102.47
36 1-Pentene					CAS #: 109-67-1		
11.014	11.014 (0.707)	55	27204	1.00000	1.030	0.00- 0.00	100.00
11.014	11.014 (0.707)	42	29664			0.00- 0.00	109.04
34 Pentane					CAS #: 109-66-0		
11.147	11.147 (0.716)	43	49846	1.00000	1.058	0.00- 0.00	100.00
11.166	11.166 (0.717)	57	10473			0.00- 0.00	21.01
11.147	11.147 (0.716)	72	7098			0.00- 0.00	14.24
44 Ethyl Ether					CAS #: 60-29-7		
11.814	11.814 (0.758)	74	17648	1.00000	0.9886	0.00- 0.00	100.00(T)
11.814	11.814 (0.758)	59	19318			0.00- 0.00	109.46
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00

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

   53 Iodomethane                                   CAS #: 74-88-4
 12.595  12.595 (0.808)   142    120821 1.00000    1.085   0.00-   0.00   100.00
 12.595  12.595 (0.808)   127     53818                    0.00-   0.00    44.54
-------------------------------------------------------------------------------
   63 Acetonitrile                                  CAS #: 75-05-8
 13.185  13.185 (0.846)    41     23400 1.00000    1.063   0.00-   0.00   100.00
 13.185  13.185 (0.846)    40     12685                    0.00-   0.00    54.21
 13.185  13.185 (0.846)    39      4156                    0.00-   0.00    17.76
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.261  13.261 (0.851)    70     24289 1.00000    1.069   0.00-   0.00   100.00
 13.280  13.280 (0.852)    55     22661                    0.00-   0.00    93.30
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.838  13.838 (0.888)    53     27250 1.00000    1.127   0.00-   0.00   100.00
 13.838  13.838 (0.888)    52     21534                    0.00-   0.00    79.02
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.921  13.921 (0.894)    55     22119 1.00000   0.9861   0.00-   0.00   100.00
 13.921  13.921 (0.894)    41     29286                    0.00-   0.00   132.40
 13.921  13.921 (0.894)    84     11785                    0.00-   0.00    53.28
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.221  15.221 (0.977)    70      7467 1.00000    1.027   0.00-   0.00   100.00
 15.221  15.221 (0.977)    43     59786                    0.00-   0.00   800.67
 15.221  15.221 (0.977)    61     21177                    0.00-   0.00   283.61
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.316  15.316 (0.983)    55     50751 1.00000    1.002   0.00-   0.00   100.00
 15.316  15.316 (0.983)    85     11409                    0.00-   0.00    22.48
 15.316  15.316 (0.983)    58      5295                    0.00-   0.00    10.43
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    181202 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    139124                   52.25- 112.25    76.78
 15.580  15.580 (1.000)    49    177164                   89.81- 149.81    97.77
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    685019 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     97903                    0.00-  45.20    14.29
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                CAS #: 140-88-5
 17.397  17.397 (1.027)    99      4970 1.00000   0.9718   0.00-   0.00   100.00
 17.397  17.397 (1.027)    45      4607                    0.00-   0.00    92.70
 17.397  17.397 (1.027)    55     51744                    0.00-   0.00  1041.13
-------------------------------------------------------------------------------
```

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

  131 2-Pentanone                                  CAS #: 107-87-9
 17.614  17.614 (1.040)    43     62777 1.00000   0.9761   0.00-   0.00   100.00
 17.614  17.614 (1.040)    58      5399                    0.00-   0.00     8.60
 17.614  17.614 (1.040)    86     15517                    0.00-   0.00    24.72
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                          CAS #: 80-62-6
 17.782  17.782 (1.050)    41     31114 1.00000   0.9697   0.00-   0.00   100.00
 17.782  17.782 (1.050)    69     32570                    0.00-   0.00   104.68
 17.807  17.807 (1.051)   100     11940                    0.00-   0.00    38.38
-------------------------------------------------------------------------------
  137 Dibromomethane                               CAS #: 74-95-3
 18.048  18.048 (1.065)   174     48282 1.00000   0.9946   0.00-   0.00   100.00
 18.048  18.048 (1.065)    93     38632                    0.00-   0.00    80.01
 18.048  18.048 (1.065)    95     36609                    0.00-   0.00    75.82
-------------------------------------------------------------------------------
  148 Octane                                       CAS #: 111-65-9
 19.624  19.624 (1.158)    57     35357 1.00000   0.9606   0.00-   0.00   100.00
 19.624  19.624 (1.158)    85     50815                    0.00-   0.00   143.72
 19.624  19.624 (1.158)    43     73240                    0.00-   0.00   207.14
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.366  22.366 (1.000)   117    615294 5.00000           80.00- 120.00   100.00
 22.366  22.366 (1.000)    82    307594                   20.64-  80.64    49.99
-------------------------------------------------------------------------------
  170 Nonane                                       CAS #: 111-84-2
 22.490  22.490 (1.006)    43     66058 1.00000   0.9605   0.00-   0.00   100.00
 22.490  22.490 (1.006)    57     70386                    0.00-   0.00   106.55
 22.490  22.490 (1.006)    85     34061                    0.00-   0.00    51.56
-------------------------------------------------------------------------------
  184 trans-1,4-Dichloro-2-butene                  CAS #: 110-57-6
 24.289  24.289 (1.086)    75     90419 1.00000   0.9677   0.00-   0.00   100.00
 24.289  24.289 (1.086)    89     11440                    0.00-   0.00    12.65
 24.267  24.267 (1.085)    53     13653                    0.00-   0.00    15.10
-------------------------------------------------------------------------------
  187 Decane                                       CAS #: 124-18-5
 24.581  24.581 (1.099)    57     62083 1.00000   0.9561   0.00-   0.00   100.00
 24.581  24.581 (1.099)    71       510                    0.00-   0.00     0.82
 24.581  24.581 (1.099)   142     13283                    0.00-   0.00    21.40
-------------------------------------------------------------------------------
  206 bis(2-Chloroethyl) Ether                     CAS #: 111-44-4
 25.186  25.186 (1.126)    93     75283 1.00000   0.9704   0.00-   0.00   100.00
 25.209  25.209 (1.127)    95     24854                    0.00-   0.00    33.01
 25.186  25.186 (1.126)    63     51431                    0.00-   0.00    68.32
-------------------------------------------------------------------------------
  215 Undecane                                     CAS #: 1120-21-4
 25.657  25.657 (1.147)    57     27918 1.00000    1.034   0.00-   0.00   100.00
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
215 Undecane (continued)								
25.657	25.657	(1.147)	43	23083			0.00- 0.00	82.68
25.657	25.657	(1.147)	85	10121			0.00- 0.00	36.25
225 Dodecane						CAS #: 112-40-3		
26.800	26.800	(1.198)	85	5154	1.00000	1.344	0.00- 0.00	100.00
26.800	26.800	(1.198)	57	12349			0.00- 0.00	239.60
26.800	26.800	(1.198)	43	9472			0.00- 0.00	183.78

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032506.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/25Mar2016.b/e16l0317b.m
Misc Info: 1.0ppbv (5.0ppbv) Combo

Calibration Date: 25-MAR-2016
Calibration Time: 09:25
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	196631	117979	275283	181202	-7.85
123 1,4-Difluorobenze	760212	456127	1064297	685019	-9.89
163 Chlorobenzene-d5	680500	408300	952700	615294	-9.58

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/25Mar2016.b/e032506.d

Date : 25-MAR-2016 13:02

Client ID: Level 8

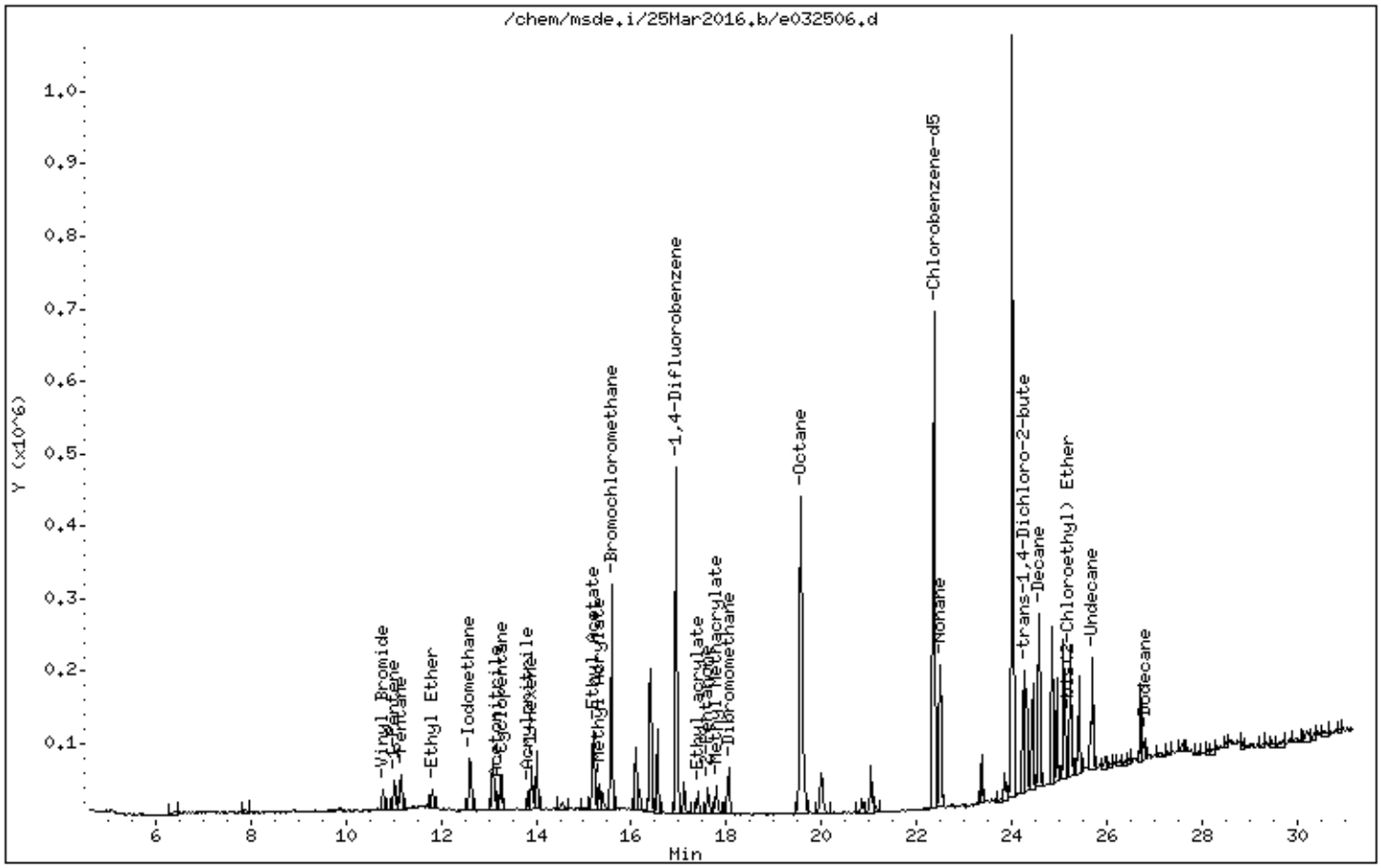
Instrument: msde.i

Sample Info: 50mL# 2789-4

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/22Mar2016.b/e032206.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 22-MAR-2016 13:20
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2759-238
Misc Info : 1.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/22Mar2016.b/e16l0317a.m
Meth Date : 24-Mar-2016 11:05 efinn Quant Type: ISTD
Cal Date : 22-MAR-2016 13:20 Cal File: e032206.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
10 1,1-Difluoroethane					CAS #: 75-37-6		
5.335	5.335 (0.342)	65	8137	1.00000	1.193	0.00- 0.00	100.00(aM)
5.335	5.335 (0.342)	51	11503			0.00- 0.00	141.37
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.962	5.962 (0.383)	51	17658	1.00000	1.005	0.00- 0.00	100.00(Ta)
6.010	6.010 (0.386)	67	3141			0.00- 0.00	17.79
0.000	1.000 (0.000)	85	0			0.00- 0.00	0.00
16 Freon 142b					CAS #: 75-68-3		
7.094	7.094 (0.455)	65	35772	1.00000	1.004	0.00- 0.00	100.00(a)
7.070	7.070 (0.454)	45	7464			0.00- 0.00	20.87
7.094	7.094 (0.455)	81	3022			0.00- 0.00	8.45
37 Dichlorofluoromethane					CAS #: 75-43-4		
11.052	11.052 (0.709)	67	35147	1.00000	0.9446	0.00- 0.00	100.00(a)
11.052	11.052 (0.709)	69	12769			0.00- 0.00	36.33

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

   37 Dichlorofluoromethane (continued)
 11.052  11.052 (0.709)    47      2763                    0.00-   0.00     7.86
-------------------------------------------------------------------------------
   48 Freon 123                                    CAS #: 306-83-2
 12.214  12.214 (0.784)    83     59511 1.00000    1.036   0.00-   0.00   100.00(a)
 12.214  12.214 (0.784)   133     17309                    0.00-   0.00    29.09
 12.214  12.214 (0.784)    85     40384                    0.00-   0.00    67.86
-------------------------------------------------------------------------------
   59 Cyclopentene                                 CAS #: 142-29-0
 13.090  13.090 (0.840)    67     26711 1.00000    1.012   0.00-   0.00   100.00(a)
 13.090  13.090 (0.840)    68      9441                    0.00-   0.00    35.34
 13.090  13.090 (0.840)    53      5602                    0.00-   0.00    20.97
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 14.552  14.552 (0.934)    59      8623 1.00000    1.164   0.00-   0.00   100.00(a)
 14.552  14.552 (0.934)    42      4834                    0.00-   0.00    56.06
 14.552  14.552 (0.934)    41      4165                    0.00-   0.00    48.30
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 15.202  15.202 (0.976)    77     47438 1.00000    1.016   0.00-   0.00   100.00(a)
 15.202  15.202 (0.976)    79     16913                    0.00-   0.00    35.65
 15.202  15.202 (0.976)    97      9463                    0.00-   0.00    19.95
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.580  15.580 (1.000)   130    198233 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    152854                   52.25- 112.25    77.11
 15.580  15.580 (1.000)    49    178955                   89.81- 149.81    90.28
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                         CAS #: 563-58-6
 16.104  16.104 (1.034)   110     12411 1.00000    1.020   0.00-   0.00   100.00(a)
 16.104  16.104 (1.034)    75     32788                    0.00-   0.00   264.18
-------------------------------------------------------------------------------
  115 Isobutanol                                  CAS #: 78-83-1
 16.165  16.165 (1.038)    43     38207 1.00000    1.067   0.00-   0.00   100.00(a)
 16.165  16.165 (1.038)    41     28410                    0.00-   0.00    74.36
 16.196  16.196 (1.040)    55      2497                    0.00-   0.00     6.54
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.939  16.939 (1.000)   114    740474 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    112049                    0.00-  45.20    15.13
-------------------------------------------------------------------------------
  124 n-Butanol                                   CAS #: 71-36-3
 17.108  17.108 (1.010)    56     47051 1.00000    1.005   0.00-   0.00   100.00(a)
 17.108  17.108 (1.010)    41     30955                    0.00-   0.00    65.79
 17.108  17.108 (1.010)    43     24026                    0.00-   0.00    51.06
-------------------------------------------------------------------------------
```

```
                                          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
 21.046  21.046 (0.941)    76     60171 1.00000    1.071   0.00-   0.00   100.00(a)
 21.046  21.046 (0.941)    41     30484                    0.00-   0.00    50.66
 21.046  21.046 (0.941)    78     19304                    0.00-   0.00    32.08
-------------------------------------------------------------------------------
  159 Butyl Acetate                                CAS #: 123-86-4
 21.128  21.128 (0.945)    56      6540 1.00000   0.9908   0.00-   0.00   100.00(a)
 21.128  21.128 (0.945)    73      5207                    0.00-   0.00    79.62
 21.128  21.128 (0.945)    43     16414                    0.00-   0.00   250.98
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.366  22.366 (1.000)   117    660850 5.00000           80.00- 120.00   100.00
 22.366  22.366 (1.000)    82    344952                   20.64-  80.64    52.20
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 22.531  22.531 (1.007)   131     71990 1.00000    1.074   0.00-   0.00   100.00(a)
 22.511  22.511 (1.006)   117     42980                    0.00-   0.00    59.70
 22.511  22.511 (1.006)    95     24658                    0.00-   0.00    34.25
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 23.381  23.381 (1.045)    58     46208 1.00000   0.9509   0.00-   0.00   100.00(a)
 23.381  23.381 (1.045)    43     69338                    0.00-   0.00   150.06
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 23.975  23.975 (1.072)    55     42582 1.00000    1.037   0.00-   0.00   100.00(a)
 23.975  23.975 (1.072)    98     27417                    0.00-   0.00    64.39
 23.975  23.975 (1.072)    42     28034                    0.00-   0.00    65.84
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 24.244  24.244 (1.084)   156     70174 1.00000   0.9690   0.00-   0.00   100.00(a)
 24.244  24.244 (1.084)   158     74273                    0.00-   0.00   105.84
 24.244  24.244 (1.084)    77    101024                    0.00-   0.00   143.96
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 24.289  24.289 (1.086)   110     36633 1.00000    1.019   0.00-   0.00   100.00(a)
 24.289  24.289 (1.086)    75     86674                    0.00-   0.00   236.60
 24.289  24.289 (1.086)    61     18471                    0.00-   0.00    50.42
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 24.446  24.446 (1.093)   126     50050 1.00000    1.018   0.00-   0.00   100.00(a)
 24.446  24.446 (1.093)    91    138328                    0.00-   0.00   276.38
 24.446  24.446 (1.093)    65     12760                    0.00-   0.00    25.49
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 24.581  24.581 (1.099)   126     46360 1.00000   0.9443   0.00-   0.00   100.00(a)
 24.581  24.581 (1.099)    91    132157                    0.00-   0.00   285.07
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
191 4-Chlorotoluene (continued)							
24.581	24.581 (1.099)	63	15550			0.00- 0.00	33.54
195 tert-Butylbenzene					CAS #: 98-06-6		
24.850	24.850 (1.111)	119	151021	1.00000	0.9855	0.00- 0.00	100.00(a)
24.850	24.850 (1.111)	134	38999			0.00- 0.00	25.82
24.850	24.850 (1.111)	91	100897			0.00- 0.00	66.81
197 Pentachloroethane					CAS #: 76-01-7		
24.962	24.962 (1.116)	167	56490	1.00000	1.028	0.00- 0.00	100.00(a)
24.962	24.962 (1.116)	117	47810			0.00- 0.00	84.63
24.962	24.962 (1.116)	169	24500			0.00- 0.00	43.37
203 sec-Butylbenzene					CAS #: 135-98-8		
25.096	25.096 (1.122)	105	205025	1.00000	0.9959	0.00- 0.00	100.00(a)
25.096	25.096 (1.122)	134	47645			0.00- 0.00	23.24
25.096	25.096 (1.122)	91	34791			0.00- 0.00	16.97
207 p-Cymene					CAS #: 99-87-6		
25.253	25.253 (1.129)	119	161408	1.00000	0.9946	0.00- 0.00	100.00(a)
25.253	25.253 (1.129)	134	40830			0.00- 0.00	25.30
25.253	25.253 (1.129)	91	37187			0.00- 0.00	23.04
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.410	25.410 (1.136)	120	49828	1.00000	0.9923	0.00- 0.00	100.00(a)
25.410	25.410 (1.136)	105	114292			0.00- 0.00	229.37
25.410	25.410 (1.136)	77	14590			0.00- 0.00	29.28
213 Butylbenzene					CAS #: 104-51-8		
25.702	25.702 (1.149)	134	36405	1.00000	1.001	0.00- 0.00	100.00(a)
25.702	25.702 (1.149)	91	124473			0.00- 0.00	341.91
25.702	25.702 (1.149)	92	66394			0.00- 0.00	182.38
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.711	26.711 (1.194)	157	65071	1.00000	0.9958	0.00- 0.00	100.00(a)
26.711	26.711 (1.194)	75	56103			0.00- 0.00	86.22
26.711	26.711 (1.194)	155	48816			0.00- 0.00	75.02

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.

Report Date: 24-Mar-2016 11:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032206.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/22Mar2016.b/e16l0317a.m
Misc Info: 1.0ppbv (5.0ppbv)

Calibration Date: 22-MAR-2016
Calibration Time: 09:49
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190421	114253	266589	198233	4.10
123 1,4-Difluorobenze	736283	441770	1030796	740474	0.57
163 Chlorobenzene-d5	650623	390374	910872	660850	1.57

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/22Mar2016.b/e032206.d

Date : 22-MAR-2016 13:20

Client ID: Level 8

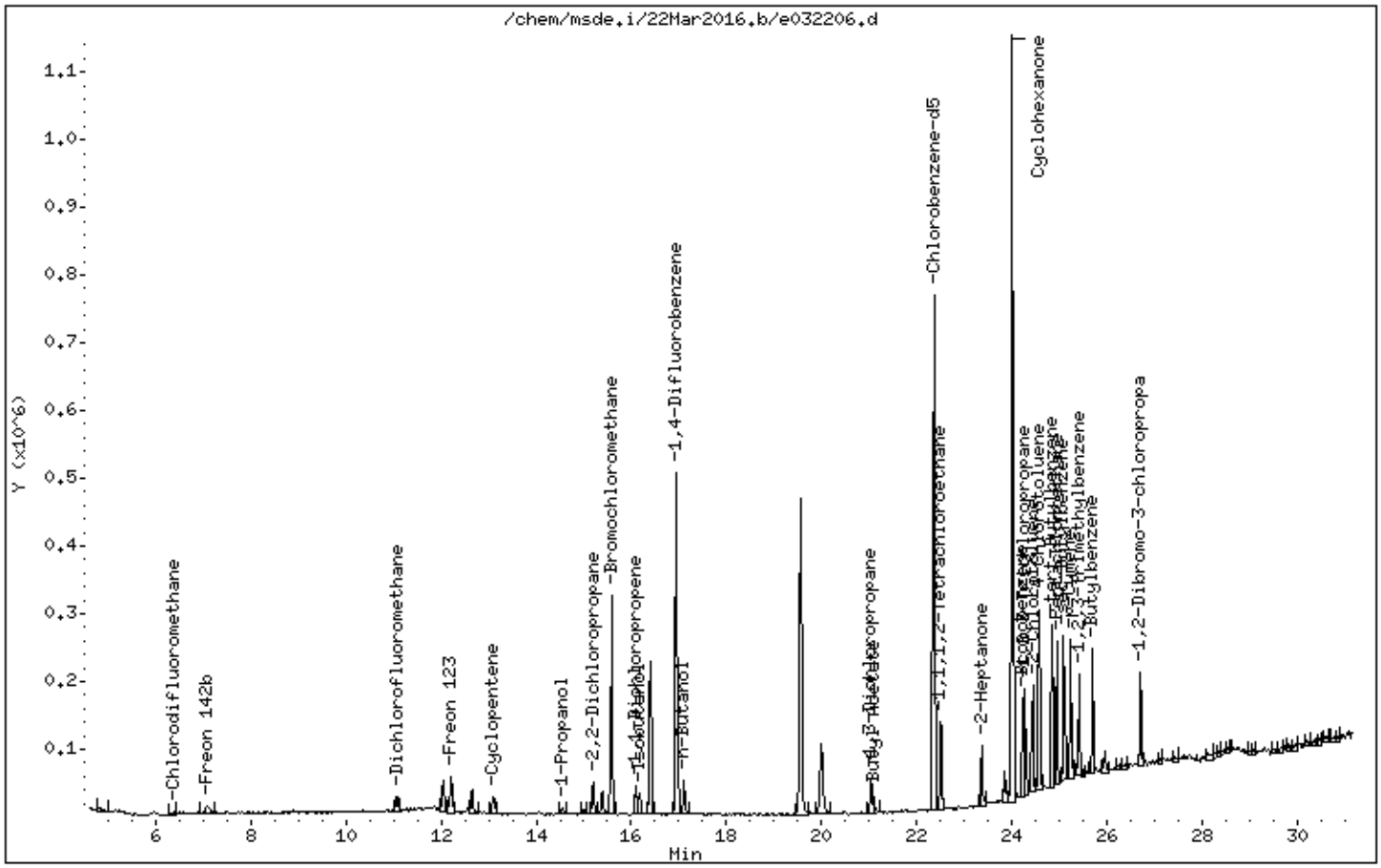
Instrument: msde.i

Sample Info: 50mL# 2759-238

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031709.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 17-MAR-2016 16:31
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2789-14
Misc Info : 1.0ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 16:31 Cal File: e031709.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
5.046	5.046 (0.324)	41	20338	1.00000	1.011	80.00- 120.00	100.00(M)
5.046	5.046 (0.324)	42	13342			38.73- 98.73	65.60
5.070	5.070 (0.325)	39	17798			55.81- 115.81	87.51
11 Freon 12					CAS #: 75-71-8		
5.479	5.479 (0.352)	85	123962	1.00000	0.9513	80.00- 120.00	100.00
5.503	5.503 (0.353)	87	42722			2.00- 62.00	34.46
15 Freon 114					CAS #: 76-14-2		
6.853	6.853 (0.440)	135	90300	1.00000	0.9468	80.00- 120.00	100.00
6.877	6.877 (0.441)	137	30025			1.31- 61.31	33.25
6.853	6.853 (0.440)	85	111106			93.88- 153.88	123.04
17 Chloromethane					CAS #: 74-87-3		
7.191	7.191 (0.462)	50	25721	1.00000	1.040	80.00- 120.00	100.00
7.191	7.191 (0.462)	52	8292			5.50- 65.50	32.24

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.889	7.889 (0.506)	58	6123	1.00000	0.9561	80.00- 120.00	100.00
7.889	7.889 (0.506)	43	40649			588.57- 648.57	663.87
25 Vinyl Chloride					CAS #: 75-01-4		
8.028	8.028 (0.515)	62	32024	1.00000	0.9206	80.00- 120.00	100.00
8.010	8.010 (0.514)	64	11699			3.14- 63.14	36.53
26 1,3-Butadiene					CAS #: 106-99-0		
8.271	8.271 (0.531)	54	23717	1.00000	1.014	80.00- 120.00	100.00
8.271	8.271 (0.531)	39	23782			65.21- 125.21	100.27
29 Bromomethane					CAS #: 74-83-9		
9.729	9.729 (0.624)	94	36917	1.00000	0.9726	80.00- 120.00	100.00
9.729	9.729 (0.624)	96	35018			64.16- 124.16	94.86
30 Chloroethane					CAS #: 75-00-3		
10.195	10.195 (0.654)	64	15878	1.00000	0.9662	80.00- 120.00	100.00
10.195	10.195 (0.654)	49	4550			0.00- 54.91	28.66
10.195	10.195 (0.654)	66	5756			3.62- 63.62	36.25
31 Isopentane					CAS #: 78-78-4		
10.329	10.329 (0.663)	57	23093	1.00000	0.9693	80.00- 120.00	100.00
10.329	10.329 (0.663)	43	28853			82.69- 142.69	124.94
10.329	10.329 (0.663)	42	23212			68.65- 128.65	100.52
35 Freon 11					CAS #: 75-69-4		
10.957	10.957 (0.703)	101	133441	1.00000	0.9510	80.00- 120.00	100.00
10.957	10.957 (0.703)	103	92213			37.17- 97.17	69.10
42 Ethanol					CAS #: 64-17-5		
11.852	11.852 (0.761)	45	11327	1.00000	1.114	80.00- 120.00	100.00
11.871	11.871 (0.762)	46	3839			6.61- 66.61	33.89
11.852	11.852 (0.761)	43	3307			0.00- 54.66	29.20
49 Freon 113					CAS #: 76-13-1		
12.271	12.271 (0.788)	151	94908	1.00000	0.9026	80.00- 120.00	100.00
12.271	12.271 (0.788)	153	60142			33.64- 93.64	63.37
12.271	12.271 (0.788)	101	107297			80.40- 140.40	113.05
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.290	12.290 (0.789)	98	29102	1.00000	0.9925	80.00- 120.00	100.00
12.290	12.290 (0.789)	61	66684			204.89- 264.89	229.14
12.290	12.290 (0.789)	96	47589			127.69- 187.69	163.52
52 Acetone					CAS #: 67-64-1		
12.556	12.556 (0.806)	58	19259	1.00000	1.123	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.556  12.556 (0.806)    43     63835                   321.47- 381.47   331.46
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.652  12.652 (0.812)    76    139395 1.00000    1.067  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.899  12.899 (0.828)    45     51379 1.00000   0.9795  80.00- 120.00   100.00
 12.899  12.899 (0.828)    43     14423                    0.00-  54.09    28.07
 12.899  12.899 (0.828)    59      2573                    0.00-  34.43     5.01
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.071  13.071 (0.839)    76     20251 1.00000    1.037  80.00- 120.00   100.00
 13.071  13.071 (0.839)    41     36374                   163.76- 223.76   179.62
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.357  13.357 (0.857)    84     39392 1.00000   0.9588  80.00- 120.00   100.00
 13.357  13.357 (0.857)    49     34842                   63.99- 123.99    88.45
 13.357  13.357 (0.857)    51     10391                    0.29-  60.29    26.38
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.564  13.564 (0.871)    59    106533 1.00000    1.110  80.00- 120.00   100.00
 13.564  13.564 (0.871)    41     21306                    0.00-  51.66    20.00
 13.564  13.564 (0.871)    57     11985                    0.00-  43.50    11.25
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.674  13.674 (0.878)    73    123434 1.00000   0.9395  80.00- 120.00   100.00
 13.674  13.674 (0.878)    57     24030                    0.00-  48.26    19.47
 13.674  13.674 (0.878)    41     21014                    0.00-  45.58    17.02
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.729  13.729 (0.881)    98     28840 1.00000   0.9683  80.00- 120.00   100.00
 13.729  13.729 (0.881)    61     59190                   155.28- 215.28   205.24
 13.729  13.729 (0.881)    96     46262                   126.18- 186.18   160.41
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.031  14.031 (0.901)    57     47662 1.00000   0.9300  80.00- 120.00   100.00
 14.031  14.031 (0.901)    43     28083                   21.48-  81.48    58.92
 14.031  14.031 (0.901)    86     10481                    0.00-  51.51    21.99
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.360  14.360 (0.922)    45     87779 1.00000   0.9390  80.00- 120.00   100.00
 14.360  14.360 (0.922)    87     35408                    9.88-  69.88    40.34
 14.360  14.360 (0.922)    59     13950                    0.00-  42.70    15.89
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.442  14.442 (0.927)    63     84769 1.00000    1.088  80.00- 120.00   100.00
```

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

   82 1,1-Dichloroethane (continued)
 14.415  14.415 (0.925)    65     24054                     1.78-  61.78    28.38
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.442  14.442 (0.927)    86     12367 1.00000    1.020  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42      7391                   44.70- 104.70    59.76
 14.442  14.442 (0.927)    43     79809                  757.33- 817.33   645.34
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59    110403 1.00000   0.9253  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87     61337                   19.74-  79.74    55.56
 14.859  14.859 (0.954)    41     19959                    0.00-  46.34    18.08
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.240  15.240 (0.978)    98     32126 1.00000   0.9861  80.00- 120.00   100.00
 15.240  15.240 (0.978)    61     56103                  145.90- 205.90   174.63
 15.240  15.240 (0.978)    96     51158                  125.53- 185.53   159.24
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.240  15.240 (0.978)    72     20144 1.00000   0.9753  80.00- 120.00   100.00
 15.240  15.240 (0.978)    43     62190                  262.26- 322.26   308.73
 15.240  15.240 (0.978)    57      5604                    0.00-  55.71    27.82
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42     37701 1.00000   0.9947  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71     18083                   26.85-  86.85    47.96
 15.580  15.580 (1.000)    72     19224                   32.22-  92.22    50.99
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    154931 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    116562                   52.25- 112.25    75.23
 15.580  15.580 (1.000)    49    125478                   89.81- 149.81    80.99
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.641  15.641 (1.004)    83    106660 1.00000   0.9535  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85     67295                   33.97-  93.97    63.09
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.888  15.888 (1.020)    84     53540 1.00000   0.9223  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56     47579                   58.69- 118.69    88.87
 15.888  15.888 (1.020)    41     24908                   18.98-  78.98    46.52
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.888  15.888 (1.020)    97    128619 1.00000   0.9885  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99     79551                   34.21-  94.21    61.85
-------------------------------------------------------------------------------
```

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

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 16.073  16.073 (1.032)   119    113250 1.00000   0.8887  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117    121916                   74.09- 134.09   107.65
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.313  16.313 (1.047)    56     65469 1.00000    1.009  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57    207985                  306.64- 366.64   317.68
 16.313  16.313 (1.047)    41     62002                   64.14- 124.14    94.70
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.409  16.409 (0.967)    78    130252 1.00000   0.9374  80.00- 120.00   100.00
 16.409  16.409 (0.967)    77     30203                    0.00-  53.97    23.19
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    219703 5.00000    4.940  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    108510                   21.16-  81.16    49.39
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.433  16.433 (0.969)    87     30608 1.00000   0.8579  80.00- 120.00   100.00
 16.433  16.433 (0.969)    73    126721                  338.86- 398.86   414.01
 16.433  16.433 (0.969)    55     30725                   44.52- 104.52   100.38
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.530  16.530 (0.974)    62     68355 1.00000   0.9438  80.00- 120.00   100.00
 16.530  16.530 (0.974)    64     22075                    1.03-  61.03    32.29
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.554  16.554 (0.976)    57     29002 1.00000   0.8806  80.00- 120.00   100.00
 16.554  16.554 (0.976)   100     16643                   28.67-  88.67    57.39
 16.554  16.554 (0.976)    43     50340                  128.92- 188.92   173.57
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.963  16.963 (1.000)   114    579840 5.00000           80.00- 120.00   100.00
 16.963  16.963 (1.000)    88     88565                    0.00-  45.20    15.27
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.373  17.373 (1.024)   130     71898 1.00000   0.9976  80.00- 120.00   100.00
 17.373  17.373 (1.024)    95     64802                   63.99- 123.99    90.13
 17.373  17.373 (1.024)    97     43440                   29.21-  89.21    60.42
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.590  17.590 (1.037)    83     71385 1.00000   0.9228  80.00- 120.00   100.00
 17.590  17.590 (1.037)    55     44467                   31.29-  91.29    62.29
 17.590  17.590 (1.037)    56     15246                    0.00-  48.78    21.36
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.806  17.806 (1.050)    63     43737 1.00000   0.9776  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)
 17.806  17.806 (1.050)    62     27385                    34.19-  94.19    62.61
 17.806  17.806 (1.050)    41     25718                    27.38-  87.38    58.80
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.951  17.951 (1.058)    88     33115 1.00000   0.9883  80.00- 120.00   100.00
 17.927  17.927 (1.057)    58     16515                    25.03-  85.03    49.87
 17.951  17.951 (1.058)    57      5891                     0.00-  50.67    17.79
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.075)    83    119457 1.00000    1.036  80.00- 120.00   100.00
 18.240  18.240 (1.075)    85     69436                    35.15-  95.15    58.13
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.086  19.086 (1.125)    75     81499 1.00000   0.9485  80.00- 120.00   100.00
 19.086  19.086 (1.125)    77     24780                     0.45-  60.45    30.41
 19.086  19.086 (1.125)    39     33956                    13.69-  73.69    41.66
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.136)    43     64877 1.00000   0.9048  80.00- 120.00   100.00
 19.265  19.265 (1.136)    58     29815                    15.64-  75.64    45.96
 19.287  19.287 (1.137)    85     17724                     0.00-  56.71    27.32
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.153)    98    563004 5.00000    4.944  80.00- 120.00   100.00
 19.556  19.556 (1.153)    70     59643                     0.00-  40.11    10.59
 19.556  19.556 (1.153)   100    378027                    37.58-  97.58    67.14
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.713  19.713 (1.162)    91    155013 1.00000   0.9366  80.00- 120.00   100.00
 19.713  19.713 (1.162)    92     89615                    28.92-  88.92    57.81
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.304  20.304 (0.908)    75     78830 1.00000   0.9537  80.00- 120.00   100.00
 20.276  20.276 (0.907)    77     25642                     0.55-  60.55    32.53
 20.276  20.276 (0.907)    39     29716                     8.25-  68.25    37.70
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.688  20.688 (0.925)    97     58272 1.00000   0.9056  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99     36859                    32.91-  92.91    63.25
 20.688  20.688 (0.925)    83     44783                    47.93- 107.93    76.85
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.853  20.853 (0.932)   166     95646 1.00000   0.9647  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129     63327                    42.31- 102.31    66.21
 20.853  20.853 (0.932)   131     65804                    40.11- 100.11    68.80
-------------------------------------------------------------------------------
```

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		
21.018	21.018 (0.940)	58	40708	1.00000	0.9831	80.00- 120.00	100.00
21.018	21.018 (0.940)	43	60419			140.44- 200.44	148.42
21.018	21.018 (0.940)	100	10329			0.00- 59.62	25.37
160 Dibromochloromethane					CAS #: 124-48-1		
21.430	21.430 (0.958)	129	128951	1.00000	0.9872	80.00- 120.00	100.00
21.430	21.430 (0.958)	127	99259			46.82- 106.82	76.97
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.677	21.677 (0.969)	107	94774	1.00000	0.9598	80.00- 120.00	100.00
21.677	21.677 (0.969)	109	89626			65.45- 125.45	94.57
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	533830	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	269261			20.64- 80.64	50.44
165 Chlorobenzene					CAS #: 108-90-7		
22.407	22.407 (1.002)	112	136158	1.00000	0.9427	80.00- 120.00	100.00
22.407	22.407 (1.002)	114	42571			2.42- 62.42	31.27
22.407	22.407 (1.002)	77	84474			23.54- 83.54	62.04
167 Ethyl Benzene					CAS #: 100-41-4		
22.490	22.490 (1.006)	106	59937	1.00000	0.8521	80.00- 120.00	100.00
22.490	22.490 (1.006)	91	205187			282.51- 342.51	342.34
169 m,p-Xylene					CAS #: 108-38-3		
22.656	22.656 (1.013)	106	76095	1.00000	0.9312	80.00- 120.00	100.00
22.656	22.656 (1.013)	91	160203			166.46- 226.46	210.53
171 o-Xylene					CAS #: 95-47-6		
23.257	23.257 (1.040)	106	74419	1.00000	0.9929	80.00- 120.00	100.00
23.257	23.257 (1.040)	91	151716			184.01- 244.01	203.87
172 Styrene					CAS #: 100-42-5		
23.298	23.298 (1.042)	104	117684	1.00000	0.9279	80.00- 120.00	100.00
23.278	23.278 (1.041)	78	61581			20.27- 80.27	52.33
174 Bromoform					CAS #: 75-25-2		
23.639	23.639 (1.057)	173	120659	1.00000	0.9323	80.00- 120.00	100.00
23.639	23.639 (1.057)	171	59405			20.88- 80.88	49.23
175 Cumene					CAS #: 98-82-8		
23.728	23.728 (1.061)	105	241543	1.00000	0.9478	80.00- 120.00	100.00
23.728	23.728 (1.061)	120	65106			0.00- 57.47	26.95

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		
24.020	24.020 (1.074)	174	362042	5.00000	4.943	80.00- 120.00	100.00
24.020	24.020 (1.074)	95	393463			77.42- 137.42	108.68
24.020	24.020 (1.074)	176	364911			65.38- 125.38	100.79
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.199	24.199 (1.082)	83	108704	1.00000	0.9160	80.00- 120.00	100.00
24.199	24.199 (1.082)	85	72697			35.73- 95.73	66.88
182 Propylbenzene					CAS #: 103-65-1		
24.267	24.267 (1.085)	91	255572	1.00000	0.9522	80.00- 120.00	100.00
24.267	24.267 (1.085)	120	63801			0.00- 55.24	24.96
188 4-Ethyltoluene					CAS #: 622-96-8		
24.401	24.401 (1.091)	105	208565	1.00000	0.9168	80.00- 120.00	100.00
24.401	24.401 (1.091)	120	66737			1.08- 61.08	32.00
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.469	24.469 (1.094)	105	175451	1.00000	0.9931	80.00- 120.00	100.00
24.469	24.469 (1.094)	120	84907			18.44- 78.44	48.39
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.917	24.917 (1.114)	105	135148	1.00000	0.8830	80.00- 120.00	100.00
24.917	24.917 (1.114)	120	61348			16.20- 76.20	45.39
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.321	25.321 (1.132)	146	126965	1.00000	0.8784	80.00- 120.00	100.00
25.321	25.321 (1.132)	148	83886			35.51- 95.51	66.07
25.321	25.321 (1.132)	111	51029			9.35- 69.35	40.19
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.433	25.433 (1.137)	146	125259	1.00000	0.9241	80.00- 120.00	100.00
25.433	25.433 (1.137)	148	87956			32.61- 92.61	70.22
25.433	25.433 (1.137)	111	46165			6.90- 66.90	36.86
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.567	25.567 (1.143)	91	161004	1.00000	0.9440	80.00- 120.00	100.00
25.567	25.567 (1.143)	126	35963			0.00- 51.82	22.34
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.859	25.859 (1.156)	146	116751	1.00000	0.9416	80.00- 120.00	100.00
25.859	25.859 (1.156)	148	77727			33.69- 93.69	66.58
25.859	25.859 (1.156)	111	46460			8.96- 68.96	39.79
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	55249	1.00000	0.9827	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.607	27.607 (1.234)	182	52161			66.05- 126.05	94.41
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	80496	1.00000	1.053	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	47848			33.78- 93.78	59.44
228 Naphthalene					CAS #: 91-20-3		
27.921	27.921 (1.248)	128	8634	0.10000	0.1052	80.00- 120.00	100.00
27.921	27.921 (1.248)	127	4254			0.00- 46.39	49.27

QC Flag Legend

M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031709.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	154931	-6.07
123 1,4-Difluorobenze	626935	376161	877709	579840	-7.51
163 Chlorobenzene-d5	567678	340607	794749	533830	-5.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.96	0.14
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031709.d

Date : 17-MAR-2016 16:31

Client ID: Level 8

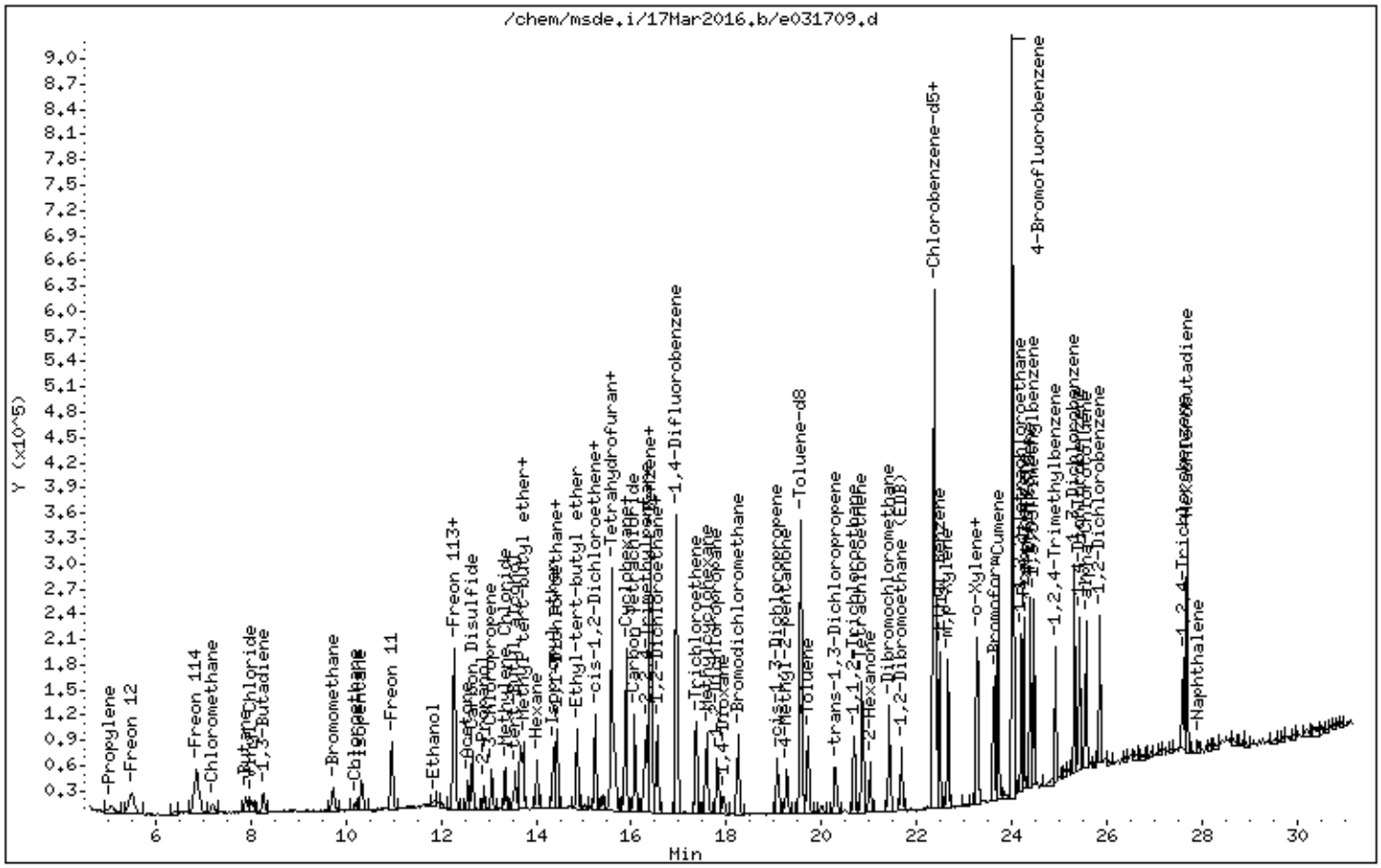
Instrument: msde.i

Sample Info: 250mL# 2789-14

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050909.d
Lab Smp Id: ICAL Level 9
Inj Date : 09-MAY-2016 12:56
Operator : ef Inst ID: msde.i
Smp Info : 100mL# 2789-105
Misc Info : 2.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 09-May-2016 17:07 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 12:56 Cal File: e050909.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.823	10.823 (0.703)	55	44155	2.00000	2.012	0.00- 0.00	100.00
10.823	10.823 (0.703)	42	49234			0.00- 0.00	111.50
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	75303	2.00000	1.957	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	15946			0.00- 0.00	21.18
10.976	10.976 (0.713)	72	13856			0.00- 0.00	18.40
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	35269	2.00000	1.977	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	40099			0.00- 0.00	113.69
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	217204	2.00000	1.962	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	95158			0.00- 0.00	43.81
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	149928	2.00000	1.997	0.00- 0.00	100.00

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

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68     60081                    0.00-   0.00    40.07
 12.900  12.900 (0.838)    53     25394                    0.00-   0.00    16.94
-------------------------------------------------------------------------------
   64 Cyclopentane                                 CAS #: 287-92-3
 13.094  13.094 (0.851)    70     36951 2.00000    1.907   0.00-   0.00   100.00
 13.094  13.094 (0.851)    55     37500                    0.00-   0.00   101.49
-------------------------------------------------------------------------------
   74 Acrylonitrile                                CAS #: 107-13-1
 13.671  13.671 (0.888)    53     45289 2.00000    2.004   0.00-   0.00   100.00
 13.671  13.671 (0.888)    52     39496                    0.00-   0.00    87.21
-------------------------------------------------------------------------------
   76 1-Hexene                                     CAS #: 592-41-6
 13.726  13.726 (0.892)    55     35669 2.00000    1.813   0.00-   0.00   100.00
 13.726  13.726 (0.892)    41     52283                    0.00-   0.00   146.58
 13.726  13.726 (0.892)    84     20782                    0.00-   0.00    58.26
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 14.384  14.384 (0.935)    59     13472 2.00000    2.200   0.00-   0.00   100.00
 14.384  14.384 (0.935)    42     10865                    0.00-   0.00    80.65
 14.384  14.384 (0.935)    41      7058                    0.00-   0.00    52.39
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 15.009  15.009 (0.975)    77    173543 2.00000    1.981   0.00-   0.00   100.00
 15.009  15.009 (0.975)    79     54934                    0.00-   0.00    31.65
 15.009  15.009 (0.975)    97     35682                    0.00-   0.00    20.56
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                CAS #: 141-78-6
 15.047  15.047 (0.978)    70     13817 2.00000    1.827   0.00-   0.00   100.00
 15.047  15.047 (0.978)    43    111338                    0.00-   0.00   805.80
 15.009  15.009 (0.975)    61     40577                    0.00-   0.00   293.67
-------------------------------------------------------------------------------
   93 Methyl Acrylate                              CAS #: 96-33-3
 15.123  15.123 (0.983)    55    115271 2.00000    1.979   0.00-   0.00   100.00
 15.123  15.123 (0.983)    85     26580                    0.00-   0.00    23.06
 15.123  15.123 (0.983)    58     11953                    0.00-   0.00    10.37
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    134839 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    100760                   52.25- 112.25    74.73
 15.391  15.391 (1.000)    49    100603                   89.81- 149.81    74.61
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                          CAS #: 563-58-6
 15.884  15.884 (1.032)   110     48393 2.00000    1.921   0.00-   0.00   100.00
 15.884  15.884 (1.032)    75    127294                    0.00-   0.00   263.04
-------------------------------------------------------------------------------
```

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

  115 Isobutanol                                     CAS #: 78-83-1
 15.977  15.977 (1.038)    43     48728 2.00000    1.804   0.00-   0.00   100.00
 15.977  15.977 (1.038)    41     40102                     0.00-   0.00    82.30
 15.977  15.977 (1.038)    55      6440                     0.00-   0.00    13.22
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    505390 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73831                     0.00-  45.20    14.61
-------------------------------------------------------------------------------
  124 n-Butanol                                      CAS #: 71-36-3
 16.906  16.906 (1.010)    56     90537 2.00000    1.993   0.00-   0.00   100.00
 16.906  16.906 (1.010)    41     60876                     0.00-   0.00    67.24
 16.906  16.906 (1.010)    43     43853                     0.00-   0.00    48.44
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                 CAS #: 140-88-5
 17.171  17.171 (1.026)    99     14420 2.00000    1.909   0.00-   0.00   100.00
 17.171  17.171 (1.026)    45     11997                     0.00-   0.00    83.20
 17.171  17.171 (1.026)    55    125578                     0.00-   0.00   870.86
-------------------------------------------------------------------------------
  131 2-Pentanone                                    CAS #: 107-87-9
 17.388  17.388 (1.039)    43    154363 2.00000    1.971   0.00-   0.00   100.00
 17.388  17.388 (1.039)    58     13873                     0.00-   0.00     8.99
 17.388  17.388 (1.039)    86     42107                     0.00-   0.00    27.28
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                            CAS #: 80-62-6
 17.556  17.556 (1.049)    41     79565 2.00000    1.946   0.00-   0.00   100.00
 17.556  17.556 (1.049)    69     84435                     0.00-   0.00   106.12
 17.556  17.556 (1.049)   100     35735                     0.00-   0.00    44.91
-------------------------------------------------------------------------------
  137 Dibromomethane                                 CAS #: 74-95-3
 17.797  17.797 (1.063)   174    150567 2.00000    1.993   0.00-   0.00   100.00
 17.797  17.797 (1.063)    93    116537                     0.00-   0.00    77.40
 17.797  17.797 (1.063)    95     94774                     0.00-   0.00    62.94
-------------------------------------------------------------------------------
  148 Octane                                         CAS #: 111-65-9
 19.320  19.320 (1.154)    57     49597 2.00000    1.950   0.00-   0.00   100.00
 19.320  19.320 (1.154)    85     71636                     0.00-   0.00   144.44
 19.320  19.320 (1.154)    43    100375                     0.00-   0.00   202.38
-------------------------------------------------------------------------------
  157 1,3-Dichloropropane                            CAS #: 142-28-9
 20.795  20.795 (0.938)    76    151538 2.00000    1.957   0.00-   0.00   100.00
 20.795  20.795 (0.938)    41     75482                     0.00-   0.00    49.81
 20.795  20.795 (0.938)    78     47871                     0.00-   0.00    31.59
-------------------------------------------------------------------------------
  159 Butyl Acetate                                  CAS #: 123-86-4
 20.905  20.905 (0.943)    56     15186 2.00000    2.009   0.00-   0.00   100.00
```

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

  159 Butyl Acetate (continued)
 20.905  20.905 (0.943)    73      9086                     0.00-   0.00    59.83
 20.905  20.905 (0.943)    43     33215                     0.00-   0.00   218.72
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    449145 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    224111                   20.64-  80.64    49.90
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                     CAS #: 630-20-6
 22.343  22.343 (1.007)   131    175712 2.00000    1.958   0.00-   0.00   100.00
 22.343  22.343 (1.007)   117    115399                     0.00-   0.00    65.68
 22.343  22.343 (1.007)    95     63594                     0.00-   0.00    36.19
-------------------------------------------------------------------------------
  170 Nonane                                        CAS #: 111-84-2
 22.301  22.301 (1.006)    43     88843 2.00000    1.976   0.00-   0.00   100.00
 22.301  22.301 (1.006)    57     93518                     0.00-   0.00   105.26
 22.301  22.301 (1.006)    85     47485                     0.00-   0.00    53.45
-------------------------------------------------------------------------------
  173 2-Heptanone                                   CAS #: 110-43-0
 23.214  23.214 (1.047)    58     84941 2.00000    1.827   0.00-   0.00   100.00
 23.214  23.214 (1.047)    43    128319                     0.00-   0.00   151.07
-------------------------------------------------------------------------------
  176 Cyclohexanone                                 CAS #: 108-94-1
 23.811  23.811 (1.074)    55     80423 2.00000    2.077   0.00-   0.00   100.00
 23.811  23.811 (1.074)    98     46566                     0.00-   0.00    57.90
 23.811  23.811 (1.074)    42     52747                     0.00-   0.00    65.59
-------------------------------------------------------------------------------
  179 alpha-Pinene                                  CAS #: 80-56-8
 23.497  23.497 (1.060)    93    355215 2.00000    1.983   0.00-   0.00   100.00
 23.519  23.519 (1.061)   121     49518                     0.00-   0.00    13.94
 23.497  23.497 (1.060)    92    139303                     0.00-   0.00    39.22
-------------------------------------------------------------------------------
  180 Bromobenzene                                  CAS #: 108-86-1
 24.080  24.080 (1.086)   156    177301 2.00000    1.964   0.00-   0.00   100.00
 24.080  24.080 (1.086)   158    166842                     0.00-   0.00    94.10
 24.080  24.080 (1.086)    77    216115                     0.00-   0.00   121.89
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                        CAS #: 96-18-4
 24.125  24.125 (1.088)   110     71416 2.00000    1.970   0.00-   0.00   100.00
 24.125  24.125 (1.088)    75    235348                     0.00-   0.00   329.55
 24.125  24.125 (1.088)    61     38992                     0.00-   0.00    54.60
-------------------------------------------------------------------------------
  187 Decane                                        CAS #: 124-18-5
 24.170  24.170 (1.090)    57     70803 2.00000    1.932   0.00-   0.00   100.00
 24.170  24.170 (1.090)    71     36499                     0.00-   0.00    51.55
 24.170  24.170 (1.090)   142      6512                     0.00-   0.00     9.20
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE		RATIO
189 2-Chlorotoluene					CAS #: 95-49-8			
24.282	24.282 (1.095)	126	112257	2.00000	1.938	0.00-	0.00	100.00
24.282	24.282 (1.095)	91	285954			0.00-	0.00	254.73
24.282	24.282 (1.095)	65	25510			0.00-	0.00	22.72
191 4-Chlorotoluene					CAS #: 106-43-4			
24.416	24.416 (1.101)	126	107061	2.00000	1.994	0.00-	0.00	100.00
24.416	24.416 (1.101)	91	280278			0.00-	0.00	261.79
24.416	24.416 (1.101)	63	28872			0.00-	0.00	26.97
195 tert-Butylbenzene					CAS #: 98-06-6			
24.708	24.708 (1.114)	119	296810	2.00000	1.961	0.00-	0.00	100.00
24.708	24.708 (1.114)	134	75959			0.00-	0.00	25.59
24.686	24.686 (1.113)	91	180906			0.00-	0.00	60.95
197 Pentachloroethane					CAS #: 76-01-7			
24.798	24.798 (1.118)	167	118441	2.00000	1.931	0.00-	0.00	100.00
24.798	24.798 (1.118)	117	98264			0.00-	0.00	82.96
24.798	24.798 (1.118)	169	56842			0.00-	0.00	47.99
199 D-Limonene					CAS #: 5989-27-5			
25.044	25.044 (1.129)	68	113761	2.00000	1.994	0.00-	0.00	100.00
25.044	25.044 (1.129)	93	287239			0.00-	0.00	252.49
203 sec-Butylbenzene					CAS #: 135-98-8			
24.955	24.955 (1.125)	105	554471	2.00000	1.942	0.00-	0.00	100.00
24.955	24.955 (1.125)	134	128050			0.00-	0.00	23.09
24.955	24.955 (1.125)	91	83896			0.00-	0.00	15.13
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4			
25.044	25.044 (1.129)	93	284572	2.00000	2.006	0.00-	0.00	100.00
25.044	25.044 (1.129)	95	71974			0.00-	0.00	25.29
25.044	25.044 (1.129)	63	118520			0.00-	0.00	41.65
207 p-Cymene					CAS #: 99-87-6			
25.089	25.089 (1.131)	119	349043	2.00000	2.002	0.00-	0.00	100.00
25.089	25.089 (1.131)	134	94428			0.00-	0.00	27.05
25.089	25.089 (1.131)	91	77864			0.00-	0.00	22.31
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8			
25.269	25.269 (1.139)	120	107064	2.00000	1.917	0.00-	0.00	100.00
25.269	25.269 (1.139)	105	235393			0.00-	0.00	219.86
25.269	25.269 (1.139)	77	28963			0.00-	0.00	27.05
213 Butylbenzene					CAS #: 104-51-8			
25.538	25.538 (1.152)	134	85703	2.00000	1.959	0.00-	0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
213 Butylbenzene (continued)							
25.538	25.538 (1.152)	91	281898			0.00- 0.00	328.92
25.538	25.538 (1.152)	92	155134			0.00- 0.00	181.01
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	55678	2.00000	2.096	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	40323			0.00- 0.00	72.42
25.515	25.515 (1.151)	85	21370			0.00- 0.00	38.38
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	139859	2.00000	1.972	0.00- 0.00	100.00
26.546	26.546 (1.197)	75	107812			0.00- 0.00	77.09
26.546	26.546 (1.197)	155	107493			0.00- 0.00	76.86
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	15827	2.00000	2.000	0.00- 0.00	100.00
26.614	26.614 (1.200)	57	32555			0.00- 0.00	205.69
26.614	26.614 (1.200)	43	23331			0.00- 0.00	147.41

QC Flag Legend

T - Target compound detected outside RT window.

Report Date: 09-May-2016 17:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e050909.d
Lab Smp Id: ICAL Level 9
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 2.0ppbv (5.0ppbv) Combo

Calibration Date: 09-MAY-2016
Calibration Time: 07:51

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	134839	-15.39
123 1,4-Difluorobenze	624905	374943	874867	505390	-19.13
163 Chlorobenzene-d5	549919	329951	769887	449145	-18.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/09May2016.b/e050909.d

Date : 09-MAY-2016 12:56

Client ID:

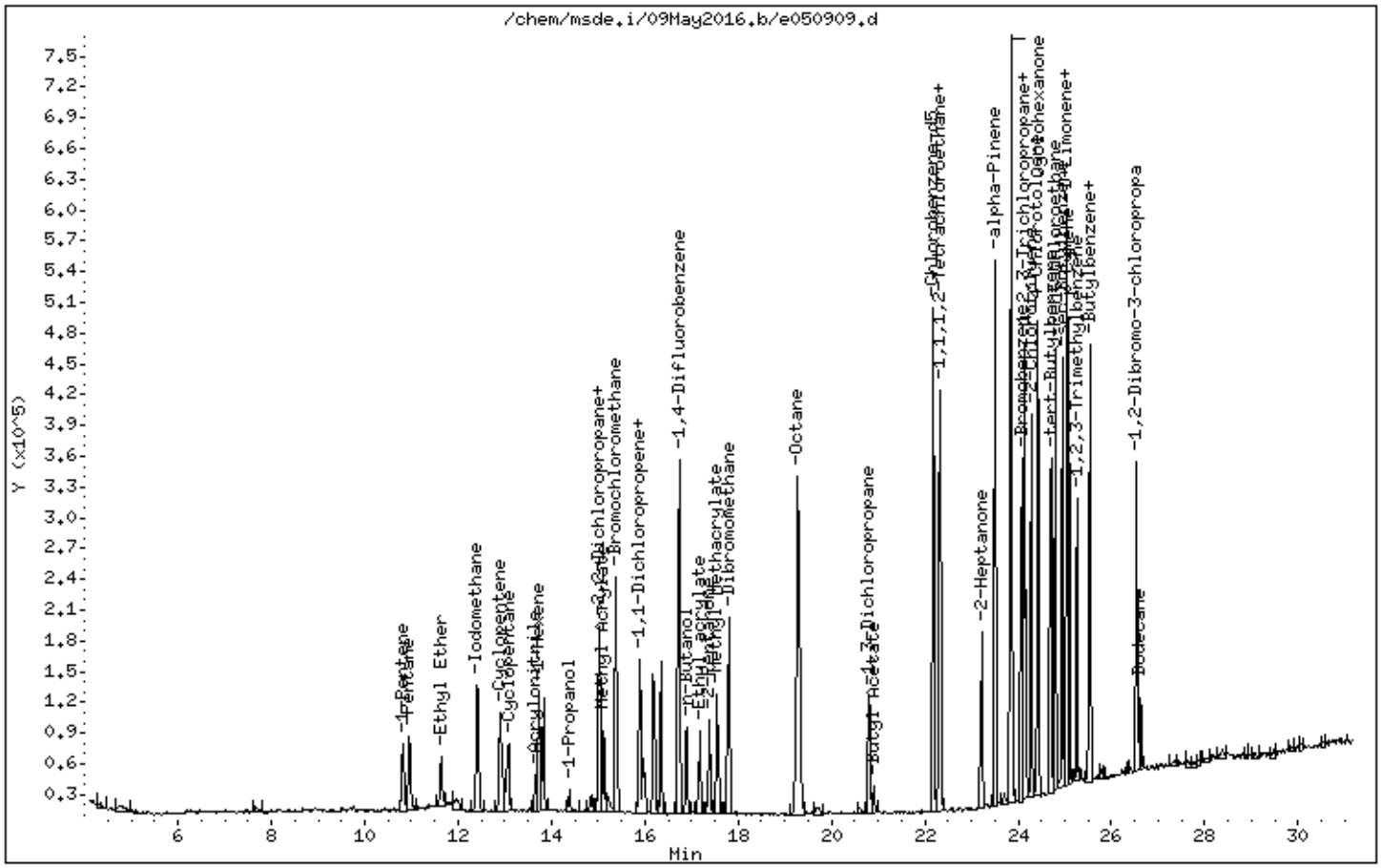
Instrument: msde.i

Sample Info: 100mL# 2789-105

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/22Mar2016.b/e032207.d
Lab Smp Id: ICAL Client Smp ID: Level 9
Inj Date : 22-MAR-2016 14:04
Operator : ef Inst ID: msde.i
Smp Info : 100mL# 2759-238
Misc Info : 2.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/22Mar2016.b/e16l0317a.m
Meth Date : 24-Mar-2016 08:33 efinn Quant Type: ISTD
Cal Date : 22-MAR-2016 14:04 Cal File: e032207.d
Als bottle: 1 Calibration Sample, Level: 9
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

Name	Value	Description
DF	1.00000	Dilution Factor

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		
4.877	4.877 (0.313)	83	31585	2.00000	2.036	0.00- 0.00	100.00(T)
4.877	4.877 (0.313)	69	22043			0.00- 0.00	69.79
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
5.335	5.335 (0.342)	65	11996	2.00000	1.832	0.00- 0.00	100.00(a)
5.335	5.335 (0.342)	51	12959			0.00- 0.00	108.03
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.986	5.986 (0.384)	51	36044	2.00000	2.137	0.00- 0.00	100.00(T)
5.962	5.962 (0.383)	67	9647			0.00- 0.00	26.76
0.000	1.000 (0.000)	85	0			0.00- 0.00	0.00
16 Freon 142b					CAS #: 75-68-3		
7.094	7.094 (0.455)	65	69656	2.00000	2.036	0.00- 0.00	100.00
7.119	7.119 (0.457)	45	12279			0.00- 0.00	17.63

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

   16 Freon 142b (continued)
  7.094   7.094 (0.455)    81      4659                     0.00-   0.00     6.69
-------------------------------------------------------------------------------
   37 Dichlorofluoromethane                        CAS #: 75-43-4
 11.071  11.071 (0.711)    67     68909 2.00000    1.928   0.00-   0.00   100.00(a)
 11.071  11.071 (0.711)    69     21878                     0.00-   0.00    31.75
 11.052  11.052 (0.709)    47      5558                     0.00-   0.00     8.07
-------------------------------------------------------------------------------
   48 Freon 123                                    CAS #: 306-83-2
 12.214  12.214 (0.784)    83    106156 2.00000    1.924   0.00-   0.00   100.00(a)
 12.214  12.214 (0.784)   133     33706                     0.00-   0.00    31.75
 12.214  12.214 (0.784)    85     77789                     0.00-   0.00    73.28
-------------------------------------------------------------------------------
   59 Cyclopentene                                 CAS #: 142-29-0
 13.090  13.090 (0.840)    67     49814 2.00000    1.964   0.00-   0.00   100.00(a)
 13.090  13.090 (0.840)    68     19653                     0.00-   0.00    39.45
 13.090  13.090 (0.840)    53      9293                     0.00-   0.00    18.66
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 14.552  14.552 (0.934)    59     14584 2.00000    2.050   0.00-   0.00   100.00
 14.552  14.552 (0.934)    42     10318                     0.00-   0.00    70.75
 14.552  14.552 (0.934)    41      7182                     0.00-   0.00    49.25
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 15.202  15.202 (0.976)    77     89068 2.00000    1.987   0.00-   0.00   100.00(a)
 15.202  15.202 (0.976)    79     27358                     0.00-   0.00    30.72
 15.202  15.202 (0.976)    97     17442                     0.00-   0.00    19.58
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.580  15.580 (1.000)   130    190394 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    145857                   52.25- 112.25    76.61
 15.580  15.580 (1.000)    49    152277                   89.81- 149.81    79.98
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                         CAS #: 563-58-6
 16.104  16.104 (1.034)   110     22294 2.00000    1.908   0.00-   0.00   100.00(a)
 16.104  16.104 (1.034)    75     63010                     0.00-   0.00   282.63
-------------------------------------------------------------------------------
  115 Isobutanol                                  CAS #: 78-83-1
 16.165  16.165 (1.038)    43     68320 2.00000    1.987   0.00-   0.00   100.00(a)
 16.165  16.165 (1.038)    41     56724                     0.00-   0.00    83.03
 16.165  16.165 (1.038)    55      5804                     0.00-   0.00     8.50
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.939  16.939 (1.000)   114    738230 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    109699                    0.00-  45.20    14.86
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
17.108	17.108 (1.010)	56	94613	2.00000	2.028	0.00- 0.00	100.00
17.108	17.108 (1.010)	41	65538			0.00- 0.00	69.27
17.108	17.108 (1.010)	43	48040			0.00- 0.00	50.78
157 1,3-Dichloropropane					CAS #: 142-28-9		
21.046	21.046 (0.941)	76	113453	2.00000	2.002	0.00- 0.00	100.00
21.046	21.046 (0.941)	41	56999			0.00- 0.00	50.24
21.046	21.046 (0.941)	78	35480			0.00- 0.00	31.27
159 Butyl Acetate					CAS #: 123-86-4		
21.128	21.128 (0.945)	56	13576	2.00000	2.039	0.00- 0.00	100.00
21.128	21.128 (0.945)	73	9146			0.00- 0.00	67.37
21.128	21.128 (0.945)	43	31587			0.00- 0.00	232.67
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	666705	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	342676			20.64- 80.64	51.40
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.511	22.511 (1.006)	131	134523	2.00000	1.989	0.00- 0.00	100.00(a)
22.511	22.511 (1.006)	117	84564			0.00- 0.00	62.86
22.511	22.511 (1.006)	95	49192			0.00- 0.00	36.57
173 2-Heptanone					CAS #: 110-43-0		
23.381	23.381 (1.045)	58	99803	2.00000	2.036	0.00- 0.00	100.00
23.381	23.381 (1.045)	43	140510			0.00- 0.00	140.79
176 Cyclohexanone					CAS #: 108-94-1		
23.975	23.975 (1.072)	55	81342	2.00000	1.964	0.00- 0.00	100.00(a)
23.975	23.975 (1.072)	98	50627			0.00- 0.00	62.24
23.975	23.975 (1.072)	42	56628			0.00- 0.00	69.62
180 Bromobenzene					CAS #: 108-86-1		
24.244	24.244 (1.084)	156	145985	2.00000	1.998	0.00- 0.00	100.00(a)
24.244	24.244 (1.084)	158	142440			0.00- 0.00	97.57
24.244	24.244 (1.084)	77	203644			0.00- 0.00	139.50
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.289	24.289 (1.086)	110	71103	2.00000	1.961	0.00- 0.00	100.00(a)
24.289	24.289 (1.086)	75	177204			0.00- 0.00	249.22
24.289	24.289 (1.086)	61	38011			0.00- 0.00	53.46
189 2-Chlorotoluene					CAS #: 95-49-8		
24.446	24.446 (1.093)	126	100135	2.00000	2.018	0.00- 0.00	100.00
24.446	24.446 (1.093)	91	266854			0.00- 0.00	266.49

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
189 2-Chlorotoluene (continued)							
24.446	24.446 (1.093)	65	25474			0.00- 0.00	25.44
191 4-Chlorotoluene					CAS #: 106-43-4		
24.581	24.581 (1.099)	126	92984	2.00000	1.877	0.00- 0.00	100.00(a)
24.581	24.581 (1.099)	91	264780			0.00- 0.00	284.76
24.581	24.581 (1.099)	63	31473			0.00- 0.00	33.85
195 tert-Butylbenzene					CAS #: 98-06-6		
24.850	24.850 (1.111)	119	303773	2.00000	1.965	0.00- 0.00	100.00(a)
24.850	24.850 (1.111)	134	84004			0.00- 0.00	27.65
24.850	24.850 (1.111)	91	199201			0.00- 0.00	65.58
197 Pentachloroethane					CAS #: 76-01-7		
24.962	24.962 (1.116)	167	109630	2.00000	1.978	0.00- 0.00	100.00(a)
24.962	24.962 (1.116)	117	94396			0.00- 0.00	86.10
24.962	24.962 (1.116)	169	51170			0.00- 0.00	46.68
203 sec-Butylbenzene					CAS #: 135-98-8		
25.096	25.096 (1.122)	105	409512	2.00000	1.972	0.00- 0.00	100.00(a)
25.096	25.096 (1.122)	134	85420			0.00- 0.00	20.86
25.096	25.096 (1.122)	91	67954			0.00- 0.00	16.59
207 p-Cymene					CAS #: 99-87-6		
25.253	25.253 (1.129)	119	330548	2.00000	2.019	0.00- 0.00	100.00
25.253	25.253 (1.129)	134	88426			0.00- 0.00	26.75
25.253	25.253 (1.129)	91	76723			0.00- 0.00	23.21
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.410	25.410 (1.136)	120	105242	2.00000	2.077	0.00- 0.00	100.00
25.410	25.410 (1.136)	105	243997			0.00- 0.00	231.84
25.410	25.410 (1.136)	77	26041			0.00- 0.00	24.74
213 Butylbenzene					CAS #: 104-51-8		
25.702	25.702 (1.149)	134	67079	2.00000	1.828	0.00- 0.00	100.00(a)
25.702	25.702 (1.149)	91	250061			0.00- 0.00	372.79
25.702	25.702 (1.149)	92	137576			0.00- 0.00	205.10
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.711	26.711 (1.194)	157	129351	2.00000	1.962	0.00- 0.00	100.00(a)
26.711	26.711 (1.194)	75	105234			0.00- 0.00	81.36
26.711	26.711 (1.194)	155	97450			0.00- 0.00	75.34

QC Flag Legend

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

Report Date: 24-Mar-2016 08:33

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032207.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/22Mar2016.b/e16l0317a.m
Misc Info: 2.0ppbv (5.0ppbv)

Calibration Date: 22-MAR-2016
Calibration Time: 09:49
Client Smp ID: Level 9
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190421	114253	266589	190394	-0.01
123 1,4-Difluorobenze	736283	441770	1030796	738230	0.26
163 Chlorobenzene-d5	650623	390374	910872	666705	2.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/22Mar2016.b/e032207.d

Date : 22-MAR-2016 14:04

Client ID: Level 9

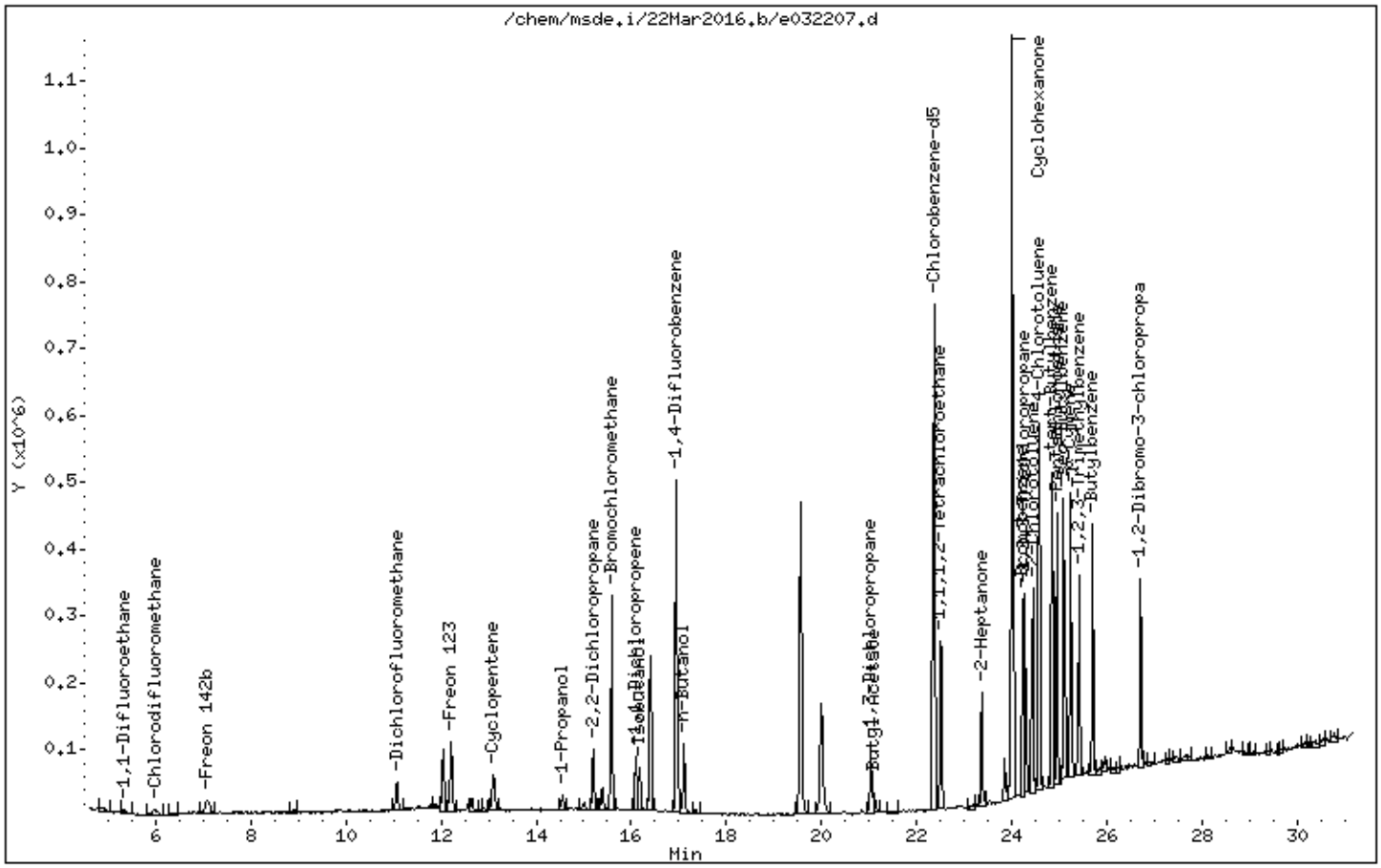
Instrument: msde.i

Sample Info: 100mL# 2759-238

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050912.d
Lab Smp Id: ICAL Level 11
Inj Date : 09-MAY-2016 14:40
Operator : ef Inst ID: msde.i
Smp Info : 200mL# 2789-105
Misc Info : 4.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 09-May-2016 17:07 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 14:40 Cal File: e050912.d
Als bottle: 1 Calibration Sample, Level: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.823	10.823 (0.703)	55	85769	4.00000	3.993	0.00- 0.00	100.00
10.823	10.823 (0.703)	42	94821			0.00- 0.00	110.55
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	139952	4.00000	3.717	0.00- 0.00	100.00
10.957	10.957 (0.712)	57	28872			0.00- 0.00	20.63
10.957	10.957 (0.712)	72	23827			0.00- 0.00	17.03
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	67461	4.00000	3.865	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	78888			0.00- 0.00	116.94
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	424719	4.00000	3.922	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	183387			0.00- 0.00	43.18
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	286638	4.00000	3.902	0.00- 0.00	100.00

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

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68    109408                     0.00-   0.00    38.17
 12.900  12.900 (0.838)    53     50685                     0.00-   0.00    17.68
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.067  13.067 (0.849)    70     73313 4.00000    3.867   0.00-   0.00   100.00
 13.094  13.094 (0.851)    55     74068                     0.00-   0.00   101.03
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.671  13.671 (0.888)    53     82684 4.00000    3.740   0.00-   0.00   100.00
 13.671  13.671 (0.888)    52     71587                     0.00-   0.00    86.58
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.725  13.725 (0.892)    55     76900 4.00000    3.995   0.00-   0.00   100.00
 13.725  13.725 (0.892)    41    104509                     0.00-   0.00   135.90
 13.725  13.725 (0.892)    84     40285                     0.00-   0.00    52.39
-------------------------------------------------------------------------------
   84 1-Propanol                                    CAS #: 71-23-8
 14.384  14.384 (0.935)    59     27008 4.00000    4.507   0.00-   0.00   100.00
 14.384  14.384 (0.935)    42     16493                     0.00-   0.00    61.07
 14.384  14.384 (0.935)    41     12459                     0.00-   0.00    46.13
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.008  15.008 (0.975)    77    337264 4.00000    3.934   0.00-   0.00   100.00
 15.008  15.008 (0.975)    79    109782                     0.00-   0.00    32.55
 15.008  15.008 (0.975)    97     65363                     0.00-   0.00    19.38
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.047  15.047 (0.978)    70     29978 4.00000    4.052   0.00-   0.00   100.00
 15.047  15.047 (0.978)    43    211701                     0.00-   0.00   706.19
 15.028  15.028 (0.976)    61     77533                     0.00-   0.00   258.63
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.123  15.123 (0.983)    55    229395 4.00000    4.026   0.00-   0.00   100.00
 15.123  15.123 (0.983)    85     52413                     0.00-   0.00    22.85
 15.123  15.123 (0.983)    58     23465                     0.00-   0.00    10.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    131935 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    109410                    52.25- 112.25    82.93
 15.391  15.391 (1.000)    49    101456                    89.81- 149.81    76.90
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                           CAS #: 563-58-6
 15.884  15.884 (1.032)   110     98328 4.00000    3.989   0.00-   0.00   100.00
 15.884  15.884 (1.032)    75    241474                     0.00-   0.00   245.58
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  115 Isobutanol                                     CAS #: 78-83-1
 15.977  15.977 (1.038)    43    102466 4.00000    3.877   0.00-   0.00   100.00
 15.977  15.977 (1.038)    41     72870                    0.00-   0.00    71.12
 15.977  15.977 (1.038)    55     10083                    0.00-   0.00     9.84
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    498931 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     74272                    0.00-  45.20    14.89
-------------------------------------------------------------------------------
  124 n-Butanol                                      CAS #: 71-36-3
 16.906  16.906 (1.010)    56    178359 4.00000    3.978   0.00-   0.00   100.00
 16.882  16.882 (1.009)    41    119247                    0.00-   0.00    66.86
 16.906  16.906 (1.010)    43     85789                    0.00-   0.00    48.10
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                 CAS #: 140-88-5
 17.171  17.171 (1.026)    99     27399 4.00000    3.674   0.00-   0.00   100.00
 17.171  17.171 (1.026)    45     21159                    0.00-   0.00    77.23
 17.171  17.171 (1.026)    55    263623                    0.00-   0.00   962.16
-------------------------------------------------------------------------------
  131 2-Pentanone                                    CAS #: 107-87-9
 17.388  17.388 (1.039)    43    305778 4.00000    3.955   0.00-   0.00   100.00
 17.388  17.388 (1.039)    58     28662                    0.00-   0.00     9.37
 17.388  17.388 (1.039)    86     86392                    0.00-   0.00    28.25
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                            CAS #: 80-62-6
 17.556  17.556 (1.049)    41    161290 4.00000    3.997   0.00-   0.00   100.00
 17.556  17.556 (1.049)    69    168968                    0.00-   0.00   104.76
 17.556  17.556 (1.049)   100     77403                    0.00-   0.00    47.99
-------------------------------------------------------------------------------
  137 Dibromomethane                                 CAS #: 74-95-3
 17.797  17.797 (1.063)   174    292057 4.00000    3.915   0.00-   0.00   100.00
 17.797  17.797 (1.063)    93    230119                    0.00-   0.00    78.79
 17.797  17.797 (1.063)    95    190186                    0.00-   0.00    65.12
-------------------------------------------------------------------------------
  148 Octane                                         CAS #: 111-65-9
 19.320  19.320 (1.154)    57     99295 4.00000    3.954   0.00-   0.00   100.00
 19.343  19.343 (1.156)    85    151015                    0.00-   0.00   152.09
 19.320  19.320 (1.154)    43    195995                    0.00-   0.00   197.39
-------------------------------------------------------------------------------
  157 1,3-Dichloropropane                            CAS #: 142-28-9
 20.795  20.795 (0.938)    76    297999 4.00000    3.739   0.00-   0.00   100.00
 20.795  20.795 (0.938)    41    144752                    0.00-   0.00    48.57
 20.795  20.795 (0.938)    78     95333                    0.00-   0.00    31.99
-------------------------------------------------------------------------------
  159 Butyl Acetate                                  CAS #: 123-86-4
 20.905  20.905 (0.943)    56     31556 4.00000    4.057   0.00-   0.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  159 Butyl Acetate (continued)
 20.905  20.905 (0.943)    73     16178                     0.00-   0.00    51.27
 20.905  20.905 (0.943)    43     66521                     0.00-   0.00   210.80
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    462236 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    226153                   20.64-  80.64    48.93
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                       CAS #: 630-20-6
 22.343  22.343 (1.007)   131    339206 4.00000    3.673   0.00-   0.00   100.00
 22.343  22.343 (1.007)   117    209648                     0.00-   0.00    61.81
 22.343  22.343 (1.007)    95    119676                     0.00-   0.00    35.28
-------------------------------------------------------------------------------
  170 Nonane                                          CAS #: 111-84-2
 22.301  22.301 (1.006)    43    182841 4.00000    3.951   0.00-   0.00   100.00
 22.301  22.301 (1.006)    57    193399                     0.00-   0.00   105.77
 22.301  22.301 (1.006)    85    100515                     0.00-   0.00    54.97
-------------------------------------------------------------------------------
  173 2-Heptanone                                     CAS #: 110-43-0
 23.214  23.214 (1.047)    58    188977 4.00000    3.950   0.00-   0.00   100.00
 23.214  23.214 (1.047)    43    261149                     0.00-   0.00   138.19
-------------------------------------------------------------------------------
  176 Cyclohexanone                                   CAS #: 108-94-1
 23.811  23.811 (1.074)    55    152788 4.00000    3.835   0.00-   0.00   100.00
 23.811  23.811 (1.074)    98     93542                     0.00-   0.00    61.22
 23.811  23.811 (1.074)    42    104028                     0.00-   0.00    68.09
-------------------------------------------------------------------------------
  179 alpha-Pinene                                    CAS #: 80-56-8
 23.497  23.497 (1.060)    93    732214 4.00000    3.972   0.00-   0.00   100.00
 23.497  23.497 (1.060)   121    101404                     0.00-   0.00    13.85
 23.497  23.497 (1.060)    92    271778                     0.00-   0.00    37.12
-------------------------------------------------------------------------------
  180 Bromobenzene                                    CAS #: 108-86-1
 24.080  24.080 (1.086)   156    342465 4.00000    3.686   0.00-   0.00   100.00
 24.080  24.080 (1.086)   158    324468                     0.00-   0.00    94.74
 24.080  24.080 (1.086)    77    425499                     0.00-   0.00   124.25
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                          CAS #: 96-18-4
 24.125  24.125 (1.088)   110    134853 4.00000    3.615   0.00-   0.00   100.00
 24.125  24.125 (1.088)    75    481314                     0.00-   0.00   356.92
 24.125  24.125 (1.088)    61     79517                     0.00-   0.00    58.97
-------------------------------------------------------------------------------
  187 Decane                                          CAS #: 124-18-5
 24.170  24.170 (1.090)    57    147525 4.00000    3.911   0.00-   0.00   100.00
 24.170  24.170 (1.090)    71     73493                     0.00-   0.00    49.82
 24.170  24.170 (1.090)   142     12347                     0.00-   0.00     8.37
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE		RATIO
189 2-Chlorotoluene					CAS #: 95-49-8			
24.282	24.282 (1.095)	126	217090	4.00000	3.642	0.00-	0.00	100.00
24.282	24.282 (1.095)	91	579657			0.00-	0.00	267.01
24.282	24.282 (1.095)	65	50969			0.00-	0.00	23.48
191 4-Chlorotoluene					CAS #: 106-43-4			
24.416	24.416 (1.101)	126	210305	4.00000	3.806	0.00-	0.00	100.00
24.416	24.416 (1.101)	91	554757			0.00-	0.00	263.79
24.416	24.416 (1.101)	63	61752			0.00-	0.00	29.36
195 tert-Butylbenzene					CAS #: 98-06-6			
24.708	24.708 (1.114)	119	599692	4.00000	3.850	0.00-	0.00	100.00
24.708	24.708 (1.114)	134	149254			0.00-	0.00	24.89
24.686	24.686 (1.113)	91	374514			0.00-	0.00	62.45
197 Pentachloroethane					CAS #: 76-01-7			
24.798	24.798 (1.118)	167	233936	4.00000	3.706	0.00-	0.00	100.00
24.798	24.798 (1.118)	117	200591			0.00-	0.00	85.75
24.798	24.798 (1.118)	169	117023			0.00-	0.00	50.02
199 D-Limonene					CAS #: 5989-27-5			
25.044	25.044 (1.129)	68	231405	4.00000	3.942	0.00-	0.00	100.00
25.044	25.044 (1.129)	93	572422			0.00-	0.00	247.37
203 sec-Butylbenzene					CAS #: 135-98-8			
24.955	24.955 (1.125)	105	1115161	4.00000	3.795	0.00-	0.00	100.00
24.955	24.955 (1.125)	134	237948			0.00-	0.00	21.34
24.955	24.955 (1.125)	91	181166			0.00-	0.00	16.25
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4			
25.044	25.044 (1.129)	93	572422	4.00000	3.921	0.00-	0.00	100.00
25.044	25.044 (1.129)	95	144011			0.00-	0.00	25.16
25.044	25.044 (1.129)	63	241021			0.00-	0.00	42.11
207 p-Cymene					CAS #: 99-87-6			
25.089	25.089 (1.131)	119	702100	4.00000	3.912	0.00-	0.00	100.00
25.089	25.089 (1.131)	134	196095			0.00-	0.00	27.93
25.089	25.089 (1.131)	91	151295			0.00-	0.00	21.55
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8			
25.268	25.268 (1.139)	120	219310	4.00000	3.816	0.00-	0.00	100.00
25.268	25.268 (1.139)	105	498808			0.00-	0.00	227.44
25.268	25.268 (1.139)	77	54582			0.00-	0.00	24.89
213 Butylbenzene					CAS #: 104-51-8			
25.537	25.537 (1.152)	134	172231	4.00000	3.826	0.00-	0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
213 Butylbenzene (continued)							
25.537	25.537 (1.152)	91	555920			0.00- 0.00	322.78
25.537	25.537 (1.152)	92	304567			0.00- 0.00	176.84
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	108515	4.00000	3.969	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	79728			0.00- 0.00	73.47
25.515	25.515 (1.151)	85	41724			0.00- 0.00	38.45
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	290043	4.00000	3.973	0.00- 0.00	100.00
26.546	26.546 (1.197)	75	213389			0.00- 0.00	73.57
26.546	26.546 (1.197)	155	228972			0.00- 0.00	78.94
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	26386	4.00000	3.240	0.00- 0.00	100.00
26.614	26.614 (1.200)	57	61867			0.00- 0.00	234.47
26.614	26.614 (1.200)	43	46595			0.00- 0.00	176.59

QC Flag Legend

T - Target compound detected outside RT window.

Report Date: 09-May-2016 17:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e050912.d
Lab Smp Id: ICAL Level 11
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 4.0ppbv (5.0ppbv) Combo

Calibration Date: 09-MAY-2016
Calibration Time: 07:51

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	131935	-17.22
123 1,4-Difluorobenze	624905	374943	874867	498931	-20.16
163 Chlorobenzene-d5	549919	329951	769887	462236	-15.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/09May2016.b/e050912.d

Date : 09-MAY-2016 14:40

Client ID:

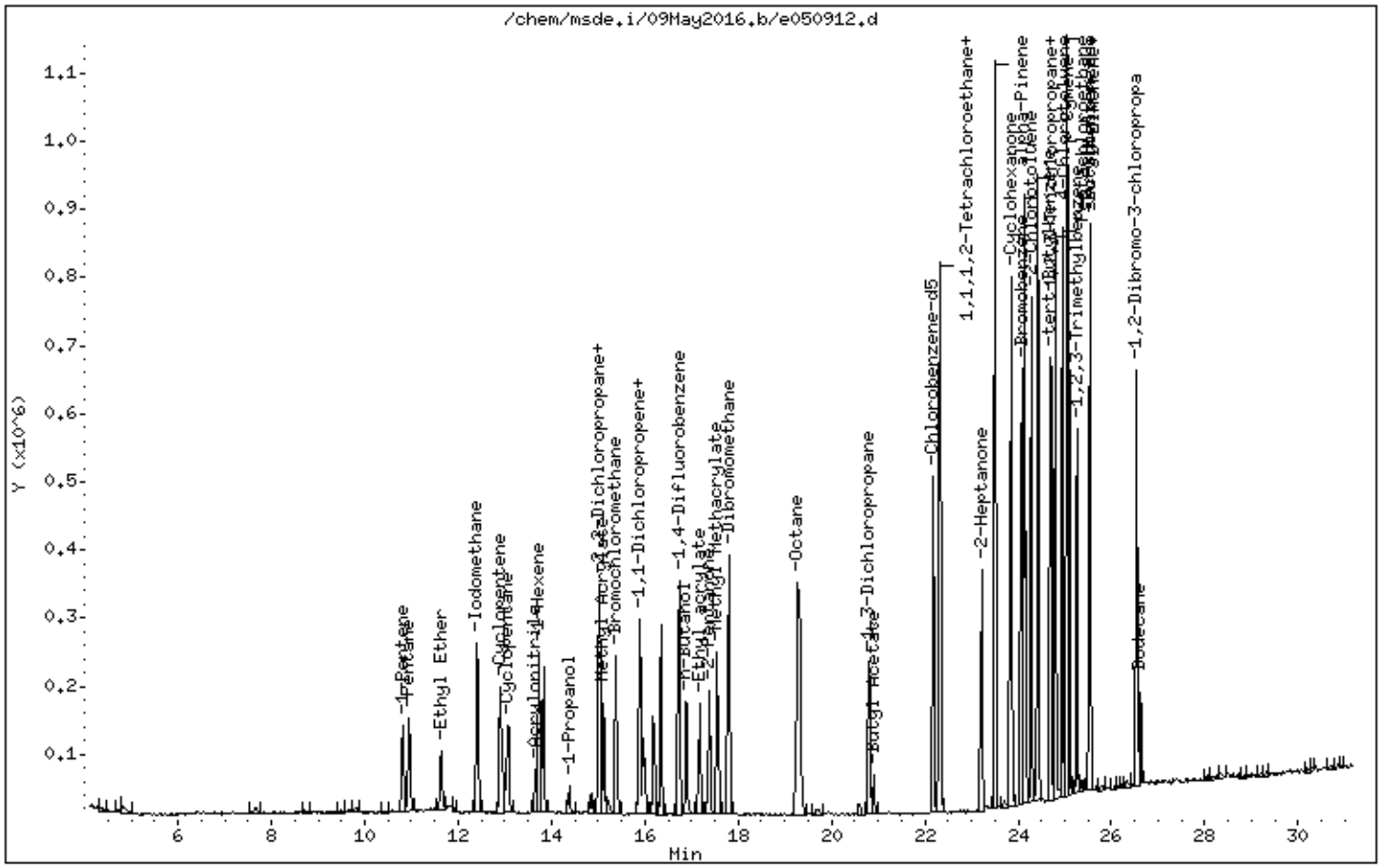
Instrument: msde.i

Sample Info: 200mL# 2789-105

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/22Mar2016.b/e032208.d
Lab Smp Id: ICAL Client Smp ID: Level 11
Inj Date : 22-MAR-2016 14:50
Operator : ef Inst ID: msde.i
Smp Info : 200mL# 2759-238
Misc Info : 4.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/22Mar2016.b/e16l0317a.m
Meth Date : 24-Mar-2016 08:33 efinn Quant Type: ISTD
Cal Date : 22-MAR-2016 14:50 Cal File: e032208.d
Als bottle: 1 Calibration Sample, Level: 11
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

Name	Value	Description
DF	1.00000	Dilution Factor

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		
4.901	4.901 (0.315)	83	64415	4.00000	4.136	0.00- 0.00	100.00(T)
4.877	4.877 (0.313)	69	42738			0.00- 0.00	66.35
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
5.311	5.311 (0.341)	65	24527	4.00000	3.731	0.00- 0.00	100.00(M)
5.335	5.335 (0.342)	51	39253			0.00- 0.00	160.04
13 Chlorodifluoromethane					CAS #: 75-45-6		
5.985	5.985 (0.384)	51	61508	4.00000	3.632	0.00- 0.00	100.00
5.985	5.985 (0.384)	67	15428			0.00- 0.00	25.08
6.010	6.010 (0.386)	85	400			0.00- 0.00	0.65
16 Freon 142b					CAS #: 75-68-3		
7.094	7.094 (0.455)	65	133474	4.00000	3.886	0.00- 0.00	100.00
7.094	7.094 (0.455)	45	24980			0.00- 0.00	18.72

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

   16 Freon 142b (continued)
  7.094   7.094 (0.455)    81      4108                     0.00-   0.00     3.08
-------------------------------------------------------------------------------
   37 Dichlorofluoromethane                        CAS #: 75-43-4
 11.052  11.052 (0.709)    67    142244 4.00000    3.965   0.00-   0.00   100.00
 11.052  11.052 (0.709)    69     46014                     0.00-   0.00    32.35
 11.071  11.071 (0.711)    47     12311                     0.00-   0.00     8.65
-------------------------------------------------------------------------------
   48 Freon 123                                    CAS #: 306-83-2
 12.213  12.213 (0.784)    83    219473 4.00000    3.962   0.00-   0.00   100.00
 12.213  12.213 (0.784)   133     61438                     0.00-   0.00    27.99
 12.213  12.213 (0.784)    85    143239                     0.00-   0.00    65.26
-------------------------------------------------------------------------------
   59 Cyclopentene                                 CAS #: 142-29-0
 13.090  13.090 (0.840)    67     99475 4.00000    3.908   0.00-   0.00   100.00
 13.090  13.090 (0.840)    68     39449                     0.00-   0.00    39.66
 13.090  13.090 (0.840)    53     16129                     0.00-   0.00    16.21
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 14.552  14.552 (0.934)    59     28623 4.00000    4.008   0.00-   0.00   100.00
 14.552  14.552 (0.934)    42     19608                     0.00-   0.00    68.50
 14.552  14.552 (0.934)    41     14656                     0.00-   0.00    51.20
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 15.201  15.201 (0.976)    77    181456 4.00000    4.033   0.00-   0.00   100.00
 15.201  15.201 (0.976)    79     60230                     0.00-   0.00    33.19
 15.201  15.201 (0.976)    97     34322                     0.00-   0.00    18.91
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    191124 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    144663                   52.25- 112.25    75.69
 15.580  15.580 (1.000)    49    146074                   89.81- 149.81    76.43
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                          CAS #: 563-58-6
 16.104  16.104 (1.034)   110     47520 4.00000    4.050   0.00-   0.00   100.00
 16.104  16.104 (1.034)    75    127721                     0.00-   0.00   268.77
-------------------------------------------------------------------------------
  115 Isobutanol                                  CAS #: 78-83-1
 16.165  16.165 (1.038)    43    127154 4.00000    3.684   0.00-   0.00   100.00
 16.165  16.165 (1.038)    41    107486                     0.00-   0.00    84.53
 16.165  16.165 (1.038)    55     11637                     0.00-   0.00     9.15
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.939  16.939 (1.000)   114    725281 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    111156                     0.00-  45.20    15.33
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
17.108	17.108 (1.010)	56	186975	4.00000	4.079	0.00- 0.00	100.00
17.108	17.108 (1.010)	41	130038			0.00- 0.00	69.55
17.108	17.108 (1.010)	43	96387			0.00- 0.00	51.55
157 1,3-Dichloropropane					CAS #: 142-28-9		
21.045	21.045 (0.941)	76	216199	4.00000	3.815	0.00- 0.00	100.00
21.045	21.045 (0.941)	41	116829			0.00- 0.00	54.04
21.045	21.045 (0.941)	78	70038			0.00- 0.00	32.40
159 Butyl Acetate					CAS #: 123-86-4		
21.128	21.128 (0.945)	56	27235	4.00000	4.090	0.00- 0.00	100.00
21.128	21.128 (0.945)	73	15848			0.00- 0.00	58.19
21.128	21.128 (0.945)	43	69733			0.00- 0.00	256.04
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.365 (1.000)	117	666778	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	341279			20.64- 80.64	51.18
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.511	22.511 (1.006)	131	261803	4.00000	3.870	0.00- 0.00	100.00
22.511	22.511 (1.006)	117	159310			0.00- 0.00	60.85
22.511	22.511 (1.006)	95	94154			0.00- 0.00	35.96
173 2-Heptanone					CAS #: 110-43-0		
23.381	23.381 (1.045)	58	203635	4.00000	4.153	0.00- 0.00	100.00
23.381	23.381 (1.045)	43	295232			0.00- 0.00	144.98
176 Cyclohexanone					CAS #: 108-94-1		
23.975	23.975 (1.072)	55	160626	4.00000	3.878	0.00- 0.00	100.00
23.975	23.975 (1.072)	98	100472			0.00- 0.00	62.55
23.975	23.975 (1.072)	42	110884			0.00- 0.00	69.03
180 Bromobenzene					CAS #: 108-86-1		
24.244	24.244 (1.084)	156	288523	4.00000	3.949	0.00- 0.00	100.00
24.244	24.244 (1.084)	158	285551			0.00- 0.00	98.97
24.244	24.244 (1.084)	77	389429			0.00- 0.00	134.97
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.289	24.289 (1.086)	110	141453	4.00000	3.901	0.00- 0.00	100.00
24.289	24.289 (1.086)	75	346764			0.00- 0.00	245.14
24.289	24.289 (1.086)	61	77861			0.00- 0.00	55.04
189 2-Chlorotoluene					CAS #: 95-49-8		
24.446	24.446 (1.093)	126	194264	4.00000	3.915	0.00- 0.00	100.00
24.446	24.446 (1.093)	91	535104			0.00- 0.00	275.45

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
189 2-Chlorotoluene (continued)							
24.446	24.446 (1.093)	65	50024			0.00- 0.00	25.75
191 4-Chlorotoluene					CAS #: 106-43-4		
24.581	24.581 (1.099)	126	203069	4.00000	4.099	0.00- 0.00	100.00
24.581	24.581 (1.099)	91	528670			0.00- 0.00	260.34
24.581	24.581 (1.099)	63	64545			0.00- 0.00	31.78
195 tert-Butylbenzene					CAS #: 98-06-6		
24.850	24.850 (1.111)	119	628236	4.00000	4.063	0.00- 0.00	100.00
24.850	24.850 (1.111)	134	153839			0.00- 0.00	24.49
24.850	24.850 (1.111)	91	399509			0.00- 0.00	63.59
197 Pentachloroethane					CAS #: 76-01-7		
24.962	24.962 (1.116)	167	216639	4.00000	3.908	0.00- 0.00	100.00
24.962	24.962 (1.116)	117	189644			0.00- 0.00	87.54
24.962	24.962 (1.116)	169	101031			0.00- 0.00	46.64
203 sec-Butylbenzene					CAS #: 135-98-8		
25.096	25.096 (1.122)	105	839863	4.00000	4.043	0.00- 0.00	100.00
25.096	25.096 (1.122)	134	181803			0.00- 0.00	21.65
25.096	25.096 (1.122)	91	132621			0.00- 0.00	15.79
207 p-Cymene					CAS #: 99-87-6		
25.253	25.253 (1.129)	119	670380	4.00000	4.094	0.00- 0.00	100.00
25.253	25.253 (1.129)	134	179334			0.00- 0.00	26.75
25.253	25.253 (1.129)	91	157500			0.00- 0.00	23.49
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.410	25.410 (1.136)	120	203351	4.00000	4.014	0.00- 0.00	100.00
25.410	25.410 (1.136)	105	491198			0.00- 0.00	241.55
25.410	25.410 (1.136)	77	59935			0.00- 0.00	29.47
213 Butylbenzene					CAS #: 104-51-8		
25.702	25.702 (1.149)	134	149220	4.00000	4.066	0.00- 0.00	100.00
25.702	25.702 (1.149)	91	520481			0.00- 0.00	348.80
25.702	25.702 (1.149)	92	276215			0.00- 0.00	185.11
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.710	26.710 (1.194)	157	265624	4.00000	4.029	0.00- 0.00	100.00
26.710	26.710 (1.194)	75	219272			0.00- 0.00	82.55
26.710	26.710 (1.194)	155	207135			0.00- 0.00	77.98

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032208.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/22Mar2016.b/e16l0317a.m
Misc Info: 4.0ppbv (5.0ppbv)

Calibration Date: 22-MAR-2016
Calibration Time: 09:49
Client Smp ID: Level 11
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190421	114253	266589	191124	0.37
123 1,4-Difluorobenze	736283	441770	1030796	725281	-1.49
163 Chlorobenzene-d5	650623	390374	910872	666778	2.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/22Mar2016.b/e032208.d

Date : 22-MAR-2016 14:50

Client ID: Level 11

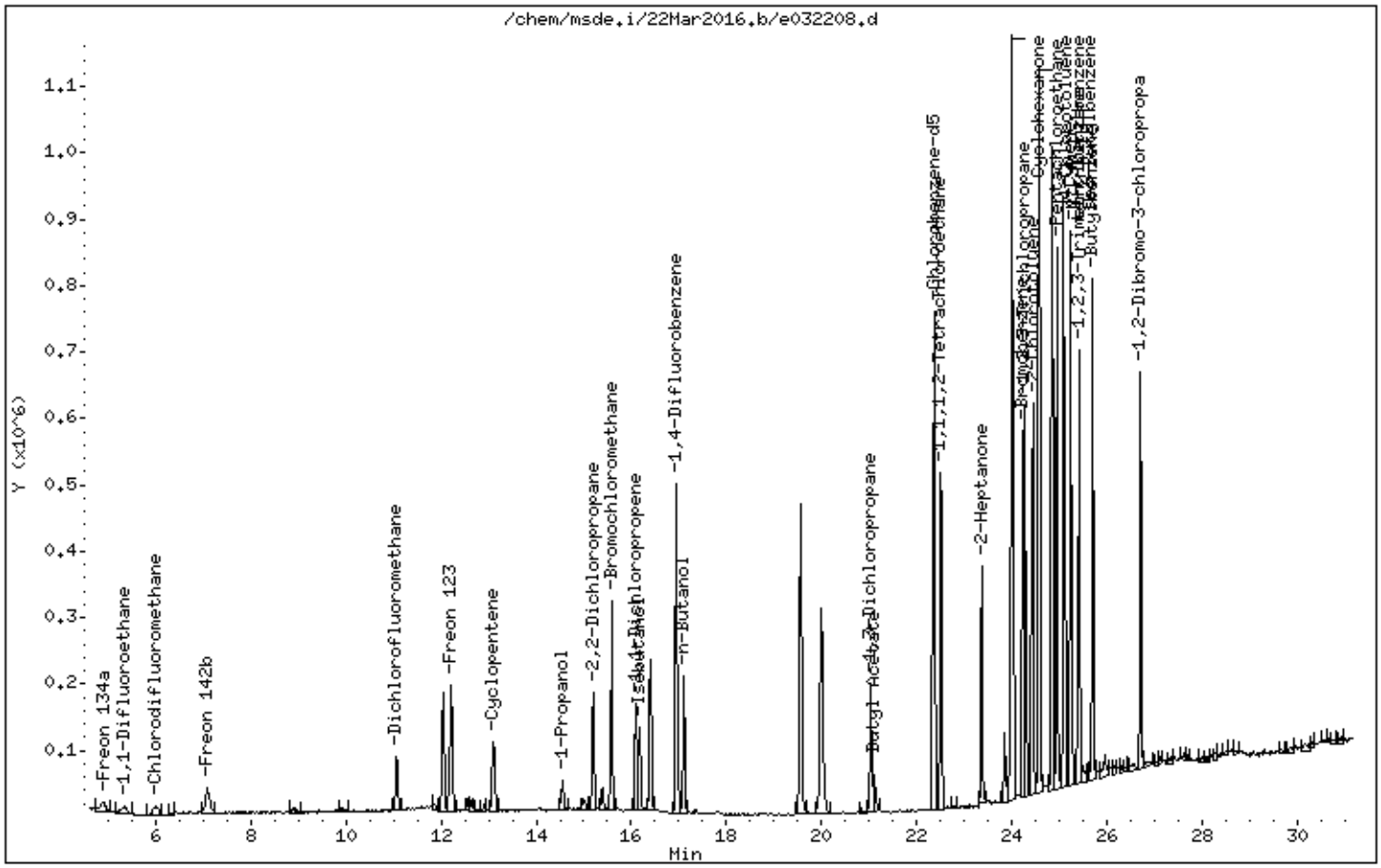
Instrument: msde.i

Sample Info: 200mL# 2759-238

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/09May2016.b/e050913.d
Lab Smp Id: ICAL Level 12
Inj Date : 09-MAY-2016 15:22
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2789-105
Misc Info : 5.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/09May2016.b/e16l0317d.m
Meth Date : 09-May-2016 17:07 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.823	10.823 (0.703)	55	104815	5.00000	4.559	0.00- 0.00	100.00
10.823	10.823 (0.703)	42	117179			0.00- 0.00	111.80
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	177965	5.00000	4.416	0.00- 0.00	100.00
10.957	10.957 (0.712)	57	35433			0.00- 0.00	19.91
10.957	10.957 (0.712)	72	31409			0.00- 0.00	17.65
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	82578	5.00000	4.420	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	101312			0.00- 0.00	122.69
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	520445	5.00000	4.489	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	229967			0.00- 0.00	44.19
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	351624	5.00000	4.471	0.00- 0.00	100.00

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

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68    142894                     0.00-   0.00    40.64
 12.900  12.900 (0.838)    53     60079                     0.00-   0.00    17.09
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.094  13.094 (0.851)    70     95762 5.00000    4.719   0.00-   0.00   100.00
 13.094  13.094 (0.851)    55     94819                     0.00-   0.00    99.02
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.671  13.671 (0.888)    53    101642 5.00000    4.295   0.00-   0.00   100.00
 13.671  13.671 (0.888)    52     90282                     0.00-   0.00    88.82
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.725  13.725 (0.892)    55     97904 5.00000    4.751   0.00-   0.00   100.00
 13.725  13.725 (0.892)    41    131563                     0.00-   0.00   134.38
 13.725  13.725 (0.892)    84     51287                     0.00-   0.00    52.38
-------------------------------------------------------------------------------
   84 1-Propanol                                    CAS #: 71-23-8
 14.384  14.384 (0.935)    59     33139 5.00000    5.166   0.00-   0.00   100.00
 14.384  14.384 (0.935)    42     21160                     0.00-   0.00    63.85
 14.384  14.384 (0.935)    41     16264                     0.00-   0.00    49.08
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.008  15.008 (0.975)    77    412190 5.00000    4.491   0.00-   0.00   100.00
 15.008  15.008 (0.975)    79    132403                     0.00-   0.00    32.12
 15.008  15.008 (0.975)    97     82991                     0.00-   0.00    20.13
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.047  15.047 (0.978)    70     39276 5.00000    4.959   0.00-   0.00   100.00
 15.047  15.047 (0.978)    43    258689                     0.00-   0.00   658.64
 15.027  15.027 (0.976)    61     95818                     0.00-   0.00   243.96
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.123  15.123 (0.983)    55    291698 5.00000    4.782   0.00-   0.00   100.00
 15.123  15.123 (0.983)    85     67528                     0.00-   0.00    23.15
 15.123  15.123 (0.983)    58     31537                     0.00-   0.00    10.81
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    141233 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107297                   52.25- 112.25    75.97
 15.391  15.391 (1.000)    49     96602                   89.81- 149.81    68.40
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                           CAS #: 563-58-6
 15.884  15.884 (1.032)   110    124288 5.00000    4.710   0.00-   0.00   100.00
 15.884  15.884 (1.032)    75    303680                     0.00-   0.00   244.34
-------------------------------------------------------------------------------
```

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

  115 Isobutanol                                     CAS #: 78-83-1
 15.977  15.977 (1.038)    43    117397 5.00000    4.149   0.00-   0.00   100.00
 15.977  15.977 (1.038)    41     89075                    0.00-   0.00    75.88
 15.977  15.977 (1.038)    55     12299                    0.00-   0.00    10.48
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    516954 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     74578                    0.00-  45.20    14.43
-------------------------------------------------------------------------------
  124 n-Butanol                                      CAS #: 71-36-3
 16.906  16.906 (1.010)    56    227746 5.00000    4.902   0.00-   0.00   100.00
 16.906  16.906 (1.010)    41    142283                    0.00-   0.00    62.47
 16.906  16.906 (1.010)    43    113242                    0.00-   0.00    49.72
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                 CAS #: 140-88-5
 17.171  17.171 (1.026)    99     36442 5.00000    4.716   0.00-   0.00   100.00
 17.171  17.171 (1.026)    45     27079                    0.00-   0.00    74.31
 17.171  17.171 (1.026)    55    333900                    0.00-   0.00   916.25
-------------------------------------------------------------------------------
  131 2-Pentanone                                    CAS #: 107-87-9
 17.388  17.388 (1.039)    43    384846 5.00000    4.804   0.00-   0.00   100.00
 17.388  17.388 (1.039)    58     34497                    0.00-   0.00     8.96
 17.388  17.388 (1.039)    86    112337                    0.00-   0.00    29.19
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                            CAS #: 80-62-6
 17.556  17.556 (1.049)    41    209575 5.00000    5.012   0.00-   0.00   100.00
 17.556  17.556 (1.049)    69    222689                    0.00-   0.00   106.26
 17.556  17.556 (1.049)   100     92187                    0.00-   0.00    43.99
-------------------------------------------------------------------------------
  137 Dibromomethane                                 CAS #: 74-95-3
 17.797  17.797 (1.063)   174    364590 5.00000    4.717   0.00-   0.00   100.00
 17.797  17.797 (1.063)    93    293369                    0.00-   0.00    80.47
 17.797  17.797 (1.063)    95    237140                    0.00-   0.00    65.04
-------------------------------------------------------------------------------
  148 Octane                                         CAS #: 111-65-9
 19.320  19.320 (1.154)    57    118134 5.00000    4.540   0.00-   0.00   100.00
 19.343  19.343 (1.156)    85    184953                    0.00-   0.00   156.56
 19.320  19.320 (1.154)    43    251518                    0.00-   0.00   212.91
-------------------------------------------------------------------------------
  157 1,3-Dichloropropane                            CAS #: 142-28-9
 20.795  20.795 (0.938)    76    375846 5.00000    4.745   0.00-   0.00   100.00
 20.795  20.795 (0.938)    41    173887                    0.00-   0.00    46.27
 20.795  20.795 (0.938)    78    123066                    0.00-   0.00    32.74
-------------------------------------------------------------------------------
  159 Butyl Acetate                                  CAS #: 123-86-4
 20.905  20.905 (0.943)    56     38685 5.00000    5.004   0.00-   0.00   100.00
```

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

  159 Butyl Acetate (continued)
 20.905  20.905 (0.943)    73     22544                     0.00-   0.00    58.28
 20.905  20.905 (0.943)    43     86345                     0.00-   0.00   223.20
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    459398 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    229098                   20.64-  80.64    49.87
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                     CAS #: 630-20-6
 22.343  22.343 (1.007)   131    422612 5.00000    4.604   0.00-   0.00   100.00
 22.343  22.343 (1.007)   117    262589                    0.00-   0.00    62.13
 22.343  22.343 (1.007)    95    146906                    0.00-   0.00    34.76
-------------------------------------------------------------------------------
  170 Nonane                                        CAS #: 111-84-2
 22.301  22.301 (1.006)    43    223074 5.00000    4.850   0.00-   0.00   100.00
 22.301  22.301 (1.006)    57    244925                    0.00-   0.00   109.80
 22.301  22.301 (1.006)    85    131111                    0.00-   0.00    58.77
-------------------------------------------------------------------------------
  173 2-Heptanone                                   CAS #: 110-43-0
 23.214  23.214 (1.047)    58    240763 5.00000    5.063   0.00-   0.00   100.00
 23.214  23.214 (1.047)    43    332802                    0.00-   0.00   138.23
-------------------------------------------------------------------------------
  176 Cyclohexanone                                 CAS #: 108-94-1
 23.811  23.811 (1.074)    55    193362 5.00000    4.883   0.00-   0.00   100.00
 23.811  23.811 (1.074)    98    127898                    0.00-   0.00    66.14
 23.811  23.811 (1.074)    42    130941                    0.00-   0.00    67.72
-------------------------------------------------------------------------------
  179 alpha-Pinene                                  CAS #: 80-56-8
 23.497  23.497 (1.060)    93    914983 5.00000    4.994   0.00-   0.00   100.00
 23.497  23.497 (1.060)   121    127713                    0.00-   0.00    13.96
 23.497  23.497 (1.060)    92    346938                    0.00-   0.00    37.92
-------------------------------------------------------------------------------
  180 Bromobenzene                                  CAS #: 108-86-1
 24.080  24.080 (1.086)   156    428983 5.00000    4.646   0.00-   0.00   100.00
 24.080  24.080 (1.086)   158    415965                    0.00-   0.00    96.97
 24.080  24.080 (1.086)    77    539987                    0.00-   0.00   125.88
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                        CAS #: 96-18-4
 24.125  24.125 (1.088)   110    173114 5.00000    4.669   0.00-   0.00   100.00
 24.125  24.125 (1.088)    75    600820                    0.00-   0.00   347.07
 24.125  24.125 (1.088)    61     98695                    0.00-   0.00    57.01
-------------------------------------------------------------------------------
  187 Decane                                        CAS #: 124-18-5
 24.170  24.170 (1.090)    57    186950 5.00000    4.986   0.00-   0.00   100.00
 24.170  24.170 (1.090)    71     88283                    0.00-   0.00    47.22
 24.170  24.170 (1.090)   142     15722                    0.00-   0.00     8.41
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE		RATIO
189 2-Chlorotoluene					CAS #: 95-49-8			
24.282	24.282 (1.095)	126	281945	5.00000	4.759	0.00-	0.00	100.00
24.282	24.282 (1.095)	91	719140			0.00-	0.00	255.06
24.282	24.282 (1.095)	65	65619			0.00-	0.00	23.27
191 4-Chlorotoluene					CAS #: 106-43-4			
24.416	24.416 (1.101)	126	272081	5.00000	4.954	0.00-	0.00	100.00
24.416	24.416 (1.101)	91	689927			0.00-	0.00	253.57
24.416	24.416 (1.101)	63	76087			0.00-	0.00	27.96
195 tert-Butylbenzene					CAS #: 98-06-6			
24.708	24.708 (1.114)	119	738274	5.00000	4.769	0.00-	0.00	100.00
24.708	24.708 (1.114)	134	183985			0.00-	0.00	24.92
24.685	24.685 (1.113)	91	450568			0.00-	0.00	61.03
197 Pentachloroethane					CAS #: 76-01-7			
24.798	24.798 (1.118)	167	295036	5.00000	4.702	0.00-	0.00	100.00
24.798	24.798 (1.118)	117	248392			0.00-	0.00	84.19
24.798	24.798 (1.118)	169	141621			0.00-	0.00	48.00
199 D-Limonene					CAS #: 5989-27-5			
25.022	25.022 (1.128)	68	285111	5.00000	4.886	0.00-	0.00	100.00
25.044	25.044 (1.129)	93	715556			0.00-	0.00	250.97
203 sec-Butylbenzene					CAS #: 135-98-8			
24.955	24.955 (1.125)	105	1401398	5.00000	4.798	0.00-	0.00	100.00
24.955	24.955 (1.125)	134	298944			0.00-	0.00	21.33
24.955	24.955 (1.125)	91	222975			0.00-	0.00	15.91
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4			
25.044	25.044 (1.129)	93	715556	5.00000	4.932	0.00-	0.00	100.00
25.044	25.044 (1.129)	95	178714			0.00-	0.00	24.98
25.044	25.044 (1.129)	63	300880			0.00-	0.00	42.05
207 p-Cymene					CAS #: 99-87-6			
25.089	25.089 (1.131)	119	871738	5.00000	4.887	0.00-	0.00	100.00
25.089	25.089 (1.131)	134	237134			0.00-	0.00	27.20
25.089	25.089 (1.131)	91	187210			0.00-	0.00	21.48
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8			
25.268	25.268 (1.139)	120	270764	5.00000	4.741	0.00-	0.00	100.00
25.268	25.268 (1.139)	105	606155			0.00-	0.00	223.87
25.268	25.268 (1.139)	77	70976			0.00-	0.00	26.21
213 Butylbenzene					CAS #: 104-51-8			
25.537	25.537 (1.152)	134	213210	5.00000	4.765	0.00-	0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
213 Butylbenzene (continued)							
25.537	25.537 (1.152)	91	695292			0.00- 0.00	326.11
25.537	25.537 (1.152)	92	375302			0.00- 0.00	176.02
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	137800	5.00000	5.072	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	101333			0.00- 0.00	73.54
25.515	25.515 (1.151)	85	48053			0.00- 0.00	34.87
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	368839	5.00000	5.084	0.00- 0.00	100.00
26.546	26.546 (1.197)	75	264815			0.00- 0.00	71.80
26.546	26.546 (1.197)	155	280375			0.00- 0.00	76.02
225 Dodecane					CAS #: 112-40-3		
26.613	26.613 (1.200)	85	37527	5.00000	4.636	0.00- 0.00	100.00
26.613	26.613 (1.200)	57	81283			0.00- 0.00	216.60
26.613	26.613 (1.200)	43	59217			0.00- 0.00	157.80

QC Flag Legend

T - Target compound detected outside RT window.

Report Date: 09-May-2016 17:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Calibration Date: 09-MAY-2016
Lab File ID: e050913.d
Calibration Time: 07:51
Lab Smp Id: ICAL Level 12
Analysis Type: VOA
Level: LOW
Quant Type: ISTD
Sample Type: AIR
Operator: ef
Method File: /chem/msde.i/09May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (5.0ppbv) Combo

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	159373	95624	223122	141233	-11.38
123 1,4-Difluorobenze	624905	374943	874867	516954	-17.27
163 Chlorobenzene-d5	549919	329951	769887	459398	-16.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/09May2016.b/e050913.d

Date : 09-MAY-2016 15:22

Client ID:

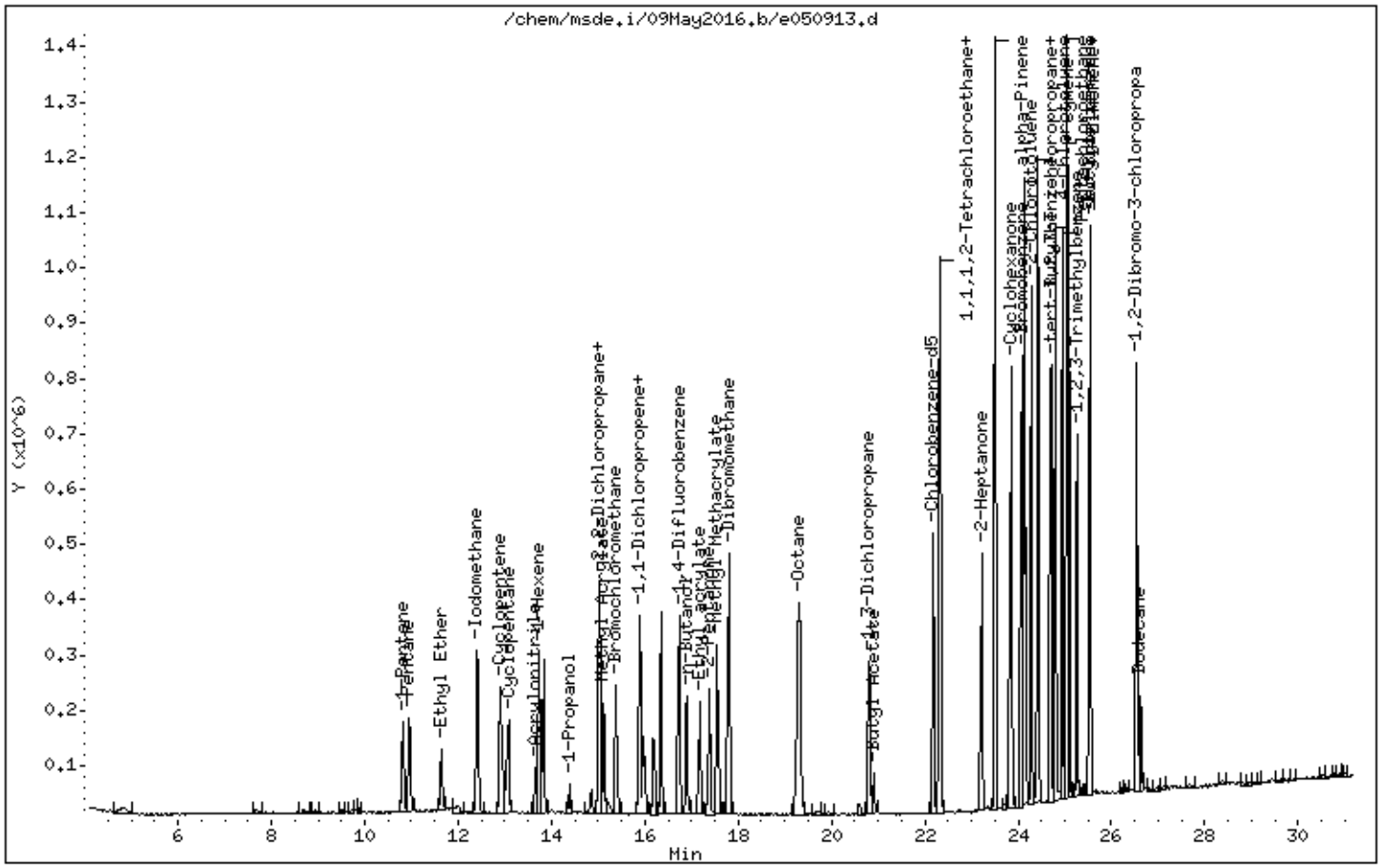
Instrument: msde.i

Sample Info: 250mL# 2789-105

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/30Mar2016.b/e033009.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 30-MAR-2016 16:25
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2789-45
Misc Info : 5.0ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/30Mar2016.b/e16l0317c.m
Meth Date : 30-Mar-2016 17:06 ealcan Quant Type: ISTD
Cal Date : 30-MAR-2016 16:25 Cal File: e033009.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.233	12.233 (0.785)	56	38032	5.00000	4.341	0.00- 0.00	100.00
12.233	12.233 (0.785)	55	27826			0.00- 0.00	73.16
* 98 Bromochloromethane					CAS #: 74-97-5		
15.580	15.580 (1.000)	130	151841	5.00000		80.00- 120.00	100.00
15.580	15.580 (1.000)	128	118683			52.25- 112.25	78.16
15.580	15.580 (1.000)	49	111139			89.81- 149.81	73.19
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.939	16.939 (1.000)	114	573763	5.00000		80.00- 120.00	100.00
16.939	16.939 (1.000)	88	83947			0.00- 45.20	14.63
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.365 (1.000)	117	524326	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	269974			20.64- 80.64	51.49

Report Date: 30-Mar-2016 17:06

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e033009.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/30Mar2016.b/e16l0317c.m
Misc Info: 5.0ppbv (5.0ppbv) Acrolein

Calibration Date: 30-MAR-2016
Calibration Time: 11:07
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190719	114431	267007	151841	-20.38
123 1,4-Difluorobenze	725285	435171	1015399	573763	-20.89
163 Chlorobenzene-d5	658854	395312	922396	524326	-20.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/30Mar2016.b/e033009.d

Date : 30-MAR-2016 16:25

Client ID: Level 12

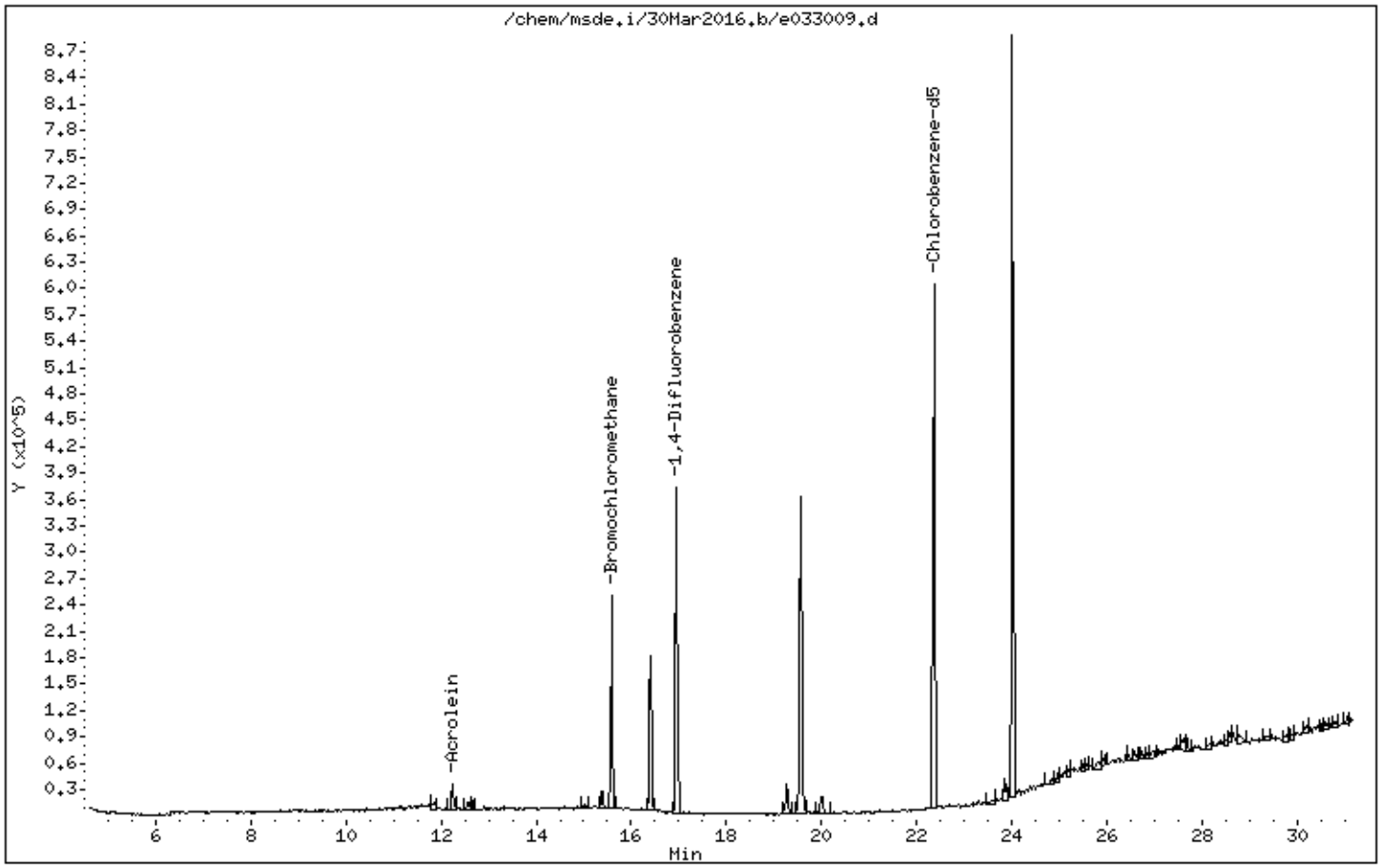
Instrument: msde.i

Sample Info: 250mL# 2789-45

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/25Mar2016.b/e032507.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 25-MAR-2016 13:44
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2789-4
Misc Info : 5.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/25Mar2016.b/e16l0317b.m
Meth Date : 25-Mar-2016 15:05 efinn Quant Type: ISTD
Cal Date : 25-MAR-2016 13:44 Cal File: e032507.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Combo-AT1ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
10.786	10.786 (0.692)	106	165451	5.00000	5.009	0.00- 0.00	100.00
10.786	10.786 (0.692)	108	154873			0.00- 0.00	93.61
36 1-Pentene					CAS #: 109-67-1		
11.033	11.033 (0.708)	55	120891	5.00000	4.791	0.00- 0.00	100.00
11.014	11.014 (0.707)	42	131204			0.00- 0.00	108.53
34 Pentane					CAS #: 109-66-0		
11.147	11.147 (0.716)	43	227736	5.00000	5.060	0.00- 0.00	100.00
11.147	11.147 (0.716)	57	43821			0.00- 0.00	19.24
11.166	11.166 (0.717)	72	38684			0.00- 0.00	16.99
44 Ethyl Ether					CAS #: 60-29-7		
11.833	11.833 (0.759)	74	75966	5.00000	4.452	0.00- 0.00	100.00(T)
11.833	11.833 (0.759)	59	90713			0.00- 0.00	119.41
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00

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

   53 Iodomethane                                   CAS #: 74-88-4
 12.614  12.614 (0.810)   142    524475 5.00000    4.930   0.00-   0.00   100.00
 12.614  12.614 (0.810)   127    246212                    0.00-   0.00    46.94
-------------------------------------------------------------------------------
   63 Acetonitrile                                  CAS #: 75-05-8
 13.204  13.204 (0.848)    41    112429 5.00000    5.342   0.00-   0.00   100.00
 13.204  13.204 (0.848)    40     60311                    0.00-   0.00    53.64
 13.204  13.204 (0.848)    39     21709                    0.00-   0.00    19.31
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.280  13.280 (0.852)    70    108011 5.00000    4.972   0.00-   0.00   100.00
 13.280  13.280 (0.852)    55    110570                    0.00-   0.00   102.37
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
 13.838  13.838 (0.888)    53    110018 5.00000    4.760   0.00-   0.00   100.00
 13.838  13.838 (0.888)    52    101087                    0.00-   0.00    91.88
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.921  13.921 (0.894)    55    105101 5.00000    4.902   0.00-   0.00   100.00
 13.921  13.921 (0.894)    41    154482                    0.00-   0.00   146.98
 13.921  13.921 (0.894)    84     56003                    0.00-   0.00    53.28
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.221  15.221 (0.977)    70     38018 5.00000    5.472   0.00-   0.00   100.00
 15.221  15.221 (0.977)    43    270011                    0.00-   0.00   710.22
 15.221  15.221 (0.977)    61    103146                    0.00-   0.00   271.31
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.316  15.316 (0.983)    55    259654 5.00000    5.363   0.00-   0.00   100.00
 15.316  15.316 (0.983)    85     59593                    0.00-   0.00    22.95
 15.316  15.316 (0.983)    58     25835                    0.00-   0.00     9.95
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    173196 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    132775                   52.25- 112.25    76.66
 15.580  15.580 (1.000)    49    137798                   89.81- 149.81    79.56
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.939  16.939 (1.000)   114    677694 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    104850                    0.00-  45.20    15.47
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                CAS #: 140-88-5
 17.397  17.397 (1.027)    99     23213 5.00000    4.588   0.00-   0.00   100.00
 17.397  17.397 (1.027)    45     24943                    0.00-   0.00   107.45
 17.397  17.397 (1.027)    55    247459                    0.00-   0.00  1066.04
-------------------------------------------------------------------------------
```

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

  131 2-Pentanone                                  CAS #: 107-87-9
 17.614  17.614 (1.040)    43    312126 5.00000    4.906   0.00-   0.00   100.00
 17.614  17.614 (1.040)    58     31705                    0.00-   0.00    10.16
 17.614  17.614 (1.040)    86     80957                    0.00-   0.00    25.94
-------------------------------------------------------------------------------
  134 Methyl Methacrylate                          CAS #: 80-62-6
 17.782  17.782 (1.050)    41    151568 5.00000    4.775   0.00-   0.00   100.00
 17.782  17.782 (1.050)    69    161442                    0.00-   0.00   106.51
 17.807  17.807 (1.051)   100     68347                    0.00-   0.00    45.09
-------------------------------------------------------------------------------
  137 Dibromomethane                               CAS #: 74-95-3
 18.048  18.048 (1.065)   174    228753 5.00000    4.763   0.00-   0.00   100.00
 18.048  18.048 (1.065)    93    183455                    0.00-   0.00    80.20
 18.048  18.048 (1.065)    95    162937                    0.00-   0.00    71.23
-------------------------------------------------------------------------------
  148 Octane                                       CAS #: 111-65-9
 19.624  19.624 (1.158)    57    173838 5.00000    4.774   0.00-   0.00   100.00
 19.624  19.624 (1.158)    85    250803                    0.00-   0.00   144.27
 19.624  19.624 (1.158)    43    359907                    0.00-   0.00   207.04
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.366  22.366 (1.000)   117    633398 5.00000           80.00- 120.00   100.00
 22.366  22.366 (1.000)    82    315456                   20.64-  80.64    49.80
-------------------------------------------------------------------------------
  170 Nonane                                       CAS #: 111-84-2
 22.490  22.490 (1.006)    43    338947 5.00000    4.787   0.00-   0.00   100.00
 22.490  22.490 (1.006)    57    354266                    0.00-   0.00   104.52
 22.490  22.490 (1.006)    85    181297                    0.00-   0.00    53.49
-------------------------------------------------------------------------------
  184 trans-1,4-Dichloro-2-butene                  CAS #: 110-57-6
 24.289  24.289 (1.086)    75    465599 5.00000    4.841   0.00-   0.00   100.00
 24.289  24.289 (1.086)    89     56823                    0.00-   0.00    12.20
 24.267  24.267 (1.085)    53     79053                    0.00-   0.00    16.98
-------------------------------------------------------------------------------
  187 Decane                                       CAS #: 124-18-5
 24.581  24.581 (1.099)    57    334448 5.00000    5.003   0.00-   0.00   100.00
 24.581  24.581 (1.099)    71      3657                    0.00-   0.00     1.09
 24.603  24.603 (1.100)   142     61910                    0.00-   0.00    18.51
-------------------------------------------------------------------------------
  206 bis(2-Chloroethyl) Ether                     CAS #: 111-44-4
 25.186  25.186 (1.126)    93    386161 5.00000    4.835   0.00-   0.00   100.00
 25.186  25.186 (1.126)    95    120236                    0.00-   0.00    31.14
 25.186  25.186 (1.126)    63    242116                    0.00-   0.00    62.70
-------------------------------------------------------------------------------
  215 Undecane                                     CAS #: 1120-21-4
 25.657  25.657 (1.147)    57    129551 5.00000    4.662   0.00-   0.00   100.00
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
215 Undecane (continued)								
25.657	25.657	(1.147)	43	96989			0.00- 0.00	74.87
25.657	25.657	(1.147)	85	49341			0.00- 0.00	38.09
225 Dodecane						CAS #: 112-40-3		
26.800	26.800	(1.198)	85	19932	5.00000	5.049	0.00- 0.00	100.00
26.800	26.800	(1.198)	57	42384			0.00- 0.00	212.64
26.800	26.800	(1.198)	43	33919			0.00- 0.00	170.17

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032507.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/25Mar2016.b/e16l0317b.m
Misc Info: 5.0ppbv (5.0ppbv) Combo

Calibration Date: 25-MAR-2016
Calibration Time: 09:25
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	196631	117979	275283	173196	-11.92
123 1,4-Difluorobenze	760212	456127	1064297	677694	-10.85
163 Chlorobenzene-d5	680500	408300	952700	633398	-6.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/25Mar2016.b/e032507.d

Date : 25-MAR-2016 13:44

Client ID: Level 12

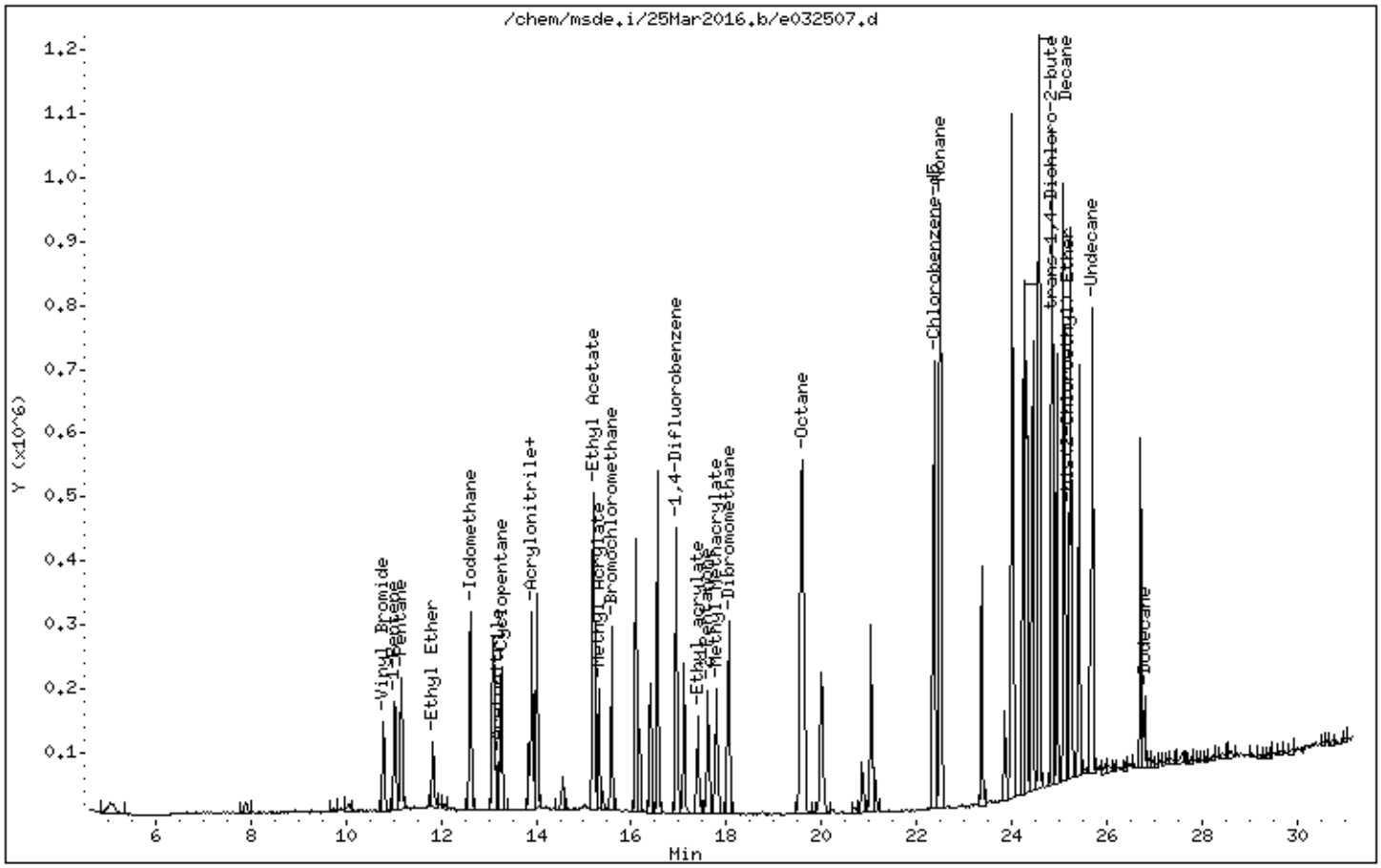
Instrument: msde.i

Sample Info: 250mL# 2789-4

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/22Mar2016.b/e032209.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 22-MAR-2016 15:32
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2759-238
Misc Info : 5.0ppbv (5.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/22Mar2016.b/e16l0317a.m
Meth Date : 24-Mar-2016 08:33 efinn Quant Type: ISTD
Cal Date : 22-MAR-2016 15:32 Cal File: e032209.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

Name	Value	Description
DF	1.00000	Dilution Factor

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		
4.901	4.901 (0.315)	83	77227	5.00000	4.739	0.00- 0.00	100.00(T)
4.925	4.925 (0.316)	69	54552			0.00- 0.00	70.64
0.000	1.000 (0.000)	0	0			0.00- 0.00	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
5.359	5.359 (0.344)	65	32956	5.00000	4.791	0.00- 0.00	100.00(M)
5.359	5.359 (0.344)	51	51930			0.00- 0.00	157.57
13 Chlorodifluoromethane					CAS #: 75-45-6		
6.010	6.010 (0.386)	51	82526	5.00000	4.657	0.00- 0.00	100.00
6.010	6.010 (0.386)	67	20911			0.00- 0.00	25.34
5.985	5.985 (0.384)	85	1042			0.00- 0.00	1.26
16 Freon 142b					CAS #: 75-68-3		
7.094	7.094 (0.455)	65	169757	5.00000	4.723	0.00- 0.00	100.00
7.118	7.118 (0.457)	45	31498			0.00- 0.00	18.55

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

   16 Freon 142b (continued)
  7.070   7.070 (0.454)    81      4962                     0.00-   0.00     2.92
-------------------------------------------------------------------------------
   37 Dichlorofluoromethane                        CAS #: 75-43-4
 11.071  11.071 (0.711)    67    179160 5.00000    4.773   0.00-   0.00   100.00
 11.071  11.071 (0.711)    69     59500                     0.00-   0.00    33.21
 11.071  11.071 (0.711)    47     14409                     0.00-   0.00     8.04
-------------------------------------------------------------------------------
   48 Freon 123                                    CAS #: 306-83-2
 12.213  12.213 (0.784)    83    276077 5.00000    4.762   0.00-   0.00   100.00
 12.213  12.213 (0.784)   133     80928                     0.00-   0.00    29.31
 12.213  12.213 (0.784)    85    193182                     0.00-   0.00    69.97
-------------------------------------------------------------------------------
   59 Cyclopentene                                 CAS #: 142-29-0
 13.090  13.090 (0.840)    67    123373 5.00000    4.632   0.00-   0.00   100.00
 13.090  13.090 (0.840)    68     47526                     0.00-   0.00    38.52
 13.090  13.090 (0.840)    53     20897                     0.00-   0.00    16.94
-------------------------------------------------------------------------------
   84 1-Propanol                                   CAS #: 71-23-8
 14.552  14.552 (0.934)    59     36617 5.00000    4.900   0.00-   0.00   100.00
 14.552  14.552 (0.934)    42     24690                     0.00-   0.00    67.43
 14.552  14.552 (0.934)    41     20825                     0.00-   0.00    56.87
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                          CAS #: 594-20-7
 15.201  15.201 (0.976)    77    219774 5.00000    4.668   0.00-   0.00   100.00
 15.201  15.201 (0.976)    79     74592                     0.00-   0.00    33.94
 15.201  15.201 (0.976)    97     44793                     0.00-   0.00    20.38
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.580  15.580 (1.000)   130    199992 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    152390                   52.25- 112.25    76.20
 15.580  15.580 (1.000)    49    154162                   89.81- 149.81    77.08
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                         CAS #: 563-58-6
 16.104  16.104 (1.034)   110     58226 5.00000    4.743   0.00-   0.00   100.00
 16.104  16.104 (1.034)    75    156172                     0.00-   0.00   268.22
-------------------------------------------------------------------------------
  115 Isobutanol                                  CAS #: 78-83-1
 16.165  16.165 (1.038)    43    169269 5.00000    4.687   0.00-   0.00   100.00
 16.165  16.165 (1.038)    41    138945                     0.00-   0.00    82.09
 16.165  16.165 (1.038)    55     14350                     0.00-   0.00     8.48
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.939  16.939 (1.000)   114    753466 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    114257                     0.00-  45.20    15.16
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
17.108	17.108 (1.010)	56	248013	5.00000	5.208	0.00- 0.00	100.00
17.108	17.108 (1.010)	41	164379			0.00- 0.00	66.28
17.108	17.108 (1.010)	43	126222			0.00- 0.00	50.89
157 1,3-Dichloropropane					CAS #: 142-28-9		
21.045	21.045 (0.941)	76	284505	5.00000	4.876	0.00- 0.00	100.00
21.045	21.045 (0.941)	41	141469			0.00- 0.00	49.72
21.045	21.045 (0.941)	78	96798			0.00- 0.00	34.02
159 Butyl Acetate					CAS #: 123-86-4		
21.128	21.128 (0.945)	56	35598	5.00000	5.191	0.00- 0.00	100.00
21.128	21.128 (0.945)	73	19759			0.00- 0.00	55.51
21.128	21.128 (0.945)	43	83093			0.00- 0.00	233.42
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.365 (1.000)	117	686632	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	350822			20.64- 80.64	51.09
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.531	22.531 (1.007)	131	337911	5.00000	4.850	0.00- 0.00	100.00
22.511	22.511 (1.006)	117	213501			0.00- 0.00	63.18
22.511	22.511 (1.006)	95	123190			0.00- 0.00	36.46
173 2-Heptanone					CAS #: 110-43-0		
23.381	23.381 (1.045)	58	265455	5.00000	5.258	0.00- 0.00	100.00
23.381	23.381 (1.045)	43	375302			0.00- 0.00	141.38
176 Cyclohexanone					CAS #: 108-94-1		
23.975	23.975 (1.072)	55	206624	5.00000	4.844	0.00- 0.00	100.00
23.975	23.975 (1.072)	98	122635			0.00- 0.00	59.35
23.975	23.975 (1.072)	42	142418			0.00- 0.00	68.93
180 Bromobenzene					CAS #: 108-86-1		
24.244	24.244 (1.084)	156	360655	5.00000	4.793	0.00- 0.00	100.00
24.244	24.244 (1.084)	158	358601			0.00- 0.00	99.43
24.244	24.244 (1.084)	77	492929			0.00- 0.00	136.68
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.289	24.289 (1.086)	110	183219	5.00000	4.907	0.00- 0.00	100.00
24.289	24.289 (1.086)	75	436860			0.00- 0.00	238.44
24.289	24.289 (1.086)	61	97886			0.00- 0.00	53.43
189 2-Chlorotoluene					CAS #: 95-49-8		
24.446	24.446 (1.093)	126	249779	5.00000	4.889	0.00- 0.00	100.00
24.446	24.446 (1.093)	91	670456			0.00- 0.00	268.42

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
189 2-Chlorotoluene (continued)							
24.446	24.446 (1.093)	65	61678			0.00- 0.00	24.69
191 4-Chlorotoluene					CAS #: 106-43-4		
24.581	24.581 (1.099)	126	247223	5.00000	4.846	0.00- 0.00	100.00
24.581	24.581 (1.099)	91	668582			0.00- 0.00	270.44
24.581	24.581 (1.099)	63	77347			0.00- 0.00	31.29
195 tert-Butylbenzene					CAS #: 98-06-6		
24.850	24.850 (1.111)	119	771196	5.00000	4.843	0.00- 0.00	100.00
24.850	24.850 (1.111)	134	189054			0.00- 0.00	24.51
24.850	24.850 (1.111)	91	484438			0.00- 0.00	62.82
197 Pentachloroethane					CAS #: 76-01-7		
24.962	24.962 (1.116)	167	278331	5.00000	4.876	0.00- 0.00	100.00
24.962	24.962 (1.116)	117	241655			0.00- 0.00	86.82
24.962	24.962 (1.116)	169	130805			0.00- 0.00	47.00
203 sec-Butylbenzene					CAS #: 135-98-8		
25.096	25.096 (1.122)	105	1051147	5.00000	4.914	0.00- 0.00	100.00
25.096	25.096 (1.122)	134	220900			0.00- 0.00	21.02
25.096	25.096 (1.122)	91	161571			0.00- 0.00	15.37
207 p-Cymene					CAS #: 99-87-6		
25.253	25.253 (1.129)	119	832038	5.00000	4.934	0.00- 0.00	100.00
25.253	25.253 (1.129)	134	224341			0.00- 0.00	26.96
25.253	25.253 (1.129)	91	193312			0.00- 0.00	23.23
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.410	25.410 (1.136)	120	259831	5.00000	4.980	0.00- 0.00	100.00
25.410	25.410 (1.136)	105	597337			0.00- 0.00	229.89
25.410	25.410 (1.136)	77	72861			0.00- 0.00	28.04
213 Butylbenzene					CAS #: 104-51-8		
25.702	25.702 (1.149)	134	184121	5.00000	4.872	0.00- 0.00	100.00
25.702	25.702 (1.149)	91	636755			0.00- 0.00	345.84
25.702	25.702 (1.149)	92	336044			0.00- 0.00	182.51
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.710	26.710 (1.194)	157	329354	5.00000	4.851	0.00- 0.00	100.00
26.710	26.710 (1.194)	75	276928			0.00- 0.00	84.08
26.710	26.710 (1.194)	155	254440			0.00- 0.00	77.25

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e032209.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/22Mar2016.b/e16l0317a.m
Misc Info: 5.0ppbv (5.0ppbv)

Calibration Date: 22-MAR-2016
Calibration Time: 09:49
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190421	114253	266589	199992	5.03
123 1,4-Difluorobenze	736283	441770	1030796	753466	2.33
163 Chlorobenzene-d5	650623	390374	910872	686632	5.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/22Mar2016.b/e032209.d

Date : 22-MAR-2016 15:32

Client ID: Level 12

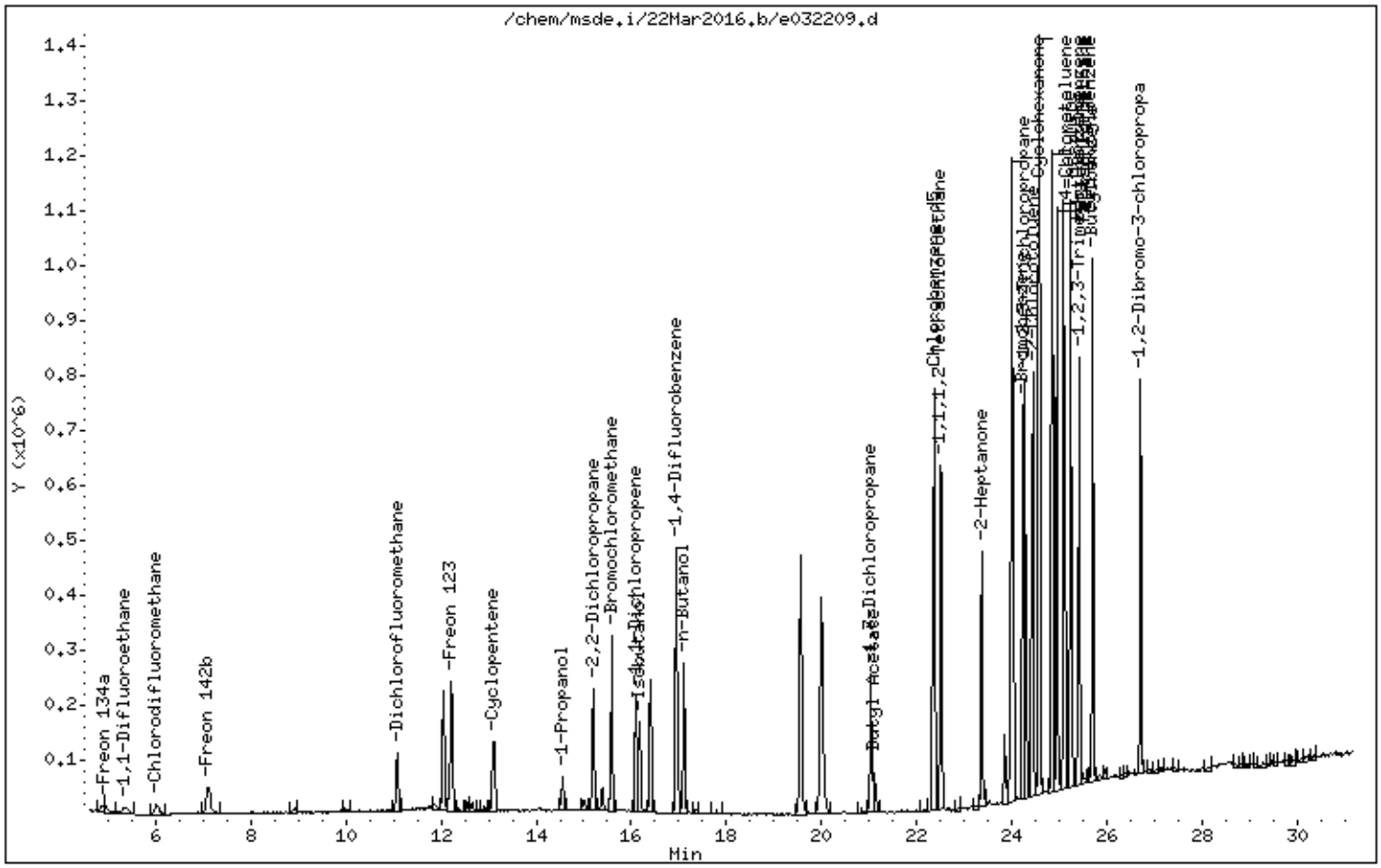
Instrument: msde.i

Sample Info: 250mL# 2759-238

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031710.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 17-MAR-2016 17:24
Operator : ea Inst ID: msde.i
Smp Info : 25mL# 2759-223
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 25-Apr-2016 15:58 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 17:24 Cal File: e031710.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.997	4.997 (0.321)	41	114844	5.00000	5.361	80.00- 120.00	100.00
4.997	4.997 (0.321)	42	78937			38.73- 98.73	68.73
5.021	5.021 (0.322)	39	98546			55.81- 115.81	85.81
11 Freon 12					CAS #: 75-71-8		
5.455	5.455 (0.350)	85	747837	5.00000	5.390	80.00- 120.00	100.00
5.455	5.455 (0.350)	87	239285			2.00- 62.00	32.00
15 Freon 114					CAS #: 76-14-2		
6.805	6.805 (0.437)	135	532724	5.00000	5.247	80.00- 120.00	100.00
6.829	6.829 (0.438)	137	166796			1.31- 61.31	31.31
6.805	6.805 (0.437)	85	659947			93.88- 153.88	123.88
17 Chloromethane					CAS #: 74-87-3		
7.167	7.167 (0.460)	50	136868	5.00000	5.200	80.00- 120.00	100.00
7.167	7.167 (0.460)	52	48589			5.50- 65.50	35.50

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.872	7.872 (0.505)	58	36822	5.00000	5.400	80.00- 120.00	100.00
7.872	7.872 (0.505)	43	227769			588.57- 648.57	618.57
25 Vinyl Chloride					CAS #: 75-01-4		
7.993	7.993 (0.513)	62	192646	5.00000	5.202	80.00- 120.00	100.00
7.993	7.993 (0.513)	64	63844			3.14- 63.14	33.14
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	130793	5.00000	5.251	80.00- 120.00	100.00
8.236	8.236 (0.529)	39	124529			65.21- 125.21	95.21
29 Bromomethane					CAS #: 74-83-9		
9.711	9.711 (0.623)	94	211801	5.00000	5.241	80.00- 120.00	100.00
9.711	9.711 (0.623)	96	199434			64.16- 124.16	94.16
30 Chloroethane					CAS #: 75-00-3		
10.176	10.176 (0.653)	64	96996	5.00000	5.544	80.00- 120.00	100.00
10.176	10.176 (0.653)	49	24159			0.00- 54.91	24.91
10.176	10.176 (0.653)	66	32609			3.62- 63.62	33.62
31 Isopentane					CAS #: 78-78-4		
10.310	10.310 (0.662)	57	133523	5.00000	5.264	80.00- 120.00	100.00
10.310	10.310 (0.662)	43	150463			82.69- 142.69	112.69
10.329	10.329 (0.663)	42	131721			68.65- 128.65	98.65
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	766641	5.00000	5.132	80.00- 120.00	100.00
10.938	10.938 (0.702)	103	514957			37.17- 97.17	67.17
42 Ethanol					CAS #: 64-17-5		
11.833	11.833 (0.759)	45	59664	5.00000	5.512	80.00- 120.00	100.00
11.852	11.852 (0.761)	46	21843			6.61- 66.61	36.61
11.852	11.852 (0.761)	43	14712			0.00- 54.66	24.66
49 Freon 113					CAS #: 76-13-1		
12.271	12.271 (0.788)	151	532173	5.00000	4.754	80.00- 120.00	100.00
12.271	12.271 (0.788)	153	338662			33.64- 93.64	63.64
12.271	12.271 (0.788)	101	587513			80.40- 140.40	110.40
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.271	12.271 (0.788)	98	158915	5.00000	5.090	80.00- 120.00	100.00
12.290	12.290 (0.789)	61	373282			204.89- 264.89	234.89
12.290	12.290 (0.789)	96	250590			127.69- 187.69	157.69
52 Acetone					CAS #: 67-64-1		
12.537	12.537 (0.805)	58	86870	5.00000	4.759	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
52 Acetone (continued)							
12.537	12.537 (0.805)	43	305324			321.47- 381.47	351.47
56 Carbon Disulfide					CAS #: 75-15-0		
12.652	12.652 (0.812)	76	726978	5.00000	5.225	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.880	12.880 (0.827)	45	300103	5.00000	5.374	80.00- 120.00	100.00
12.880	12.880 (0.827)	43	72303			0.00- 54.09	24.09
12.880	12.880 (0.827)	59	13298			0.00- 34.43	4.43
58 3-Chloropropene					CAS #: 107-05-1		
13.071	13.071 (0.839)	76	108607	5.00000	5.222	80.00- 120.00	100.00
13.071	13.071 (0.839)	41	210441			163.76- 223.76	193.76
66 Methylene Chloride					CAS #: 75-09-2		
13.338	13.338 (0.856)	84	218872	5.00000	5.004	80.00- 120.00	100.00
13.338	13.338 (0.856)	49	205722			63.99- 123.99	93.99
13.338	13.338 (0.856)	51	66300			0.29- 60.29	30.29
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.536	13.536 (0.869)	59	487013	5.00000	4.767	80.00- 120.00	100.00
13.536	13.536 (0.869)	41	105492			0.00- 51.66	21.66
13.536	13.536 (0.869)	57	65736			0.00- 43.50	13.50
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.674	13.674 (0.878)	73	749567	5.00000	5.359	80.00- 120.00	100.00
13.674	13.674 (0.878)	57	136840			0.00- 48.26	18.26
13.674	13.674 (0.878)	41	116764			0.00- 45.58	15.58
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.729	13.729 (0.881)	98	173089	5.00000	5.459	80.00- 120.00	100.00
13.729	13.729 (0.881)	61	320692			155.28- 215.28	185.28
13.729	13.729 (0.881)	96	270330			126.18- 186.18	156.18
78 Hexane					CAS #: 110-54-3		
14.003	14.003 (0.899)	57	294787	5.00000	5.402	80.00- 120.00	100.00
14.003	14.003 (0.899)	43	151753			21.48- 81.48	51.48
14.003	14.003 (0.899)	86	63423			0.00- 51.51	21.51
83 Isopropyl ether					CAS #: 108-20-3		
14.360	14.360 (0.922)	45	550869	5.00000	5.535	80.00- 120.00	100.00
14.360	14.360 (0.922)	87	219703			9.88- 69.88	39.88
14.360	14.360 (0.922)	59	69937			0.00- 42.70	12.70
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.415	14.415 (0.925)	63	447667	5.00000	5.395	80.00- 120.00	100.00

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

   82 1,1-Dichloroethane (continued)
 14.415  14.415 (0.925)    65    142277                     1.78-  61.78    31.78
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.442  14.442 (0.927)    86     68571 5.00000    5.312  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42     51224                    44.70- 104.70    74.70
 14.442  14.442 (0.927)    43    539878                   757.33- 817.33   787.33
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59    710444 5.00000    5.593  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87    353372                    19.74-  79.74    49.74
 14.859  14.859 (0.954)    41    116086                     0.00-  46.34    16.34
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.240  15.240 (0.978)    98    178900 5.00000    5.158  80.00- 120.00   100.00
 15.240  15.240 (0.978)    61    314689                   145.90- 205.90   175.90
 15.240  15.240 (0.978)    96    278249                   125.53- 185.53   155.53
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.221  15.221 (0.977)    72    121619 5.00000    5.531  80.00- 120.00   100.00
 15.221  15.221 (0.977)    43    355442                   262.26- 322.26   292.26
 15.221  15.221 (0.977)    57     31266                     0.00-  55.71    25.71
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42    220559 5.00000    5.466  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71    125391                    26.85-  86.85    56.85
 15.580  15.580 (1.000)    72    137221                    32.22-  92.22    62.22
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    164946 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    135666                    52.25- 112.25    82.25
 15.580  15.580 (1.000)    49    197619                    89.81- 149.81   119.81
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.641  15.641 (1.004)    83    614120 5.00000    5.157  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85    392863                    33.97-  93.97    63.97
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.888  15.888 (1.020)    84    333250 5.00000    5.392  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56    295554                    58.69- 118.69    88.69
 15.888  15.888 (1.020)    41    163216                    18.98-  78.98    48.98
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.888  15.888 (1.020)    97    726214 5.00000    5.242  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99    466296                    34.21-  94.21    64.21
-------------------------------------------------------------------------------
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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
 16.073  16.073 (1.032)   119    752378 5.00000    5.546  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117    783150                   74.09- 134.09   104.09
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.313  16.313 (1.047)    56    353111 5.00000    5.110  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57   1188711                  306.64- 366.64   336.64
 16.313  16.313 (1.047)    41    332416                   64.14- 124.14    94.14
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.409  16.409 (0.969)    78    747719 5.00000    4.977  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77    179223                    0.00-  53.97    23.97
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    234231 5.00000    4.946  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    119830                   21.16-  81.16    51.16
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.433  16.433 (0.970)    87    210772 5.00000    5.464  80.00- 120.00   100.00
 16.433  16.433 (0.970)    73    777446                  338.86- 398.86   368.86
 16.433  16.433 (0.970)    55    157070                   44.52- 104.52    74.52
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.505  16.505 (0.974)    62    418974 5.00000    5.350  80.00- 120.00   100.00
 16.505  16.505 (0.974)    64    130013                    1.03-  61.03    31.03
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.554  16.554 (0.977)    57    183800 5.00000    5.161  80.00- 120.00   100.00
 16.554  16.554 (0.977)   100    107840                   28.67-  88.67    58.67
 16.554  16.554 (0.977)    43    292088                  128.92- 188.92   158.92
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.939  16.939 (1.000)   114    626935 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     95276                    0.00-  45.20    15.20
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.349  17.349 (1.024)   130    406965 5.00000    5.222  80.00- 120.00   100.00
 17.349  17.349 (1.024)    95    382524                   63.99- 123.99    93.99
 17.349  17.349 (1.024)    97    240947                   29.21-  89.21    59.21
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.590  17.590 (1.038)    83    458031 5.00000    5.476  80.00- 120.00   100.00
 17.590  17.590 (1.038)    55    280737                   31.29-  91.29    61.29
 17.590  17.590 (1.038)    56     86023                    0.00-  48.78    18.78
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.807  17.807 (1.051)    63    251132 5.00000    5.192  80.00- 120.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.807  17.807 (1.051)    62    161197                    34.19-  94.19    64.19
 17.807  17.807 (1.051)    41    144112                    27.38-  87.38    57.38
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.927  17.927 (1.058)    88    185804 5.00000    5.129  80.00- 120.00   100.00
 17.927  17.927 (1.058)    58    102246                    25.03-  85.03    55.03
 17.927  17.927 (1.058)    57     38401                     0.00-  50.67    20.67
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83    658181 5.00000    5.279  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85    428800                    35.15-  95.15    65.15
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.086  19.086 (1.127)    75    500326 5.00000    5.385  80.00- 120.00   100.00
 19.086  19.086 (1.127)    77    152346                     0.45-  60.45    30.45
 19.063  19.063 (1.125)    39    218606                    13.69-  73.69    43.69
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43    412979 5.00000    5.327  80.00- 120.00   100.00
 19.265  19.265 (1.137)    58    188504                    15.64-  75.64    45.64
 19.265  19.265 (1.137)    85    110311                     0.00-  56.71    26.71
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    623703 5.00000    5.066  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     63080                     0.00-  40.11    10.11
 19.556  19.556 (1.155)   100    421519                    37.58-  97.58    67.58
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.713  19.713 (1.164)    91    936282 5.00000    5.232  80.00- 120.00   100.00
 19.713  19.713 (1.164)    92    551687                    28.92-  88.92    58.92
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.276  20.276 (0.907)    75    469728 5.00000    5.344  80.00- 120.00   100.00
 20.276  20.276 (0.907)    77    143498                     0.55-  60.55    30.55
 20.276  20.276 (0.907)    39    179682                     8.25-  68.25    38.25
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.688  20.688 (0.925)    97    340995 5.00000    4.984  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99    214511                    32.91-  92.91    62.91
 20.688  20.688 (0.925)    83    265754                    47.93- 107.93    77.93
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.853  20.853 (0.932)   166    564666 5.00000    5.356  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129    408288                    42.31- 102.31    72.31
 20.853  20.853 (0.932)   131    395886                    40.11- 100.11    70.11
-------------------------------------------------------------------------------
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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		
21.018	21.018 (0.940)	58	235305	5.00000	5.344	80.00- 120.00	100.00
21.018	21.018 (0.940)	43	401046			140.44- 200.44	170.44
21.018	21.018 (0.940)	100	69696			0.00- 59.62	29.62
160 Dibromochloromethane					CAS #: 124-48-1		
21.430	21.430 (0.958)	129	754807	5.00000	5.434	80.00- 120.00	100.00
21.430	21.430 (0.958)	127	579827			46.82- 106.82	76.82
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.677	21.677 (0.969)	107	564793	5.00000	5.379	80.00- 120.00	100.00
21.677	21.677 (0.969)	109	539067			65.45- 125.45	95.45
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.366	22.366 (1.000)	117	567678	5.00000		80.00- 120.00	100.00
22.366	22.366 (1.000)	82	287474			20.64- 80.64	50.64
165 Chlorobenzene					CAS #: 108-90-7		
22.407	22.407 (1.002)	112	811200	5.00000	5.282	80.00- 120.00	100.00
22.407	22.407 (1.002)	114	262983			2.42- 62.42	32.42
22.407	22.407 (1.002)	77	434353			23.54- 83.54	53.54
167 Ethyl Benzene					CAS #: 100-41-4		
22.490	22.490 (1.006)	106	392193	5.00000	5.243	80.00- 120.00	100.00
22.490	22.490 (1.006)	91	1225624			282.51- 342.51	312.51
169 m,p-Xylene					CAS #: 108-38-3		
22.656	22.656 (1.013)	106	477877	5.00000	5.499	80.00- 120.00	100.00
22.656	22.656 (1.013)	91	938840			166.46- 226.46	196.46
171 o-Xylene					CAS #: 95-47-6		
23.257	23.257 (1.040)	106	440673	5.00000	5.529	80.00- 120.00	100.00
23.257	23.257 (1.040)	91	943084			184.01- 244.01	214.01
172 Styrene					CAS #: 100-42-5		
23.299	23.299 (1.042)	104	742314	5.00000	5.504	80.00- 120.00	100.00
23.278	23.278 (1.041)	78	373180			20.27- 80.27	50.27
174 Bromoform					CAS #: 75-25-2		
23.639	23.639 (1.057)	173	757728	5.00000	5.506	80.00- 120.00	100.00
23.639	23.639 (1.057)	171	385536			20.88- 80.88	50.88
175 Cumene					CAS #: 98-82-8		
23.728	23.728 (1.061)	105	1464900	5.00000	5.406	80.00- 120.00	100.00
23.728	23.728 (1.061)	120	402388			0.00- 57.47	27.47

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		
24.020	24.020 (1.074)	174	391878	5.00000	5.031	80.00- 120.00	100.00
24.020	24.020 (1.074)	95	420970			77.42- 137.42	107.42
24.020	24.020 (1.074)	176	373758			65.38- 125.38	95.38
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.199	24.199 (1.082)	83	654850	5.00000	5.189	80.00- 120.00	100.00
24.199	24.199 (1.082)	85	430448			35.73- 95.73	65.73
182 Propylbenzene					CAS #: 103-65-1		
24.267	24.267 (1.085)	91	1518478	5.00000	5.320	80.00- 120.00	100.00
24.267	24.267 (1.085)	120	383260			0.00- 55.24	25.24
188 4-Ethyltoluene					CAS #: 622-96-8		
24.401	24.401 (1.091)	105	1265650	5.00000	5.232	80.00- 120.00	100.00
24.401	24.401 (1.091)	120	393369			1.08- 61.08	31.08
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.469	24.469 (1.094)	105	998504	5.00000	5.315	80.00- 120.00	100.00
24.469	24.469 (1.094)	120	483680			18.44- 78.44	48.44
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.917	24.917 (1.114)	105	825838	5.00000	5.074	80.00- 120.00	100.00
24.917	24.917 (1.114)	120	381532			16.20- 76.20	46.20
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.321	25.321 (1.132)	146	757713	5.00000	4.930	80.00- 120.00	100.00
25.321	25.321 (1.132)	148	496358			35.51- 95.51	65.51
25.321	25.321 (1.132)	111	298175			9.35- 69.35	39.35
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.433	25.433 (1.137)	146	732048	5.00000	5.079	80.00- 120.00	100.00
25.433	25.433 (1.137)	148	458311			32.61- 92.61	62.61
25.433	25.433 (1.137)	111	270151			6.90- 66.90	36.90
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.567	25.567 (1.143)	91	974701	5.00000	5.374	80.00- 120.00	100.00
25.567	25.567 (1.143)	126	212719			0.00- 51.82	21.82
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.859	25.859 (1.156)	146	672376	5.00000	5.100	80.00- 120.00	100.00
25.859	25.859 (1.156)	148	428222			33.69- 93.69	63.69
25.859	25.859 (1.156)	111	261969			8.96- 68.96	38.96
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.607	27.607 (1.234)	180	290324	5.00000	4.856	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.607	27.607 (1.234)	182	278853			66.05- 126.05	96.05
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	422190	5.00000	5.194	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	269281			33.78- 93.78	63.78
228 Naphthalene					CAS #: 91-20-3		
27.921	27.921 (1.248)	128	44081	0.50000	0.5049	80.00- 120.00	100.00
27.921	27.921 (1.248)	127	7223			0.00- 46.39	16.39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031710.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	164946	0.00
123 1,4-Difluorobenze	626935	376161	877709	626935	0.00
163 Chlorobenzene-d5	567678	340607	794749	567678	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031710.d

Date : 17-MAR-2016 17:24

Client ID: Level 12

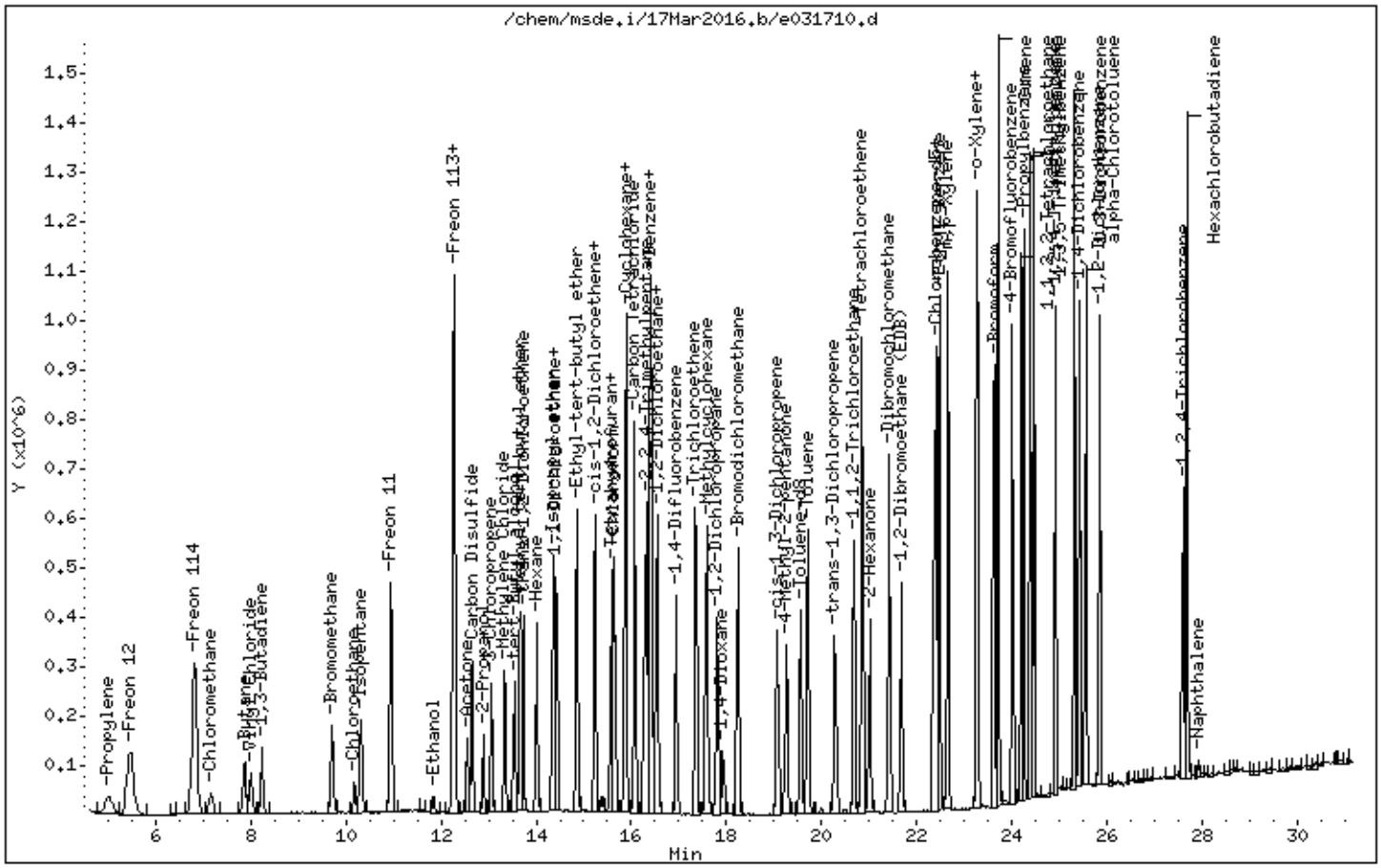
Instrument: msde.i

Sample Info: 25mL# 2759-223

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031711.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 17-MAR-2016 18:10
Operator : ea Inst ID: msde.i
Smp Info : 50mL# 2759-223
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 18:10 Cal File: e031711.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
5.022	5.022 (0.322)	41	224554	10.0000	10.379	80.00- 120.00	100.00
5.022	5.022 (0.322)	42	143270			38.73- 98.73	63.80
5.022	5.022 (0.322)	39	178226			55.81- 115.81	79.37
11 Freon 12					CAS #: 75-71-8		
5.479	5.479 (0.352)	85	1388089	10.0000	9.906	80.00- 120.00	100.00
5.479	5.479 (0.352)	87	435051			2.00- 62.00	31.34
15 Freon 114					CAS #: 76-14-2		
6.829	6.829 (0.438)	135	1011476	10.0000	9.863	80.00- 120.00	100.00
6.805	6.805 (0.437)	137	331054			1.31- 61.31	32.73
6.805	6.805 (0.437)	85	1257901			93.88- 153.88	124.36
17 Chloromethane					CAS #: 74-87-3		
7.167	7.167 (0.460)	50	261195	10.0000	9.824	80.00- 120.00	100.00
7.167	7.167 (0.460)	52	86785			5.50- 65.50	33.23

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.872	7.872 (0.505)	58	71016	10.0000	10.312	80.00- 120.00	100.00
7.872	7.872 (0.505)	43	441638			588.57- 648.57	621.89
25 Vinyl Chloride					CAS #: 75-01-4		
7.993	7.993 (0.513)	62	377577	10.0000	10.095	80.00- 120.00	100.00
7.993	7.993 (0.513)	64	128285			3.14- 63.14	33.98
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	248933	10.0000	9.895	80.00- 120.00	100.00
8.236	8.236 (0.529)	39	240238			65.21- 125.21	96.51
29 Bromomethane					CAS #: 74-83-9		
9.712	9.712 (0.623)	94	403679	10.0000	9.890	80.00- 120.00	100.00
9.712	9.712 (0.623)	96	378287			64.16- 124.16	93.71
30 Chloroethane					CAS #: 75-00-3		
10.176	10.176 (0.653)	64	188820	10.0000	10.685	80.00- 120.00	100.00
10.176	10.176 (0.653)	49	41555			0.00- 54.91	22.01
10.176	10.176 (0.653)	66	59925			3.62- 63.62	31.74
31 Isopentane					CAS #: 78-78-4		
10.310	10.310 (0.662)	57	253338	10.0000	9.889	80.00- 120.00	100.00
10.310	10.310 (0.662)	43	297512			82.69- 142.69	117.44
10.310	10.310 (0.662)	42	241501			68.65- 128.65	95.33
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	1435109	10.0000	9.512	80.00- 120.00	100.00
10.938	10.938 (0.702)	103	939408			37.17- 97.17	65.46
42 Ethanol					CAS #: 64-17-5		
11.833	11.833 (0.759)	45	97164	10.0000	8.887	80.00- 120.00	100.00
11.833	11.833 (0.759)	46	37990			6.61- 66.61	39.10
11.833	11.833 (0.759)	43	25310			0.00- 54.66	26.05
49 Freon 113					CAS #: 76-13-1		
12.252	12.252 (0.786)	151	1151782	10.0000	10.186	80.00- 120.00	100.00
12.252	12.252 (0.786)	153	754407			33.64- 93.64	65.50
12.252	12.252 (0.786)	101	1296774			80.40- 140.40	112.59
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.271	12.271 (0.788)	98	303226	10.0000	9.617	80.00- 120.00	100.00
12.271	12.271 (0.788)	61	716757			204.89- 264.89	236.38
12.271	12.271 (0.788)	96	473247			127.69- 187.69	156.07
52 Acetone					CAS #: 67-64-1		
12.538	12.538 (0.805)	58	174564	10.0000	9.468	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.538  12.538 (0.805)    43    577155                   321.47- 381.47   330.63
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.633  12.633 (0.811)    76   1332073 10.0000    9.479  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.899  12.899 (0.828)    45    566562 10.0000   10.045  80.00- 120.00   100.00
 12.899  12.899 (0.828)    43    135008                    0.00-  54.09    23.83
 12.899  12.899 (0.828)    59     27684                    0.00-  34.43     4.89
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.071  13.071 (0.839)    76    211156 10.0000   10.052  80.00- 120.00   100.00
 13.071  13.071 (0.839)    41    404334                  163.76- 223.76   191.49
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.338  13.338 (0.856)    84    419651 10.0000    9.499  80.00- 120.00   100.00
 13.338  13.338 (0.856)    49    384144                   63.99- 123.99    91.54
 13.338  13.338 (0.856)    51    123056                    0.29-  60.29    29.32
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.536  13.536 (0.869)    59   1099876 10.0000   10.660  80.00- 120.00   100.00
 13.536  13.536 (0.869)    41    186403                    0.00-  51.66    16.95
 13.536  13.536 (0.869)    57    138529                    0.00-  43.50    12.59
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.674  13.674 (0.878)    73   1414221 10.0000   10.010  80.00- 120.00   100.00
 13.674  13.674 (0.878)    57    252637                    0.00-  48.26    17.86
 13.674  13.674 (0.878)    41    228634                    0.00-  45.58    16.17
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.729  13.729 (0.881)    98    316324 10.0000    9.877  80.00- 120.00   100.00
 13.729  13.729 (0.881)    61    604150                  155.28- 215.28   190.99
 13.729  13.729 (0.881)    96    490570                  126.18- 186.18   155.08
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.003  14.003 (0.899)    57    555918 10.0000   10.087  80.00- 120.00   100.00
 14.003  14.003 (0.899)    43    305203                   21.48-  81.48    54.90
 14.003  14.003 (0.899)    86    119590                    0.00-  51.51    21.51
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.360  14.360 (0.922)    45   1047954 10.0000   10.425  80.00- 120.00   100.00
 14.360  14.360 (0.922)    87    432042                    9.88-  69.88    41.23
 14.360  14.360 (0.922)    59    139127                    0.00-  42.70    13.28
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.415  14.415 (0.925)    63    830424 10.0000    9.908  80.00- 120.00   100.00
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.415  14.415 (0.925)    65    266513                     1.78-  61.78    32.09
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.442  14.442 (0.927)    86    134038 10.0000   10.280  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42     97964                    44.70- 104.70    73.09
 14.442  14.442 (0.927)    43   1091527                   757.33- 817.33   814.34
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59   1377036 10.0000   10.733  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87    676670                    19.74-  79.74    49.14
 14.859  14.859 (0.954)    41    216175                     0.00-  46.34    15.70
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.240  15.240 (0.978)    98    345903 10.0000    9.874  80.00- 120.00   100.00
 15.240  15.240 (0.978)    61    601158                   145.90- 205.90   173.79
 15.240  15.240 (0.978)    96    520318                   125.53- 185.53   150.42
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.240  15.240 (0.978)    72    227303 10.0000   10.235  80.00- 120.00   100.00
 15.221  15.221 (0.977)    43    667981                   262.26- 322.26   293.87
 15.221  15.221 (0.977)    57     65479                     0.00-  55.71    28.81
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42    419464 10.0000   10.292  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71    251643                    26.85-  86.85    59.99
 15.580  15.580 (1.000)    72    270285                    32.22-  92.22    64.44
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    166597 5.00000            80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    130946                    52.25- 112.25    78.60
 15.580  15.580 (1.000)    49    133949                    89.81- 149.81    80.40
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.642  15.642 (1.004)    83   1145811 10.0000    9.526  80.00- 120.00   100.00
 15.642  15.642 (1.004)    85    757917                    33.97-  93.97    66.15
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.888  15.888 (1.020)    84    646781 10.0000   10.362  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56    555728                    58.69- 118.69    85.92
 15.888  15.888 (1.020)    41    307013                    18.98-  78.98    47.47
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.888  15.888 (1.020)    97   1333546 10.0000    9.531  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99    900202                    34.21-  94.21    67.50
-------------------------------------------------------------------------------
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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
 16.073  16.073 (1.032)   119   1443826 10.0000   10.537  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117   1479227                   74.09- 134.09   102.45
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.313  16.313 (1.047)    56    661721 10.0000    9.482  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57   2173399                  306.64- 366.64   328.45
 16.313  16.313 (1.047)    41    638251                   64.14- 124.14    96.45
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.409  16.409 (0.969)    78   1376713 10.0000    9.011  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77    328971                    0.00-  53.97    23.90
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    230796 5.00000    4.826  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    122076                   21.16-  81.16    52.89
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.433  16.433 (0.970)    87    394090 10.0000   10.046  80.00- 120.00   100.00
 16.433  16.433 (0.970)    73   1502484                  338.86- 398.86   381.25
 16.433  16.433 (0.970)    55    300151                   44.52- 104.52    76.16
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.506  16.506 (0.974)    62    767037 10.0000    9.632  80.00- 120.00   100.00
 16.506  16.506 (0.974)    64    252620                    1.03-  61.03    32.93
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.554  16.554 (0.977)    57    358164 10.0000    9.890  80.00- 120.00   100.00
 16.554  16.554 (0.977)   100    204029                   28.67-  88.67    56.97
 16.554  16.554 (0.977)    43    561210                  128.92- 188.92   156.69
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.939  16.939 (1.000)   114    637581 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     96576                    0.00-  45.20    15.15
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.373  17.373 (1.026)   130    793464 10.0000   10.012  80.00- 120.00   100.00
 17.349  17.349 (1.024)    95    715220                   63.99- 123.99    90.14
 17.349  17.349 (1.024)    97    460751                   29.21-  89.21    58.07
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.590  17.590 (1.038)    83    869819 10.0000   10.225  80.00- 120.00   100.00
 17.590  17.590 (1.038)    55    548772                   31.29-  91.29    63.09
 17.590  17.590 (1.038)    56    164597                    0.00-  48.78    18.92
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.807  17.807 (1.051)    63    485462 10.0000    9.868  80.00- 120.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.807  17.807 (1.051)    62    305888                    34.19-  94.19    63.01
 17.807  17.807 (1.051)    41    268343                    27.38-  87.38    55.28
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.927  17.927 (1.058)    88    354646 10.0000    9.626  80.00- 120.00   100.00
 17.927  17.927 (1.058)    58    196318                    25.03-  85.03    55.36
 17.927  17.927 (1.058)    57     70533                     0.00-  50.67    19.89
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83   1270633 10.0000   10.021  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85    833447                    35.15-  95.15    65.59
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.086  19.086 (1.127)    75    945339 10.0000   10.005  80.00- 120.00   100.00
 19.086  19.086 (1.127)    77    305858                     0.45-  60.45    32.35
 19.086  19.086 (1.127)    39    406437                    13.69-  73.69    42.99
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43    796140 10.0000   10.098  80.00- 120.00   100.00
 19.265  19.265 (1.137)    58    352066                    15.64-  75.64    44.22
 19.265  19.265 (1.137)    85    209083                     0.00-  56.71    26.26
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    633038 5.00000    5.055  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     66373                     0.00-  40.11    10.48
 19.556  19.556 (1.155)   100    419925                    37.58-  97.58    66.33
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.713  19.713 (1.164)    91   1762092 10.0000    9.682  80.00- 120.00   100.00
 19.713  19.713 (1.164)    92   1038319                    28.92-  88.92    58.93
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.276  20.276 (0.907)    75    900982 10.0000   10.057  80.00- 120.00   100.00
 20.276  20.276 (0.907)    77    289316                     0.55-  60.55    32.11
 20.276  20.276 (0.907)    39    341641                     8.25-  68.25    37.92
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.688  20.688 (0.925)    97    640526 10.0000    9.184  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99    412214                    32.91-  92.91    64.36
 20.688  20.688 (0.925)    83    515323                    47.93- 107.93    80.45
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.853  20.853 (0.932)   166   1032947 10.0000    9.612  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129    746739                    42.31- 102.31    72.29
 20.853  20.853 (0.932)   131    743545                    40.11- 100.11    71.98
-------------------------------------------------------------------------------
```

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

  158 2-Hexanone                                     CAS #: 591-78-6
 21.018  21.018 (0.940)    58    464502 10.0000   10.350  80.00- 120.00   100.00
 21.018  21.018 (0.940)    43    787320                  140.44- 200.44   169.50
 21.018  21.018 (0.940)   100    133775                    0.00-  59.62    28.80
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 21.430  21.430 (0.958)   129   1426043 10.0000   10.073  80.00- 120.00   100.00
 21.430  21.430 (0.958)   127   1094799                   46.82- 106.82    76.77
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 21.677  21.677 (0.969)   107   1055551 10.0000    9.863  80.00- 120.00   100.00
 21.677  21.677 (0.969)   109   1005531                   65.45- 125.45    95.26
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.366  22.366 (1.000)   117    578602 5.00000           80.00- 120.00   100.00
 22.366  22.366 (1.000)    82    288327                   20.64-  80.64    49.83
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 22.407  22.407 (1.002)   112   1520233 10.0000    9.711  80.00- 120.00   100.00
 22.407  22.407 (1.002)   114    501335                    2.42-  62.42    32.98
 22.407  22.407 (1.002)    77    816749                   23.54-  83.54    53.73
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 22.490  22.490 (1.006)   106    746677 10.0000    9.794  80.00- 120.00   100.00
 22.490  22.490 (1.006)    91   2335672                  282.51- 342.51   312.81
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 22.656  22.656 (1.013)   106    907577 10.0000   10.247  80.00- 120.00   100.00
 22.656  22.656 (1.013)    91   1816518                  166.46- 226.46   200.15
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 23.257  23.257 (1.040)   106    834619 10.0000   10.274  80.00- 120.00   100.00
 23.257  23.257 (1.040)    91   1766135                  184.01- 244.01   211.61
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 23.299  23.299 (1.042)   104   1419978 10.0000   10.330  80.00- 120.00   100.00
 23.278  23.278 (1.041)    78    739778                   20.27-  80.27    52.10
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 23.639  23.639 (1.057)   173   1478323 10.0000   10.539  80.00- 120.00   100.00
 23.639  23.639 (1.057)   171    754798                   20.88-  80.88    51.06
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 23.728  23.728 (1.061)   105   2778980 10.0000   10.061  80.00- 120.00   100.00
 23.728  23.728 (1.061)   120    754428                    0.00-  57.47    27.15
-------------------------------------------------------------------------------
```

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

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 24.020  24.020 (1.074)   174    400816 5.00000    5.048  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    419905                   77.42- 137.42   104.76
 24.020  24.020 (1.074)   176    392308                   65.38- 125.38    97.88
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.200  24.200 (1.082)    83   1258098 10.0000    9.781  80.00- 120.00   100.00
 24.200  24.200 (1.082)    85    820207                   35.73-  95.73    65.19
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 24.267  24.267 (1.085)    91   2940087 10.0000   10.106  80.00- 120.00   100.00
 24.267  24.267 (1.085)   120    735604                    0.00-  55.24    25.02
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.401  24.401 (1.091)   105   2457441 10.0000    9.966  80.00- 120.00   100.00
 24.401  24.401 (1.091)   120    760021                    1.08-  61.08    30.93
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 24.469  24.469 (1.094)   105   1954035 10.0000   10.205  80.00- 120.00   100.00
 24.469  24.469 (1.094)   120    940045                   18.44-  78.44    48.11
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 24.917  24.917 (1.114)   105   1613755 10.0000    9.727  80.00- 120.00   100.00
 24.917  24.917 (1.114)   120    737582                   16.20-  76.20    45.71
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 25.321  25.321 (1.132)   146   1478957 10.0000    9.440  80.00- 120.00   100.00
 25.321  25.321 (1.132)   148    947475                   35.51-  95.51    64.06
 25.321  25.321 (1.132)   111    573984                    9.35-  69.35    38.81
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 25.433  25.433 (1.137)   146   1413836 10.0000    9.624  80.00- 120.00   100.00
 25.433  25.433 (1.137)   148    918447                   32.61-  92.61    64.96
 25.433  25.433 (1.137)   111    524560                    6.90-  66.90    37.10
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 25.567  25.567 (1.143)    91   1937867 10.0000   10.483  80.00- 120.00   100.00
 25.567  25.567 (1.143)   126    432963                    0.00-  51.82    22.34
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 25.859  25.859 (1.156)   146   1320802 10.0000    9.828  80.00- 120.00   100.00
 25.859  25.859 (1.156)   148    832755                   33.69-  93.69    63.05
 25.859  25.859 (1.156)   111    517176                    8.96-  68.96    39.16
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 27.607  27.607 (1.234)   180    635603 10.0000   10.431  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.607	27.607 (1.234)	182	599547			66.05- 126.05	94.33
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	866561	10.0000	10.459	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	546910			33.78- 93.78	63.11
228 Naphthalene					CAS #: 91-20-3		
27.921	27.921 (1.248)	128	91163	1.00000	1.024	80.00- 120.00	100.00
27.921	27.921 (1.248)	127	14412			0.00- 46.39	15.81

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031711.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	166597	1.00
123 1,4-Difluorobenze	626935	376161	877709	637581	1.70
163 Chlorobenzene-d5	567678	340607	794749	578602	1.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031711.d

Date : 17-MAR-2016 18:10

Client ID: Level 13

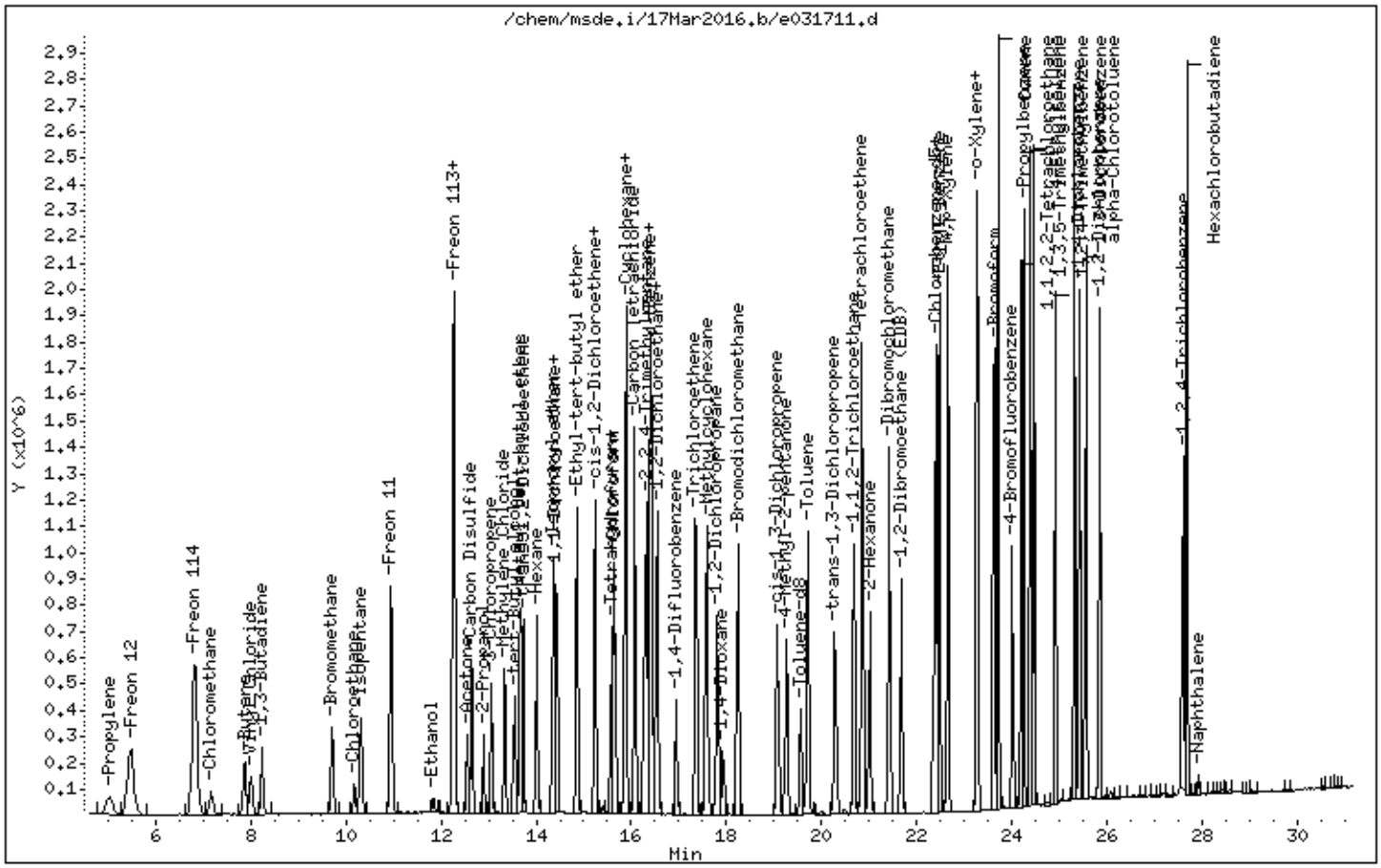
Instrument: msde.i

Sample Info: 50mL# 2759-223

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031712.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 17-MAR-2016 19:01
Operator : ea Inst ID: msde.i
Smp Info : 100mL# 2759-223
Misc Info : 20ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:52 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 19:01 Cal File: e031712.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
5.045	5.045 (0.324)	41	418694	20.0000	18.236	80.00- 120.00	100.00
5.045	5.045 (0.324)	42	279974			38.73- 98.73	66.87
5.045	5.045 (0.324)	39	361722			55.81- 115.81	86.39
11 Freon 12					CAS #: 75-71-8		
5.479	5.479 (0.352)	85	2632699	20.0000	17.706	80.00- 120.00	100.00
5.479	5.479 (0.352)	87	857792			2.00- 62.00	32.58
15 Freon 114					CAS #: 76-14-2		
6.829	6.829 (0.438)	135	1987627	20.0000	18.265	80.00- 120.00	100.00
6.829	6.829 (0.438)	137	656978			1.31- 61.31	33.05
6.829	6.829 (0.438)	85	2452054			93.88- 153.88	123.37
17 Chloromethane					CAS #: 74-87-3		
7.167	7.167 (0.460)	50	503169	20.0000	17.835	80.00- 120.00	100.00
7.167	7.167 (0.460)	52	165187			5.50- 65.50	32.83

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.854	7.854 (0.504)	58	135889	20.0000	18.595	80.00- 120.00	100.00
7.871	7.871 (0.505)	43	874878			588.57- 648.57	643.82
25 Vinyl Chloride					CAS #: 75-01-4		
7.993	7.993 (0.513)	62	716755	20.0000	18.058	80.00- 120.00	100.00
7.993	7.993 (0.513)	64	246035			3.14- 63.14	34.33
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	496268	20.0000	18.590	80.00- 120.00	100.00
8.236	8.236 (0.529)	39	477809			65.21- 125.21	96.28
29 Bromomethane					CAS #: 74-83-9		
9.711	9.711 (0.623)	94	748900	20.0000	17.291	80.00- 120.00	100.00
9.711	9.711 (0.623)	96	724975			64.16- 124.16	96.81
30 Chloroethane					CAS #: 75-00-3		
10.176	10.176 (0.653)	64	361425	20.0000	19.274	80.00- 120.00	100.00
10.176	10.176 (0.653)	49	81655			0.00- 54.91	22.59
10.176	10.176 (0.653)	66	116360			3.62- 63.62	32.19
31 Isopentane					CAS #: 78-78-4		
10.309	10.309 (0.662)	57	504085	20.0000	18.544	80.00- 120.00	100.00
10.309	10.309 (0.662)	43	578390			82.69- 142.69	114.74
10.309	10.309 (0.662)	42	481221			68.65- 128.65	95.46
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	2802600	20.0000	17.505	80.00- 120.00	100.00
10.938	10.938 (0.702)	103	1820853			37.17- 97.17	64.97
42 Ethanol					CAS #: 64-17-5		
11.833	11.833 (0.759)	45	199906	20.0000	17.231	80.00- 120.00	100.00
11.833	11.833 (0.759)	46	74162			6.61- 66.61	37.10
11.833	11.833 (0.759)	43	50080			0.00- 54.66	25.05
49 Freon 113					CAS #: 76-13-1		
12.252	12.252 (0.786)	151	2261346	20.0000	18.847	80.00- 120.00	100.00
12.252	12.252 (0.786)	153	1455081			33.64- 93.64	64.35
12.252	12.252 (0.786)	101	2489402			80.40- 140.40	110.08
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.271	12.271 (0.788)	98	586348	20.0000	17.525	80.00- 120.00	100.00
12.271	12.271 (0.788)	61	1384315			204.89- 264.89	236.09
12.271	12.271 (0.788)	96	918085			127.69- 187.69	156.58
52 Acetone					CAS #: 67-64-1		
12.537	12.537 (0.805)	58	335171	20.0000	17.131	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.537  12.537 (0.805)    43   1101970                  321.47- 381.47   328.78
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.633  12.633 (0.811)    76   2592283 20.0000   17.384  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.880  12.880 (0.827)    45   1145088 20.0000   19.132  80.00- 120.00   100.00
 12.880  12.880 (0.827)    43    259174                    0.00-  54.09    22.63
 12.899  12.899 (0.828)    59     50134                    0.00-  34.43     4.38
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.071  13.071 (0.839)    76    407845 20.0000   18.297  80.00- 120.00   100.00
 13.052  13.052 (0.838)    41    789918                  163.76- 223.76   193.68
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.337  13.337 (0.856)    84    777428 20.0000   16.583  80.00- 120.00   100.00
 13.337  13.337 (0.856)    49    739367                   63.99- 123.99    95.10
 13.337  13.337 (0.856)    51    224948                    0.29-  60.29    28.93
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.536  13.536 (0.869)    59   1942029 20.0000   17.737  80.00- 120.00   100.00
 13.536  13.536 (0.869)    41    389153                    0.00-  51.66    20.04
 13.536  13.536 (0.869)    57    255553                    0.00-  43.50    13.16
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.674  13.674 (0.878)    73   2724323 20.0000   18.173  80.00- 120.00   100.00
 13.646  13.646 (0.876)    57    500585                    0.00-  48.26    18.37
 13.646  13.646 (0.876)    41    440409                    0.00-  45.58    16.17
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.728  13.728 (0.881)    98    627152 20.0000   18.454  80.00- 120.00   100.00
 13.701  13.701 (0.879)    61   1193618                  155.28- 215.28   190.32
 13.728  13.728 (0.881)    96    947436                  126.18- 186.18   151.07
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.003  14.003 (0.899)    57   1077207 20.0000   18.420  80.00- 120.00   100.00
 14.003  14.003 (0.899)    43    601258                   21.48-  81.48    55.82
 14.003  14.003 (0.899)    86    228691                    0.00-  51.51    21.23
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.360  14.360 (0.922)    45   2022509 20.0000   18.961  80.00- 120.00   100.00
 14.360  14.360 (0.922)    87    821885                    9.88-  69.88    40.64
 14.360  14.360 (0.922)    59    273848                    0.00-  42.70    13.54
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.415  14.415 (0.925)    63   1574041 20.0000   17.698  80.00- 120.00   100.00
```

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

   82 1,1-Dichloroethane (continued)
 14.415  14.415 (0.925)    65    521077                     1.78-  61.78    33.10
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.442  14.442 (0.927)    86    253784 20.0000   18.342  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42    187287                   44.70- 104.70    73.80
 14.442  14.442 (0.927)    43   2008795                  757.33- 817.33   791.54
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59   2651597 20.0000   19.476  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87   1287755                   19.74-  79.74    48.57
 14.859  14.859 (0.954)    41    412828                    0.00-  46.34    15.57
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.239  15.239 (0.978)    98    663794 20.0000   17.856  80.00- 120.00   100.00
 15.239  15.239 (0.978)    61   1158555                  145.90- 205.90   174.54
 15.239  15.239 (0.978)    96   1023549                  125.53- 185.53   154.20
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.220  15.220 (0.977)    72    443259 20.0000   18.809  80.00- 120.00   100.00
 15.220  15.220 (0.977)    43   1314838                  262.26- 322.26   296.63
 15.220  15.220 (0.977)    57    126768                    0.00-  55.71    28.60
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42    838603 20.0000   19.391  80.00- 120.00   100.00
 15.580  15.580 (1.000)    71    494844                   26.85-  86.85    59.01
 15.580  15.580 (1.000)    72    534524                   32.22-  92.22    63.74
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    176784 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    163103                   52.25- 112.25    92.26
 15.641  15.641 (1.000)    49    318483                   89.81- 149.81   180.15
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.641  15.641 (1.004)    83   2237024 20.0000   17.526  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85   1452544                   33.97-  93.97    64.93
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.888  15.888 (1.020)    84   1263544 20.0000   19.076  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56   1087383                   58.69- 118.69    86.06
 15.888  15.888 (1.020)    41    589441                   18.98-  78.98    46.65
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.888  15.888 (1.020)    97   2564559 20.0000   17.273  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99   1664024                   34.21-  94.21    64.89
-------------------------------------------------------------------------------
```

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

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 16.073  16.073 (1.032)   119   2744213 20.0000   18.873  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117   2840230                   74.09- 134.09   103.50
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.313  16.313 (1.047)    56   1243884 20.0000   16.797  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57   4056024                  306.64- 366.64   326.08
 16.313  16.313 (1.047)    41   1098899                   64.14- 124.14    88.34
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.409  16.409 (0.969)    78   2702628 20.0000   17.387  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77    635782                    0.00-  53.97    23.52
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    250827 5.00000    4.942  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    127229                   21.16-  81.16    50.72
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.433  16.433 (0.970)    87    781060 20.0000   19.570  80.00- 120.00   100.00
 16.433  16.433 (0.970)    73   2909750                  338.86- 398.86   372.54
 16.433  16.433 (0.970)    55    577394                   44.52- 104.52    73.92
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.505  16.505 (0.974)    62   1472227 20.0000   18.172  80.00- 120.00   100.00
 16.505  16.505 (0.974)    64    499418                    1.03-  61.03    33.92
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.553  16.553 (0.977)    57    699144 20.0000   18.975  80.00- 120.00   100.00
 16.553  16.553 (0.977)   100    388942                   28.67-  88.67    55.63
 16.553  16.553 (0.977)    43   1094226                  128.92- 188.92   156.51
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.939  16.939 (1.000)   114    648654 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88     91936                    0.00-  45.20    14.17
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.349  17.349 (1.024)   130   1530843 20.0000   18.987  80.00- 120.00   100.00
 17.349  17.349 (1.024)    95   1372279                   63.99- 123.99    89.64
 17.349  17.349 (1.024)    97    884941                   29.21-  89.21    57.81
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.589  17.589 (1.038)    83   1713849 20.0000   19.804  80.00- 120.00   100.00
 17.589  17.589 (1.038)    55   1085608                   31.29-  91.29    63.34
 17.589  17.589 (1.038)    56    328939                    0.00-  48.78    19.19
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.806  17.806 (1.051)    63    922002 20.0000   18.422  80.00- 120.00   100.00
```

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

  132 1,2-Dichloropropane (continued)
 17.806  17.806 (1.051)    62    594433                    34.19-  94.19    64.47
 17.806  17.806 (1.051)    41    506600                    27.38-  87.38    54.95
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.927  17.927 (1.058)    88    706032 20.0000   18.837  80.00- 120.00   100.00
 17.927  17.927 (1.058)    58    383534                    25.03-  85.03    54.32
 17.927  17.927 (1.058)    57    133620                     0.00-  50.67    18.93
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83   2475762 20.0000   19.193  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85   1590847                    35.15-  95.15    64.26
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.063  19.063 (1.125)    75   1864177 20.0000   19.393  80.00- 120.00   100.00
 19.063  19.063 (1.125)    77    583129                     0.45-  60.45    31.28
 19.063  19.063 (1.125)    39    785432                    13.69-  73.69    42.13
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43   1586505 20.0000   19.778  80.00- 120.00   100.00
 19.265  19.265 (1.137)    58    699882                    15.64-  75.64    44.11
 19.265  19.265 (1.137)    85    400441                     0.00-  56.71    25.24
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    644126 5.00000    5.056  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     67969                     0.00-  40.11    10.55
 19.556  19.556 (1.155)   100    425854                    37.58-  97.58    66.11
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.713  19.713 (1.164)    91   3453581 20.0000   18.653  80.00- 120.00   100.00
 19.713  19.713 (1.164)    92   2035608                    28.92-  88.92    58.94
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.276  20.276 (0.907)    75   1766927 20.0000   19.589  80.00- 120.00   100.00
 20.276  20.276 (0.907)    77    562651                     0.55-  60.55    31.84
 20.276  20.276 (0.907)    39    663369                     8.25-  68.25    37.54
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.688  20.688 (0.925)    97   1241409 20.0000   17.680  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99    762706                    32.91-  92.91    61.44
 20.688  20.688 (0.925)    83   1006926                    47.93- 107.93    81.11
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.853  20.853 (0.932)   166   2049673 20.0000   18.944  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129   1475541                    42.31- 102.31    71.99
 20.853  20.853 (0.932)   131   1422288                    40.11- 100.11    69.39
-------------------------------------------------------------------------------
```

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		
21.018	21.018 (0.940)	58	925824	20.0000	20.489	80.00- 120.00	100.00
21.018	21.018 (0.940)	43	1549540			140.44- 200.44	167.37
21.018	21.018 (0.940)	100	263024			0.00- 59.62	28.41
160 Dibromochloromethane					CAS #: 124-48-1		
21.430	21.430 (0.958)	129	2772219	20.0000	19.449	80.00- 120.00	100.00
21.430	21.430 (0.958)	127	2136449			46.82- 106.82	77.07
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.677	21.677 (0.969)	107	2057142	20.0000	19.091	80.00- 120.00	100.00
21.677	21.677 (0.969)	109	1962128			65.45- 125.45	95.38
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.365	22.365 (1.000)	117	582541	5.00000		80.00- 120.00	100.00
22.365	22.365 (1.000)	82	299842			20.64- 80.64	51.47
165 Chlorobenzene					CAS #: 108-90-7		
22.407	22.407 (1.002)	112	2967481	20.0000	18.828	80.00- 120.00	100.00
22.407	22.407 (1.002)	114	974023			2.42- 62.42	32.82
22.407	22.407 (1.002)	77	1615915			23.54- 83.54	54.45
167 Ethyl Benzene					CAS #: 100-41-4		
22.490	22.490 (1.006)	106	1477913	20.0000	19.254	80.00- 120.00	100.00
22.490	22.490 (1.006)	91	4586862			282.51- 342.51	310.36
169 m,p-Xylene					CAS #: 108-38-3		
22.656	22.656 (1.013)	106	1769334	20.0000	19.842	80.00- 120.00	100.00
22.656	22.656 (1.013)	91	3555026			166.46- 226.46	200.92
171 o-Xylene					CAS #: 95-47-6		
23.257	23.257 (1.040)	106	1669242	20.0000	20.409	80.00- 120.00	100.00
23.257	23.257 (1.040)	91	3533405			184.01- 244.01	211.68
172 Styrene					CAS #: 100-42-5		
23.278	23.278 (1.041)	104	2817814	20.0000	20.360	80.00- 120.00	100.00
23.278	23.278 (1.041)	78	1432244			20.27- 80.27	50.83
174 Bromoform					CAS #: 75-25-2		
23.616	23.616 (1.056)	173	2866617	20.0000	20.298	80.00- 120.00	100.00
23.616	23.616 (1.056)	171	1472658			20.88- 80.88	51.37
175 Cumene					CAS #: 98-82-8		
23.728	23.728 (1.061)	105	5502310	20.0000	19.786	80.00- 120.00	100.00
23.728	23.728 (1.061)	120	1510007			0.00- 57.47	27.44

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

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 24.020  24.020 (1.074)   174    410339 5.00000    5.134  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    445297                   77.42- 137.42   108.52
 24.020  24.020 (1.074)   176    386330                   65.38- 125.38    94.15
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.199  24.199 (1.082)    83   2487186 20.0000   19.205  80.00- 120.00   100.00
 24.199  24.199 (1.082)    85   1607378                   35.73-  95.73    64.63
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 24.244  24.244 (1.084)    91   5828029 20.0000   19.898  80.00- 120.00   100.00
 24.267  24.267 (1.085)   120   1460719                    0.00-  55.24    25.06
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.401  24.401 (1.091)   105   4874217 20.0000   19.634  80.00- 120.00   100.00
 24.401  24.401 (1.091)   120   1481952                    1.08-  61.08    30.40
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 24.468  24.468 (1.094)   105   3769488 20.0000   19.553  80.00- 120.00   100.00
 24.468  24.468 (1.094)   120   1832663                   18.44-  78.44    48.62
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 24.917  24.917 (1.114)   105   3261797 20.0000   19.528  80.00- 120.00   100.00
 24.917  24.917 (1.114)   120   1513731                   16.20-  76.20    46.41
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 25.320  25.320 (1.132)   146   2941634 20.0000   18.650  80.00- 120.00   100.00
 25.320  25.320 (1.132)   148   1890981                   35.51-  95.51    64.28
 25.320  25.320 (1.132)   111   1115798                    9.35-  69.35    37.93
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 25.433  25.433 (1.137)   146   2840365 20.0000   19.203  80.00- 120.00   100.00
 25.433  25.433 (1.137)   148   1808538                   32.61-  92.61    63.67
 25.410  25.410 (1.136)   111   1050010                    6.90-  66.90    36.97
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 25.567  25.567 (1.143)    91   3909627 20.0000   21.007  80.00- 120.00   100.00
 25.567  25.567 (1.143)   126    885383                    0.00-  51.82    22.65
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 25.858  25.858 (1.156)   146   2590182 20.0000   19.144  80.00- 120.00   100.00
 25.858  25.858 (1.156)   148   1656897                   33.69-  93.69    63.97
 25.858  25.858 (1.156)   111   1036977                    8.96-  68.96    40.03
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 27.607  27.607 (1.234)   180   1279654 20.0000   20.858  80.00- 120.00   100.00
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)								
27.607	27.607	(1.234)	182	1222301			66.05- 126.05	95.52
227 Hexachlorobutadiene						CAS #: 87-68-3		
27.697	27.697	(1.238)	225	1737234	20.0000	20.826	80.00- 120.00	100.00
27.697	27.697	(1.238)	223	1088824			33.78- 93.78	62.68
228 Naphthalene						CAS #: 91-20-3		
27.921	27.921	(1.248)	128	184142	2.00000	2.055	80.00- 120.00	100.00
27.921	27.921	(1.248)	127	26394			0.00- 46.39	14.33

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031712.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	176784	7.18
123 1,4-Difluorobenze	626935	376161	877709	648654	3.46
163 Chlorobenzene-d5	567678	340607	794749	582541	2.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031712.d

Date : 17-MAR-2016 19:01

Client ID: Level 15

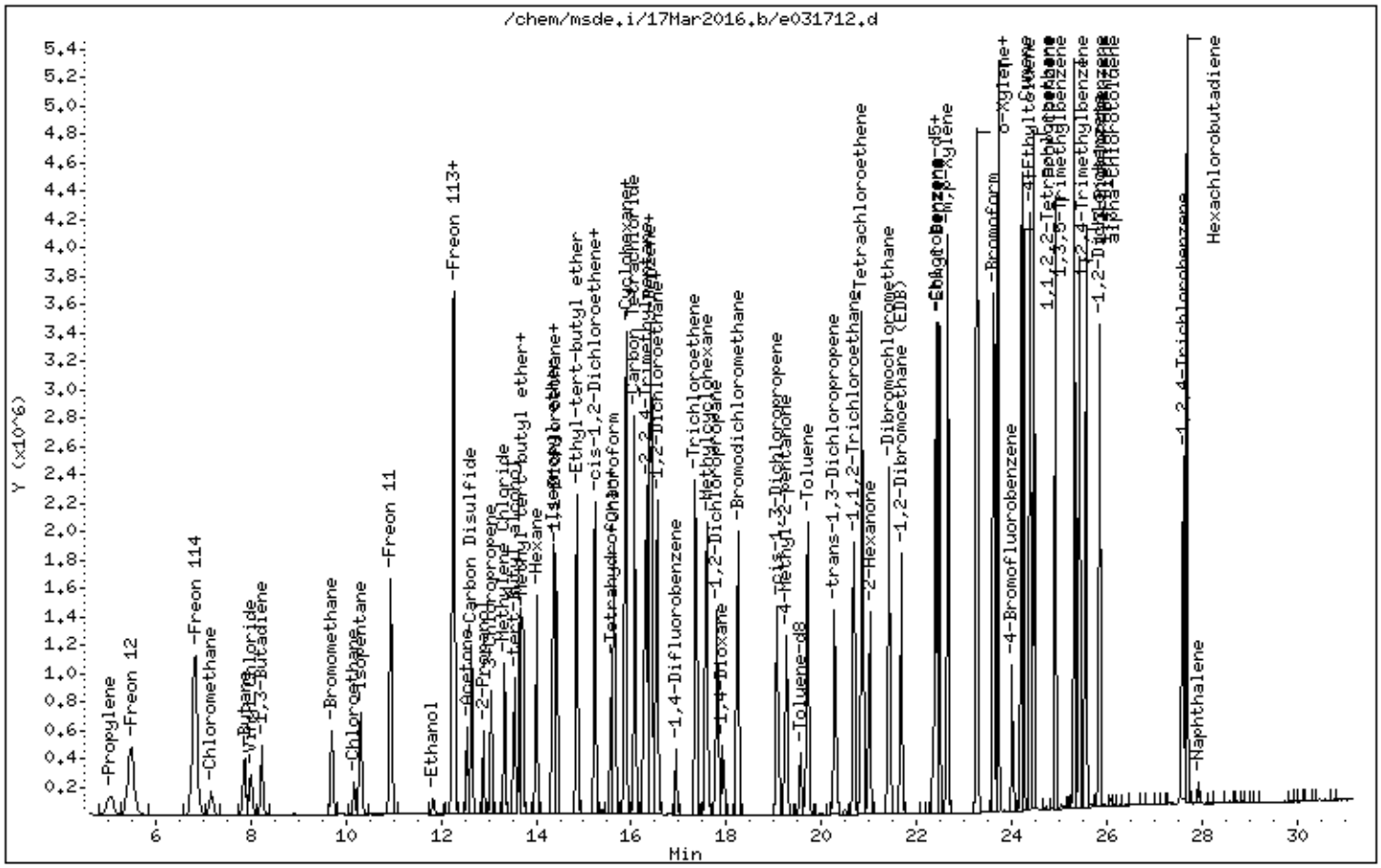
Instrument: msde.i

Sample Info: 100mL# 2759-223

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/17Mar2016.b/e031713.d
Lab Smp Id: ICAL Client Smp ID: Level 16
Inj Date : 17-MAR-2016 19:49
Operator : ea Inst ID: msde.i
Smp Info : 200mL# 2759-223
Misc Info : 40ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/17Mar2016.b/e16l0317a.m
Meth Date : 23-Mar-2016 08:53 efinn Quant Type: ISTD
Cal Date : 17-MAR-2016 19:49 Cal File: e031713.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

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
5.070	5.070 (0.325)	41	863758	40.0000	38.692	80.00- 120.00	100.00
5.046	5.046 (0.324)	42	555479			38.73- 98.73	64.31
5.070	5.070 (0.325)	39	718996			55.81- 115.81	83.24
11 Freon 12					CAS #: 75-71-8		
5.479	5.479 (0.352)	85	5204716	40.0000	36.000	80.00- 120.00	100.00
5.479	5.479 (0.352)	87	1696862			2.00- 62.00	32.60
15 Freon 114					CAS #: 76-14-2		
6.829	6.829 (0.438)	135	3924996	40.0000	37.094	80.00- 120.00	100.00
6.829	6.829 (0.438)	137	1271459			1.31- 61.31	32.39
6.829	6.829 (0.438)	85	4818737			93.88- 153.88	122.77
17 Chloromethane					CAS #: 74-87-3		
7.167	7.167 (0.460)	50	1005880	40.0000	36.669	80.00- 120.00	100.00
7.167	7.167 (0.460)	52	327142			5.50- 65.50	32.52

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane					CAS #: 106-97-8		
7.872	7.872 (0.505)	58	291239	40.0000	40.988	80.00- 120.00	100.00(A)
7.872	7.872 (0.505)	43	1765809			588.57- 648.57	606.31
25 Vinyl Chloride					CAS #: 75-01-4		
8.010	8.010 (0.514)	62	1457287	40.0000	37.761	80.00- 120.00	100.00
8.010	8.010 (0.514)	64	491266			3.14- 63.14	33.71
26 1,3-Butadiene					CAS #: 106-99-0		
8.236	8.236 (0.529)	54	1013084	40.0000	39.030	80.00- 120.00	100.00
8.236	8.236 (0.529)	39	980715			65.21- 125.21	96.80
29 Bromomethane					CAS #: 74-83-9		
9.711	9.711 (0.623)	94	1501037	40.0000	35.644	80.00- 120.00	100.00
9.711	9.711 (0.623)	96	1418889			64.16- 124.16	94.53
30 Chloroethane					CAS #: 75-00-3		
10.176	10.176 (0.653)	64	701588	40.0000	38.479	80.00- 120.00	100.00
10.176	10.176 (0.653)	49	163149			0.00- 54.91	23.25
10.176	10.176 (0.653)	66	231227			3.62- 63.62	32.96
31 Isopentane					CAS #: 78-78-4		
10.309	10.309 (0.662)	57	1001897	40.0000	37.906	80.00- 120.00	100.00
10.309	10.309 (0.662)	43	1166835			82.69- 142.69	116.46
10.309	10.309 (0.662)	42	953658			68.65- 128.65	95.19
35 Freon 11					CAS #: 75-69-4		
10.938	10.938 (0.702)	101	5489142	40.0000	35.260	80.00- 120.00	100.00
10.938	10.938 (0.702)	103	3611529			37.17- 97.17	65.79
42 Ethanol					CAS #: 64-17-5		
11.852	11.852 (0.761)	45	387299	40.0000	34.334	80.00- 120.00	100.00
11.852	11.852 (0.761)	46	145349			6.61- 66.61	37.53
11.852	11.852 (0.761)	43	94449			0.00- 54.66	24.39
49 Freon 113					CAS #: 76-13-1		
12.252	12.252 (0.786)	151	4503251	40.0000	38.600	80.00- 120.00	100.00
12.252	12.252 (0.786)	153	2889506			33.64- 93.64	64.16
12.252	12.252 (0.786)	101	4908902			80.40- 140.40	109.01
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.271	12.271 (0.788)	98	1185266	40.0000	36.433	80.00- 120.00	100.00
12.271	12.271 (0.788)	61	2751481			204.89- 264.89	232.14
12.271	12.271 (0.788)	96	1868444			127.69- 187.69	157.64
52 Acetone					CAS #: 67-64-1		
12.537	12.537 (0.805)	58	666418	40.0000	35.032	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.537  12.537 (0.805)    43   2190345                   321.47- 381.47   328.67
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.633  12.633 (0.811)    76   5014477 40.0000   34.585  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.899  12.899 (0.828)    45   2335707 40.0000   40.136  80.00- 120.00   100.00(A)
 12.899  12.899 (0.828)    43    507081                    0.00-  54.09    21.71
 12.899  12.899 (0.828)    59    103121                    0.00-  34.43     4.41
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 13.071  13.071 (0.839)    76    827057 40.0000   38.160  80.00- 120.00   100.00
 13.071  13.071 (0.839)    41   1576278                  163.76- 223.76   190.59
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.337  13.337 (0.856)    84   1565356 40.0000   34.340  80.00- 120.00   100.00
 13.337  13.337 (0.856)    49   1444018                   63.99- 123.99    92.25
 13.337  13.337 (0.856)    51    451272                    0.29-  60.29    28.83
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.536  13.536 (0.869)    59   4076001 40.0000   38.286  80.00- 120.00   100.00
 13.536  13.536 (0.869)    41    839932                    0.00-  51.66    20.61
 13.536  13.536 (0.869)    57    467210                    0.00-  43.50    11.46
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.674  13.674 (0.878)    73   5452833 40.0000   37.408  80.00- 120.00   100.00
 13.674  13.674 (0.878)    57   1017832                    0.00-  48.26    18.67
 13.674  13.674 (0.878)    41    882802                    0.00-  45.58    16.19
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.729  13.729 (0.881)    98   1250633 40.0000   37.848  80.00- 120.00   100.00
 13.729  13.729 (0.881)    61   2410285                  155.28- 215.28   192.73
 13.729  13.729 (0.881)    96   1896284                  126.18- 186.18   151.63
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 14.003  14.003 (0.899)    57   2161417 40.0000   38.012  80.00- 120.00   100.00
 14.003  14.003 (0.899)    43   1167365                   21.48-  81.48    54.01
 14.003  14.003 (0.899)    86    449944                    0.00-  51.51    20.82
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.360  14.360 (0.922)    45   4028468 40.0000   38.842  80.00- 120.00   100.00
 14.360  14.360 (0.922)    87   1633777                    9.88-  69.88    40.56
 14.360  14.360 (0.922)    59    547515                    0.00-  42.70    13.59
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.415  14.415 (0.925)    63   3159565 40.0000   36.536  80.00- 120.00   100.00
```

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

   82 1,1-Dichloroethane (continued)
 14.415  14.415 (0.925)    65   1015877                     1.78-  61.78    32.15
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.442  14.442 (0.927)    86    516090 40.0000   38.361  80.00- 120.00   100.00
 14.442  14.442 (0.927)    42    387316                   44.70- 104.70    75.05
 14.442  14.442 (0.927)    43   4136557                  757.33- 817.33   801.52
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.859  14.859 (0.954)    59   5270533 40.0000   39.813  80.00- 120.00   100.00
 14.859  14.859 (0.954)    87   2604070                   19.74-  79.74    49.41
 14.859  14.859 (0.954)    41    818740                    0.00-  46.34    15.53
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.240  15.240 (0.978)    98   1347909 40.0000   37.292  80.00- 120.00   100.00
 15.240  15.240 (0.978)    61   2347413                  145.90- 205.90   174.15
 15.240  15.240 (0.978)    96   2060982                  125.53- 185.53   152.90
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.221  15.221 (0.977)    72    905755 40.0000   39.528  80.00- 120.00   100.00
 15.221  15.221 (0.977)    43   2643825                  262.26- 322.26   291.89
 15.221  15.221 (0.977)    57    257586                    0.00-  55.71    28.44
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.580  15.580 (1.000)    42   1732019 40.0000   41.189  80.00- 120.00   100.00(A)
 15.580  15.580 (1.000)    71   1007250                   26.85-  86.85    58.15
 15.580  15.580 (1.000)    72   1080455                   32.22-  92.22    62.38
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.580  15.580 (1.000)   130    171892 5.00000           80.00- 120.00   100.00
 15.580  15.580 (1.000)   128    135575                   52.25- 112.25    78.87
 15.641  15.641 (1.000)    49    423395                   89.81- 149.81   246.31
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.641  15.641 (1.004)    83   4440244 40.0000   35.778  80.00- 120.00   100.00
 15.641  15.641 (1.004)    85   2883671                   33.97-  93.97    64.94
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.888  15.888 (1.020)    84   2533848 40.0000   39.343  80.00- 120.00   100.00
 15.888  15.888 (1.020)    56   2175304                   58.69- 118.69    85.85
 15.888  15.888 (1.020)    41   1154767                   18.98-  78.98    45.57
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.888  15.888 (1.020)    97   5085363 40.0000   35.227  80.00- 120.00   100.00
 15.888  15.888 (1.020)    99   3315295                   34.21-  94.21    65.19
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 16.073  16.073 (1.032)   119   5420654 40.0000   38.341  80.00- 120.00   100.00
 16.073  16.073 (1.032)   117   5603565                   74.09- 134.09   103.37
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.313  16.313 (1.047)    56   2487597 40.0000   34.548  80.00- 120.00   100.00
 16.313  16.313 (1.047)    57   8537233                  306.64- 366.64   343.19
 16.313  16.313 (1.047)    41   2399438                   64.14- 124.14    96.46
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.409  16.409 (0.969)    78   5322656 40.0000   33.574  80.00- 120.00   100.00
 16.409  16.409 (0.969)    77   1264691                    0.00-  53.97    23.76
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.409  16.409 (1.053)    65    239923 5.00000    4.862  80.00- 120.00   100.00
 16.409  16.409 (1.053)    67    140715                   21.16-  81.16    58.65
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.433  16.433 (0.970)    87   1549433 40.0000   38.065  80.00- 120.00   100.00
 16.433  16.433 (0.970)    73   5825136                  338.86- 398.86   375.95
 16.433  16.433 (0.970)    55   1119795                   44.52- 104.52    72.27
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.505  16.505 (0.974)    62   2898522 40.0000   35.078  80.00- 120.00   100.00
 16.505  16.505 (0.974)    64    973360                    1.03-  61.03    33.58
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.554  16.554 (0.977)    57   1404053 40.0000   37.364  80.00- 120.00   100.00
 16.554  16.554 (0.977)   100    787152                   28.67-  88.67    56.06
 16.554  16.554 (0.977)    43   2182187                  128.92- 188.92   155.42
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.939  16.939 (1.000)   114    661560 5.00000           80.00- 120.00   100.00
 16.939  16.939 (1.000)    88    104690                    0.00-  45.20    15.82
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.349  17.349 (1.024)   130   3039931 40.0000   36.969  80.00- 120.00   100.00
 17.349  17.349 (1.024)    95   2720928                   63.99- 123.99    89.51
 17.349  17.349 (1.024)    97   1804422                   29.21-  89.21    59.36
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.590  17.590 (1.038)    83   3424441 40.0000   38.798  80.00- 120.00   100.00
 17.590  17.590 (1.038)    55   2160959                   31.29-  91.29    63.10
 17.590  17.590 (1.038)    56    649455                    0.00-  48.78    18.97
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.806  17.806 (1.051)    63   1842737 40.0000   36.101  80.00- 120.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.806  17.806 (1.051)    62   1197979                    34.19-  94.19    65.01
 17.806  17.806 (1.051)    41   1029606                    27.38-  87.38    55.87
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.927  17.927 (1.058)    88   1403733 40.0000   36.720  80.00- 120.00   100.00
 17.927  17.927 (1.058)    58    793286                    25.03-  85.03    56.51
 17.927  17.927 (1.058)    57    271870                     0.00-  50.67    19.37
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.240  18.240 (1.077)    83   4928740 40.0000   37.464  80.00- 120.00   100.00
 18.240  18.240 (1.077)    85   3156706                    35.15-  95.15    64.05
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 19.063  19.063 (1.125)    75   3760015 40.0000   38.353  80.00- 120.00   100.00
 19.086  19.086 (1.127)    77   1197455                     0.45-  60.45    31.85
 19.063  19.063 (1.125)    39   1561472                    13.69-  73.69    41.53
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.265  19.265 (1.137)    43   3171953 40.0000   38.772  80.00- 120.00   100.00
 19.265  19.265 (1.137)    58   1398111                    15.64-  75.64    44.08
 19.265  19.265 (1.137)    85    822493                     0.00-  56.71    25.93
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.556  19.556 (1.155)    98    658694 5.00000    5.070  80.00- 120.00   100.00
 19.556  19.556 (1.155)    70     68390                     0.00-  40.11    10.38
 19.556  19.556 (1.155)   100    441805                    37.58-  97.58    67.07
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.713  19.713 (1.164)    91   6864830 40.0000   36.354  80.00- 120.00   100.00
 19.713  19.713 (1.164)    92   4082893                    28.92-  88.92    59.48
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.276  20.276 (0.907)    75   3589089 40.0000   37.805  80.00- 120.00   100.00
 20.276  20.276 (0.907)    77   1127670                     0.55-  60.55    31.42
 20.276  20.276 (0.907)    39   1354089                     8.25-  68.25    37.73
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.688  20.688 (0.925)    97   2453341 40.0000   33.196  80.00- 120.00   100.00
 20.688  20.688 (0.925)    99   1559156                    32.91-  92.91    63.55
 20.688  20.688 (0.925)    83   2007206                    47.93- 107.93    81.82
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.853  20.853 (0.932)   166   4090136 40.0000   35.917  80.00- 120.00   100.00
 20.853  20.853 (0.932)   129   2965927                    42.31- 102.31    72.51
 20.853  20.853 (0.932)   131   2914967                    40.11- 100.11    71.27
-------------------------------------------------------------------------------
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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
 21.018  21.018 (0.940)    58   1915270 40.0000   40.270  80.00- 120.00   100.00(A)
 21.018  21.018 (0.940)    43   3186870                  140.44- 200.44   166.39
 21.018  21.018 (0.940)   100    538711                    0.00-  59.62    28.13
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.430  21.430 (0.958)   129   5498473 40.0000   36.649  80.00- 120.00   100.00
 21.430  21.430 (0.958)   127   4243810                   46.82- 106.82    77.18
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.677  21.677 (0.969)   107   4146365 40.0000   36.560  80.00- 120.00   100.00
 21.677  21.677 (0.969)   109   3948816                   65.45- 125.45    95.24
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.366  22.366 (1.000)   117    613145 5.00000           80.00- 120.00   100.00
 22.366  22.366 (1.000)    82    319825                   20.64-  80.64    52.16
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.407  22.407 (1.002)   112   5991758 40.0000   36.119  80.00- 120.00   100.00
 22.407  22.407 (1.002)   114   1926107                    2.42-  62.42    32.15
 22.407  22.407 (1.002)    77   3233167                   23.54-  83.54    53.96
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.490  22.490 (1.006)   106   2968967 40.0000   36.748  80.00- 120.00   100.00
 22.490  22.490 (1.006)    91   9222100                  282.51- 342.51   310.62
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.656  22.656 (1.013)   106   3568298 40.0000   38.019  80.00- 120.00   100.00
 22.656  22.656 (1.013)    91   7176993                  166.46- 226.46   201.13
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.257  23.257 (1.040)   106   3352270 40.0000   38.940  80.00- 120.00   100.00
 23.257  23.257 (1.040)    91   7015998                  184.01- 244.01   209.29
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.298  23.298 (1.042)   104   5688203 40.0000   39.048  80.00- 120.00   100.00
 23.278  23.278 (1.041)    78   2842935                   20.27-  80.27    49.98
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.639  23.639 (1.057)   173   5716979 40.0000   38.461  80.00- 120.00   100.00
 23.639  23.639 (1.057)   171   2984813                   20.88-  80.88    52.21
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.728  23.728 (1.061)   105  10843336 40.0000   37.047  80.00- 120.00   100.00
 23.728  23.728 (1.061)   120   2997563                    0.00-  57.47    27.64
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 24.020  24.020 (1.074)   174    416867 5.00000    4.955  80.00- 120.00   100.00
 24.020  24.020 (1.074)    95    452332                   77.42- 137.42   108.51
 24.020  24.020 (1.074)   176    403389                   65.38- 125.38    96.77
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.199  24.199 (1.082)    83   4899652 40.0000   35.945  80.00- 120.00   100.00
 24.199  24.199 (1.082)    85   3194971                   35.73-  95.73    65.21
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 24.267  24.267 (1.085)    91  11506199 40.0000   37.324  80.00- 120.00   100.00
 24.267  24.267 (1.085)   120   2895821                    0.00-  55.24    25.17
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.401  24.401 (1.091)   105   9603125 40.0000   36.752  80.00- 120.00   100.00
 24.401  24.401 (1.091)   120   2967050                    1.08-  61.08    30.90
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 24.469  24.469 (1.094)   105   7567927 40.0000   37.296  80.00- 120.00   100.00
 24.469  24.469 (1.094)   120   3687287                   18.44-  78.44    48.72
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 24.917  24.917 (1.114)   105   6284398 40.0000   35.747  80.00- 120.00   100.00
 24.917  24.917 (1.114)   120   2950078                   16.20-  76.20    46.94
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 25.321  25.321 (1.132)   146   5746579 40.0000   34.615  80.00- 120.00   100.00
 25.321  25.321 (1.132)   148   3746438                   35.51-  95.51    65.19
 25.321  25.321 (1.132)   111   2228537                    9.35-  69.35    38.78
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 25.433  25.433 (1.137)   146   5554738 40.0000   35.680  80.00- 120.00   100.00
 25.433  25.433 (1.137)   148   3585224                   32.61-  92.61    64.54
 25.433  25.433 (1.137)   111   2098530                    6.90-  66.90    37.78
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 25.567  25.567 (1.143)    91   7764625 40.0000   39.638  80.00- 120.00   100.00
 25.567  25.567 (1.143)   126   1774279                    0.00-  51.82    22.85
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 25.859  25.859 (1.156)   146   5092681 40.0000   35.761  80.00- 120.00   100.00
 25.859  25.859 (1.156)   148   3274434                   33.69-  93.69    64.30
 25.859  25.859 (1.156)   111   2050643                    8.96-  68.96    40.27
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 27.607  27.607 (1.234)   180   2536594 40.0000   39.282  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.607	27.607 (1.234)	182	2425641			66.05- 126.05	95.63
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.697	27.697 (1.238)	225	3486370	40.0000	39.708	80.00- 120.00	100.00
27.697	27.697 (1.238)	223	2253285			33.78- 93.78	64.63
228 Naphthalene					CAS #: 91-20-3		
27.921	27.921 (1.248)	128	361692	4.00000	3.836	80.00- 120.00	100.00
27.921	27.921 (1.248)	127	44834			0.00- 46.39	12.40

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e031713.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/17Mar2016.b/e16l0317a.m
Misc Info: 40ppbv (50ppbv)

Calibration Date: 17-MAR-2016
Calibration Time: 17:24
Client Smp ID: Level 16
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	164946	98968	230924	171892	4.21
123 1,4-Difluorobenze	626935	376161	877709	661560	5.52
163 Chlorobenzene-d5	567678	340607	794749	613145	8.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.58	15.25	15.91	15.58	0.00
123 1,4-Difluorobenze	16.94	16.61	17.27	16.94	0.00
163 Chlorobenzene-d5	22.37	22.04	22.70	22.37	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/17Mar2016.b/e031713.d

Date : 17-MAR-2016 19:49

Client ID: Level 16

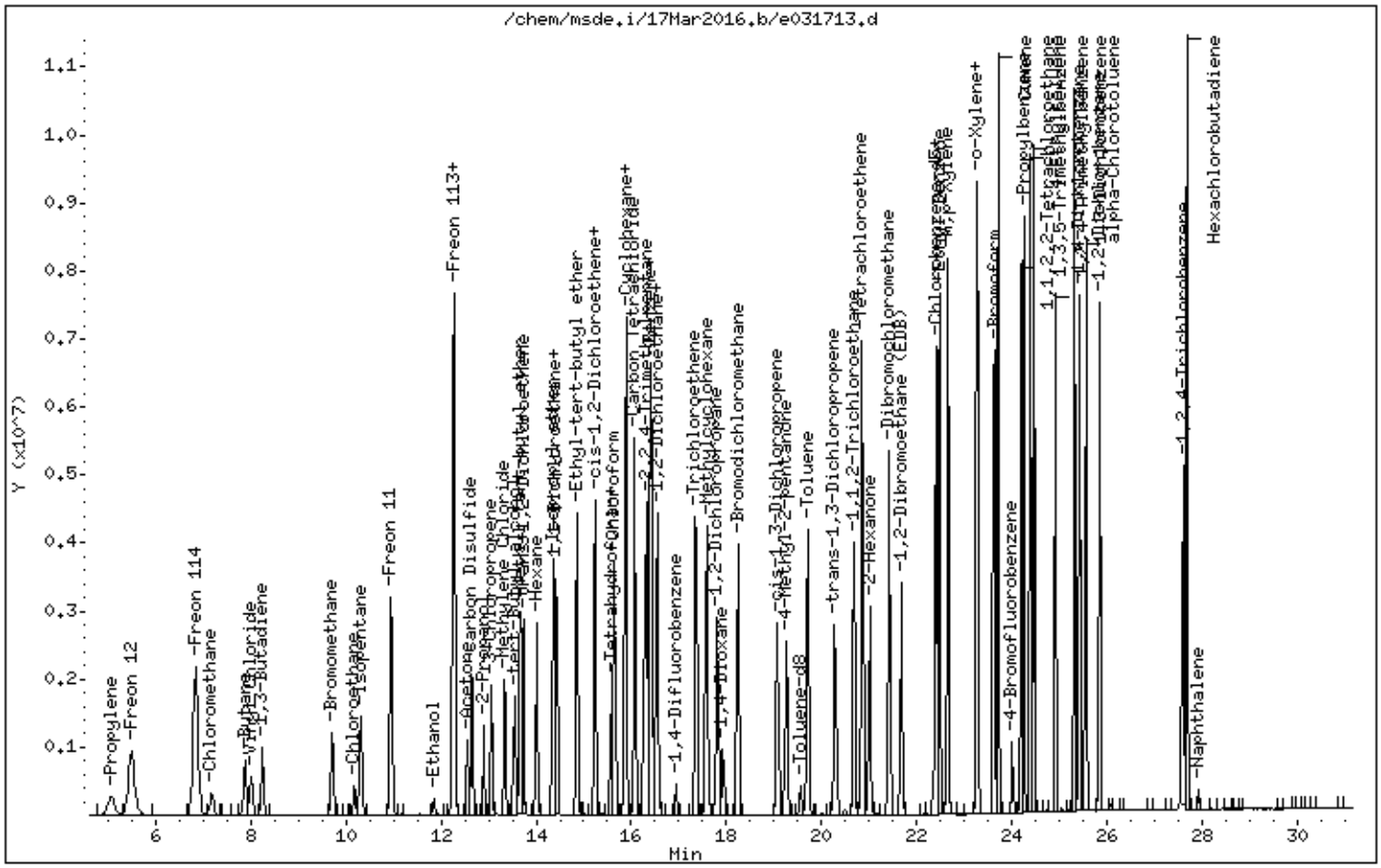
Instrument: msde.i

Sample Info: 200mL# 2759-223

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



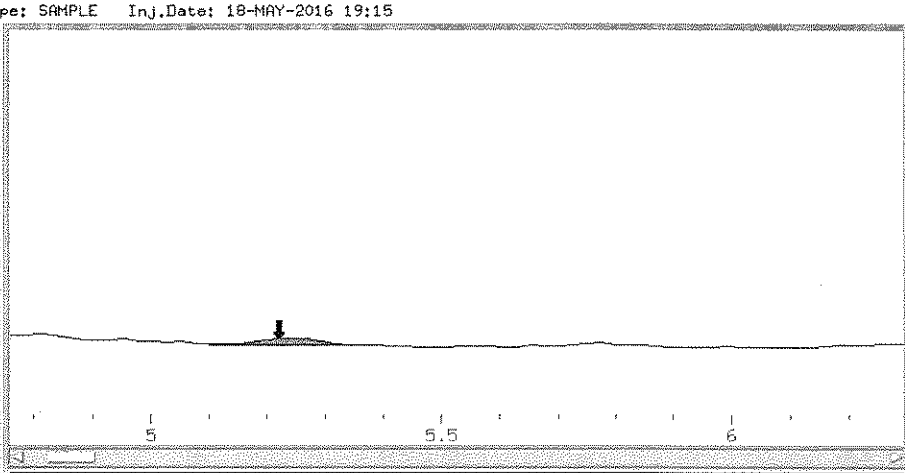
TargetReview: eeyore: 1605308D-03A: /chem/msde.i/18May2016.b/e051815.d

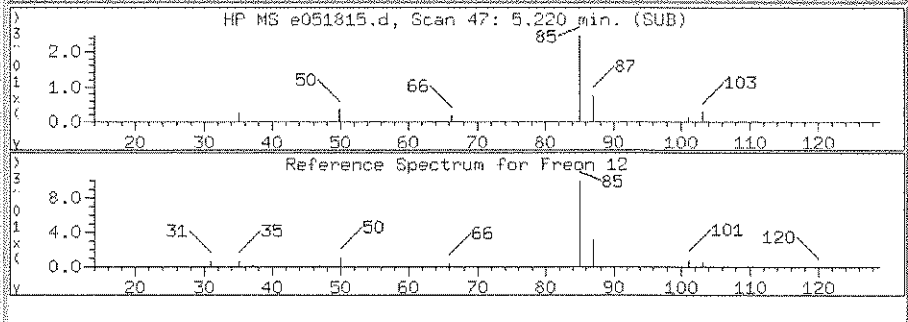
File Security Edit Display Process Spectra Help

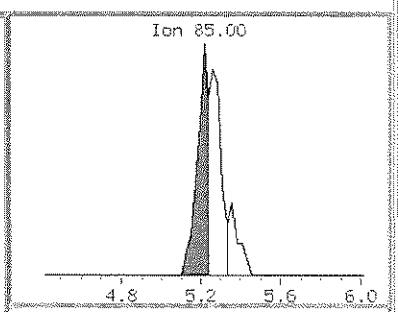
Sample: 1605308D-03A Type: SAMPLE Inj.Date: 18-MAY-2016 19:15

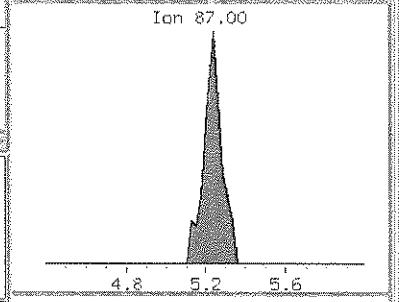
- * 11 Freon 12
- 15 Freon 114
- + 17 Chloromethane
- 25 Vinyl Chloride
- 26 1,3-Butadiene
- 29 Bromomethane
- 30 Chloroethane
- + 35 Freon 11
- + 42 Ethanol
- + 49 Freon 113
- 50 1,1-Dichloroeti
- + 52 Acetone
- + 56 Carbon Disulfi
- + 57 2-Propanol
- 58 3-Chloropropen
- + 66 Methylene Chlo
- 72 Methyl tert-bu
- 73 trans-1,2-Dich
- 78 Hexane
- 82 1,1-Dichloroeti
- 91 cis-1,2-Dichlo
- + 92 2-Butanone
- 99 Tetrahydrofura
- *+ 98 Bromochlorometi
- + 100 Chloroform

e051814.d
e051815.d
e051817.d









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.220	10987	0.09648	0.1997	100	a	
	5.244	6262			57		
2	5.269	11003	0.09654	0.1998	100	a	
	5.244	6262			57		
3	5.365	3104	0.02723	0.05637	100	a	
	5.244	6262			202		

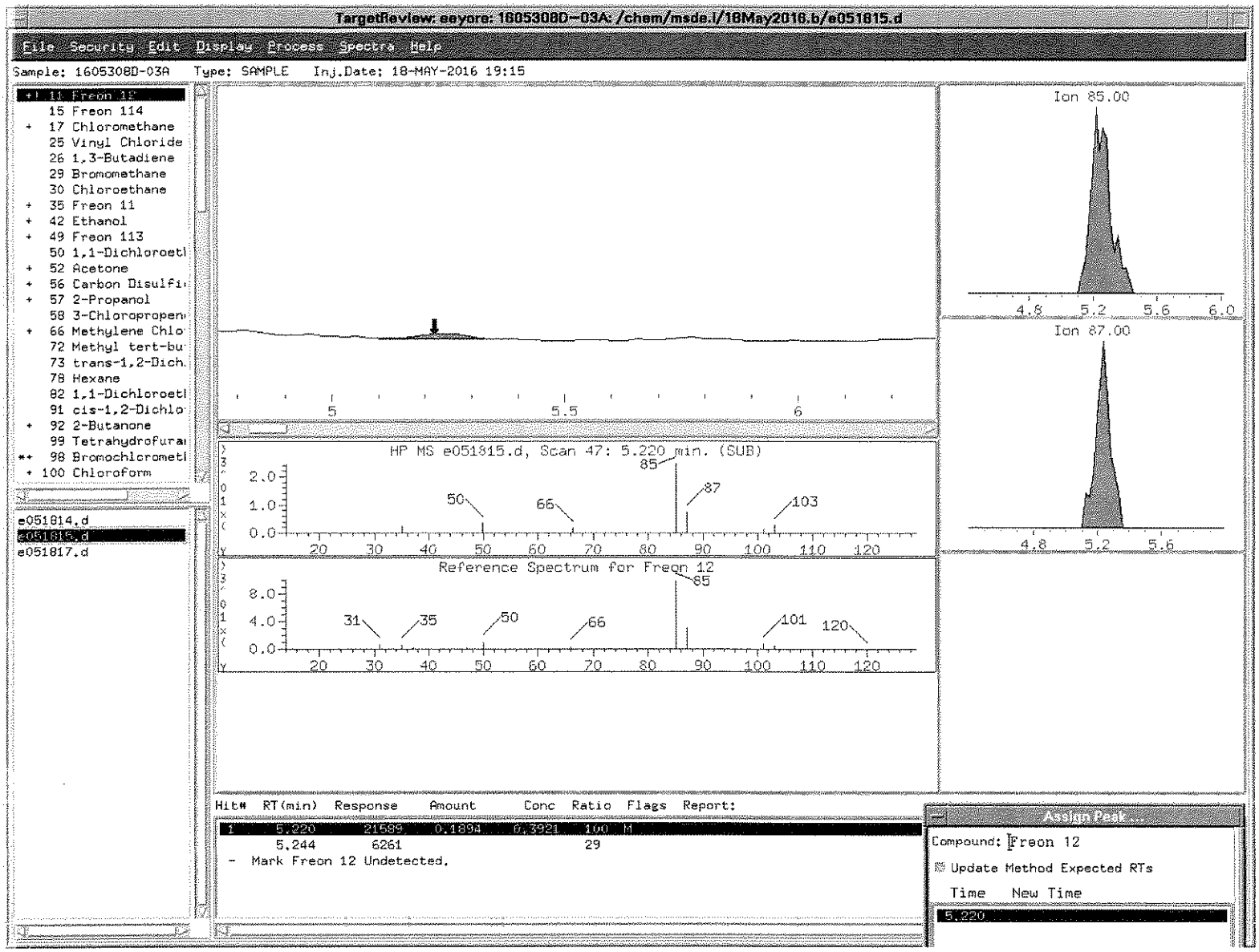
Assign Peak...

Compound: Freon 12

Update Method Expected RTs

Time	New Time
5.220	

Before



After

Mz 8/19/16

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

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Client Sample ID: CCV

Lab ID#: 1605308D-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051802**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 08:43 AM**

Compound	%Recovery
Freon 12	84
Freon 114	90
Chloromethane	82
Vinyl Chloride	86
1,3-Butadiene	83
Bromomethane	94
Chloroethane	98
Freon 11	86
Ethanol	92
Freon 113	80
1,1-Dichloroethene	87
Acetone	79
2-Propanol	85
Carbon Disulfide	86
3-Chloropropene	115
Methylene Chloride	81
Methyl tert-butyl ether	82
trans-1,2-Dichloroethene	84
Hexane	85
1,1-Dichloroethane	82
2-Butanone (Methyl Ethyl Ketone)	89
cis-1,2-Dichloroethene	86
Tetrahydrofuran	66 Q
Chloroform	82
1,1,1-Trichloroethane	82
Cyclohexane	88
Carbon Tetrachloride	72
2,2,4-Trimethylpentane	90
Benzene	81
1,2-Dichloroethane	76
Heptane	82
Trichloroethene	87
1,2-Dichloropropane	82
1,4-Dioxane	81
Bromodichloromethane	82
cis-1,3-Dichloropropene	82
4-Methyl-2-pentanone	80
Toluene	84
trans-1,3-Dichloropropene	86
1,1,2-Trichloroethane	87
Tetrachloroethene	96
2-Hexanone	86

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Client Sample ID: CCV

Lab ID#: 1605308D-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051802**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 08:43 AM**

Compound	**%Recovery**
Dibromochloromethane	91
1,2-Dibromoethane (EDB)	91
Chlorobenzene	91
Ethyl Benzene	87
m,p-Xylene	94
o-Xylene	97
Styrene	92
Bromoform	95
Cumene	85
1,1,2,2-Tetrachloroethane	74
Propylbenzene	79
4-Ethyltoluene	83
1,3,5-Trimethylbenzene	73
1,2,4-Trimethylbenzene	68 Q
1,3-Dichlorobenzene	75
1,4-Dichlorobenzene	78
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	82
1,2,4-Trichlorobenzene	103
Hexachlorobutadiene	115
Naphthalene	75

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 18-MAY-2016 08:43
Lab File ID: e051802.d Init. Cal. Date(s): 17-MAR-2016 09-MAY-2016
Analysis Type: AIR Init. Cal. Times: 14:00 15:22
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/18May2016.b/e16l0317d.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
9 Propylene	0.64936	0.57768	0.010	11.03776	40.00000	Averaged
11 Freon 12	4.20541	3.54896	0.010	15.60973	30.00000	Averaged
15 Freon 114	3.07783	2.77531	0.010	9.82890	30.00000	Averaged
17 Chloromethane	0.79793	0.65653	0.010	17.72019	30.00000	Averaged
23 Butane	0.20668	0.18672	0.010	9.65792	40.00000	Averaged
25 Vinyl Chloride	1.12258	0.96000	0.010	14.48256	30.00000	Averaged
26 1,3-Butadiene	0.75503	0.63028	0.010	16.52313	30.00000	Averaged
29 Bromomethane	1.22495	1.15431	0.010	5.76685	30.00000	Averaged
30 Chloroethane	0.53036	0.51878	0.010	2.18197	30.00000	Averaged
31 Isopentane	0.76884	0.72022	0.010	6.32306	40.00000	Averaged
35 Freon 11	4.52830	3.88985	0.010	14.09921	30.00000	Averaged
42 Ethanol	0.32813	0.30053	0.010	8.41046	30.00000	Averaged
49 Freon 113	3.39349	2.72604	0.010	19.66849	30.00000	Averaged
50 1,1-Dichloroethene	0.94631	0.82370	0.010	12.95691	30.00000	Averaged
52 Acetone	0.55335	0.43541	0.010	21.31432	30.00000	Averaged
56 Carbon Disulfide	4.21745	3.62987	0.010	13.93201	30.00000	Averaged
57 2-Propanol	1.69275	1.44096	0.010	14.87479	30.00000	Averaged
58 3-Chloropropene	0.63044	0.72782	0.010	-15.44576	30.00000	Averaged
66 Methylene Chloride	1.32596	1.07217	0.010	19.13977	30.00000	Averaged
71 tert-Butyl alcohol	3.09672	2.06755	0.010	33.23418	40.00000	Averaged
72 Methyl tert-butyl ether	4.24002	3.48314	0.010	17.85093	30.00000	Averaged
73 trans-1,2-Dichloroethene	0.96116	0.81222	0.010	15.49586	30.00000	Averaged
78 Hexane	1.65400	1.40578	0.010	15.00731	30.00000	Averaged
83 Isopropyl ether	3.01685	2.45245	0.010	18.70817	40.00000	Averaged
82 1,1-Dichloroethane	2.51547	2.05293	0.010	18.38780	30.00000	Averaged
86 Vinyl Acetate	0.39134	0.34611	0.010	11.55787	40.00000	Averaged
88 Ethyl-tert-butyl ether	3.85071	3.32102	0.010	13.75571	40.00000	Averaged
91 cis-1,2-Dichloroethene	1.05139	0.90416	0.010	14.00370	30.00000	Averaged
92 2-Butanone	0.66654	0.59115	0.010	11.31026	30.00000	Averaged
99 Tetrahydrofuran	1.22317	0.80562	0.010	34.13673	30.00000	Averaged <-
100 Chloroform	3.60995	2.94973	0.010	18.28895	30.00000	Averaged
102 Cyclohexane	1.87337	1.65792	0.010	11.50044	30.00000	Averaged
103 1,1,1-Trichloroethane	4.19916	3.44613	0.010	17.93291	30.00000	Averaged
106 Carbon Tetrachloride	4.11244	2.94451	0.010	28.39987	30.00000	Averaged
113 2,2,4-Trimethylpentane	2.09445	1.89183	0.010	9.67417	30.00000	Averaged
116 Benzene	1.19817	0.97640	0.010	18.50934	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 18-MAY-2016 08:43
Lab File ID: e051802.d Init. Cal. Date(s): 17-MAR-2016 09-MAY-2016
Analysis Type: AIR Init. Cal. Times: 14:00 15:22
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/18May2016.b/e16l0317d.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 117 1,2-Dichloroethane-d4	1.43539	1.25332	0.010	12.68458	30.00000	Averaged	
119 tert-Amyl methyl ether	0.30765	0.24413	0.010	20.64584	40.00000	Averaged	
120 1,2-Dichloroethane	0.62451	0.47344	0.010	24.18991	30.00000	Averaged	
121 Heptane	0.28401	0.23345	0.010	17.80267	30.00000	Averaged	
125 Trichloroethene	0.62148	0.54330	0.010	12.57957	30.00000	Averaged	
127 Methylcyclohexane	0.66709	0.57346	0.010	14.03469	40.00000	Averaged	
132 1,2-Dichloropropane	0.38578	0.31550	0.010	18.21837	30.00000	Averaged	
136 1,4-Dioxane	0.28892	0.23409	0.010	18.97919	30.00000	Averaged	
138 Bromodichloromethane	0.99432	0.81336	0.010	18.19934	30.00000	Averaged	
144 cis-1,3-Dichloropropene	0.74095	0.60650	0.010	18.14541	30.00000	Averaged	
145 4-Methyl-2-pentanone	0.61831	0.49775	0.010	19.49703	30.00000	Averaged	
$ 146 Toluene-d8	0.98198	0.95456	0.010	2.79216	30.00000	Averaged	
147 Toluene	1.42718	1.19901	0.010	15.98796	30.00000	Averaged	
150 trans-1,3-Dichloropropene	0.77418	0.66595	0.010	13.98055	30.00000	Averaged	
155 1,1,2-Trichloroethane	0.60267	0.52231	0.010	13.33337	30.00000	Averaged	
156 Tetrachloroethene	0.92863	0.88838	0.010	4.33533	30.00000	Averaged	
158 2-Hexanone	0.38784	0.33406	0.010	13.86721	30.00000	Averaged	
160 Dibromochloromethane	1.22343	1.11025	0.010	9.25110	30.00000	Averaged	
161 1,2-Dibromoethane (EDB)	0.92484	0.83928	0.010	9.25214	30.00000	Averaged	
165 Chlorobenzene	1.35279	1.23226	0.010	8.90990	30.00000	Averaged	
167 Ethyl Benzene	0.65884	0.57318	0.010	13.00165	30.00000	Averaged	
169 m,p-Xylene	0.76536	0.71922	0.010	6.02904	30.00000	Averaged	
171 o-Xylene	0.70201	0.68115	0.010	2.97229	30.00000	Averaged	
172 Styrene	1.18792	1.09661	0.010	7.68719	30.00000	Averaged	
174 Bromoform	1.21214	1.15197	0.010	4.96340	30.00000	Averaged	
175 Cumene	2.38682	2.02716	0.010	15.06859	30.00000	Averaged	
$ 177 4-Bromofluorobenzene	0.68607	0.69007	0.010	-0.58205	30.00000	Averaged	
181 1,1,2,2-Tetrachloroethane	1.11157	0.82112	0.010	26.12990	30.00000	Averaged	
182 Propylbenzene	2.51395	1.98521	0.010	21.03196	30.00000	Averaged	
188 4-Ethyltoluene	2.13075	1.77859	0.010	16.52763	30.00000	Averaged	
190 1,3,5-Trimethylbenzene	1.65469	1.21258	0.010	26.71844	30.00000	Averaged	
196 1,2,4-Trimethylbenzene	1.43361	0.98319	0.010	31.41859	30.00000	Averaged	<-
208 1,3-Dichlorobenzene	1.35377	1.01825	0.010	24.78453	30.00000	Averaged	
209 1,4-Dichlorobenzene	1.26953	0.98934	0.010	22.07011	30.00000	Averaged	
212 alpha-Chlorotoluene	1.59742	1.27154	0.010	20.40030	30.00000	Averaged	

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 18-MAY-2016 08:43
Lab File ID: e051802.d Init. Cal. Date(s): 17-MAR-2016 09-MAY-2016
Analysis Type: AIR Init. Cal. Times: 14:00 15:22
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/18May2016.b/e16l0317d.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	1.16130	0.94825	0.010	18.34567	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.52658	0.54275	0.010	-3.07088	30.00000	Averaged
227 Hexachlorobutadiene	0.71599	0.82523	0.010	-15.25844	30.00000	Averaged
228 Naphthalene	0.76893	0.57635	0.010	25.04496	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051802.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 18-MAY-2016 08:43
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2789-51
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.762	4.762 (0.309)	41	89767	5.00000	4.448	80.00- 120.00	100.00
4.738	4.738 (0.308)	42	32440			38.73- 98.73	36.14
4.762	4.762 (0.309)	39	72742			55.81- 115.81	81.03
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	551480	5.00000	4.220	80.00- 120.00	100.00
5.196	5.196 (0.338)	87	180324			2.00- 62.00	32.70
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	431261	5.00000	4.508	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	137755			1.31- 61.31	31.94
6.594	6.594 (0.428)	85	501737			93.88- 153.88	116.34
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	102020	5.00000	4.114	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	35140			5.50- 65.50	34.44
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	29015	5.00000	4.517	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)							
7.640	7.640 (0.496)	43	172229			588.57- 648.57	593.59
25 Vinyl Chloride					CAS #: 75-01-4		
7.779	7.779 (0.505)	62	149177	5.00000	4.276	80.00- 120.00	100.00
7.779	7.779 (0.505)	64	50728			3.14- 63.14	34.01
26 1,3-Butadiene					CAS #: 106-99-0		
8.005	8.005 (0.520)	54	97940	5.00000	4.174	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	92505			65.21- 125.21	94.45
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	179371	5.00000	4.712	80.00- 120.00	100.00
9.491	9.491 (0.617)	96	168600			64.16- 124.16	94.00
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	80615	5.00000	4.891	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	16948			0.00- 54.91	21.02
9.986	9.986 (0.649)	66	24942			3.62- 63.62	30.94
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	111917	5.00000	4.684	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	128620			82.69- 142.69	114.92
10.119	10.119 (0.657)	42	105096			68.65- 128.65	93.91
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	604451	5.00000	4.295	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	386681			37.17- 97.17	63.97
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	46700	5.00000	4.579	80.00- 120.00	100.00
11.680	11.680 (0.759)	46	18379			6.61- 66.61	39.36
11.661	11.661 (0.758)	43	11604			0.00- 54.66	24.85
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	423605	5.00000	4.016	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	274841			33.64- 93.64	64.88
12.080	12.080 (0.785)	101	453841			80.40- 140.40	107.14
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.099	12.099 (0.786)	98	127996	5.00000	4.352	80.00- 120.00	100.00
12.080	12.080 (0.785)	61	273468			204.89- 264.89	213.65
12.099	12.099 (0.786)	96	191447			127.69- 187.69	149.57
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	67659	5.00000	3.934	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    221962                   321.47- 381.47   328.06
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.442  12.442 (0.808)    76    564053 5.00000    4.303  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.709  12.709 (0.826)    45    223913 5.00000    4.256  80.00- 120.00   100.00
 12.709  12.709 (0.826)    43     51568                    0.00-  54.09    23.03
 12.709  12.709 (0.826)    59      9892                    0.00-  34.43     4.42
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.880  12.880 (0.837)    76    113097 5.00000    5.772  80.00- 120.00   100.00
 12.880  12.880 (0.837)    41    201900                   163.76- 223.76   178.52
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.149  13.149 (0.854)    84    166607 5.00000    4.043  80.00- 120.00   100.00
 13.149  13.149 (0.854)    49    147663                   63.99- 123.99    88.63
 13.149  13.149 (0.854)    51     46804                    0.29-  60.29    28.09
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.368  13.368 (0.869)    59    321281 5.00000    3.338  80.00- 120.00   100.00
 13.368  13.368 (0.869)    41     62660                    0.00-  51.66    19.50
 13.368  13.368 (0.869)    57     37789                    0.00-  43.50    11.76
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.478  13.478 (0.876)    73    541252 5.00000    4.107  80.00- 120.00   100.00
 13.478  13.478 (0.876)    57     99049                    0.00-  48.26    18.30
 13.478  13.478 (0.876)    41     88242                    0.00-  45.58    16.30
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98    126213 5.00000    4.225  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    231680                   155.28- 215.28   183.56
 13.533  13.533 (0.879)    96    204949                   126.18- 186.18   162.38
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    218447 5.00000    4.250  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    119795                   21.48-  81.48    54.84
 13.835  13.835 (0.899)    86     49139                    0.00-  51.51    22.49
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.192  14.192 (0.922)    45    381091 5.00000    4.064  80.00- 120.00   100.00
 14.192  14.192 (0.922)    87    174591                    9.88-  69.88    45.81
 14.165  14.165 (0.920)    59     54389                    0.00-  42.70    14.27
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    319009 5.00000    4.081  80.00- 120.00   100.00
```

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

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    100277                     1.78-  61.78    31.43
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86     53782 5.00000    4.422  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42     34518                    44.70- 104.70    64.18
 14.247  14.247 (0.926)    43    372703                   757.33- 817.33   692.99
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59    516060 5.00000    4.312  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87    252470                    19.74-  79.74    48.92
 14.666  14.666 (0.953)    41     80148                     0.00-  46.34    15.53
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    140499 5.00000    4.300  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61    232024                   145.90- 205.90   165.14
 15.047  15.047 (0.978)    96    224852                   125.53- 185.53   160.04
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     91860 5.00000    4.434  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    251186                   262.26- 322.26   273.44
 15.047  15.047 (0.978)    57     23463                     0.00-  55.71    25.54
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42    125187 5.00000    3.293  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71     75579                    26.85-  86.85    60.37
 15.360  15.360 (0.998)    72     86941                    32.22-  92.22    69.45
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    155392 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    118463                    52.25- 112.25    76.23
 15.391  15.391 (1.000)    49    118382                    89.81- 149.81    76.18
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83    458364 5.00000    4.086  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    297590                    33.97-  93.97    64.92
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84    257628 5.00000    4.425  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    222116                    58.69- 118.69    86.22
 15.669  15.669 (1.018)    41    112966                    18.98-  78.98    43.85
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97    535501 5.00000    4.103  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    334856                    34.21-  94.21    62.53
-------------------------------------------------------------------------------
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.853  15.853 (1.030)   119    457554 5.00000    3.580  80.00- 120.00   100.00
 15.853  15.853 (1.030)   117    484569                    74.09- 134.09   105.90
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56    293975 5.00000    4.516  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    985684                   306.64- 366.64   335.30
 16.111  16.111 (1.047)    41    275363                    64.14- 124.14    93.67
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78    589623 5.00000    4.074  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    134455                     0.00-  53.97    22.80
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    194756 5.00000    4.366  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    100767                    21.16-  81.16    51.74
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.207  16.207 (0.968)    87    147424 5.00000    3.968  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73    560445                   338.86- 398.86   380.16
 16.207  16.207 (0.968)    55    112146                    44.52- 104.52    76.07
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62    285897 5.00000    3.790  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64     92572                     1.03-  61.03    32.38
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    140974 5.00000    4.110  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     78671                    28.67-  88.67    55.81
 16.352  16.352 (0.977)    43    221360                   128.92- 188.92   157.02
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    603874 5.00000           80.00- 120.00   100.00
 16.713  16.713 (1.000)    88     85756                     0.00-  45.20    14.20
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.122  17.122 (1.023)   130    328086 5.00000    4.371  80.00- 120.00   100.00
 17.122  17.122 (1.023)    95    293647                    63.99- 123.99    89.50
 17.122  17.122 (1.023)    97    186117                    29.21-  89.21    56.73
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.339  17.339 (1.036)    83    346299 5.00000    4.298  80.00- 120.00   100.00
 17.339  17.339 (1.036)    55    220677                    31.29-  91.29    63.72
 17.339  17.339 (1.036)    56     65472                     0.00-  48.78    18.91
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    190522 5.00000    4.089  80.00- 120.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.556  17.556 (1.049)    62    124139                    34.19-  94.19    65.16
 17.556  17.556 (1.049)    41    103043                    27.38-  87.38    54.08
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.677  17.677 (1.056)    88    141358 5.00000    4.051  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58     78793                    25.03-  85.03    55.74
 17.677  17.677 (1.056)    57     24861                     0.00-  50.67    17.59
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83    491168 5.00000    4.090  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    324306                    35.15-  95.15    66.03
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    366252 5.00000    4.093  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    117821                     0.45-  60.45    32.17
 18.805  18.805 (1.124)    39    147904                    13.69-  73.69    40.38
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43    300581 5.00000    4.025  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    133576                    15.64-  75.64    44.44
 18.984  18.984 (1.134)    85     81994                     0.00-  56.71    27.28
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    576435 5.00000    4.860  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     56223                     0.00-  40.11     9.75
 19.275  19.275 (1.152)   100    383081                    37.58-  97.58    66.46
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.410  19.410 (1.160)    91    724048 5.00000    4.201  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92    431031                    28.92-  88.92    59.53
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.902)    75    348232 5.00000    4.301  80.00- 120.00   100.00
 19.998  19.998 (0.902)    77    115066                     0.55-  60.55    33.04
 19.998  19.998 (0.902)    39    124389                     8.25-  68.25    35.72
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    273123 5.00000    4.333  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    162833                    32.91-  92.91    59.62
 20.438  20.438 (0.922)    83    216018                    47.93- 107.93    79.09
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.602  20.602 (0.929)   166    464542 5.00000    4.783  80.00- 120.00   100.00
 20.602  20.602 (0.929)   129    320317                    42.31- 102.31    68.95
 20.602  20.602 (0.929)   131    313779                    40.11- 100.11    67.55
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.936)	58	174684	5.00000	4.307	80.00- 120.00	100.00
20.767	20.767 (0.936)	43	288134			140.44- 200.44	164.95
20.795	20.795 (0.938)	100	53899			0.00- 59.62	30.86
160 Dibromochloromethane					CAS #: 124-48-1		
21.207	21.207 (0.956)	129	580565	5.00000	4.537	80.00- 120.00	100.00
21.207	21.207 (0.956)	127	443963			46.82- 106.82	76.47
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.481	21.481 (0.969)	107	438867	5.00000	4.537	80.00- 120.00	100.00
21.481	21.481 (0.969)	109	424417			65.45- 125.45	96.71
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	522912	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	262258			20.64- 80.64	50.15
165 Chlorobenzene					CAS #: 108-90-7		
22.218	22.218 (1.002)	112	644361	5.00000	4.554	80.00- 120.00	100.00
22.218	22.218 (1.002)	114	203732			2.42- 62.42	31.62
22.218	22.218 (1.002)	77	321114			23.54- 83.54	49.83
167 Ethyl Benzene					CAS #: 100-41-4		
22.301	22.301 (1.006)	106	299724	5.00000	4.350	80.00- 120.00	100.00
22.301	22.301 (1.006)	91	959184			282.51- 342.51	320.02
169 m,p-Xylene					CAS #: 108-38-3		
22.467	22.467 (1.013)	106	376087	5.00000	4.698	80.00- 120.00	100.00
22.467	22.467 (1.013)	91	726243			166.46- 226.46	193.11
171 o-Xylene					CAS #: 95-47-6		
23.089	23.089 (1.041)	106	356180	5.00000	4.851	80.00- 120.00	100.00
23.089	23.089 (1.041)	91	692440			184.01- 244.01	194.41
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.042)	104	573428	5.00000	4.616	80.00- 120.00	100.00
23.110	23.110 (1.042)	78	279968			20.27- 80.27	48.82
174 Bromoform					CAS #: 75-25-2		
23.452	23.452 (1.057)	173	602381	5.00000	4.752	80.00- 120.00	100.00
23.452	23.452 (1.057)	171	313505			20.88- 80.88	52.04
175 Cumene					CAS #: 98-82-8		
23.564	23.564 (1.063)	105	1060028	5.00000	4.246	80.00- 120.00	100.00
23.564	23.564 (1.063)	120	299154			0.00- 57.47	28.22

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	360844	5.00000	5.029	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	358804			77.42- 137.42	99.43
23.856	23.856 (1.076)	176	337230			65.38- 125.38	93.46
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	429371	5.00000	3.694	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	285382			35.73- 95.73	66.47
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	1038092	5.00000	3.948	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	274514			0.00- 55.24	26.44
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	930044	5.00000	4.174	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	270829			1.08- 61.08	29.12
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	634074	5.00000	3.664	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	348687			18.44- 78.44	54.99
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	514123	5.00000	3.429	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	252505			16.20- 76.20	49.11
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	532454	5.00000	3.761	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	333845			35.51- 95.51	62.70
25.156	25.156 (1.134)	111	200764			9.35- 69.35	37.71
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.268	25.268 (1.139)	146	517340	5.00000	3.896	80.00- 120.00	100.00
25.268	25.268 (1.139)	148	339876			32.61- 92.61	65.70
25.268	25.268 (1.139)	111	181989			6.90- 66.90	35.18
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	664903	5.00000	3.980	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	151626			0.00- 51.82	22.80
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.694	25.694 (1.159)	146	495851	5.00000	4.083	80.00- 120.00	100.00
25.694	25.694 (1.159)	148	313359			33.69- 93.69	63.20
25.694	25.694 (1.159)	111	185817			8.96- 68.96	37.47
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	283811	5.00000	5.154	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.398	27.398 (1.235)	182	264030			66.05- 126.05	93.03
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	431525	5.00000	5.763	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	273780			33.78- 93.78	63.44
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	30138	0.50000	0.3748	80.00- 120.00	100.00(a)
27.734	27.734 (1.251)	127	5568			0.00- 46.39	18.48

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051802.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 18-MAY-2016
Calibration Time: 08:43
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	155392	0.00
123 1,4-Difluorobenze	603874	362324	845424	603874	0.00
163 Chlorobenzene-d5	522912	313747	732077	522912	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/18May2016.b/e051802.d

Date : 18-MAY-2016 08:43

Client ID: CCV

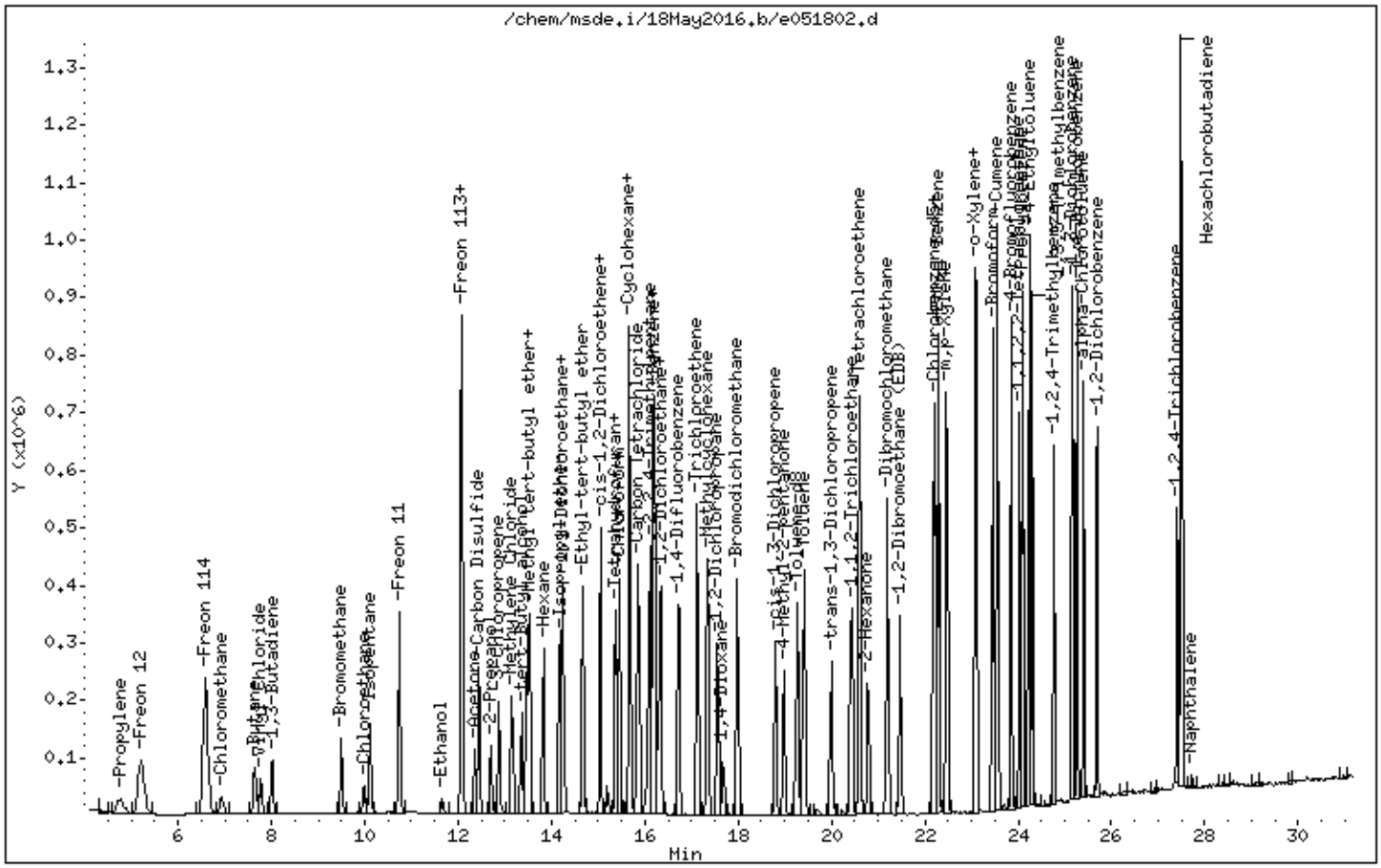
Instrument: msde.i

Sample Info: 25mL# 2789-51

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCS

Lab ID#: 1605308D-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051803**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 09:27 AM**	

Compound	%Recovery	Method Limits
Freon 12	83	70-130
Freon 114	94	70-130
Chloromethane	83	70-130
Vinyl Chloride	86	70-130
1,3-Butadiene	83	70-130
Bromomethane	95	70-130
Chloroethane	104	70-130
Freon 11	86	70-130
Ethanol	88	70-130
Freon 113	81	70-130
1,1-Dichloroethene	85	70-130
Acetone	79	70-130
2-Propanol	83	70-130
Carbon Disulfide	74	70-130
3-Chloropropene	105	70-130
Methylene Chloride	80	70-130
Methyl tert-butyl ether	83	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	84	70-130
1,1-Dichloroethane	82	70-130
2-Butanone (Methyl Ethyl Ketone)	80	70-130
cis-1,2-Dichloroethene	85	70-130
Tetrahydrofuran	66 Q	70-130
Chloroform	80	70-130
1,1,1-Trichloroethane	80	70-130
Cyclohexane	88	70-130
Carbon Tetrachloride	81	70-130
2,2,4-Trimethylpentane	89	70-130
Benzene	86	70-130
1,2-Dichloroethane	78	70-130
Heptane	89	70-130
Trichloroethene	94	70-130
1,2-Dichloropropane	87	70-130
1,4-Dioxane	85	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	81	70-130
4-Methyl-2-pentanone	84	70-130
Toluene	90	70-130
trans-1,3-Dichloropropene	88	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	96	70-130
2-Hexanone	85	70-130

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Client Sample ID: LCS

Lab ID#: 1605308D-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051803**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 09:27 AM**	

Compound	**%Recovery**	**Method Limits**
Dibromochloromethane	93	70-130
1,2-Dibromoethane (EDB)	94	70-130
Chlorobenzene	92	70-130
Ethyl Benzene	92	70-130
m,p-Xylene	97	70-130
o-Xylene	98	70-130
Styrene	95	70-130
Bromoform	99	70-130
Cumene	89	70-130
1,1,2,2-Tetrachloroethane	74	70-130
Propylbenzene	82	70-130
4-Ethyltoluene	87	70-130
1,3,5-Trimethylbenzene	75	70-130
1,2,4-Trimethylbenzene	74	70-130
1,3-Dichlorobenzene	78	70-130
1,4-Dichlorobenzene	78	70-130
alpha-Chlorotoluene	67 Q	70-130
1,2-Dichlorobenzene	84	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	112	70-130
Naphthalene	74	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

Report Date: 18-May-2016 10:06

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 18May2016
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: AT09Bromo.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (25ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	5.000	3.981	79.61	60-140
11 Freon 12	5.000	4.169	83.38	70-130
15 Freon 114	5.000	4.682	93.64	70-130
17 Chloromethane	5.000	4.158	83.16	70-130
23 Butane	5.000	4.374	87.48	60-140
25 Vinyl Chloride	5.000	4.282	85.64	70-130
26 1,3-Butadiene	5.000	4.162	83.24	70-130
29 Bromomethane	5.000	4.766	95.32	70-130
30 Chloroethane	5.000	5.200	104.01	70-130
31 Isopentane	5.000	4.462	89.25	60-140
35 Freon 11	5.000	4.322	86.44	70-130
42 Ethanol	5.000	4.423	88.45	70-130
49 Freon 113	5.000	4.030	80.61	70-130
50 1,1-Dichloroethene	5.000	4.238	84.76	70-130
52 Acetone	5.000	3.939	78.79	70-130
56 Carbon Disulfide	5.000	3.714	74.27	70-130
57 2-Propanol	5.000	4.148	82.97	70-130
58 3-Chloropropene	5.000	5.268	105.36	70-130
66 Methylene Chloride	5.000	4.028	80.57	70-130
72 Methyl tert-butyl	5.000	4.164	83.28	70-130
73 trans-1,2-Dichloro	4.250	3.749	88.21	70-130
78 Hexane	5.000	4.180	83.59	70-130
82 1,1-Dichloroethane	5.000	4.091	81.83	70-130
86 Vinyl Acetate	5.000	4.256	85.13	60-140
91 cis-1,2-Dichloroet	5.650	4.823	85.37	70-130
92 2-Butanone	5.000	4.013	80.25	70-130
99 Tetrahydrofuran	5.000	3.279	65.58*	70-130
100 Chloroform	5.000	3.999	79.98	70-130
103 1,1,1-Trichloroeth	5.000	3.991	79.82	70-130
106 Carbon Tetrachlori	5.000	4.041	80.82	70-130
102 Cyclohexane	5.000	4.400	88.01	70-130
113 2,2,4-Trimethylpen	5.000	4.446	88.92	70-130
116 Benzene	5.000	4.289	85.79	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	5.000	3.929	78.59	70-130
121 Heptane	5.000	4.448	88.97	70-130
125 Trichloroethene	5.000	4.714	94.28	70-130
127 Methylcyclohexane	5.000	4.684	93.69	60-140
132 1,2-Dichloropropan	5.000	4.359	87.18	70-130
136 1,4-Dioxane	5.000	4.239	84.78	70-130
138 Bromodichlorometha	5.000	4.404	88.07	70-130
144 cis-1,3-Dichloropr	5.000	4.038	80.77	70-130
145 4-Methyl-2-pentano	5.000	4.205	84.11	70-130
147 Toluene	5.000	4.492	89.84	70-130
150 trans-1,3-Dichloro	5.000	4.404	88.08	70-130
155 1,1,2-Trichloroeth	5.000	4.337	86.73	70-130
156 Tetrachloroethene	5.000	4.775	95.51	70-130
158 2-Hexanone	5.000	4.264	85.28	70-130
160 Dibromochlorometha	5.000	4.640	92.79	70-130
161 1,2-Dibromoethane	5.000	4.726	94.53	70-130
165 Chlorobenzene	5.000	4.585	91.70	70-130
167 Ethyl Benzene	5.000	4.614	92.28	70-130
169 m,p-Xylene	5.000	4.857	97.13	70-130
171 o-Xylene	5.000	4.911	98.21	70-130
172 Styrene	5.000	4.731	94.63	70-130
174 Bromoform	6.500	6.466	99.47	70-130
175 Cumene	5.000	4.459	89.18	70-130
181 1,1,2,2-Tetrachlor	5.000	3.715	74.30	70-130
182 Propylbenzene	5.000	4.092	81.83	70-130
188 4-Ethyltoluene	5.000	4.330	86.60	70-130
190 1,3,5-Trimethylben	5.000	3.752	75.05	70-130
196 1,2,4-Trimethylben	5.000	3.712	74.25	70-130
208 1,3-Dichlorobenzen	5.000	3.888	77.76	70-130
209 1,4-Dichlorobenzen	5.000	3.912	78.25	70-130
212 alpha-Chlorotoluen	5.000	3.337	66.75*	70-130
214 1,2-Dichlorobenzen	5.000	4.214	84.27	70-130
226 1,2,4-Trichloroben	5.000	5.286	105.73	70-130
227 Hexachlorobutadien	5.000	5.594	111.88	70-130
228 Naphthalene	0.5000	0.3694	73.87	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.215	84.30	70-130
$ 146 Toluene-d8	5.000	4.934	98.69	70-130
$ 177 4-Bromofluorobenze	5.000	4.905	98.10	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051803.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 18-MAY-2016 09:27
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2789-8A
Misc Info : 5.0ppbv (25ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.763	4.762 (0.309)	41	77161	3.98075	3.981	80.00- 120.00	100.00
4.763	4.738 (0.309)	42	50292			38.73- 98.73	65.18
4.738	4.762 (0.308)	39	63696			55.81- 115.81	82.55
11 Freon 12					CAS #: 75-71-8		
5.196	5.220 (0.338)	85	523363	4.16910	4.169	80.00- 120.00	100.00
5.221	5.196 (0.339)	87	164773			2.00- 62.00	31.48
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	430170	4.68214	4.682	80.00- 120.00	100.00
6.619	6.594 (0.430)	137	140503			1.31- 61.31	32.66
6.594	6.594 (0.428)	85	465928			93.88- 153.88	108.31
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	99039	4.15807	4.158	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	30891			5.50- 65.50	31.19
23 Butane					CAS #: 106-97-8		
7.641	7.658 (0.496)	58	26985	4.37392	4.374	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.640 (0.498)	43	163755			588.57- 648.57	606.83
25 Vinyl Chloride					CAS #: 75-01-4		
7.779	7.779 (0.505)	62	143493	4.28215	4.282	80.00- 120.00	100.00
7.779	7.779 (0.505)	64	49102			3.14- 63.14	34.22
26 1,3-Butadiene					CAS #: 106-99-0		
8.023	8.005 (0.521)	54	93805	4.16208	4.162	80.00- 120.00	100.00
8.023	8.022 (0.521)	39	85329			65.21- 125.21	90.96
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	174266	4.76587	4.766	80.00- 120.00	100.00
9.510	9.491 (0.618)	96	162903			64.16- 124.16	93.48
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	82331	5.20050	5.200	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	18151			0.00- 54.91	22.05
9.986	9.986 (0.649)	66	25663			3.62- 63.62	31.17
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	102411	4.46235	4.462	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	124856			82.69- 142.69	121.92
10.119	10.119 (0.657)	42	103028			68.65- 128.65	100.60
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	584238	4.32217	4.322	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	384525			37.17- 97.17	65.82
42 Ethanol					CAS #: 64-17-5		
11.662	11.661 (0.758)	45	43318	4.42265	4.423	80.00- 120.00	100.00
11.662	11.680 (0.758)	46	16048			6.61- 66.61	37.05
11.662	11.661 (0.758)	43	10854			0.00- 54.66	25.06
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	408271	4.03042	4.030	80.00- 120.00	100.00
12.081	12.080 (0.785)	153	259115			33.64- 93.64	63.47
12.081	12.080 (0.785)	101	423627			80.40- 140.40	103.76
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.099 (0.786)	98	119721	4.23824	4.238	80.00- 120.00	100.00
12.100	12.080 (0.786)	61	251950			204.89- 264.89	210.45
12.100	12.099 (0.786)	96	189301			127.69- 187.69	158.12
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	65069	3.93933	3.939	80.00- 120.00	100.00

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

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    210329                   321.47- 381.47   323.24
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.443  12.442 (0.808)    76    467509 3.71354    3.714  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.709  12.709 (0.826)    45    209618 4.14845    4.148  80.00- 120.00   100.00
 12.709  12.709 (0.826)    43     51938                    0.00-  54.09    24.78
 12.709  12.709 (0.826)    59     10573                    0.00-  34.43     5.04
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.881  12.880 (0.837)    76     99135 5.26783    5.268  80.00- 120.00   100.00
 12.881  12.880 (0.837)    41    182201                   163.76- 223.76   183.79
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.149  13.149 (0.854)    84    159440 4.02826    4.028  80.00- 120.00   100.00
 13.149  13.149 (0.854)    49    140352                   63.99- 123.99    88.03
 13.149  13.149 (0.854)    51     45169                    0.29-  60.29    28.33
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.479  13.478 (0.876)    73    527043 4.16415    4.164  80.00- 120.00   100.00
 13.479  13.478 (0.876)    57     86723                    0.00-  48.26    16.45
 13.479  13.478 (0.876)    41     84353                    0.00-  45.58    16.00
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98    107564 3.74902    3.749  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    195831                   155.28- 215.28   182.06
 13.533  13.533 (0.879)    96    174398                   126.18- 186.18   162.13
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    206363 4.17969    4.180  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    111013                   21.48-  81.48    53.80
 13.835  13.835 (0.899)    86     45080                    0.00-  51.51    21.85
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    307217 4.09142    4.091  80.00- 120.00   100.00
 14.247  14.247 (0.926)    65    103173                    1.78-  61.78    33.58
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                   CAS #: 108-05-4
 14.247  14.247 (0.926)    86     49720 4.25629    4.256  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42     32870                   44.70- 104.70    66.11
 14.247  14.247 (0.926)    43    327425                   757.33- 817.33   658.54
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                          CAS #: 156-59-2
 15.047  15.047 (0.978)    98    151374 4.82320    4.823  80.00- 120.00   100.00
```

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

   91 cis-1,2-Dichloroethene (continued)
 15.047  15.047 (0.978)    61    245191                  145.90- 205.90   161.98
 15.047  15.047 (0.978)    96    222981                  125.53- 185.53   147.30
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     79837 4.01263    4.013  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    235715                  262.26- 322.26   295.24
 15.047  15.047 (0.978)    57     21354                    0.00-  55.71    26.75
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.361  15.360 (0.998)    42    119725 3.27904    3.279  80.00- 120.00   100.00(R)
 15.361  15.360 (0.998)    71     70255                   26.85-  86.85    58.68
 15.361  15.360 (0.998)    72     75502                   32.22-  92.22    63.06
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    149252 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    111715                   52.25- 112.25    74.85
 15.391  15.391 (1.000)    49    132117                   89.81- 149.81    88.52
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83    430904 3.99878    3.999  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    290287                   33.97-  93.97    67.37
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    246068 4.40027    4.400  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    214476                   58.69- 118.69    87.16
 15.669  15.669 (1.018)    41    112059                   18.98-  78.98    45.54
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97    500268 3.99106    3.991  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    317043                   34.21-  94.21    63.37
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.853 (1.030)   119    496096 4.04123    4.041  80.00- 120.00   100.00
 15.854  15.853 (1.030)   117    504834                   74.09- 134.09   101.76
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56    277971 4.44609    4.446  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    962153                  306.64- 366.64   346.13
 16.111  16.111 (1.047)    41    252150                   64.14- 124.14    90.71
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.183  16.183 (0.967)    78    561182 4.28946    4.289  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    127610                    0.00-  53.97    22.74
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    180596 4.21489    4.215  80.00- 120.00   100.00
```

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

$ 117 1,2-Dichloroethane-d4 (continued)
 16.183  16.183 (1.051)    67     89048                    21.16-  81.16    49.31
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.303 (0.974)    62    267949 3.92948    3.929  80.00- 120.00   100.00
 16.304  16.303 (0.974)    64     93689                     1.03-  61.03    34.97
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    137948 4.44836    4.448  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     78785                    28.67-  88.67    57.11
 16.352  16.352 (0.977)    43    201813                   128.92- 188.92   146.30
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    545947 5.00000           80.00- 120.00   100.00
 16.737  16.713 (1.000)    88     78595                     0.00-  45.20    14.40
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.122 (1.023)   130    319903 4.71421    4.714  80.00- 120.00   100.00
 17.123  17.122 (1.023)    95    278193                    63.99- 123.99    86.96
 17.123  17.122 (1.023)    97    183133                    29.21-  89.21    57.25
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.340  17.339 (1.036)    83    341203 4.68436    4.684  80.00- 120.00   100.00
 17.340  17.339 (1.036)    55    200496                    31.29-  91.29    58.76
 17.340  17.339 (1.036)    56     62393                     0.00-  48.78    18.29
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    183616 4.35901    4.359  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    117912                    34.19-  94.19    64.22
 17.556  17.556 (1.049)    41     99101                    27.38-  87.38    53.97
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                   CAS #: 123-91-1
 17.701  17.677 (1.058)    88    133730 4.23908    4.239  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58     71337                    25.03-  85.03    53.34
 17.701  17.677 (1.058)    57     26213                     0.00-  50.67    19.60
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 17.990  17.990 (1.075)    83    478093 4.40357    4.404  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    308878                    35.15-  95.15    64.61
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    326725 4.03842    4.038  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    108405                     0.45-  60.45    33.18
 18.805  18.805 (1.124)    39    131314                    13.69-  73.69    40.19
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 18.984  18.984 (1.134)    43    283921 4.20547    4.205  80.00- 120.00   100.00
```

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

  145 4-Methyl-2-pentanone (continued)
 18.984  18.984 (1.134)    58    126575                   15.64-  75.64    44.58
 18.984  18.984 (1.134)    85     75265                    0.00-  56.71    26.51
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                  CAS #: 2037-26-5
 19.276  19.275 (1.152)    98    529074 4.93438    4.934  80.00- 120.00   100.00
 19.276  19.275 (1.152)    70     54665                    0.00-  40.11    10.33
 19.276  19.275 (1.152)   100    351715                   37.58-  97.58    66.48
-------------------------------------------------------------------------------
  147 Toluene                                     CAS #: 108-88-3
 19.410  19.410 (1.160)    91    700021 4.49211    4.492  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92    409722                   28.92-  88.92    58.53
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                   CAS #: 10061-02-6
 19.998  19.998 (0.902)    75    331234 4.40399    4.404  80.00- 120.00   100.00
 19.998  19.998 (0.902)    77    106276                    0.55-  60.55    32.08
 19.998  19.998 (0.902)    39    120305                    8.25-  68.25    36.32
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                       CAS #: 79-00-5
 20.438  20.438 (0.922)    97    253909 4.33666    4.337  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    152482                   32.91-  92.91    60.05
 20.438  20.438 (0.922)    83    202601                   47.93- 107.93    79.79
-------------------------------------------------------------------------------
  156 Tetrachloroethene                           CAS #: 127-18-4
 20.603  20.602 (0.929)   166    430825 4.77541    4.775  80.00- 120.00   100.00
 20.603  20.602 (0.929)   129    298041                   42.31- 102.31    69.18
 20.603  20.602 (0.929)   131    295552                   40.11- 100.11    68.60
-------------------------------------------------------------------------------
  158 2-Hexanone                                  CAS #: 591-78-6
 20.768  20.767 (0.936)    58    160670 4.26416    4.264  80.00- 120.00   100.00
 20.768  20.767 (0.936)    43    277401                  140.44- 200.44   172.65
 20.795  20.795 (0.938)   100     46860                    0.00-  59.62    29.17
-------------------------------------------------------------------------------
  160 Dibromochloromethane                        CAS #: 124-48-1
 21.207  21.207 (0.956)   129    551443 4.63953    4.640  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127    424160                   46.82- 106.82    76.92
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                     CAS #: 106-93-4
 21.482  21.481 (0.969)   107    424655 4.72631    4.726  80.00- 120.00   100.00
 21.482  21.481 (0.969)   109    399011                   65.45- 125.45    93.96
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                            CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    485753 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    239254                   20.64-  80.64    49.25
-------------------------------------------------------------------------------
  165 Chlorobenzene                               CAS #: 108-90-7
 22.219  22.218 (1.002)   112    602565 4.58489    4.585  80.00- 120.00   100.00
```

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

  165 Chlorobenzene (continued)
 22.219  22.218 (1.002)   114    197166                     2.42-  62.42    32.72
 22.219  22.218 (1.002)    77    303690                    23.54-  83.54    50.40
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.302  22.301 (1.006)   106    295324 4.61394    4.614  80.00- 120.00   100.00
 22.302  22.301 (1.006)    91    898501                  282.51- 342.51   304.24
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106    361122 4.85672    4.857  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91    701955                  166.46- 226.46   194.38
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106    334913 4.91068    4.911  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91    682786                  184.01- 244.01   203.87
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104    546030 4.73132    4.731  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    252584                    20.27-  80.27    46.26
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173    761382 6.46555    6.466  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    388387                    20.88-  80.88    51.01
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105   1033940 4.45892    4.459  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    280719                     0.00-  57.47    27.15
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    326928 4.90497    4.905  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    325174                    77.42- 137.42    99.46
 23.856  23.856 (1.076)   176    318242                    65.38- 125.38    97.34
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83    401153 3.71475    3.715  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85    268177                    35.73-  95.73    66.85
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.103  24.102 (1.087)    91    999303 4.09162    4.092  80.00- 120.00   100.00
 24.103  24.102 (1.087)   120    262021                     0.00-  55.24    26.22
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105    896306 4.32991    4.330  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120    258024                     1.08-  61.08    28.79
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105    603199 3.75231    3.752  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.304	24.304 (1.096)	120	333316			18.44- 78.44	55.26
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	517030	3.71226	3.712	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	243254			16.20- 76.20	47.05
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.156 (1.134)	146	511320	3.88777	3.888	80.00- 120.00	100.00
25.157	25.156 (1.134)	148	325850			35.51- 95.51	63.73
25.157	25.156 (1.134)	111	185158			9.35- 69.35	36.21
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.268 (1.139)	146	482537	3.91239	3.912	80.00- 120.00	100.00
25.269	25.268 (1.139)	148	317092			32.61- 92.61	65.71
25.269	25.268 (1.139)	111	180615			6.90- 66.90	37.43
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	517910	3.33727	3.337	80.00- 120.00	100.00(R)
25.403	25.403 (1.145)	126	124174			0.00- 51.82	23.98
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.695	25.694 (1.159)	146	475382	4.21360	4.214	80.00- 120.00	100.00
25.695	25.694 (1.159)	148	298880			33.69- 93.69	62.87
25.695	25.694 (1.159)	111	180823			8.96- 68.96	38.04
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	270449	5.28660	5.286	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	258111			66.05- 126.05	95.44
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	389113	5.59405	5.594	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	248043			33.78- 93.78	63.75
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	27592	0.36937	0.3694	80.00- 120.00	100.00(a)
27.712	27.734 (1.250)	127	4384			0.00- 46.39	15.89

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051803.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (25ppbv)

Calibration Date: 18-MAY-2016
Calibration Time: 08:43
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	149252	-3.95
123 1,4-Difluorobenze	603874	362324	845424	545947	-9.59
163 Chlorobenzene-d5	522912	313747	732077	485753	-7.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/18May2016.b/e051803.d

Date : 18-MAY-2016 09:27

Client ID: LCS

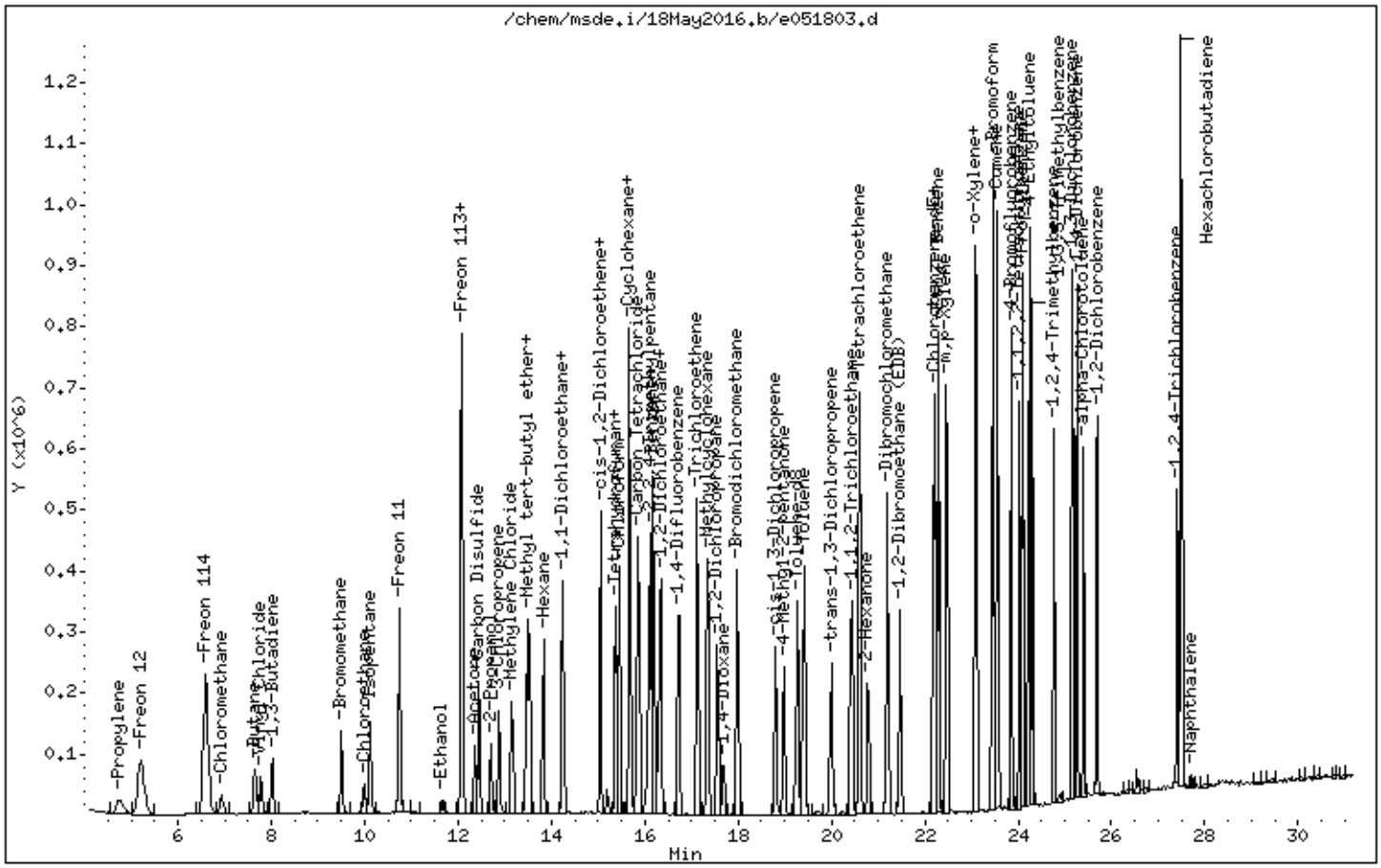
Instrument: msde.i

Sample Info: 50mL# 2789-8A

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1605308D-10AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051804**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 10:09 AM**	

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	102	70-130
Chloromethane	89	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	88	70-130
Bromomethane	104	70-130
Chloroethane	112	70-130
Freon 11	97	70-130
Ethanol	102	70-130
Freon 113	86	70-130
1,1-Dichloroethene	94	70-130
Acetone	86	70-130
2-Propanol	89	70-130
Carbon Disulfide	82	70-130
3-Chloropropene	115	70-130
Methylene Chloride	92	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	94	70-130
1,1-Dichloroethane	91	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	91	70-130
Tetrahydrofuran	72	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	86	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	84	70-130
1,2-Dichloroethane	78	70-130
Heptane	87	70-130
Trichloroethene	94	70-130
1,2-Dichloropropane	88	70-130
1,4-Dioxane	85	70-130
Bromodichloromethane	89	70-130
cis-1,3-Dichloropropene	84	70-130
4-Methyl-2-pentanone	84	70-130
Toluene	88	70-130
trans-1,3-Dichloropropene	85	70-130
1,1,2-Trichloroethane	89	70-130
Tetrachloroethene	95	70-130
2-Hexanone	83	70-130

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Client Sample ID: LCSD

Lab ID#: 1605308D-10AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e051804**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/18/16 10:09 AM**	

Compound	**%Recovery**	**Method Limits**
Dibromochloromethane	96	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	93	70-130
m,p-Xylene	97	70-130
o-Xylene	97	70-130
Styrene	94	70-130
Bromoform	98	70-130
Cumene	88	70-130
1,1,2,2-Tetrachloroethane	76	70-130
Propylbenzene	82	70-130
4-Ethyltoluene	78	70-130
1,3,5-Trimethylbenzene	82	70-130
1,2,4-Trimethylbenzene	73	70-130
1,3-Dichlorobenzene	78	70-130
1,4-Dichlorobenzene	80	70-130
alpha-Chlorotoluene	67 Q	70-130
1,2-Dichlorobenzene	82	70-130
1,2,4-Trichlorobenzene	95	70-130
Hexachlorobutadiene	108	70-130
Naphthalene	67	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

Report Date: 18-May-2016 10:48

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 18May2016
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: AT09Bromo.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (25ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	5.000	4.361	87.22	60-140
11 Freon 12	5.000	4.612	92.23	70-130
15 Freon 114	5.000	5.088	101.77	70-130
17 Chloromethane	5.000	4.466	89.31	70-130
23 Butane	5.000	4.903	98.06	60-140
25 Vinyl Chloride	5.000	4.786	95.72	70-130
26 1,3-Butadiene	5.000	4.408	88.16	70-130
29 Bromomethane	5.000	5.203	104.06	70-130
30 Chloroethane	5.000	5.581	111.63	70-130
31 Isopentane	5.000	4.876	97.52	60-140
35 Freon 11	5.000	4.831	96.63	70-130
42 Ethanol	5.000	5.096	101.93	70-130
49 Freon 113	5.000	4.326	86.52	70-130
50 1,1-Dichloroethene	5.000	4.680	93.61	70-130
52 Acetone	5.000	4.307	86.13	70-130
56 Carbon Disulfide	5.000	4.096	81.93	70-130
57 2-Propanol	5.000	4.446	88.92	70-130
58 3-Chloropropene	5.000	5.760	115.20	70-130
66 Methylene Chloride	5.000	4.612	92.25	70-130
72 Methyl tert-butyl	5.000	4.426	88.53	70-130
73 trans-1,2-Dichloro	4.250	4.091	96.25	70-130
78 Hexane	5.000	4.706	94.12	70-130
82 1,1-Dichloroethane	5.000	4.558	91.17	70-130
86 Vinyl Acetate	5.000	4.668	93.37	60-140
91 cis-1,2-Dichloroet	5.650	5.130	90.80	70-130
92 2-Butanone	5.000	4.658	93.17	70-130
99 Tetrahydrofuran	5.000	3.618	72.36	70-130
100 Chloroform	5.000	4.484	89.69	70-130
103 1,1,1-Trichloroeth	5.000	4.343	86.86	70-130
106 Carbon Tetrachlori	5.000	4.313	86.25	70-130
102 Cyclohexane	5.000	4.978	99.55	70-130
113 2,2,4-Trimethylpen	5.000	4.800	96.00	70-130
116 Benzene	5.000	4.211	84.23	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	5.000	3.927	78.54	70-130
121 Heptane	5.000	4.365	87.30	70-130
125 Trichloroethene	5.000	4.681	93.62	70-130
127 Methylcyclohexane	5.000	4.607	92.15	60-140
132 1,2-Dichloropropan	5.000	4.380	87.61	70-130
136 1,4-Dioxane	5.000	4.252	85.03	70-130
138 Bromodichlorometha	5.000	4.464	89.28	70-130
144 cis-1,3-Dichloropr	5.000	4.179	83.57	70-130
145 4-Methyl-2-pentano	5.000	4.214	84.27	70-130
147 Toluene	5.000	4.400	88.00	70-130
150 trans-1,3-Dichloro	5.000	4.250	85.00	70-130
155 1,1,2-Trichloroeth	5.000	4.444	88.88	70-130
156 Tetrachloroethene	5.000	4.734	94.67	70-130
158 2-Hexanone	5.000	4.166	83.31	70-130
160 Dibromochlorometha	5.000	4.789	95.78	70-130
161 1,2-Dibromoethane	5.000	4.771	95.42	70-130
165 Chlorobenzene	5.000	4.691	93.83	70-130
167 Ethyl Benzene	5.000	4.647	92.94	70-130
169 m,p-Xylene	5.000	4.842	96.83	70-130
171 o-Xylene	5.000	4.866	97.33	70-130
172 Styrene	5.000	4.706	94.13	70-130
174 Bromoform	6.500	6.373	98.05	70-130
175 Cumene	5.000	4.427	88.55	70-130
181 1,1,2,2-Tetrachlor	5.000	3.775	75.49	70-130
182 Propylbenzene	5.000	4.093	81.86	70-130
188 4-Ethyltoluene	5.000	3.900	78.01	70-130
190 1,3,5-Trimethylben	5.000	4.082	81.64	70-130
196 1,2,4-Trimethylben	5.000	3.636	72.72	70-130
208 1,3-Dichlorobenzen	5.000	3.916	78.31	70-130
209 1,4-Dichlorobenzen	5.000	3.984	79.67	70-130
212 alpha-Chlorotoluen	5.000	3.363	67.27*	70-130
214 1,2-Dichlorobenzen	5.000	4.100	82.00	70-130
226 1,2,4-Trichloroben	5.000	4.773	95.46	70-130
227 Hexachlorobutadien	5.000	5.417	108.34	70-130
228 Naphthalene	0.5000	0.3363	67.27	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.540	90.80	70-130
$ 146 Toluene-d8	5.000	4.859	97.18	70-130
$ 177 4-Bromofluorobenze	5.000	5.050	100.99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/18May2016.b/e051804.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 18-MAY-2016 10:09
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2789-8A
Misc Info : 5.0ppbv (25ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/18May2016.b/e16l0317d.m
Meth Date : 18-May-2016 09:23 efinn Quant Type: ISTD
Cal Date : 09-MAY-2016 15:22 Cal File: e050913.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.738	4.762 (0.308)	41	77080	4.36082	4.361	80.00- 120.00	100.00
4.738	4.738 (0.308)	42	52447			38.73- 98.73	68.04
4.762	4.762 (0.309)	39	63588			55.81- 115.81	82.50
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	527900	4.61160	4.612	80.00- 120.00	100.00
5.196	5.196 (0.338)	87	173911			2.00- 62.00	32.94
15 Freon 114					CAS #: 76-14-2		
6.618	6.594 (0.430)	135	426295	5.08832	5.088	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	137602			1.31- 61.31	32.28
6.594	6.594 (0.428)	85	465750			93.88- 153.88	109.26
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	96994	4.46572	4.466	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	32756			5.50- 65.50	33.77
23 Butane					CAS #: 106-97-8		
7.640	7.658 (0.496)	58	27583	4.90299	4.903	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.640	7.640 (0.496)	43	162754			588.57- 648.57	590.03
25 Vinyl Chloride					CAS #: 75-01-4		
7.779	7.779 (0.505)	62	146244	4.78596	4.786	80.00- 120.00	100.00
7.779	7.779 (0.505)	64	47799			3.14- 63.14	32.69
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.005 (0.521)	54	90592	4.40794	4.408	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	87045			65.21- 125.21	96.08
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	173493	5.20321	5.203	80.00- 120.00	100.00
9.510	9.491 (0.618)	96	165819			64.16- 124.16	95.58
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	80574	5.58132	5.581	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	18686			0.00- 54.91	23.19
9.986	9.986 (0.649)	66	26335			3.62- 63.62	32.68
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	102049	4.87625	4.876	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	121780			82.69- 142.69	119.33
10.119	10.119 (0.657)	42	102828			68.65- 128.65	100.76
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	595515	4.83133	4.831	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	381429			37.17- 97.17	64.05
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	45519	5.09641	5.096	80.00- 120.00	100.00
11.661	11.680 (0.758)	46	16572			6.61- 66.61	36.41
11.680	11.661 (0.759)	43	12722			0.00- 54.66	27.95
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	399611	4.32613	4.326	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	263560			33.64- 93.64	65.95
12.080	12.080 (0.785)	101	423840			80.40- 140.40	106.06
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.099	12.099 (0.786)	98	120558	4.68030	4.680	80.00- 120.00	100.00
12.099	12.080 (0.786)	61	261042			204.89- 264.89	216.53
12.099	12.099 (0.786)	96	185062			127.69- 187.69	153.50
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	64867	4.30660	4.307	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
52 Acetone (continued)							
12.366	12.366 (0.803)	43	215524			321.47- 381.47	332.25
56 Carbon Disulfide					CAS #: 75-15-0		
12.442	12.442 (0.808)	76	470256	4.09632	4.096	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	204868	4.44622	4.446	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	49999			0.00- 54.09	24.41
12.709	12.709 (0.826)	59	9838			0.00- 34.43	4.80
58 3-Chloropropene					CAS #: 107-05-1		
12.880	12.880 (0.837)	76	98845	5.75998	5.760	80.00- 120.00	100.00
12.880	12.880 (0.837)	41	172219			163.76- 223.76	174.23
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	166474	4.61239	4.612	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	141634			63.99- 123.99	85.08
13.149	13.149 (0.854)	51	41960			0.29- 60.29	25.21
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	510859	4.42631	4.426	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	92398			0.00- 48.26	18.09
13.478	13.478 (0.876)	41	85130			0.00- 45.58	16.66
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	107024	4.09067	4.091	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	197961			155.28- 215.28	184.97
13.533	13.533 (0.879)	96	170527			126.18- 186.18	159.34
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	211878	4.70608	4.706	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	114389			21.48- 81.48	53.99
13.835	13.835 (0.899)	86	43095			0.00- 51.51	20.34
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	312126	4.55848	4.558	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	100819			1.78- 61.78	32.30
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	49730	4.66856	4.668	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	30784			44.70- 104.70	61.90
14.247	14.247 (0.926)	43	330640			757.33- 817.33	664.86
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	146819	5.13012	5.130	80.00- 120.00	100.00

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

   91 cis-1,2-Dichloroethene (continued)
 15.047  15.047 (0.978)    61    246460                  145.90- 205.90   167.87
 15.047  15.047 (0.978)    96    228776                  125.53- 185.53   155.82
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     84520 4.65847    4.658  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    232963                  262.26- 322.26   275.63
 15.047  15.047 (0.978)    57     21384                    0.00-  55.71    25.30
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42    120465 3.61813    3.618  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71     70979                   26.85-  86.85    58.92
 15.360  15.360 (0.998)    72     82317                   32.22-  92.22    68.33
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    136101 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107770                   52.25- 112.25    79.18
 15.391  15.391 (1.000)    49    109875                   89.81- 149.81    80.73
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83    440665 4.48452    4.484  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    284949                   33.97-  93.97    64.66
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    253826 4.97762    4.978  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    210325                   58.69- 118.69    82.86
 15.669  15.669 (1.018)    41    105118                   18.98-  78.98    41.41
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97    496406 4.34294    4.343  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    320533                   34.21-  94.21    64.57
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.853 (1.030)   119    482770 4.31270    4.313  80.00- 120.00   100.00
 15.854  15.853 (1.030)   117    495442                   74.09- 134.09   102.62
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56    273657 4.80005    4.800  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    975363                  306.64- 366.64   356.42
 16.111  16.111 (1.047)    41    250111                   64.14- 124.14    91.40
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.183  16.183 (0.967)    78    553070 4.21149    4.211  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    124819                    0.00-  53.97    22.57
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    177383 4.53995    4.540  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.183  16.183 (1.051)    67     92341                    21.16-  81.16    52.06
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62    268794 3.92699    3.927  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64     88200                     1.03-  61.03    32.81
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    135874 4.36495    4.365  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     78229                    28.67-  88.67    57.57
 16.352  16.352 (0.977)    43    197600                   128.92- 188.92   145.43
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    548017 5.00000           80.00- 120.00   100.00
 16.737  16.713 (1.000)    88     80680                     0.00-  45.20    14.72
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.122 (1.023)   130    318846 4.68089    4.681  80.00- 120.00   100.00
 17.123  17.122 (1.023)    95    281143                   63.99- 123.99    88.18
 17.123  17.122 (1.023)    97    182556                   29.21-  89.21    57.26
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.339  17.339 (1.036)    83    336861 4.60729    4.607  80.00- 120.00   100.00
 17.339  17.339 (1.036)    55    209380                   31.29-  91.29    62.16
 17.339  17.339 (1.036)    56     62992                    0.00-  48.78    18.70
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    185214 4.38033    4.380  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    124922                   34.19-  94.19    67.45
 17.556  17.556 (1.049)    41     98477                   27.38-  87.38    53.17
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                   CAS #: 123-91-1
 17.701  17.677 (1.058)    88    134636 4.25169    4.252  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58     75294                   25.03-  85.03    55.92
 17.677  17.677 (1.056)    57     26023                    0.00-  50.67    19.33
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 17.990  17.990 (1.075)    83    486479 4.46388    4.464  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    311636                   35.15-  95.15    64.06
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    339357 4.17871    4.179  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    108377                    0.45-  60.45    31.94
 18.805  18.805 (1.124)    39    129799                   13.69-  73.69    38.25
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 18.984  18.984 (1.134)    43    285552 4.21365    4.214  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  145 4-Methyl-2-pentanone (continued)
 18.984  18.984 (1.134)    58    125694                   15.64-  75.64    44.02
 18.984  18.984 (1.134)    85     77457                    0.00-  56.71    27.13
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    522958 4.85892    4.859  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     54044                    0.00-  40.11    10.33
 19.275  19.275 (1.152)   100    352789                   37.58-  97.58    67.46
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.410  19.410 (1.160)    91    688276 4.40007    4.400  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92    406490                   28.92-  88.92    59.06
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.902)    75    319822 4.25020    4.250  80.00- 120.00   100.00
 19.998  19.998 (0.902)    77    103467                    0.55-  60.55    32.35
 19.998  19.998 (0.902)    39    118078                    8.25-  68.25    36.92
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    260314 4.44391    4.444  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    157980                   32.91-  92.91    60.69
 20.438  20.438 (0.922)    83    197145                   47.93- 107.93    75.73
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.602  20.602 (0.929)   166    427254 4.73354    4.734  80.00- 120.00   100.00
 20.602  20.602 (0.929)   129    302240                   42.31- 102.31    70.74
 20.602  20.602 (0.929)   131    291499                   40.11- 100.11    68.23
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.936)    58    157037 4.16573    4.166  80.00- 120.00   100.00
 20.767  20.767 (0.936)    43    269008                  140.44- 200.44   171.30
 20.795  20.795 (0.938)   100     46381                    0.00-  59.62    29.54
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.956)   129    569494 4.78909    4.789  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127    424050                   46.82- 106.82    74.46
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.481  21.481 (0.969)   107    428892 4.77116    4.771  80.00- 120.00   100.00
 21.481  21.481 (0.969)   109    405225                   65.45- 125.45    94.48
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    485988 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    238926                   20.64-  80.64    49.16
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.218 (1.002)   112    616868 4.69145    4.691  80.00- 120.00   100.00
```

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

  165 Chlorobenzene (continued)
 22.218  22.218 (1.002)   114    193485                     2.42-  62.42    31.37
 22.218  22.218 (1.002)    77    313170                    23.54-  83.54    50.77
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.301  22.301 (1.006)   106    297599 4.64724    4.647  80.00- 120.00   100.00
 22.301  22.301 (1.006)    91    897337                  282.51- 342.51   301.52
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106    360174 4.84162    4.842  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91    690408                  166.46- 226.46   191.69
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106    332062 4.86653    4.866  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91    686291                  184.01- 244.01   206.68
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104    543423 4.70646    4.706  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    251410                   20.27-  80.27    46.26
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173    750855 6.37307    6.373  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    375614                   20.88-  80.88    50.02
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105   1027103 4.42729    4.427  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    288876                    0.00-  57.47    28.13
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    336736 5.04969    5.050  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    332208                   77.42- 137.42    98.66
 23.856  23.856 (1.076)   176    323200                   65.38- 125.38    95.98
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83    407829 3.77474    3.775  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85    263414                   35.73-  95.73    64.59
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.102  24.102 (1.087)    91   1000109 4.09295    4.093  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120    255388                    0.00-  55.24    25.54
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105    807812 3.90052    3.900  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120    260883                    1.08-  61.08    32.30
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105    656539 4.08214    4.082  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.304	24.304 (1.096)	120	316972			18.44- 78.44	48.28
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	506634	3.63586	3.636	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	242809			16.20- 76.20	47.93
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	515247	3.91574	3.916	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	329138			35.51- 95.51	63.88
25.156	25.156 (1.134)	111	190149			9.35- 69.35	36.90
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.268	25.268 (1.139)	146	491561	3.98363	3.984	80.00- 120.00	100.00
25.268	25.268 (1.139)	148	320721			32.61- 92.61	65.25
25.268	25.268 (1.139)	111	176439			6.90- 66.90	35.89
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	522209	3.36334	3.363	80.00- 120.00	100.00(R)
25.403	25.403 (1.145)	126	119900			0.00- 51.82	22.96
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.694	25.694 (1.159)	146	462790	4.10001	4.100	80.00- 120.00	100.00
25.694	25.694 (1.159)	148	298056			33.69- 93.69	64.40
25.694	25.694 (1.159)	111	179553			8.96- 68.96	38.80
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	244285	4.77285	4.773	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	235120			66.05- 126.05	96.25
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	376977	5.41696	5.417	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	234662			33.78- 93.78	62.25
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	25136	0.33633	0.3363	80.00- 120.00	100.00(a)
27.734	27.734 (1.251)	127	4687			0.00- 46.39	18.65

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051804.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/18May2016.b/e16l0317d.m
Misc Info: 5.0ppbv (25ppbv)

Calibration Date: 18-MAY-2016
Calibration Time: 08:43
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	155392	93235	217549	136101	-12.41
123 1,4-Difluorobenze	603874	362324	845424	548017	-9.25
163 Chlorobenzene-d5	522912	313747	732077	485988	-7.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.18	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/18May2016.b/e051804.d

Date : 18-MAY-2016 10:09

Client ID: LCSD

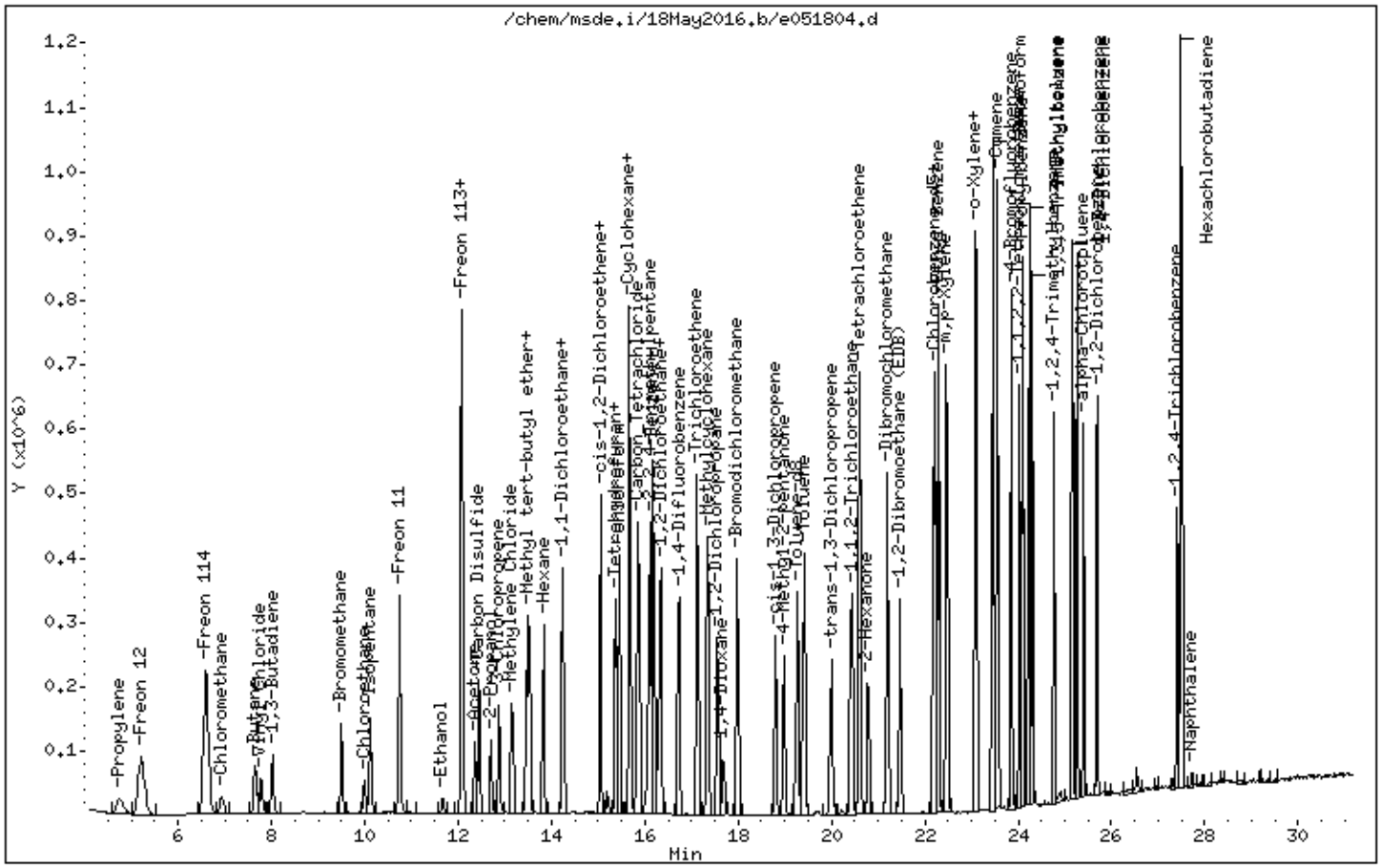
Instrument: msde.i

Sample Info: 50mL# 2789-8A

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics, Inc.

MSD-E

Logbook #2755

BFB Verification of 176/174 m/z Ratio: (792000/810860) x100 = 97.71	
Tekmar Purge Flow:	
Vacuum:	5/18/16

IS/S Std. #: 2789-17		Exp. Date: 6/17/16
BCM	lot: 155372	Std: 155416
1,4-DFB	603374	656520
CB-d5	522912	583147

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

File ID:	E051802
Compound:	Toluene-d8
Initials:	EA

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (576435) x (5.000) = 4.860
(603374) (0.978198)

SOP# (Circle one): 6 / 83 / 38 / 91 / 109

Method (Circle one): TO-14A/TO-15/TO-17

Reported Result: 4.860

Method Name: 20160503-7A / 20160503-7A

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E051801 400 (5/18/16)	BFB Tune check	2789-148t	50mg	2.0mL	EA	1.00	EA	5/18/16	0824	EA	
2	✓	E051802	CCV (50ppbv)	2789-5I	5.0ppbv	25mL	EA	1.00	EA		0843	EA	Std: 2mL Exp: 7/1/16 Std: 5mL Std: 5mL
3	✓	03	ICV (25ppbv)	2789-8A	5.0ppbv	50mL	EA	1.00	EA		0927	EA	Exp: 6/11/16 Std: 5mL
4	✓	04	CCV (50ppbv)	2789-8A	5.0ppbv	50mL	EA	1.00	EA		1009	EA	
5	✓	05	LAB BLANK	35249	Humid	250mL	EA	1.00	EA		1051	EA	
6	✓	06	LAB BLANK	35248	Humid	250mL	EA	1.00	EA		1134	EA	
7	✓	07	MANIFOLD CONT	12959	Dry	250mL	EA	1.00	EA		1216	EA	M10102-051816-1033
8	✓	08	1605308-02A	6L0604	5.0"Hg	4.9psi	250mL	1.66	EA		1257	EA	
9	✓	09	-04A	6L0700	3.0"Hg	4.8psi	250mL	1.80	EA		1341	EA	
10	✓	10	-05A	5737	5.1"Hg	5.1psi	250mL	1.62	EA		1422	EA	
11	✓	11	-06A	6L1224	4.5"Hg	5.0psi	250mL	1.58	EA		1504	EA	
12		~~12~~	~~1605323-01A~~	~~6L0720~~	~~10.2"Hg~~	~~4.9psi~~	~~250mL~~	~~2.02~~	~~EA~~				~~5/18/16 NOT RAN~~
13		~~E051812~~	~~1605308-04A~~	~~6L0700~~	~~3.0"Hg~~	~~4.8psi~~	~~250mL~~	~~1.80~~	~~EA~~	~~5/18/16~~			~~5/18/16 NOT RAN~~
14	✓	12	1605323-01A	33920	10.2"Hg	4.9psi	250mL	2.02	EA	5/18/16	~~2149~~ 1632	EA	~~2" ETA~~ CAS 5/18/16

Reviewed

5/18/16
Date

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2755

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
15	✓	2051813	1605323-02A	00352	6.1"Hg-4.7psi	250mL	EA	1.66	EA	5/18/16	1727	EA	
16	✓	14	1605308D-04A	00316	6.1"Hg-5.1psi		EA	2.68	EA		1831	EA	E°EtOH
17	✓	15	-03A	N0593	10.6"Hg-5psi		EA	2.07	EA		1915	EA	EtOH 75%
18	X	16	-01A	00355	5.5"Hg-5psi	150mL	EA	2.73	EA		2002	EA	overdil
19	✓	17	-01A	↓	↓	250mL	EA	1.64	EA		2059	EA	
20	✓	18	1605287-01AB	21020	5.5"Hg-5psi	250mL	EA	1.64	EA		2149	EA	E° EtOH
21		19	01AB	40034	6.5"Hg-5psi			1.7	EA				
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													

5/18/16 EA

Reviewed

5/18/16

Date

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/17Mar2016.b/e031701.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 17-MAR-2016 10:47
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/17Mar2016.b/bfb60.m
Meth Date : 17-Mar-2016 11:03 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		
6.204	6.235	-0.031	95	703018			100.00- 100.00	100.00
6.204	6.235	-0.031	50	113232			8.00- 40.00	16.11
6.204	6.235	-0.031	75	351481			30.00- 66.00	50.00
6.204	6.235	-0.031	96	46382			5.00- 9.00	6.60
6.204	6.235	-0.031	173	4154			0.00- 1.99	0.64
6.204	6.235	-0.031	174	649216			50.00- 120.00	92.35
6.204	6.235	-0.031	175	48733			4.00- 9.00	7.51
6.204	6.235	-0.031	176	627466			93.00- 101.00	96.65
6.204	6.235	-0.031	177	40597			5.00- 9.00	6.47

Data File: /var/chem/msde.i/17Mar2016.b/e031701.d

Date : 17-MAR-2016 10:47

Client ID: BFB

Instrument: msde.i

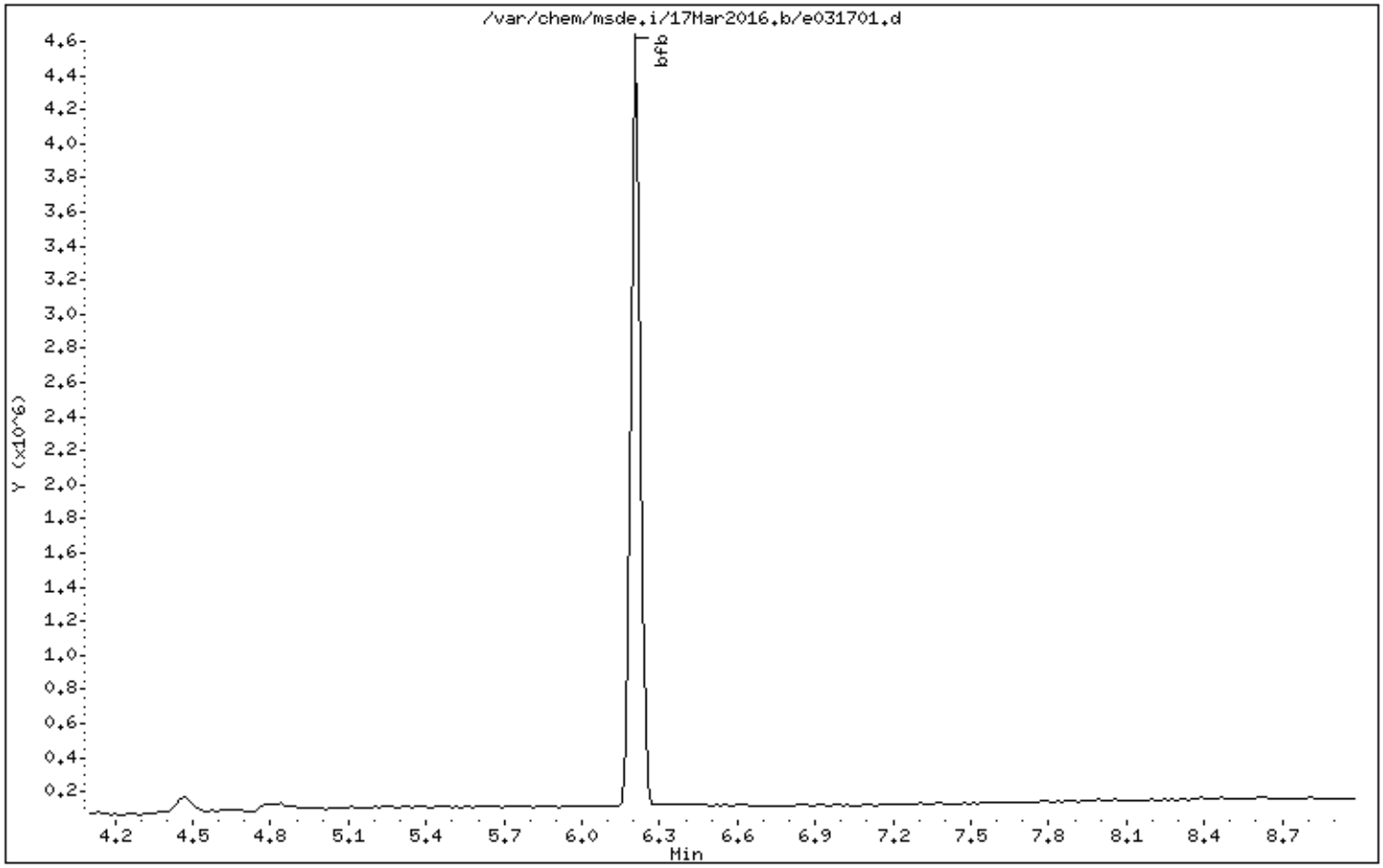
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /var/chem/msde.i/17Mar2016.b/e031701.d

Date : 17-MAR-2016 10:47

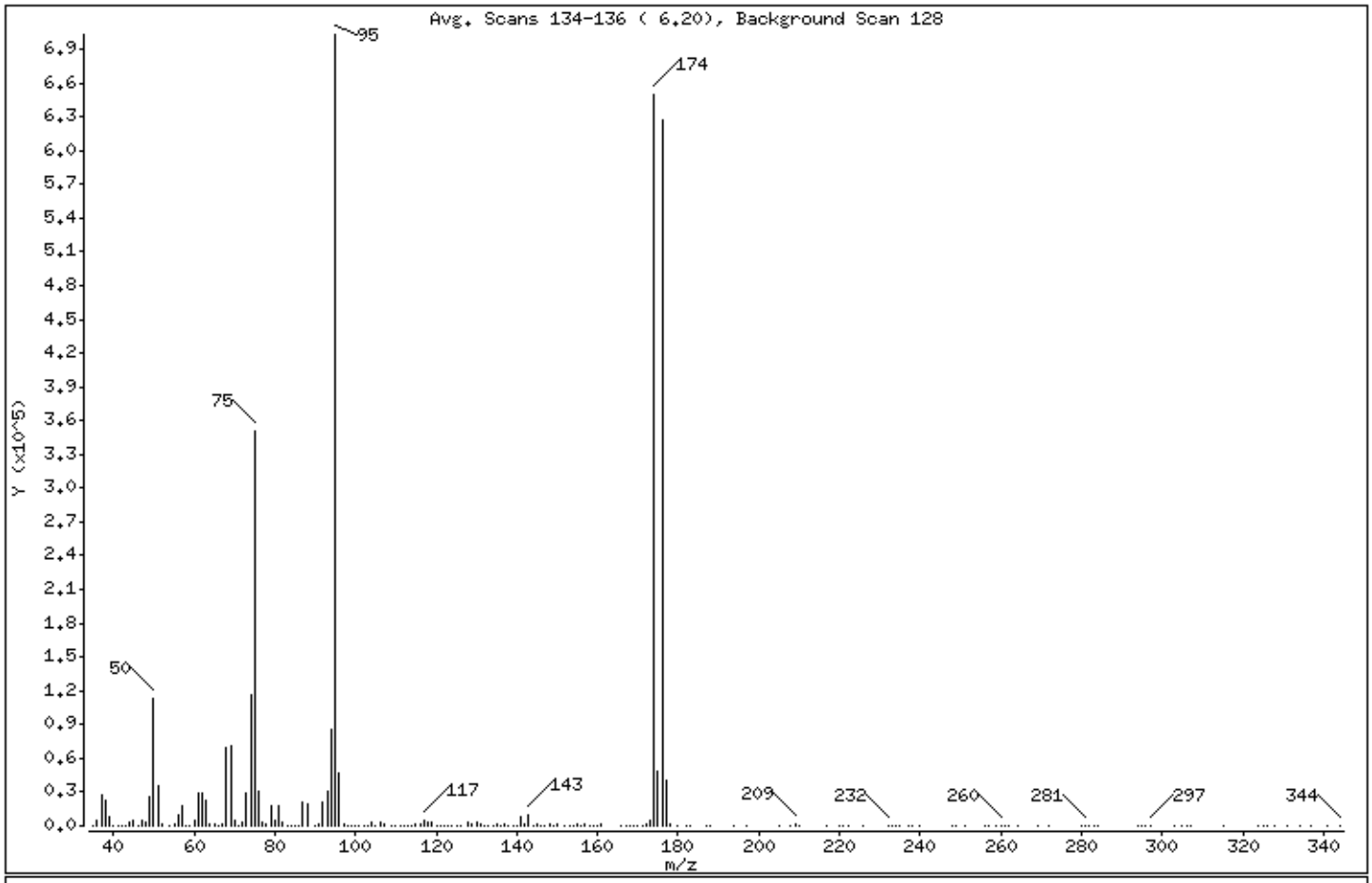
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0 Operator: ef

Column phase: Rtx-624 Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	16.11
75	30.00 - 66.00% of mass 95	50.00
96	5.00 - 9.00% of mass 95	6.60
173	Less than 1.99% of mass 174	0.59 (0.64)
174	50.00 - 120.00% of mass 95	92.35
175	4.00 - 9.00% of mass 174	6.93 (7.51)
176	93.00 - 101.00% of mass 174	89.25 (96.65)
177	5.00 - 9.00% of mass 176	5.77 (6.47)

Data File: /var/chem/msde.i/17Mar2016.b/e031701.d

Date : 17-MAR-2016 10:47

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e031701.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128
Location of Maximum: 95.00
Number of points: 193

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	41	85.00	549	137.00	1190	220.00	59
36.00	4253	86.00	563	138.00	193	221.00	149
37.00	26736	87.00	20696	139.00	322	222.00	106
38.00	23192	88.00	19648	140.00	602	226.00	52
39.00	8791	90.00	61	141.00	8559	232.00	663
40.00	82	91.00	2353	142.00	1116	233.00	215
41.00	298	92.00	20304	143.00	8906	234.00	254
42.00	392	93.00	30728	144.00	696	235.00	245
43.00	717	94.00	85000	145.00	1387	237.00	145
44.00	2676	95.00	702976	146.00	707	238.00	176
45.00	5031	96.00	46376	147.00	293	240.00	45
46.00	531	97.00	1640	148.00	2237	248.00	155
47.00	4560	98.00	135	149.00	178	249.00	214
48.00	3475	99.00	246	150.00	1028	251.00	46
49.00	25368	100.00	44	152.00	536	256.00	5
50.00	113232	101.00	217	153.00	611	257.00	99
51.00	36000	102.00	190	154.00	646	259.00	45
52.00	1438	103.00	677	155.00	1917	260.00	776
54.00	195	104.00	2695	156.00	85	261.00	28
55.00	1716	105.00	590	157.00	1591	262.00	132
56.00	9255	106.00	2892	158.00	267	264.00	44
57.00	18064	107.00	922	159.00	799	269.00	37
58.00	733	109.00	464	160.00	178	272.00	3
59.00	322	110.00	603	161.00	1203	280.00	43
60.00	5505	111.00	513	166.00	121	281.00	599
61.00	29368	112.00	536	167.00	86	282.00	149
62.00	29112	113.00	413	168.00	50	283.00	129
63.00	23232	114.00	154	169.00	46	284.00	58
64.00	2007	115.00	990	170.00	499	294.00	39
65.00	901	116.00	2391	171.00	602	295.00	185
66.00	46	117.00	4315	172.00	997	296.00	44
67.00	1454	118.00	2681	173.00	4154	297.00	233
68.00	68856	119.00	3451	174.00	649216	303.00	44
69.00	71408	120.00	325	175.00	48728	305.00	50
70.00	5417	121.00	178	176.00	627456	306.00	97

Data File: /var/chem/msde.i/17Mar2016.b/e031701.d

Date : 17-MAR-2016 10:47

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e031701.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128
Location of Maximum: 95.00
Number of points: 193

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	575	122.00	380	177.00	40592	307.00	88
72.00	3739	123.00	369	178.00	976	315.00	18
73.00	28920	124.00	734	180.00	19	324.00	74
74.00	117080	125.00	508	182.00	38	325.00	219
75.00	351424	126.00	740	183.00	61	326.00	60
76.00	30496	128.00	3148	187.00	54	328.00	3
77.00	3650	129.00	1205	188.00	176	331.00	6
78.00	2210	130.00	2821	194.00	57	334.00	30
79.00	17272	131.00	999	197.00	37	337.00	92
80.00	4999	132.00	252	205.00	49	341.00	48
81.00	16976	133.00	152	208.00	37	344.00	265
82.00	3403	134.00	309	209.00	919		
83.00	645	135.00	1548	210.00	39		
84.00	242	136.00	203	217.00	107		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/22Mar2016.b/e032201.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 22-MAR-2016 09:24
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/22Mar2016.b/bfb60.m
Meth Date : 22-Mar-2016 09:45 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	
6.189	6.235	-0.046	95	749880			100.00- 100.00	100.00
6.189	6.235	-0.046	50	119669			8.00- 40.00	15.96
6.189	6.235	-0.046	75	380507			30.00- 66.00	50.74
6.189	6.235	-0.046	96	50043			5.00- 9.00	6.67
6.189	6.235	-0.046	173	6598			0.00- 1.99	0.95
6.189	6.235	-0.046	174	692096			50.00- 120.00	92.29
6.189	6.235	-0.046	175	51082			4.00- 9.00	7.38
6.189	6.235	-0.046	176	669859			93.00- 101.00	96.79
6.189	6.235	-0.046	177	43218			5.00- 9.00	6.45

Data File: /var/chem/msde.i/22Mar2016.b/e032201.d

Date : 22-MAR-2016 09:24

Client ID: BFB

Instrument: msde.i

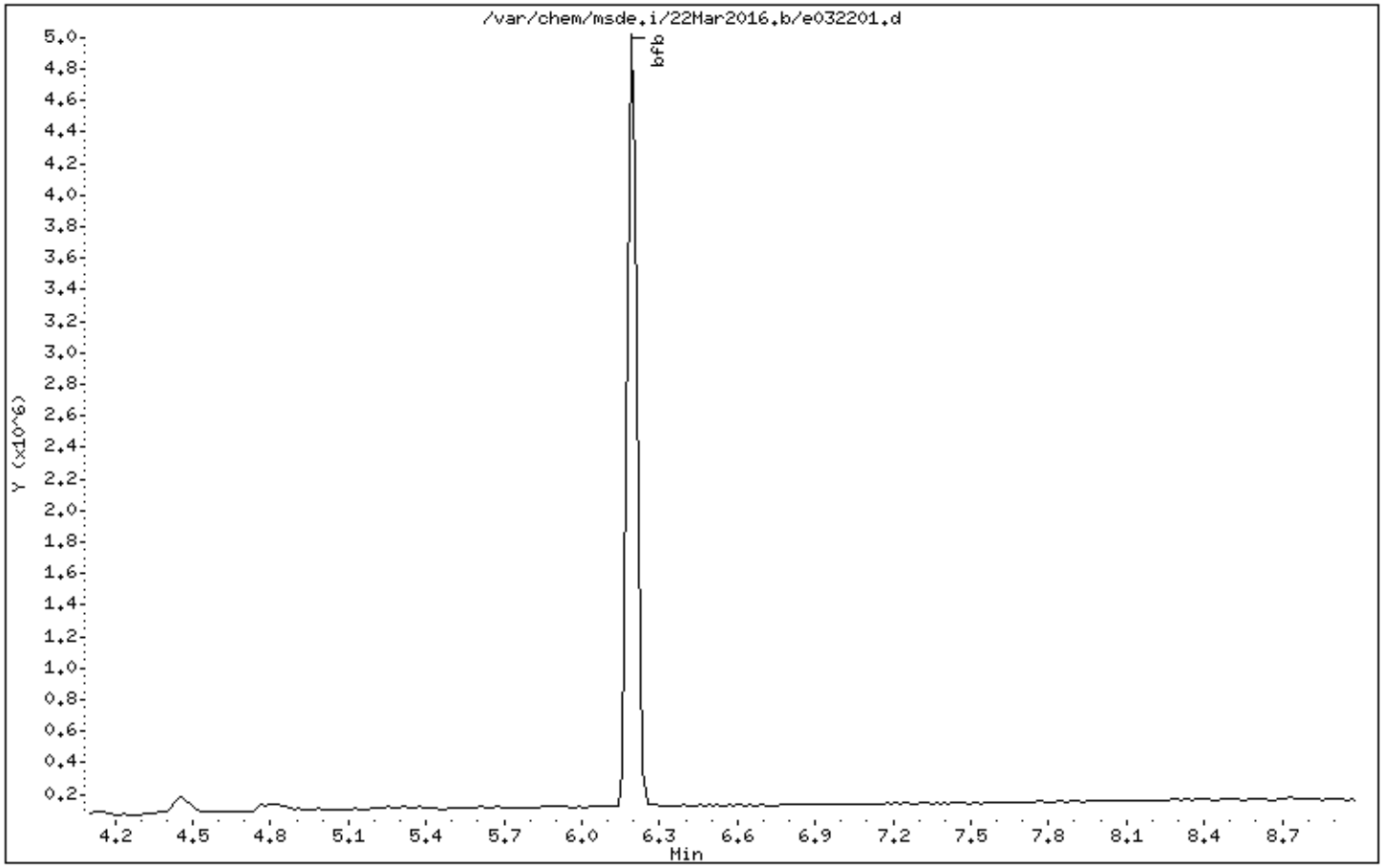
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /var/chem/msde.i/22Mar2016.b/e032201.d

Date : 22-MAR-2016 09:24

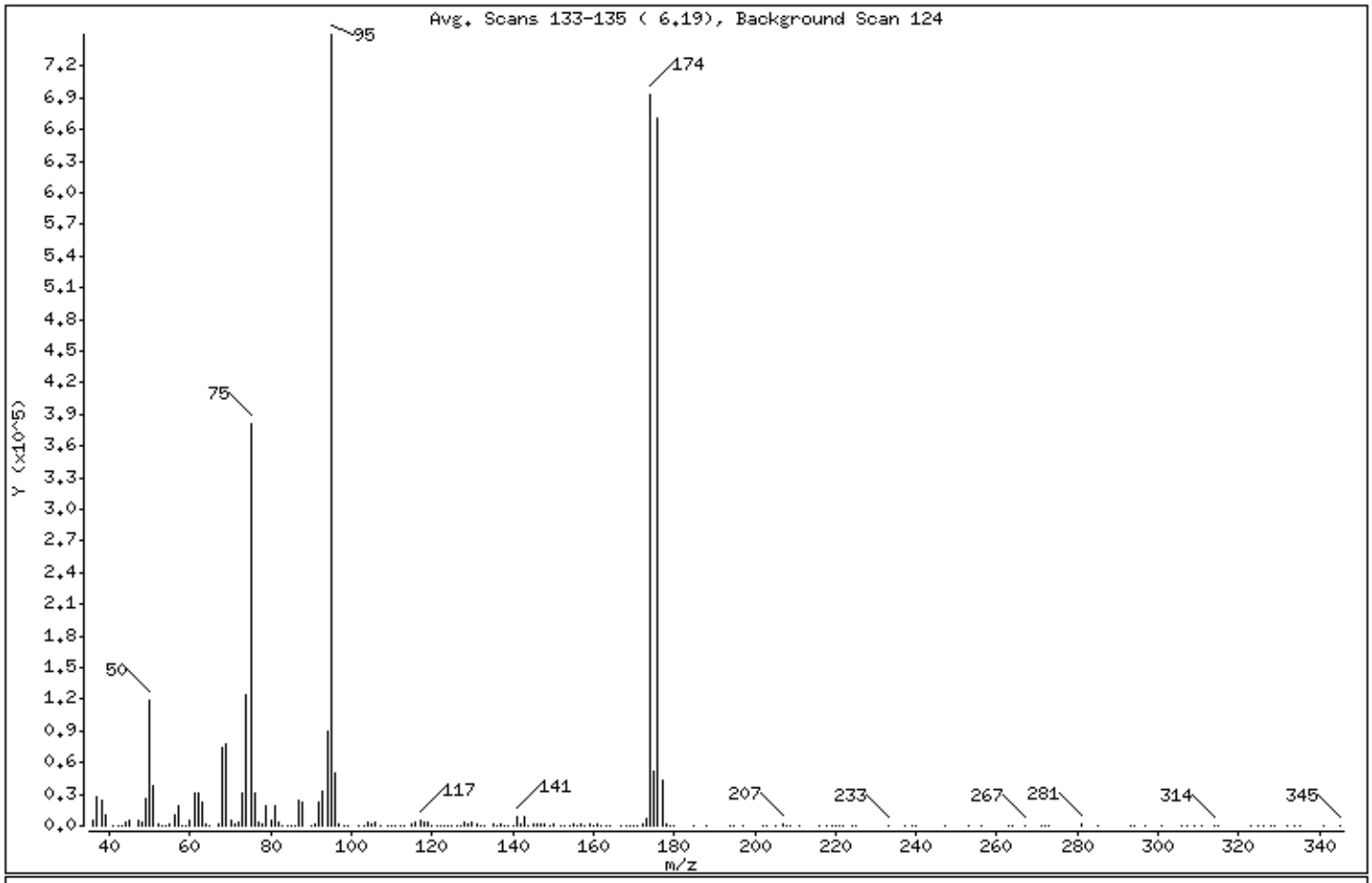
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0 Operator: ef

Column phase: Rtx-624 Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.96
75	30.00 - 66.00% of mass 95	50.74
96	5.00 - 9.00% of mass 95	6.67
173	Less than 1.99% of mass 174	0.88 (0.95)
174	50.00 - 120.00% of mass 95	92.29
175	4.00 - 9.00% of mass 174	6.81 (7.38)
176	93.00 - 101.00% of mass 174	89.33 (96.79)
177	5.00 - 9.00% of mass 176	5.76 (6.45)

Data File: /var/chem/msde.i/22Mar2016.b/e032201.d

Date : 22-MAR-2016 09:24

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e032201.d
Spectrum: Avg. Scans 133-135 (6.19), Background Scan 124
Location of Maximum: 95.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5221	87.00	24312	141.00	8861	211.00	216
37.00	28264	88.00	22496	142.00	1144	216.00	332
38.00	24872	90.00	206	143.00	8494	218.00	272
39.00	9657	91.00	2067	144.00	312	219.00	117
41.00	761	92.00	22000	145.00	1085	220.00	136
42.00	332	93.00	33352	146.00	1087	221.00	357
43.00	767	94.00	89360	147.00	870	222.00	87
44.00	2866	95.00	749824	148.00	2067	224.00	108
45.00	5265	96.00	50040	149.00	391	225.00	30
47.00	5037	97.00	1512	150.00	1122	233.00	549
48.00	3729	98.00	107	152.00	562	237.00	217
49.00	25408	99.00	137	153.00	665	239.00	145
50.00	119664	102.00	107	154.00	465	240.00	112
51.00	37208	103.00	197	155.00	2220	247.00	112
52.00	1821	104.00	3048	156.00	172	253.00	25
53.00	110	105.00	901	157.00	1033	256.00	40
54.00	134	106.00	2888	158.00	187	263.00	218
55.00	1800	107.00	604	159.00	1103	264.00	55
56.00	9860	109.00	95	160.00	129	267.00	254
57.00	18192	110.00	354	161.00	1171	271.00	251
58.00	638	111.00	633	162.00	93	272.00	194
59.00	100	112.00	708	163.00	115	273.00	42
60.00	6007	113.00	593	164.00	193	281.00	940
61.00	31512	115.00	1165	167.00	51	285.00	219
62.00	31240	116.00	3000	168.00	50	293.00	90
63.00	23184	117.00	4423	169.00	172	294.00	30
64.00	2195	118.00	2703	170.00	440	297.00	34
65.00	491	119.00	3872	171.00	385	301.00	38
67.00	1856	120.00	325	172.00	1279	306.00	51
68.00	74976	121.00	68	173.00	6598	307.00	41
69.00	78344	122.00	442	174.00	692096	309.00	79
70.00	5330	123.00	268	175.00	51080	311.00	40
71.00	961	124.00	427	176.00	669824	314.00	138
72.00	4015	125.00	368	177.00	43216	315.00	15
73.00	31184	126.00	440	178.00	892	323.00	286

Data File: /var/chem/msde.i/22Mar2016.b/e032201.d

Date : 22-MAR-2016 09:24

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e032201.d
Spectrum: Avg. Scans 133-135 (6.19), Background Scan 124
Location of Maximum: 95.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	123696	127.00	163	179.00	296	325.00	226
75.00	380480	128.00	2805	180.00	107	326.00	44
76.00	31144	129.00	1474	185.00	42	328.00	74
77.00	3589	130.00	3028	188.00	94	329.00	132
78.00	2451	131.00	1029	194.00	23	332.00	193
79.00	18216	132.00	239	195.00	457	334.00	209
80.00	5413	133.00	524	197.00	153	335.00	49
81.00	19272	135.00	1682	202.00	110	341.00	98
82.00	3568	136.00	24	203.00	9	345.00	516
83.00	587	137.00	1806	205.00	275		
84.00	303	138.00	262	207.00	2572		
85.00	690	139.00	176	208.00	462		
86.00	599	140.00	675	209.00	129		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/25Mar2016.b/e032501.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 25-MAR-2016 09:02
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/25Mar2016.b/bfb60.m
Meth Date : 25-Mar-2016 09:18 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	
6.204	6.235	-0.031	95	747861			100.00- 100.00	100.00
6.204	6.235	-0.031	50	114889			8.00- 40.00	15.36
6.204	6.235	-0.031	75	366501			30.00- 66.00	49.01
6.204	6.235	-0.031	96	49258			5.00- 9.00	6.59
6.204	6.235	-0.031	173	7075			0.00- 1.99	0.97
6.204	6.235	-0.031	174	728106			50.00- 120.00	97.36
6.204	6.235	-0.031	175	56144			4.00- 9.00	7.71
6.204	6.235	-0.031	176	705132			93.00- 101.00	96.84
6.204	6.235	-0.031	177	46645			5.00- 9.00	6.62

Data File: /chem/msde.i/25Mar2016.b/e032501.d

Date : 25-MAR-2016 09:02

Client ID: BFB

Instrument: msde.i

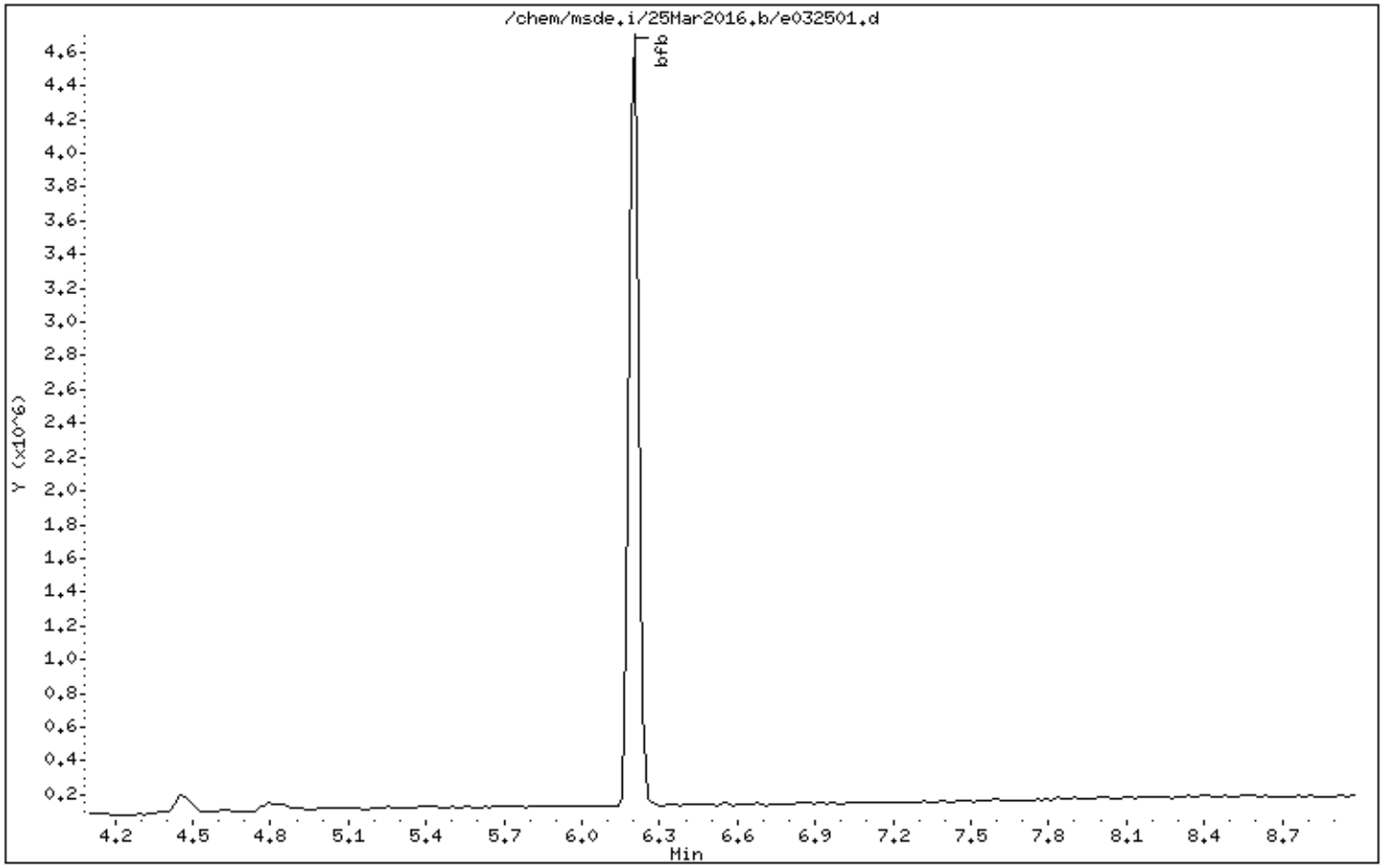
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/25Mar2016.b/e032501.d

Date : 25-MAR-2016 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

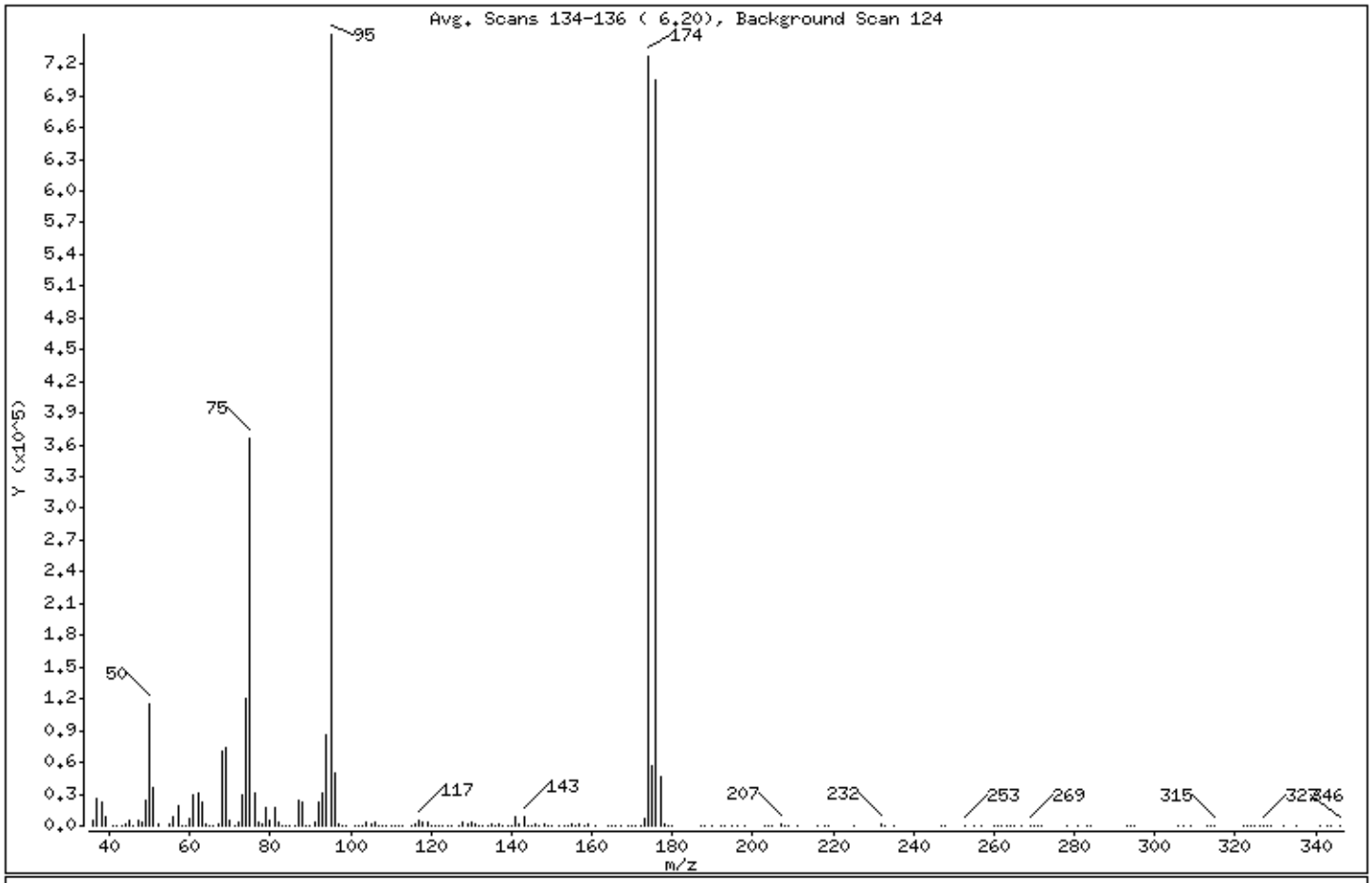
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.36
75	30.00 - 66.00% of mass 95	49.01
96	5.00 - 9.00% of mass 95	6.59
173	Less than 1.99% of mass 174	0.95 (0.97)
174	50.00 - 120.00% of mass 95	97.36
175	4.00 - 9.00% of mass 174	7.51 (7.71)
176	93.00 - 101.00% of mass 174	94.29 (96.84)
177	5.00 - 9.00% of mass 176	6.24 (6.62)

Data File: /chem/msde.i/25Mar2016.b/e032501.d

Date : 25-MAR-2016 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e032501.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 124
Location of Maximum: 95.00
Number of points: 199

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5323	89.00	40	142.00	1138	218.00	156
37.00	26432	90.00	110	143.00	8689	219.00	183
38.00	23064	91.00	2642	144.00	597	225.00	84
39.00	8546	92.00	21680	145.00	789	232.00	868
41.00	642	93.00	31384	146.00	1577	233.00	35
42.00	130	94.00	86296	147.00	368	235.00	67
43.00	714	95.00	747840	148.00	1508	247.00	73
44.00	2571	96.00	49256	149.00	700	248.00	149
45.00	4676	97.00	1106	150.00	622	253.00	802
46.00	528	98.00	64	152.00	732	255.00	90
47.00	4846	99.00	118	153.00	688	257.00	42
48.00	3888	101.00	250	154.00	588	260.00	442
49.00	24176	102.00	99	155.00	2393	261.00	29
50.00	114888	103.00	613	156.00	367	262.00	181
51.00	36136	104.00	3044	157.00	1454	263.00	102
52.00	1525	105.00	1157	158.00	369	264.00	138
55.00	1572	106.00	2849	159.00	1162	265.00	84
56.00	8138	107.00	815	161.00	728	267.00	302
57.00	18816	108.00	93	164.00	814	269.00	411
58.00	371	109.00	25	165.00	84	270.00	238
59.00	390	110.00	347	166.00	13	271.00	391
60.00	6128	111.00	550	167.00	51	272.00	162
61.00	29280	112.00	479	169.00	207	278.00	51
62.00	30560	113.00	811	170.00	344	281.00	232
63.00	21616	115.00	494	171.00	572	283.00	338
64.00	2304	116.00	2169	172.00	390	284.00	15
65.00	540	117.00	4467	173.00	7075	293.00	201
66.00	171	118.00	3277	174.00	728064	294.00	321
67.00	1897	119.00	3962	175.00	56144	295.00	87
68.00	70376	120.00	130	176.00	705088	306.00	33
69.00	74480	121.00	91	177.00	46640	307.00	148
70.00	5510	122.00	504	178.00	1390	309.00	41
71.00	388	123.00	166	179.00	134	313.00	18
72.00	4214	124.00	656	180.00	215	314.00	85
73.00	28616	125.00	273	187.00	216	315.00	203

Data File: /chem/msde.i/25Mar2016.b/e032501.d

Date : 25-MAR-2016 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e032501.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 124
Location of Maximum: 95.00
Number of points: 199

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	120280	127.00	362	188.00	56	322.00	261
75.00	366464	128.00	3362	190.00	33	323.00	132
76.00	30824	129.00	1247	192.00	256	324.00	181
77.00	3053	130.00	3431	193.00	321	325.00	262
78.00	2578	131.00	1021	195.00	250	326.00	72
79.00	16416	132.00	209	196.00	256	327.00	359
80.00	5185	133.00	27	198.00	33	328.00	31
81.00	17920	134.00	627	203.00	64	329.00	93
82.00	3370	135.00	2077	204.00	41	332.00	33
83.00	451	136.00	252	205.00	54	335.00	44
84.00	80	137.00	1282	207.00	1681	341.00	224
85.00	640	138.00	194	208.00	138	343.00	78
86.00	826	139.00	258	209.00	177	344.00	212
87.00	23608	140.00	574	211.00	287	346.00	36
88.00	22752	141.00	8243	216.00	82		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/30Mar2016.b/e033001.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 30-MAR-2016 10:46
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/30Mar2016.b/bfb60.m
Meth Date : 30-Mar-2016 11:02 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	
6.204	6.235	-0.031	95	972288			100.00- 100.00	100.00
6.204	6.235	-0.031	50	151554			8.00- 40.00	15.59
6.204	6.235	-0.031	75	482262			30.00- 66.00	49.60
6.204	6.235	-0.031	96	65046			5.00- 9.00	6.69
6.204	6.235	-0.031	173	9030			0.00- 1.99	0.98
6.204	6.235	-0.031	174	916943			50.00- 120.00	94.31
6.204	6.235	-0.031	175	67176			4.00- 9.00	7.33
6.204	6.235	-0.031	176	890170			93.00- 101.00	97.08
6.204	6.235	-0.031	177	58210			5.00- 9.00	6.54

Data File: /chem/msde.i/30Mar2016.b/e033001.d

Date : 30-MAR-2016 10:46

Client ID: BFB

Instrument: msde.i

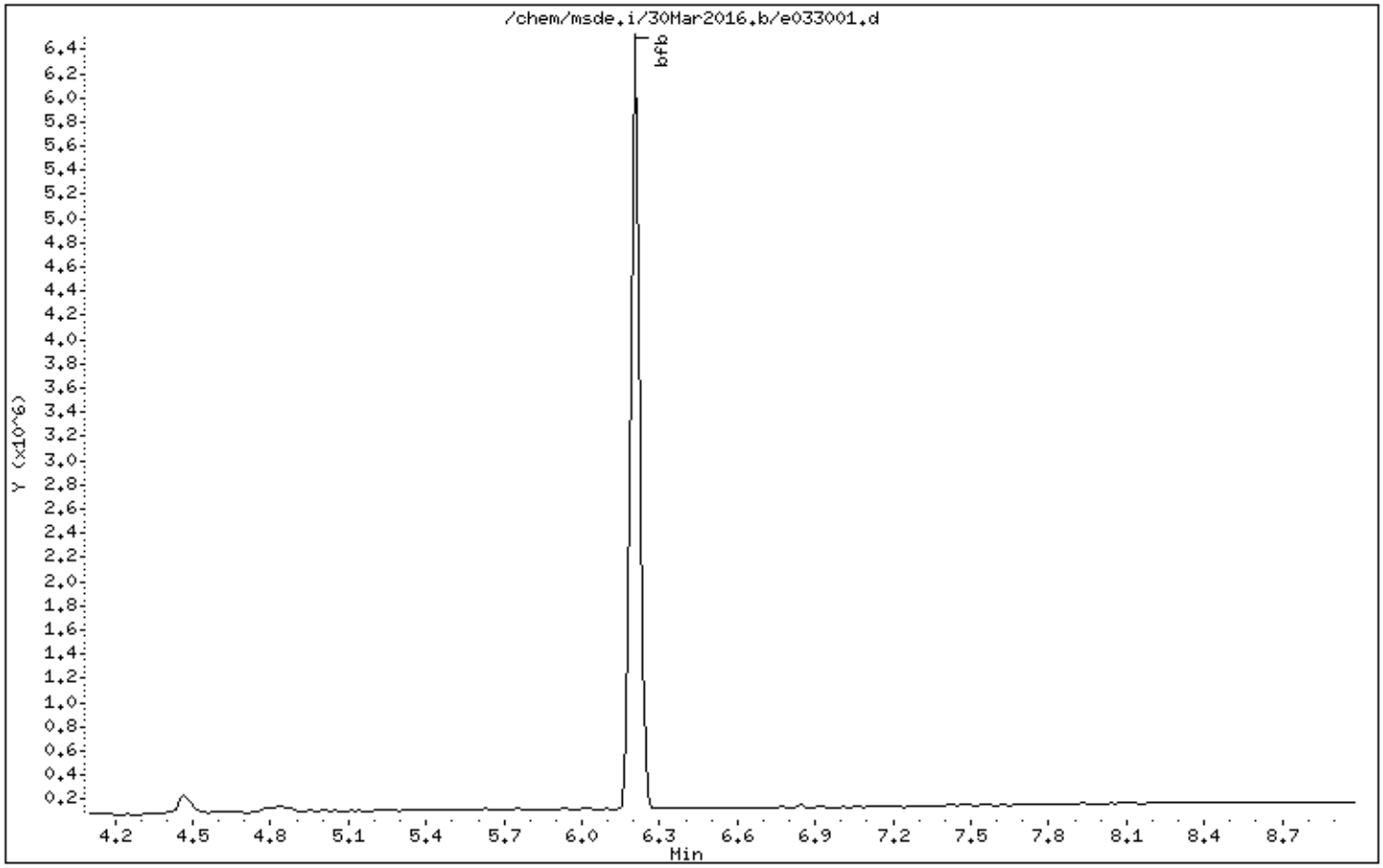
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/30Mar2016.b/e033001.d

Date : 30-MAR-2016 10:46

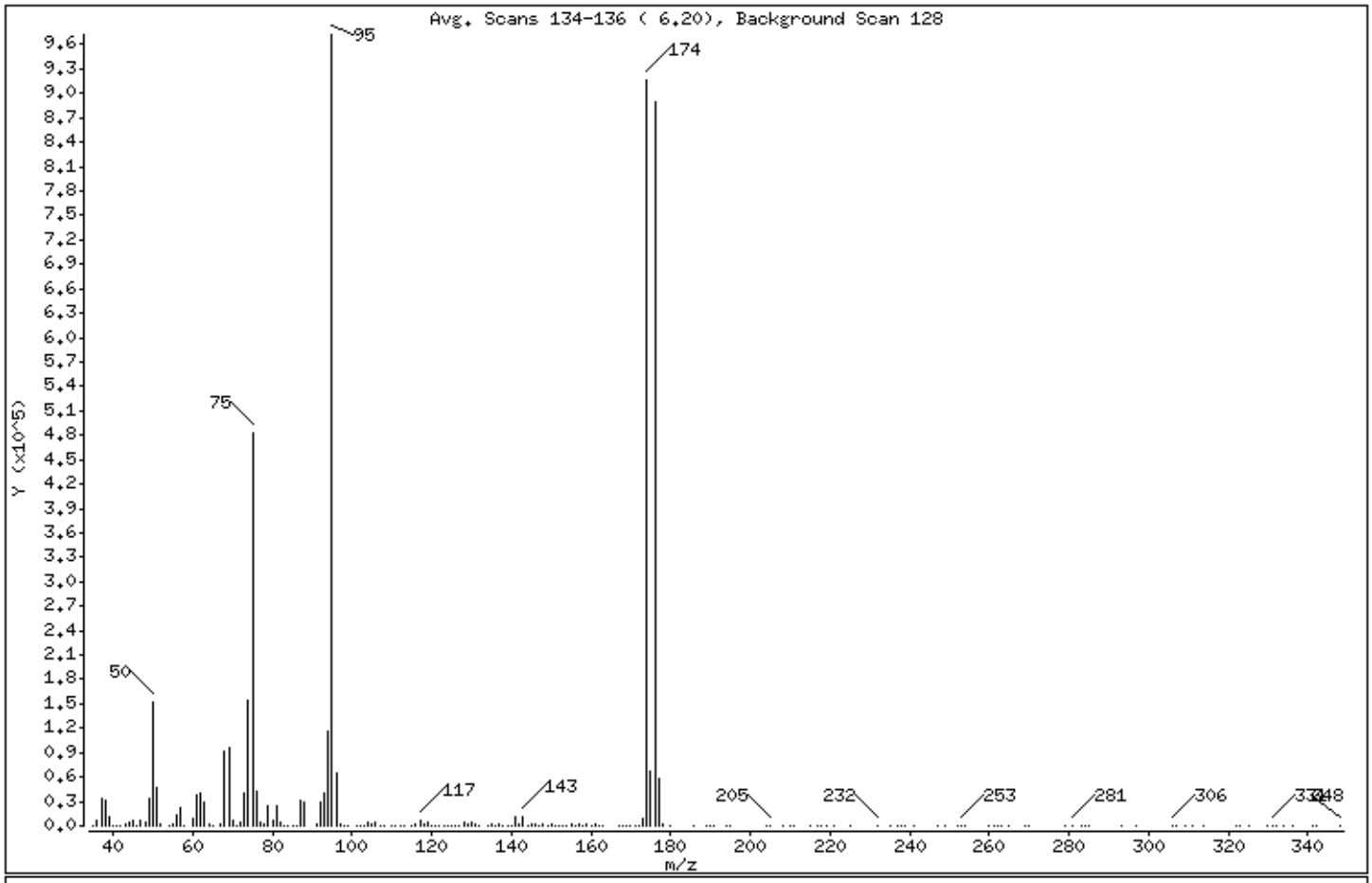
Client ID: BFB | Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0 | Operator: ef

Column phase: Rtx-624 | Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.59
75	30.00 - 66.00% of mass 95	49.60
96	5.00 - 9.00% of mass 95	6.69
173	Less than 1.99% of mass 174	0.93 (0.98)
174	50.00 - 120.00% of mass 95	94.31
175	4.00 - 9.00% of mass 174	6.91 (7.33)
176	93.00 - 101.00% of mass 174	91.55 (97.08)
177	5.00 - 9.00% of mass 176	5.99 (6.54)

Data File: /chem/msde.i/30Mar2016.b/e033001.d

Date : 30-MAR-2016 10:46

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e033001.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128
Location of Maximum: 95.00
Number of points: 191

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	111	86.00	791	140.00	884	215.00	33
36.00	6808	87.00	30552	141.00	10602	217.00	1
37.00	34280	88.00	29488	142.00	1490	218.00	53
38.00	30208	91.00	3339	143.00	11542	219.00	151
39.00	11615	92.00	28296	144.00	586	221.00	133
40.00	140	93.00	40584	145.00	1147	225.00	174
41.00	649	94.00	115848	146.00	1390	232.00	402
42.00	186	95.00	972288	147.00	730	235.00	142
43.00	1292	96.00	65040	148.00	2715	237.00	209
44.00	3766	97.00	1509	149.00	627	238.00	54
45.00	6670	98.00	29	150.00	1411	239.00	106
46.00	259	99.00	140	151.00	320	241.00	55
47.00	6163	101.00	13	152.00	772	247.00	58
48.00	4547	102.00	10	153.00	755	249.00	110
49.00	33288	103.00	287	154.00	647	252.00	14
50.00	151552	104.00	3763	155.00	2906	253.00	450
51.00	46912	105.00	1608	156.00	407	254.00	25
52.00	2291	106.00	4223	157.00	2213	260.00	62
54.00	126	107.00	916	158.00	20	261.00	276
55.00	2343	108.00	256	159.00	1553	262.00	87
56.00	12530	110.00	562	160.00	119	263.00	103
57.00	23208	111.00	730	161.00	1424	265.00	135
58.00	1087	112.00	721	162.00	53	269.00	430
60.00	8099	113.00	877	163.00	251	270.00	225
61.00	38832	115.00	839	167.00	179	279.00	45
62.00	40968	116.00	2845	168.00	222	281.00	607
63.00	29992	117.00	6208	169.00	250	283.00	307
64.00	2676	118.00	3149	170.00	454	284.00	40
65.00	853	119.00	4303	171.00	259	285.00	34
67.00	2452	120.00	171	172.00	495	293.00	80
68.00	91672	121.00	363	173.00	9030	297.00	118
69.00	95256	122.00	240	174.00	916928	306.00	208
70.00	6893	123.00	415	175.00	67176	307.00	115
71.00	657	124.00	727	176.00	890112	309.00	52
72.00	4793	125.00	274	177.00	58208	311.00	125

Data File: /chem/msde.i/30Mar2016.b/e033001.d

Date : 30-MAR-2016 10:46

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e033001.d
Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128
Location of Maximum: 95.00
Number of points: 191

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	40808	126.00	171	178.00	1395	314.00	35
74.00	154688	127.00	55	180.00	127	322.00	102
75.00	482240	128.00	3945	186.00	46	323.00	101
76.00	41392	129.00	1703	189.00	298	325.00	112
77.00	4878	130.00	4144	190.00	70	330.00	37
78.00	2851	131.00	1834	191.00	663	331.00	359
79.00	23688	132.00	523	194.00	38	332.00	153
80.00	6065	134.00	81	195.00	104	334.00	29
81.00	23712	135.00	2404	204.00	44	336.00	68
82.00	4553	136.00	121	205.00	189	341.00	62
83.00	580	137.00	1329	208.00	42	342.00	352
84.00	298	138.00	238	210.00	66	348.00	51
85.00	640	139.00	474	211.00	104		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/09May2016.b/e050901.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 09-MAY-2016 06:45
Operator : act Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/09May2016.b/bfb60.m
Meth Date : 09-May-2016 07:01 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

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

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

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	693402			100.00- 100.00	100.00
6.063	6.235	-0.172	50	101354			8.00- 40.00	14.62
6.063	6.235	-0.172	75	329892			30.00- 66.00	47.58
6.063	6.235	-0.172	96	44685			5.00- 9.00	6.44
6.063	6.235	-0.172	173	6907			0.00- 1.99	1.00
6.063	6.235	-0.172	174	693098			50.00- 120.00	99.96
6.063	6.235	-0.172	175	51520			4.00- 9.00	7.43
6.063	6.235	-0.172	176	677226			93.00- 101.00	97.71
6.063	6.235	-0.172	177	43672			5.00- 9.00	6.45

Data File: /chem/msde.i/09May2016.b/e050901.d

Date : 09-MAY-2016 06:45

Client ID: BFB

Instrument: msde.i

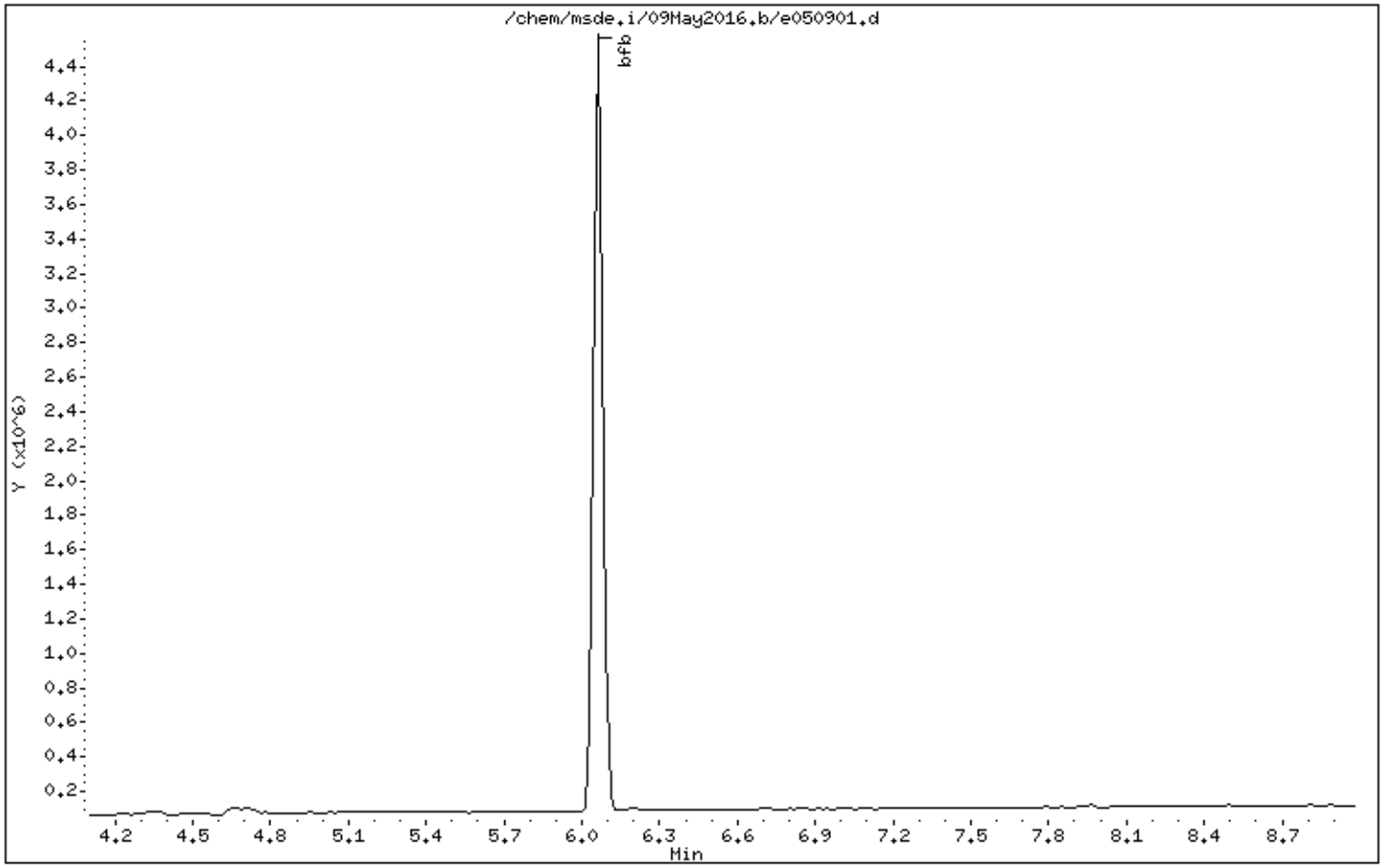
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/09May2016.b/e050901.d

Date : 09-MAY-2016 06:45

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

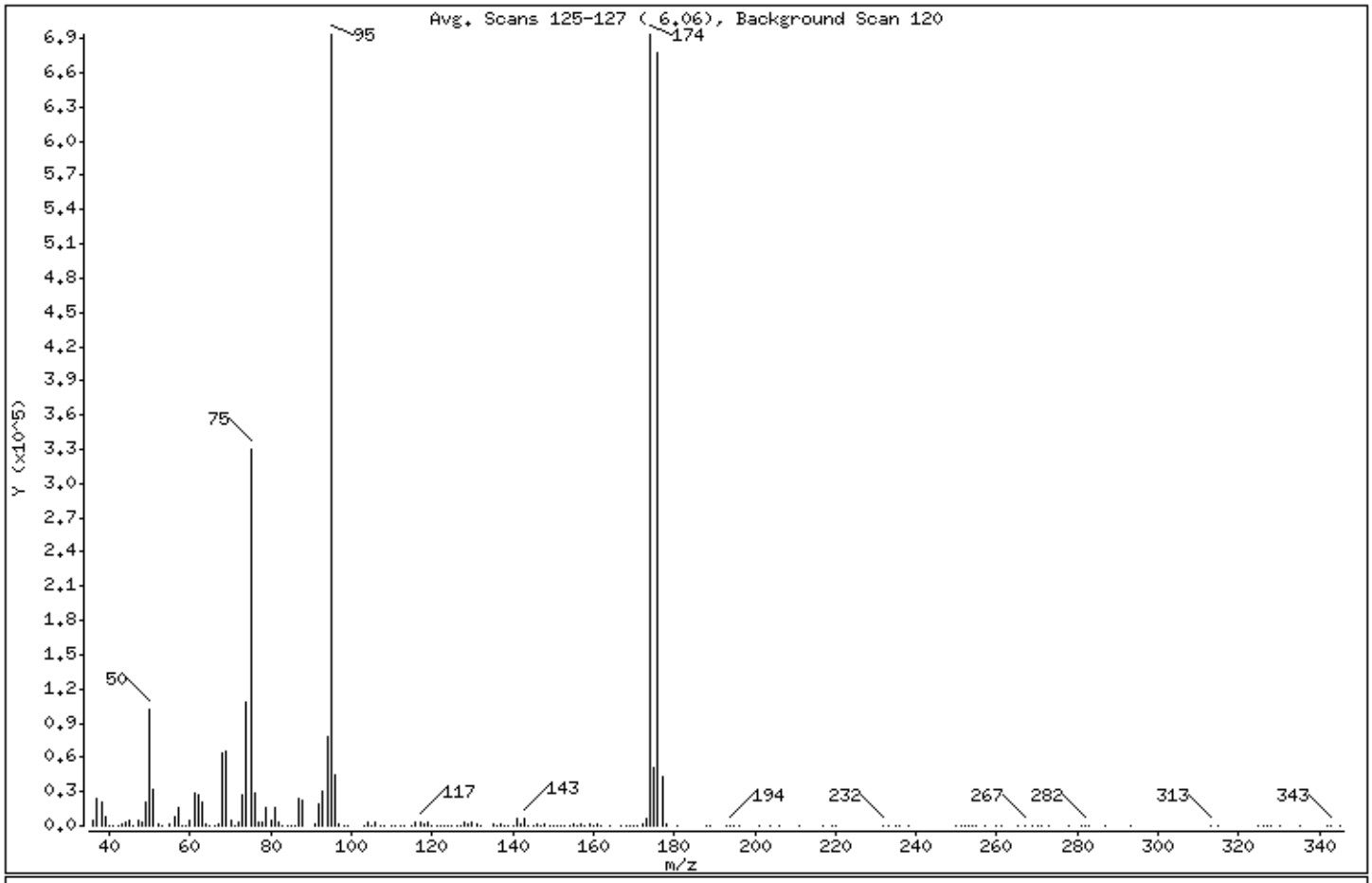
Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	14.62
75	30.00 - 66.00% of mass 95	47.58
96	5.00 - 9.00% of mass 95	6.44
173	Less than 1.99% of mass 174	1.00 (1.00)
174	50.00 - 120.00% of mass 95	99.96
175	4.00 - 9.00% of mass 174	7.43 (7.43)
176	93.00 - 101.00% of mass 174	97.67 (97.71)
177	5.00 - 9.00% of mass 176	6.30 (6.45)

Data File: /chem/msde.i/09May2016.b/e050901.d

Date : 09-MAY-2016 06:45

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00

Data File: e050901.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 181

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4782	83.00	642	138.00	236	204.00	225
37.00	23360	84.00	235	139.00	185	206.00	24
38.00	20216	85.00	428	140.00	617	211.00	112
39.00	8065	86.00	640	141.00	6814	217.00	134
40.00	554	87.00	24320	142.00	1015	219.00	25
41.00	222	88.00	21720	143.00	7098	220.00	46
42.00	236	91.00	2052	144.00	624	232.00	412
43.00	918	92.00	19408	145.00	722	233.00	87
44.00	2632	93.00	29808	146.00	1167	235.00	75
45.00	4346	94.00	77440	147.00	766	236.00	36
46.00	357	95.00	693376	148.00	2208	238.00	40
47.00	5026	96.00	44680	149.00	426	250.00	128
48.00	3105	97.00	1059	150.00	707	251.00	153
49.00	20936	98.00	197	151.00	247	252.00	143
50.00	101352	99.00	132	152.00	388	253.00	9
51.00	32400	103.00	455	153.00	760	254.00	88
52.00	1388	104.00	2535	154.00	635	255.00	70
53.00	207	105.00	249	155.00	2281	257.00	85
55.00	1596	106.00	2647	156.00	135	260.00	30
56.00	8044	107.00	748	157.00	1725	261.00	217
57.00	15975	108.00	344	158.00	324	265.00	204
58.00	700	110.00	298	159.00	1034	267.00	395
59.00	194	111.00	508	160.00	51	269.00	118
60.00	5391	112.00	576	161.00	947	270.00	129
61.00	28184	113.00	597	162.00	144	271.00	103
62.00	26976	115.00	552	164.00	219	273.00	47
63.00	20688	116.00	2714	167.00	204	278.00	36
64.00	1562	117.00	3876	168.00	181	281.00	276
65.00	689	118.00	2360	169.00	208	282.00	442
66.00	163	119.00	3202	170.00	438	283.00	122
67.00	1566	120.00	29	171.00	394	287.00	38
68.00	63496	121.00	175	172.00	1477	293.00	46
69.00	64728	122.00	152	173.00	6907	313.00	292
70.00	4395	123.00	234	174.00	693056	315.00	92
71.00	525	124.00	513	175.00	51520	325.00	5

Data File: /chem/msde.i/09May2016.b/e050901.d

Date : 09-MAY-2016 06:45

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00

Data File: e050901.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 181

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	3525	125.00	272	176.00	677184	326.00	62
73.00	27784	126.00	342	177.00	43672	327.00	129
74.00	108408	127.00	230	178.00	1479	328.00	33
75.00	329856	128.00	2559	181.00	156	330.00	84
76.00	28128	129.00	1277	188.00	64	335.00	100
77.00	3601	130.00	2663	189.00	82	342.00	101
78.00	2436	131.00	1239	193.00	90	343.00	500
79.00	15669	132.00	129	194.00	289	345.00	47
80.00	4285	135.00	1345	195.00	76		
81.00	16109	136.00	283	196.00	42		
82.00	3238	137.00	1305	201.00	44		

Eurofins Air Toxics Inc.

Data file : /chem/msde.i/18May2016.b/e051801.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 18-MAY-2016 08:21
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-1484; BFB; BFB
Misc Info : 50ng
Comment :
Method : /chem/msde.i/18May2016.b/bfb60.m
Meth Date : 03-Oct-2014 15:46 ejakob Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

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

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

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	789048			100.00- 100.00	97.35
6.063	6.235	-0.172	50	114042			8.00- 40.00	14.45
6.063	6.235	-0.172	75	371704			30.00- 66.00	47.11
6.063	6.235	-0.172	96	53006			5.00- 9.00	6.72
6.063	6.235	-0.172	173	7283			0.00- 1.99	0.90
6.063	6.235	-0.172	174	810560			50.00- 120.00	102.73
6.063	6.235	-0.172	175	60671			4.00- 9.00	7.49
6.063	6.235	-0.172	176	792021			93.00- 101.00	97.71
6.063	6.235	-0.172	177	49323			5.00- 9.00	6.23

Data File: /chem/msde.i/18May2016.b/e051801.d

Date : 18-MAY-2016 08:21

Client ID: BFB

Instrument: msde.i

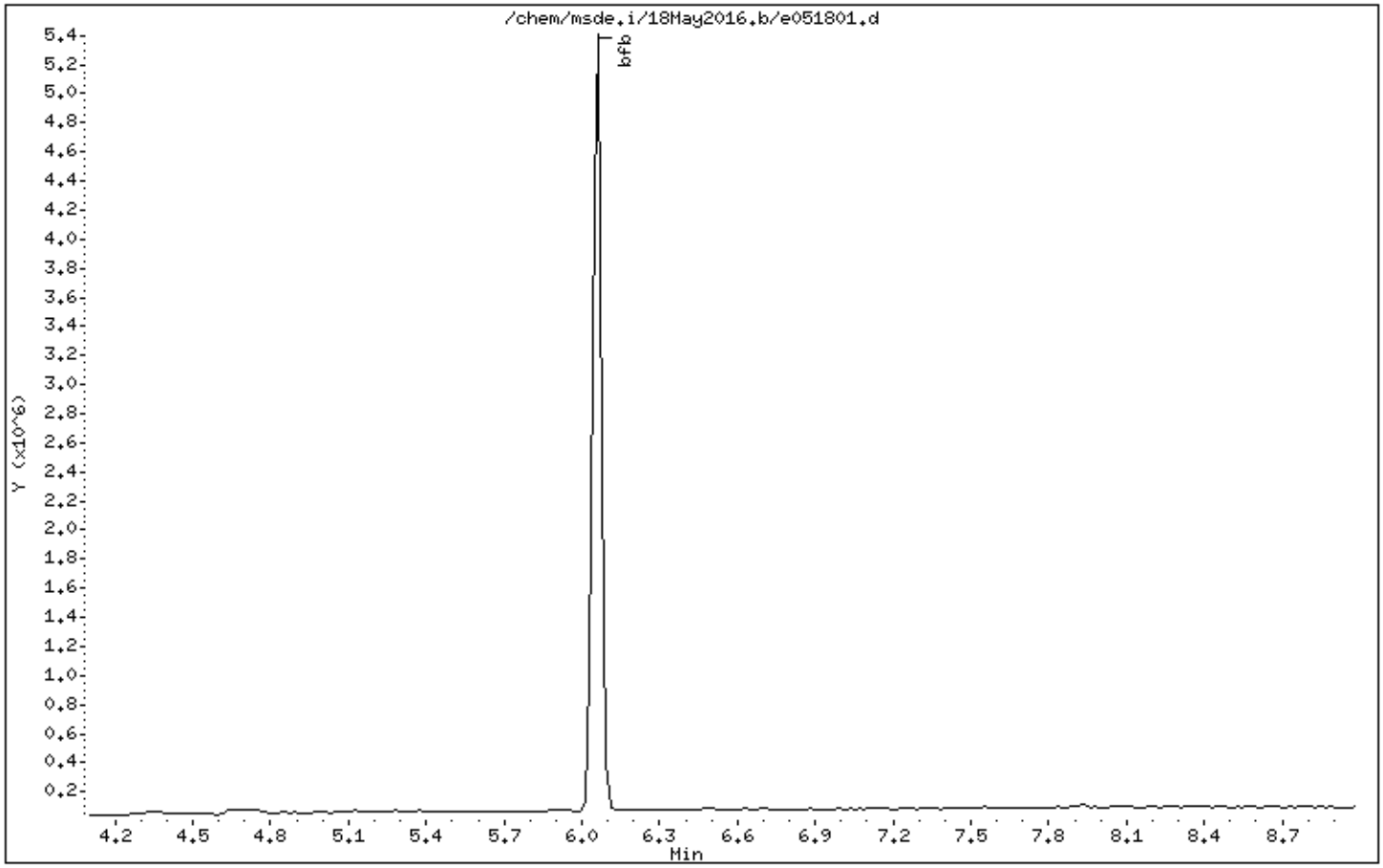
Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/18May2016.b/e051801.d

Date : 18-MAY-2016 08:21

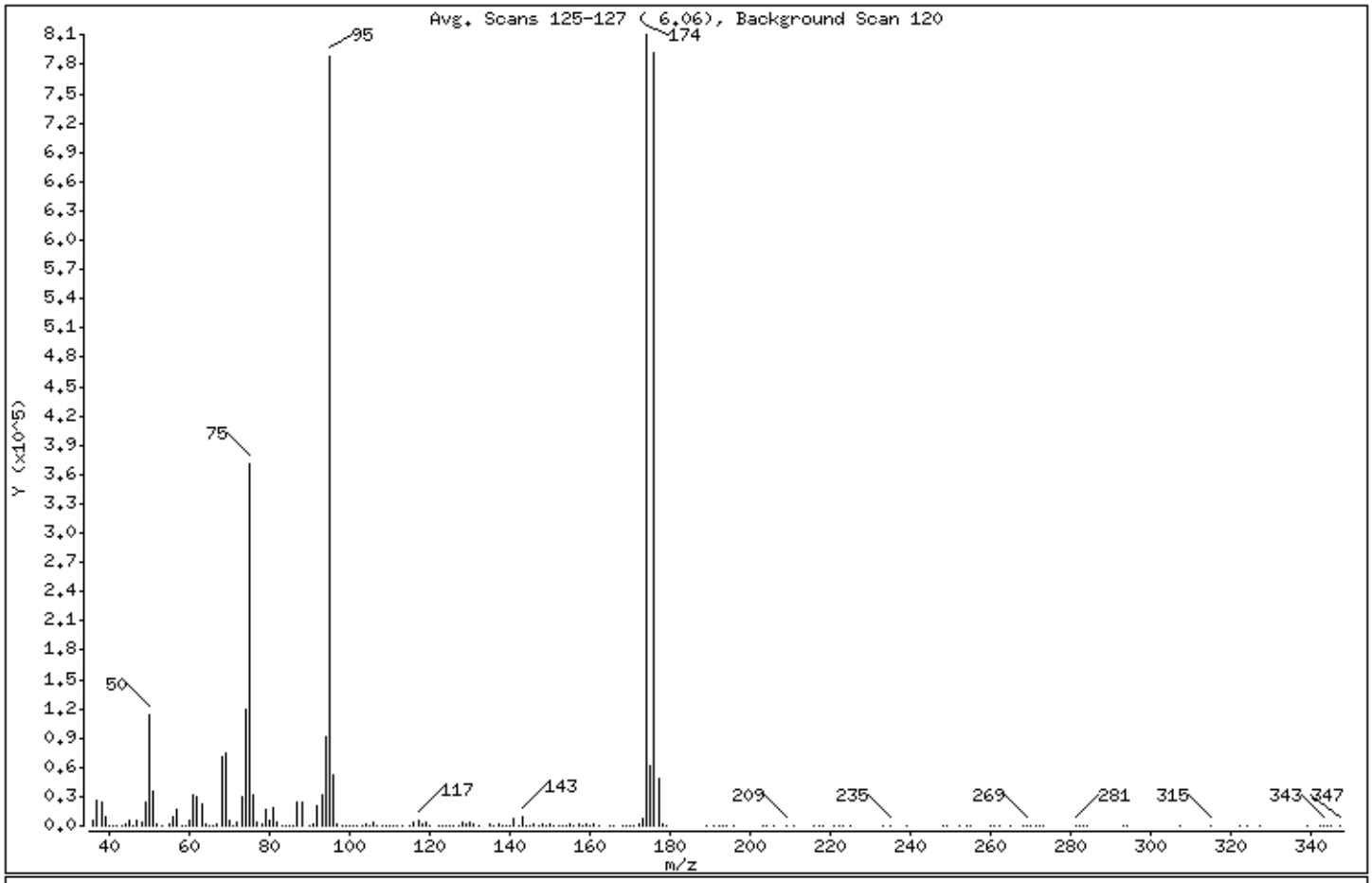
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0 Operator: ef

Column phase: Rtx-624 Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	14.45
75	30.00 - 66.00% of mass 95	47.11
96	5.00 - 9.00% of mass 95	6.72
173	Less than 1.99% of mass 174	0.92 (0.90)
174	50.00 - 120.00% of mass 95	102.73
175	4.00 - 9.00% of mass 174	7.69 (7.49)
176	93.00 - 101.00% of mass 174	100.38 (97.71)
177	5.00 - 9.00% of mass 176	6.25 (6.23)

Data File: /chem/msde.i/18May2016.b/e051801.d

Date : 18-MAY-2016 08:21

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051801.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 174.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5008	85.00	162	138.00	191	209.00	522
37.00	25992	86.00	671	139.00	256	211.00	1
38.00	23872	87.00	24576	140.00	703	216.00	52
39.00	8785	88.00	23952	141.00	8105	217.00	48
40.00	253	90.00	51	142.00	439	218.00	10
41.00	573	91.00	2195	143.00	8627	221.00	67
42.00	297	92.00	21144	144.00	702	222.00	76
43.00	668	93.00	31888	145.00	684	223.00	24
44.00	2795	94.00	91056	146.00	1623	225.00	61
45.00	5020	95.00	788992	147.00	678	233.00	77
46.00	510	96.00	53000	148.00	2181	235.00	93
47.00	5175	97.00	1608	149.00	784	239.00	93
48.00	3987	98.00	190	150.00	1023	248.00	155
49.00	24320	99.00	157	151.00	203	249.00	287
50.00	114040	100.00	74	152.00	483	252.00	144
51.00	35344	101.00	102	153.00	820	254.00	333
52.00	1907	102.00	172	154.00	548	255.00	359
53.00	244	103.00	559	155.00	2275	260.00	2
55.00	1936	104.00	2701	156.00	357	261.00	135
56.00	8721	105.00	931	157.00	1584	262.00	116
57.00	17280	106.00	2983	158.00	258	265.00	108
58.00	684	107.00	582	159.00	1054	268.00	345
59.00	379	108.00	44	160.00	94	269.00	664
60.00	5769	109.00	216	161.00	1363	270.00	142
61.00	30992	110.00	321	162.00	134	271.00	202
62.00	30688	111.00	621	165.00	97	272.00	60
63.00	22200	112.00	627	166.00	89	273.00	45
64.00	2276	113.00	638	168.00	76	281.00	667
65.00	830	115.00	623	169.00	173	282.00	81
66.00	75	116.00	3054	170.00	611	283.00	290
67.00	1185	117.00	4692	171.00	174	284.00	117
68.00	70384	118.00	2759	172.00	1582	293.00	108
69.00	73864	119.00	4132	173.00	7283	294.00	110
70.00	5131	120.00	259	174.00	810560	307.00	62
71.00	706	122.00	258	175.00	60664	315.00	69

Data File: /chem/msde.i/18May2016.b/e051801.d

Date : 18-MAY-2016 08:21

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-1484; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051801.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 174.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	3655	123.00	316	176.00	792000	322.00	61
73.00	30448	124.00	661	177.00	49320	324.00	36
74.00	119592	125.00	410	178.00	1207	327.00	131
75.00	371648	126.00	241	179.00	215	339.00	40
76.00	31944	127.00	28	189.00	278	342.00	141
77.00	4028	128.00	3124	191.00	110	343.00	607
78.00	2291	129.00	1557	192.00	16	344.00	290
79.00	16348	130.00	3262	193.00	116	345.00	191
80.00	4971	131.00	1096	194.00	74	347.00	48
81.00	17976	132.00	249	196.00	34		
82.00	3523	135.00	1412	203.00	135		
83.00	522	136.00	336	204.00	83		
84.00	156	137.00	1724	206.00	236		

Shipping/ Receiving Documents

eurofins | Air Toxics

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

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

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

For corrections call: **Brian Whittaker at 916-985-1000**

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

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

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

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

FedEx Tracking No. 783081486749

eurofins | Air Toxics

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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Terry Taylor
Collected by: (Print and Sign) Terry Taylor + David Lindstrand
Company: Anderson Mulholland Assoc. Inc. Email: TTaylor@amaconsult.com
Address: 2700 Westchester City: Purchase State: NY Zip: 10571
Phone: 914-251-0400 Fax:

Project Info:
P.O. #:
Project #:
Project Name:

Turn Around Time:
☐ Normal
☒ Rush 1-Day (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 (in Hg Vac)	Final (in Hg Vac)	Receipt	Final (psi)
01a	B7IA-1	00300	05/14/16	2011	TO-15	+30	7.5		
KKC 5/18/16 ~~02a~~	B7IA-1D	00355	05/14/16	2012	TO-15	+30	7.0		
03a	B7IA-2	N0593	05/14/16	2025	TO-15	+30	13.0		
~~04a~~	B7IA-3	00314	05/14/16	2034	TO-15	+30	10.0		
KKC 5/18/16 05a	B7IA-4	5737	05/14/16	2057	TO-15	+30	6.5		
~~06a~~	B7IA-5	6L1224	05/14/16	2004	TO-15	+30	6.5		
07a	B7IA-6	00316	05/14/16	2053	TO-15	+30	~7		

Relinquished by: (signature) Date/Time: 05/16/16 1500
Received by: (signature) Date/Time: Fed Ex

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time: ~~EATL 1025 5/17/16~~

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time: EATL 1045 5/18/16

Notes: KK 5/18/16

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No None	1605308

recieved samples 01a, 03a, 07a 5/18/16

Form 1293 rev.11

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1605308D

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: 05/19/16 11:59 pm
Date Completed: 5/19/16
Date Received: 5/18/16
PO#:
Project#:

Total $: $ 990.00
Logged By: KK

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B7IA-1	Modified TO-15	5/14/2016	5.5 "Hg	$270.00
03A	B7IA-2	Modified TO-15	5/14/2016	10.6 "Hg	$270.00
07A	B7IA-6	Modified TO-15	5/14/2016	14.9 "Hg	$270.00
08A	Lab Blank	Modified TO-15	NA	NA	$0.00
09A	CCV	Modified TO-15	NA	NA	$0.00
10A	LCS	Modified TO-15	NA	NA	$0.00
10AA	LCSD	Modified TO-15	NA	NA	$0.00

Misc. Charges	6 Liter Summa Canister (100% Certified) (3) @ $55.00 each., Shipme	$165.00
	eCVP (3) @ $5.00 each.	$15.00

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

REMARKS: A 100% surcharge is applied for a 24 hour turnaround time.

TERMS:

Reporting Method: Modified TO-15-LL + Naph

Sample Discrepancy Report

Identification

Initiated By: KK **Project ID:**19256 **PM**: BSW **Date:** 5/17/2016 **Discrepancy Type:** ☒ **1.** ☒ **2.** ☐ **3.**

Workorder(s) affected:1605308 **Sample(s) affected:** 02a; 01a, 03a, 07a

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 02a can number listed on the COC did not match what was listed on the tag.

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,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.

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: KK **Date:** 5/17/2016 **Notify Receiving:** ☐ **Notify PM:** ☒

Describe the Discrepancy: 2.4 01a, 03a, 07a samples were not received but listed on the COC NO LONGER VALID all canisters have now been received

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:BSW Person notified: Terry Taylor Date: 5/17/2016

☐ Waiting for Client Reply

Comments: **Narrate and proceed.**

_____

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

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

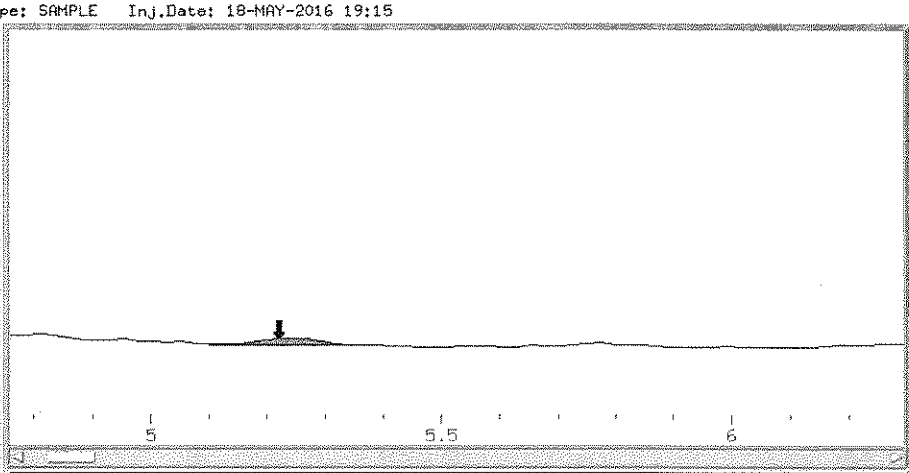
TargetReview: eeyore: 1605308D-03A: /chem/msde.i/18May2016.b/e051815.d

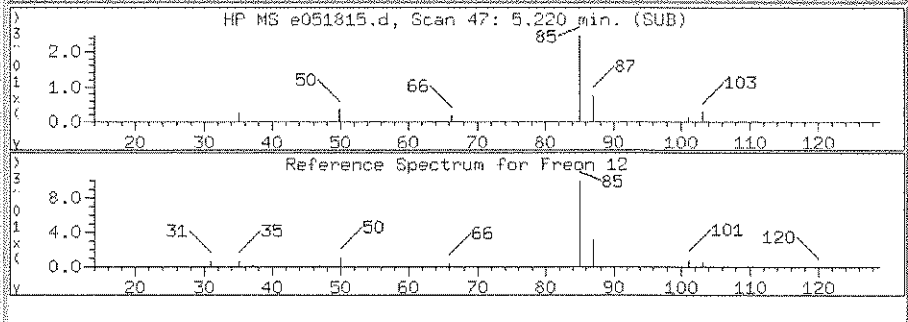
File Security Edit Display Process Spectra Help

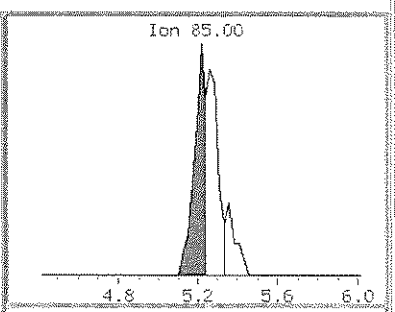
Sample: 1605308D-03A Type: SAMPLE Inj.Date: 18-MAY-2016 19:15

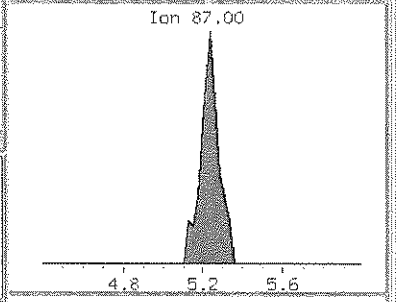
- * 11 Freon 12
- 15 Freon 114
- + 17 Chloromethane
- 25 Vinyl Chloride
- 26 1,3-Butadiene
- 29 Bromomethane
- 30 Chloroethane
- + 35 Freon 11
- + 42 Ethanol
- + 49 Freon 113
- 50 1,1-Dichloroeti
- + 52 Acetone
- + 56 Carbon Disulfi
- + 57 2-Propanol
- 58 3-Chloropropen
- + 66 Methylene Chlo
- 72 Methyl tert-bu
- 73 trans-1,2-Dich
- 78 Hexane
- 82 1,1-Dichloroeti
- 91 cis-1,2-Dichlo
- + 92 2-Butanone
- 99 Tetrahydrofura
- *+ 98 Bromochlorometi
- + 100 Chloroform

e051814.d
e051815.d
e051817.d









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.220	10987	0.09648	0.1997	100	a	
	5.244	6262			57		
2	5.269	11003	0.09654	0.1998	100	a	
	5.244	6262			57		
3	5.365	3104	0.02723	0.05637	100	a	
	5.244	6262			202		

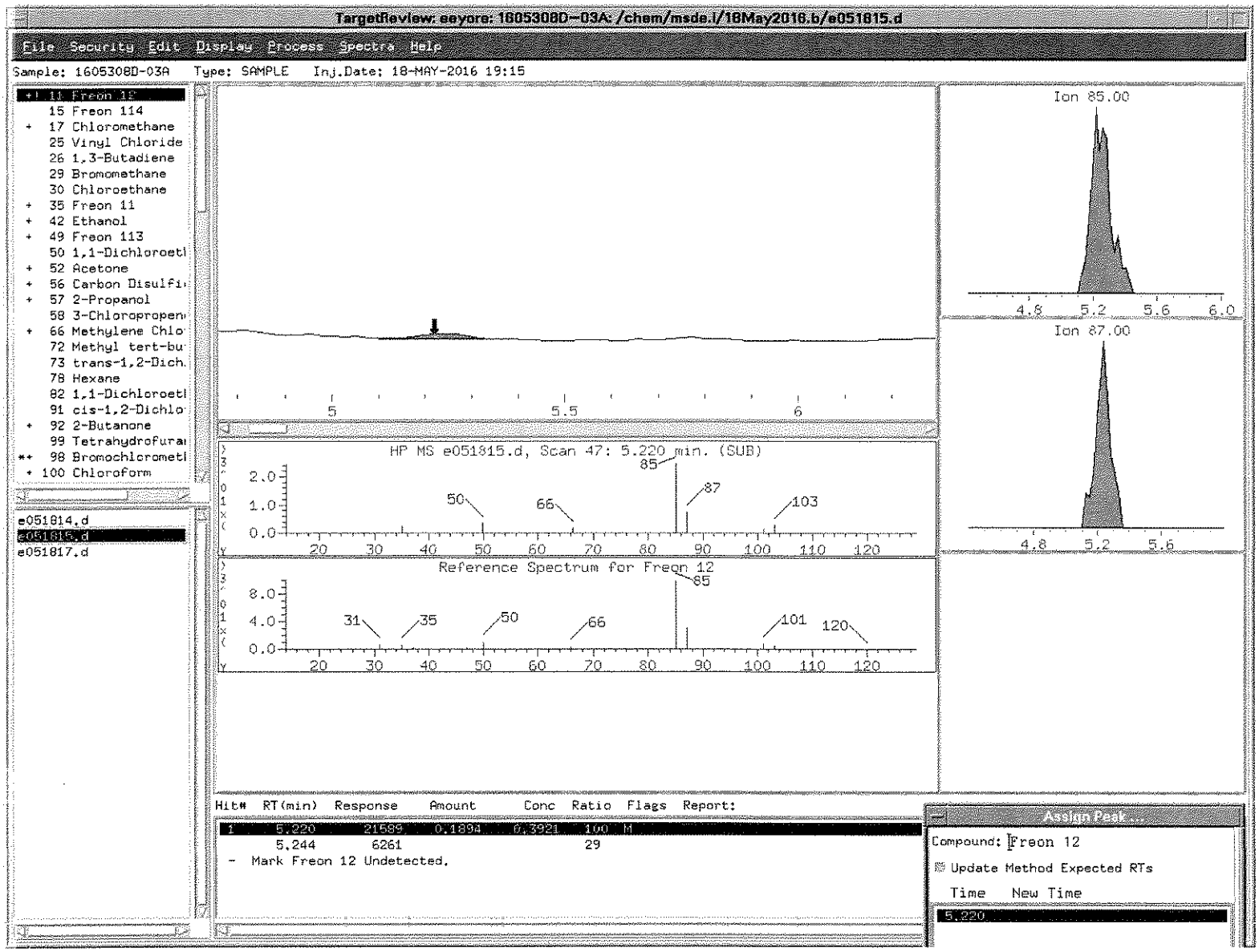
Assign Peak...

Compound: Freon 12

Update Method Expected RTs

Time	New Time
5.220	

Before



After

Mz 8/19/16

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	

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www.airtoxics.com
1-800-985-5955

Media Certification Report

Canister Number: 6L# 0355
Can#: 107384-0355
Date : 05/01/16 11:52
Data File: d043035.d

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.250	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.050	ND	ppbv
Acetone	67-64-1	0.250	ND	ppbv
Benzene	71-43-2	0.050	ND	ppbv
Ethyl Benzene	100-41-4	0.050	ND	ppbv
m,p-Xylene	108-38-3	0.050	ND	ppbv
o-Xylene	95-47-6	0.050	ND	ppbv
Toluene	108-88-3	0.050	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		100.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.250	100.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.050	104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	104.00	% Recovery
Toluene-d8	2037-26-5	0.050	98.00	% Recovery
Toluene-d8	2037-26-5	0.250	98.00	% Recovery

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Media Certification Report

Canister Number: 6L# 0593
Can#: 107384-0593
Date : 05/01/16 6:57
Data File: d043027.d

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1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.250	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.050	ND	ppbv
Acetone	67-64-1	0.250	ND	ppbv
Benzene	71-43-2	0.050	ND	ppbv
Ethyl Benzene	100-41-4	0.050	ND	ppbv
m,p-Xylene	108-38-3	0.050	ND	ppbv
o-Xylene	95-47-6	0.050	ND	ppbv
Toluene	108-88-3	0.050	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		96.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.250	96.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.050	98.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	98.00	% Recovery
Toluene-d8	2037-26-5	0.050	110.00	% Recovery
Toluene-d8	2037-26-5	0.250	110.00	% Recovery

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Media Certification Report

Canister Number: 6L# 0316
Can#: 107384-0316
Date : 05/01/16 9:25
Data File: d043031.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.250	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.050	ND	ppbv
Acetone	67-64-1	0.250	ND	ppbv
Benzene	71-43-2	0.050	ND	ppbv
Ethyl Benzene	100-41-4	0.050	ND	ppbv
m,p-Xylene	108-38-3	0.050	ND	ppbv
o-Xylene	95-47-6	0.050	ND	ppbv
Toluene	108-88-3	0.050	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		92.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.250	92.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.050	96.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	96.00	% Recovery
Toluene-d8	2037-26-5	0.050	95.00	% Recovery
Toluene-d8	2037-26-5	0.250	95.00	% Recovery

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 02/23/16
Workorder # 1605308	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 NSDT 5/18/16	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:

J flag to MDL, 2 out in CCV, 2 out in ICS.

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: LA 5/18/16	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				
NA				NA	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓					12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks, samples following bad loads on CIAAs have been verified (system blks, confirmation runs).				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: 9A, 10A - Full loads 07A Full load 30 EtOH FD01A dup w/02A

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/Instrument/ Date	D1: MC 5/19/16	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: J flag to MDL, QC exceedance

A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
		Initials/Date: MC 5/19/16	3rd Tier: *(needed only for DOD or per client request)*	
✓		Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
NA		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

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

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

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

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

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

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