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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15 (5&20 ppbv)

INVENTORY SHEET

Work Order #: 1602064C

	Page Nos. From	Page Nos. To
1. Work Order Cover Page & Laboratory Narrative	1	4
a. Lumen Validation Report	--	--
2. Sample Results and Raw Data (Organized by Sample)	5	131
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	132	138
b. Surrogate Recover Summary Form (If Applicable)	139	139
c. Internal Standard Summary Form (If Applicable)	140	140
d. Duplicate Results Summary Sheet	--	--
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	141	150
g. MDL Study (If Applicable)	--	--
h. Continuing Calibration Verification Data (Summary Sheet	151	156
i. Second Source LCS(Summary + Raw Data)	--	--
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	157	158
l. GC/MS Tune (Results + Raw Data)	159	162
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	163	164
b. Chain-of-Custody Records	165	166
c. Sample Log-In Sheet	167	168
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	--	--
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	--	--
c. Manual Calculations	--	--
d. Canister Dilution Factors	169	171
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	172	172
g. Variance Table	--	--
h. Canister Certification	--	--
i. Data Review Check Sheet	173	174

Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	2/23/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1602064C

Work Order Summary

CLIENT:	Mr. Terry Taylor Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577	**BILL TO:**	Accounts Payable Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577
PHONE:	(914) 251-0400	**P.O. #**	
FAX:		**PROJECT #**	BMS VI
DATE RECEIVED:	02/02/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/13/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B30-1IA013016	Modified TO-15 (5&20 ppbv	8.0 "Hg	5 psi
02A	B30-2IA013016	Modified TO-15 (5&20 ppbv	6.5 "Hg	5 psi
03A	B30-3IA013016	Modified TO-15 (5&20 ppbv	7.5 "Hg	5 psi
04A	B30-4IA013016	Modified TO-15 (5&20 ppbv	2.5 "Hg	5 psi
05A	B30-4DIA013016	Modified TO-15 (5&20 ppbv	10.0 "Hg	5 psi
06A	B30-5IA013016	Modified TO-15 (5&20 ppbv	8.5 "Hg	5 psi
07A	B42-1IA013016	Modified TO-15 (5&20 ppbv	9.5 "Hg	5 psi
08A	B42-2IA013016	Modified TO-15 (5&20 ppbv	7.5 "Hg	5 psi
09A	B42-3IA013016	Modified TO-15 (5&20 ppbv	6.5 "Hg	5 psi
10A	B3042AA013016	Modified TO-15 (5&20 ppbv	9.0 "Hg	5 psi
11A	B30-1SSV013116	Modified TO-15 (5&20 ppbv	4.7 "Hg	14.9 psi
12A	B30-2SSV013116	Modified TO-15 (5&20 ppbv	4.3 "Hg	14.5 psi
13A	B30-3SSV013116	Modified TO-15 (5&20 ppbv	6.1 "Hg	14.7 psi
14A	B30-4DSSV013116	Modified TO-15 (5&20 ppbv	6.3 "Hg	15 psi
15A	B30-5SSV013116	Modified TO-15 (5&20 ppbv	2.2 "Hg	14.6 psi
16A	B42-1SSV013116	Modified TO-15 (5&20 ppbv	4.5 "Hg	14.9 psi
17A	B42-2SSV013116	Modified TO-15 (5&20 ppbv	3.3 "Hg	14.9 psi
18A	B42-3SSV013116	Modified TO-15 (5&20 ppbv	3.3 "Hg	15 psi
19A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
20A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/13/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
Anderson Mulholland & Associates, Inc.
Workorder# 1602064C

Ten 6 Liter Summa Canister (100% Certified) and eight 1 Liter Summa Canister samples were received on February 02, 2016. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for Methanol was performed for the daily analytical batch. Recovery is reported as 100% in the associated results for the CCV.

Dilution was performed on sample B30-1SSV013116 due to the presence of high level non-target species.

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)	Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
B30-1IA013016	1602064C-01A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-2IA013016	1602064C-02A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-3IA013016	1602064C-03A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-4IA013016	1602064C-04A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-4DIA013016	1602064C-05A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-5IA013016	1602064C-06A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B42-1IA013016	1602064C-07A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B42-2IA013016	1602064C-08A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B42-3IA013016	1602064C-09A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B3042AA013016	1602064C-10A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-1SSV013116	1602064C-11A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-2SSV013116	1602064C-12A	1/31/2016	2/ 2/2016	NA	12	2/12/2016	NA	Good
B30-3SSV013116	1602064C-13A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
B30-4DSSV013116	1602064C-14A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
B30-5SSV013116	1602064C-15A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
B42-1SSV013116	1602064C-16A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
B42-2SSV013116	1602064C-17A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
B42-3SSV013116	1602064C-18A	1/31/2016	2/ 2/2016	NA	13	2/13/2016	NA	Good
Lab Blank	1602064C-19A	NA	NA	NA	NA	2/12/2016	NA	Good
CCV	1602064C-20A	NA	NA	NA	NA	2/12/2016	NA	Good

Sample Results and Raw Data

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

Client Sample ID: B30-1IA013016

Lab ID#: 1602064C-01A

No Detections Were Found.

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Client Sample ID: B30-1IA013016

Lab ID#: 1602064C-01A

EPA METHOD TO-15 GC/MS

File Name:	**14021306**	**Date of Collection:**	**1/31/16 10:32:00 AM**
Dil. Factor:	**1.83**	**Date of Analysis:**	**2/12/16 07:27 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	92	Not Detected	120	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021306.d
Lab Smp Id: 1602064C-01A
Inj Date : 12-FEB-2016 19:27
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #6L1261
Misc Info : 8.0"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 1.83000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.83000	Dilution Factor

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5		
4.749	4.749	(1.000)	130	100376	400.000		80.00- 120.00	100.00
4.749	4.749	(1.000)	128	77250			48.38- 108.38	76.96
4.734	4.749	(1.000)	49	177704			122.49- 182.49	177.04
* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.846	5.846	(1.000)	114	450234	400.000		80.00- 120.00	100.00
5.846	5.846	(1.000)	88	78413			0.00- 47.28	17.42
* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
8.513	8.513	(1.000)	117	372072	400.000		80.00- 120.00	100.00
8.513	8.513	(1.000)	82	249220			33.96- 93.96	66.98
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.390	5.390	(1.135)	65	180110	395.327	395.33	80.00- 120.00	100.00
5.390	5.390	(1.135)	67	92208			22.50- 82.50	51.20

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	CONCENTRATIONS FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	490011	400.321	400.32	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	58653			0.00- 42.36	11.97
7.352	7.352	(1.258)	100	309307			36.13- 96.13	63.12
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	184889	405.193	405.19	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	314391			113.45- 173.45	170.04
9.283	9.283	(1.090)	176	177688			68.10- 128.10	96.11

Report Date: 13-Feb-2016 12:08

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021306.d
Lab Smp Id: 1602064C-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 8.0"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	100376	5.51
123 1,4-Difluorobenze	432238	259343	605133	450234	4.16
163 Chlorobenzene-d5	350733	210440	491026	372072	6.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-01A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 8.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	395.33	98.83	70-130
$ 146 Toluene-d8	400.00	400.32	100.08	70-130
$ 177 4-Bromofluorobenze	400.00	405.19	101.30	70-130

Data File: /chem/msd14.i/13feb16.b/14021306.d

Date : 12-FEB-2016 19:27

Client ID:

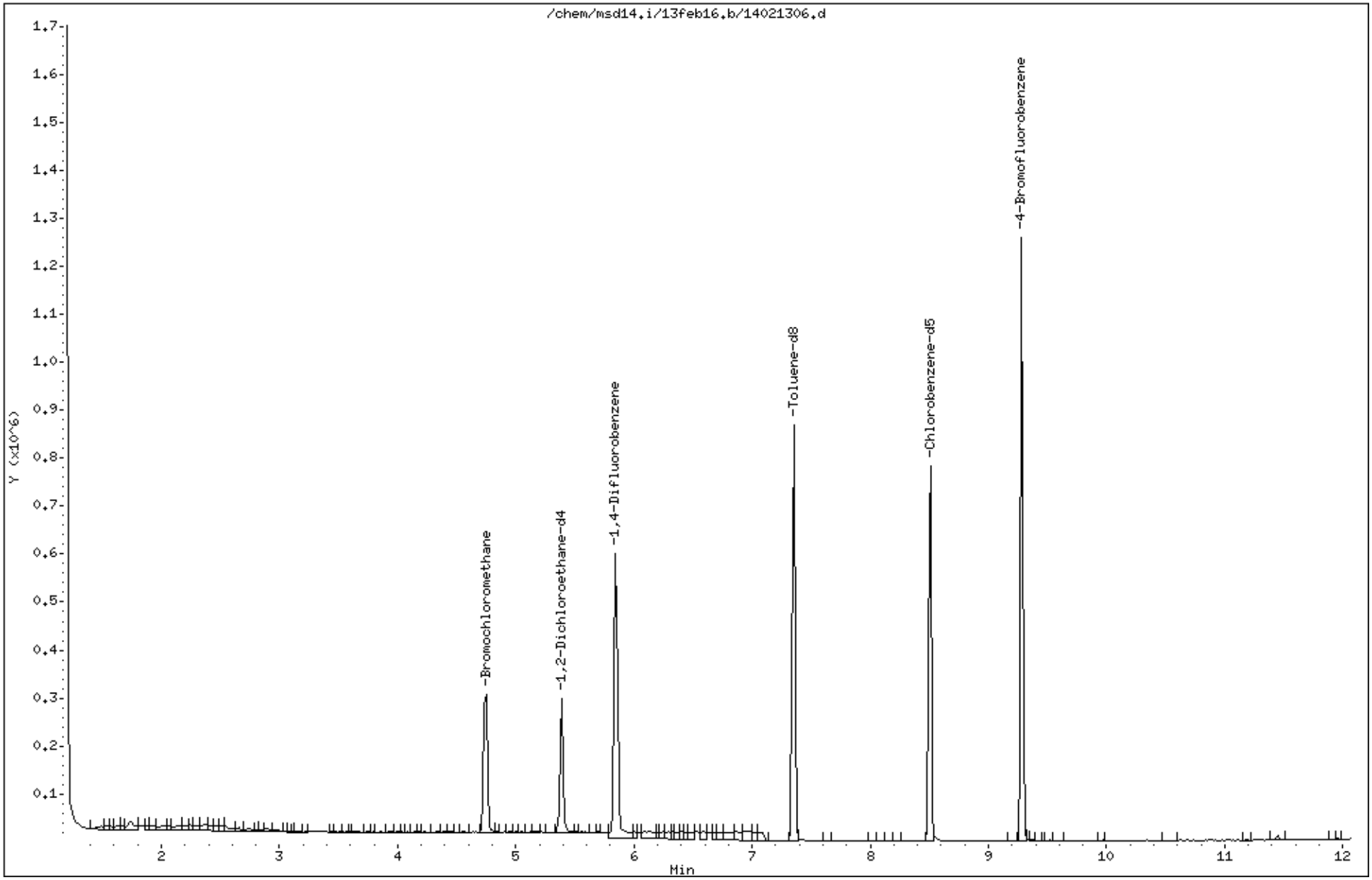
Sample Info: 50ml #6L1261

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-2IA013016

Lab ID#: 1602064C-02A

No Detections Were Found.

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Client Sample ID: B30-2IA013016

Lab ID#: 1602064C-02A

EPA METHOD TO-15 GC/MS

File Name:	**14021307**	**Date of Collection:**	**1/31/16 10:33:00 AM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**2/12/16 07:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	86	Not Detected	110	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021307.d
Lab Smp Id: 1602064C-02A
Inj Date : 12-FEB-2016 19:45
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #14872
Misc Info : 6.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 2
Dil Factor: 1.71000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.71000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	100330	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	77614			48.38- 108.38	77.36
4.749	4.749 (1.000)	49	173211			122.49- 182.49	172.64
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	443443	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	75222			0.00- 47.28	16.96
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	369887	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	253231			33.96- 93.96	68.46
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	177618	390.039	390.04	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	93603			22.50- 82.50	52.70

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	493210	409.104	409.10	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	57316			0.00- 42.36	11.62
7.352	7.352	(1.258)	100	310442			36.13- 96.13	62.94
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	181099	399.232	399.23	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	320434			113.45- 173.45	176.94
9.283	9.283	(1.090)	176	172881			68.10- 128.10	95.46

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021307.d
Lab Smp Id: 1602064C-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	100330	5.47
123 1,4-Difluorobenze	432238	259343	605133	443443	2.59
163 Chlorobenzene-d5	350733	210440	491026	369887	5.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-02A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	390.04	97.51	70-130
$ 146 Toluene-d8	400.00	409.10	102.28	70-130
$ 177 4-Bromofluorobenze	400.00	399.23	99.81	70-130

Data File: /chem/msd14.i/13feb16.b/14021307.d

Date : 12-FEB-2016 19:45

Client ID:

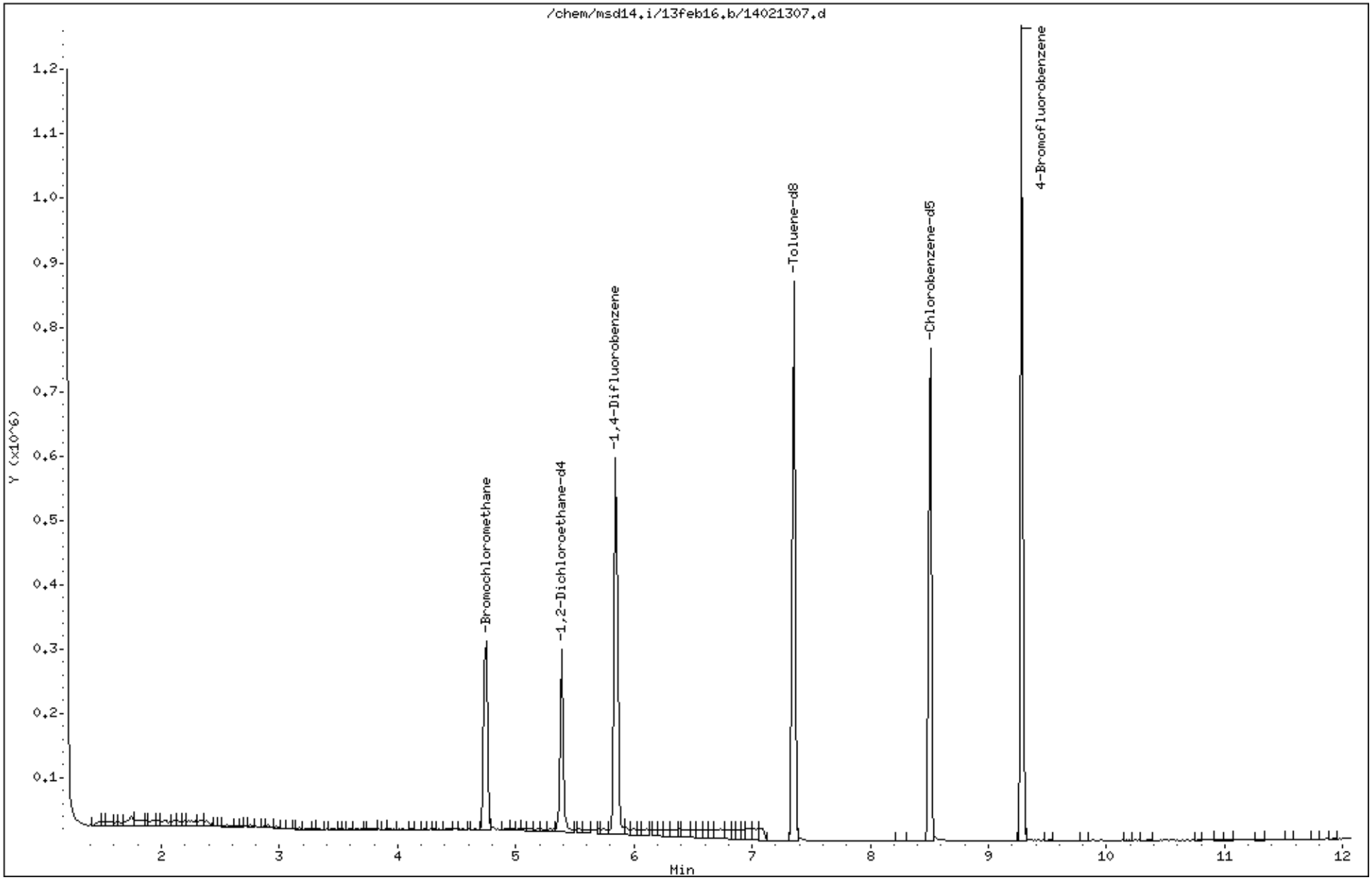
Sample Info: 50ml #14872

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-3IA013016

Lab ID#: 1602064C-03A

No Detections Were Found.

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Client Sample ID: B30-3IA013016

Lab ID#: 1602064C-03A

EPA METHOD TO-15 GC/MS

File Name:	**14021308**	**Date of Collection:**	**1/31/16 10:42:00 AM**
Dil. Factor:	**1.79**	**Date of Analysis:**	**2/12/16 08:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	90	Not Detected	120	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021308.d
Lab Smp Id: 1602064C-03A
Inj Date : 12-FEB-2016 20:03
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #34354
Misc Info : 7.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 3
Dil Factor: 1.79000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.79000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	96648	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	73994			48.38- 108.38	76.56
4.735	4.749 (1.000)	49	172039			122.49- 182.49	178.00
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	436629	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	72674			0.00- 47.28	16.64
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	361397	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	247143			33.96- 93.96	68.39
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	176449	402.232	402.23	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	90072			22.50- 82.50	51.05

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	487186	410.414	410.41	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	58167			0.00- 42.36	11.94
7.352	7.352	(1.258)	100	300301			36.13- 96.13	61.64
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	181767	410.118	410.12	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	312385			113.45- 173.45	171.86
9.283	9.283	(1.090)	176	172079			68.10- 128.10	94.67

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021308.d
Lab Smp Id: 1602064C-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 7.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	96648	1.60
123 1,4-Difluorobenze	432238	259343	605133	436629	1.02
163 Chlorobenzene-d5	350733	210440	491026	361397	3.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-03A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 7.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	402.23	100.56	70-130
$ 146 Toluene-d8	400.00	410.41	102.60	70-130
$ 177 4-Bromofluorobenze	400.00	410.12	102.53	70-130

Data File: /chem/msd14.i/13feb16.b/14021308.d

Date : 12-FEB-2016 20:03

Client ID:

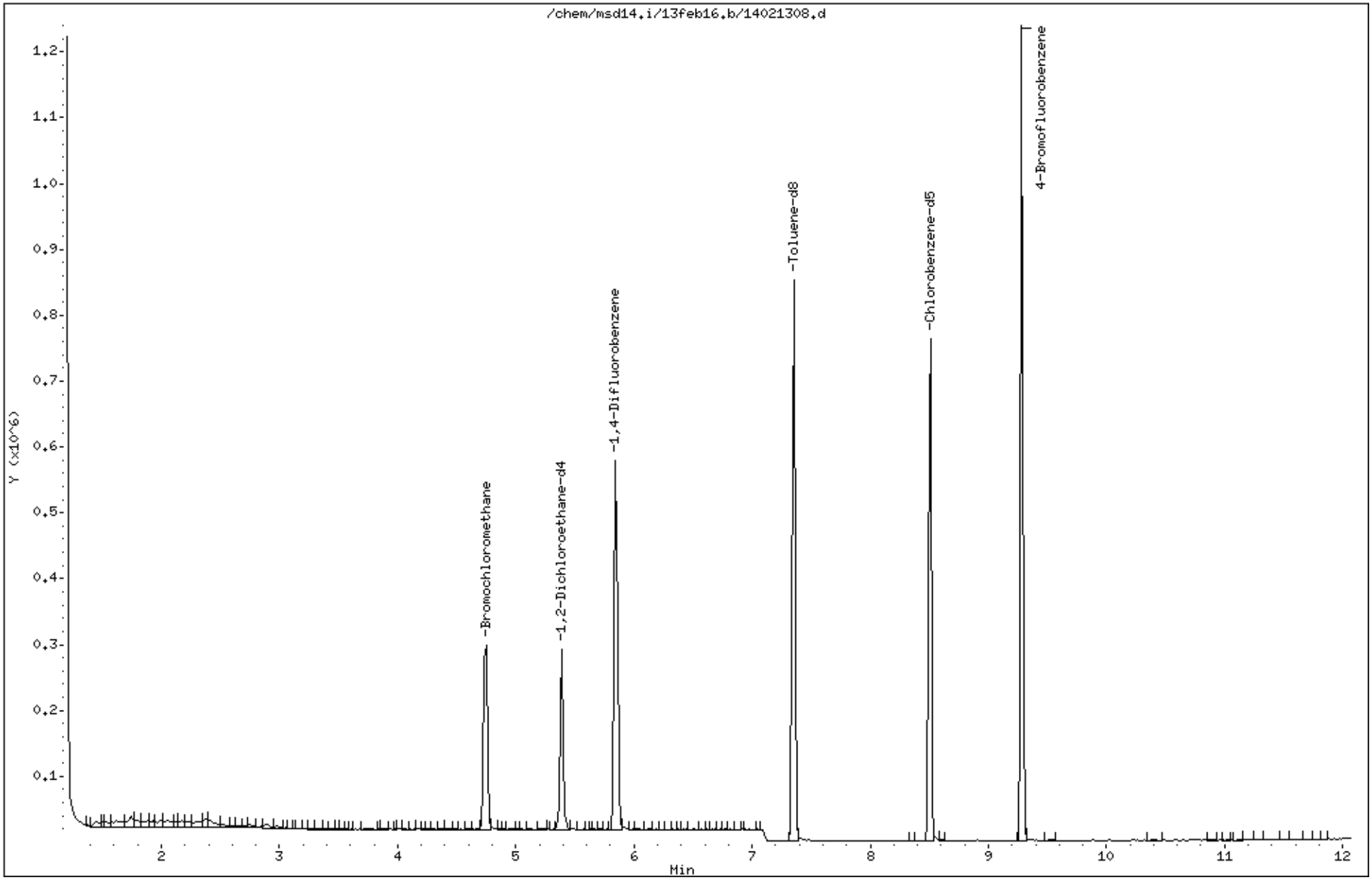
Sample Info: 50ml #34354

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-4IA013016

Lab ID#: 1602064C-04A

No Detections Were Found.

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Client Sample ID: B30-4IA013016

Lab ID#: 1602064C-04A

EPA METHOD TO-15 GC/MS

File Name:	**14021309**	**Date of Collection:**	**1/31/16 9:36:00 AM**
Dil. Factor:	**1.46**	**Date of Analysis:**	**2/12/16 08:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	73	Not Detected	96	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021309.d
Lab Smp Id: 1602064C-04A
Inj Date : 12-FEB-2016 20:22
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #34212
Misc Info : 2.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 1.46000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.46000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	94404	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	74088			48.38- 108.38	78.48
4.749	4.749 (1.000)	49	171294			122.49- 182.49	181.45
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	439376	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	74320			0.00- 47.28	16.92
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	366912	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	242101			33.96- 93.96	65.98
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	177344	413.881	413.88	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	90658			22.50- 82.50	51.12

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	CONCENTRATIONS FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	474367	397.117	397.12	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54573			0.00- 42.36	11.50
7.352	7.352	(1.258)	100	305887			36.13- 96.13	64.48
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	180364	400.835	400.83	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	308423			113.45- 173.45	171.00
9.283	9.283	(1.090)	176	174054			68.10- 128.10	96.50

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021309.d
Lab Smp Id: 1602064C-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 2.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	94404	-0.76
123 1,4-Difluorobenze	432238	259343	605133	439376	1.65
163 Chlorobenzene-d5	350733	210440	491026	366912	4.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 11feb16
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1602064C-04A
Level: LOW Operator: mjs
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 2.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	413.88	103.47	70-130
$ 146 Toluene-d8	400.00	397.12	99.28	70-130
$ 177 4-Bromofluorobenze	400.00	400.83	100.21	70-130

Data File: /chem/msd14.i/13feb16.b/14021309.d

Page 1

Date : 12-FEB-2016 20:22

Client ID:

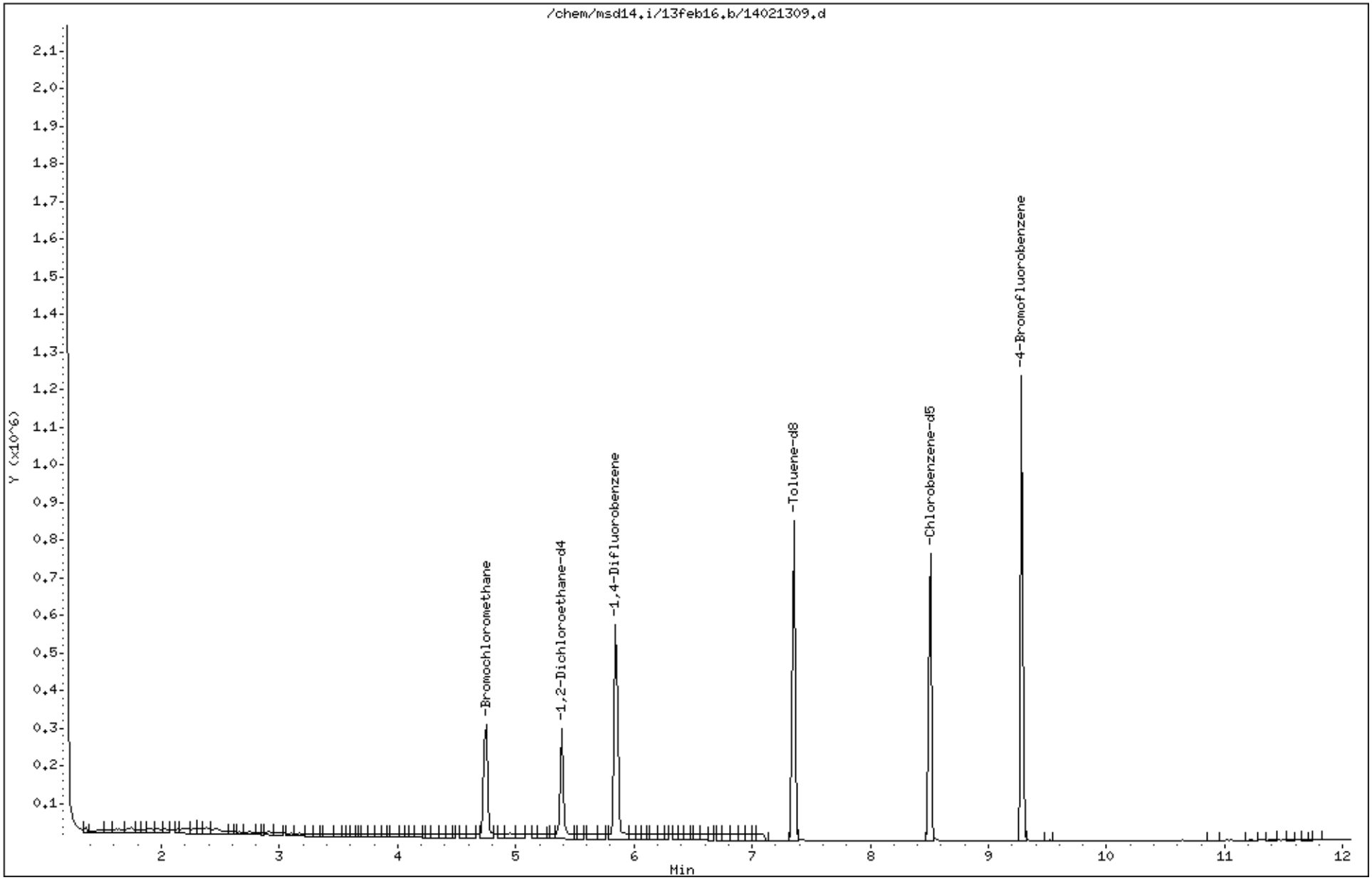
Instrument: msd14.i

Sample Info: 50ml #34212

Operator: mjs

Column phase: RTX-624

Column diameter: 0.18



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

Client Sample ID: B30-4DIA013016

Lab ID#: 1602064C-05A

No Detections Were Found.

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Client Sample ID: B30-4DIA013016

Lab ID#: 1602064C-05A

EPA METHOD TO-15 GC/MS

File Name:	**14021310**	**Date of Collection:**	**1/31/16 9:36:00 AM**
Dil. Factor:	**2.01**	**Date of Analysis:**	**2/12/16 08:39 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	100	Not Detected	130	Not Detected

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

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

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021310.d
Lab Smp Id: 1602064C-05A
Inj Date : 12-FEB-2016 20:39
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #6L0465
Misc Info : 10"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 2
Dil Factor: 2.01000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.01000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	96768	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	75976			48.38- 108.38	78.51
4.749	4.749 (1.000)	49	176708			122.49- 182.49	182.61
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	428012	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	73302			0.00- 47.28	17.13
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	363400	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	245311			33.96- 93.96	67.50
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	178588	406.603	406.60	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	90476			22.50- 82.50	50.66

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	474543	407.811	407.81	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54423			0.00- 42.36	11.47
7.352	7.352	(1.258)	100	300586			36.13- 96.13	63.34
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	177080	397.340	397.34	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	313504			113.45- 173.45	177.04
9.283	9.283	(1.090)	176	168154			68.10- 128.10	94.96

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021310.d
Lab Smp Id: 1602064C-05A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 10"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	96768	1.72
123 1,4-Difluorobenze	432238	259343	605133	428012	-0.98
163 Chlorobenzene-d5	350733	210440	491026	363400	3.61

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-05A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 10"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	406.60	101.65	70-130
$ 146 Toluene-d8	400.00	407.81	101.95	70-130
$ 177 4-Bromofluorobenze	400.00	397.34	99.33	70-130

Data File: /chem/msd14.i/13feb16.b/14021310.d

Date : 12-FEB-2016 20:39

Client ID:

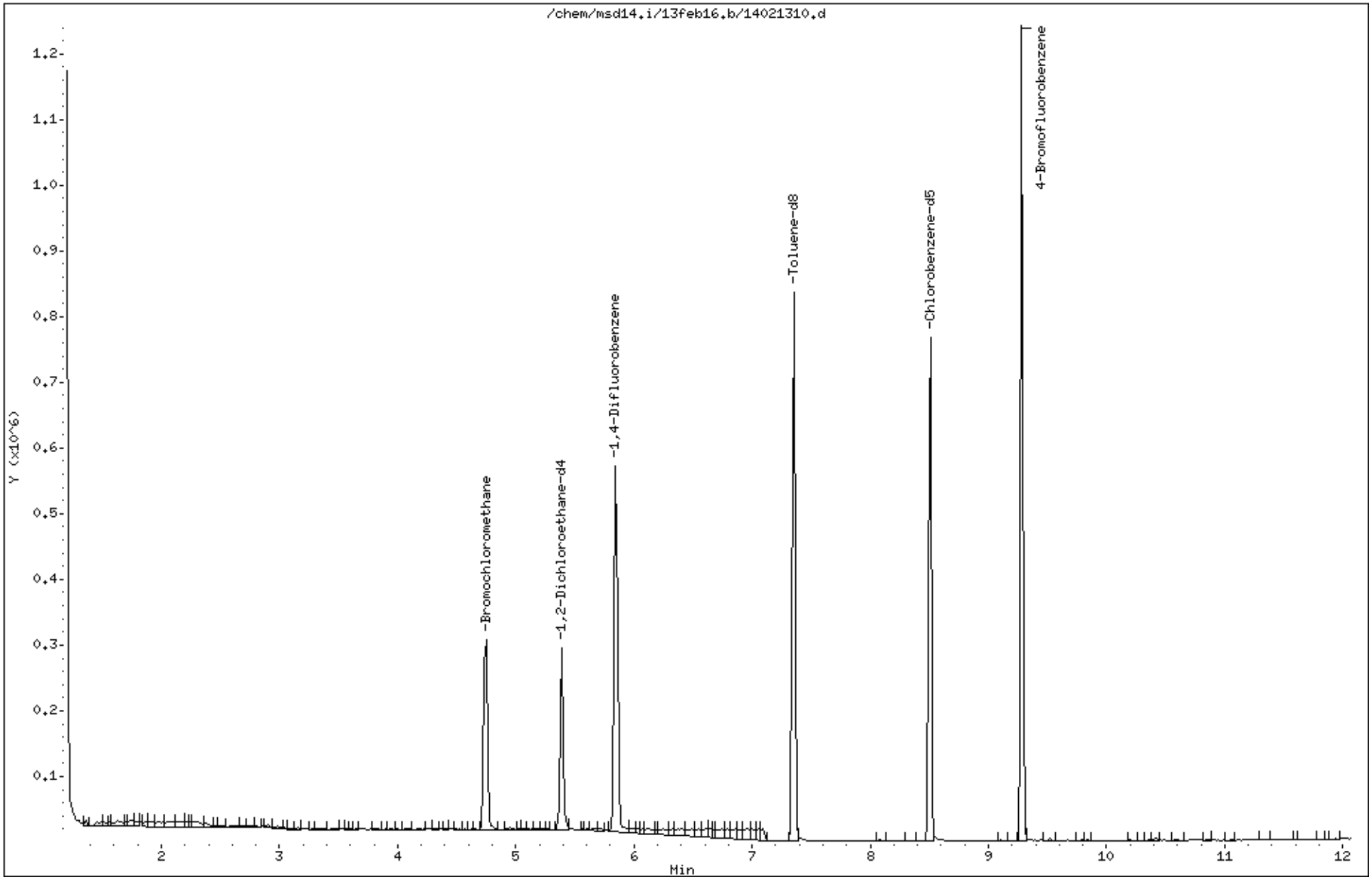
Sample Info: 50ml #6L0465

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-5IA013016

Lab ID#: 1602064C-06A

No Detections Were Found.

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Client Sample ID: B30-5IA013016

Lab ID#: 1602064C-06A

EPA METHOD TO-15 GC/MS

File Name:	**14021311**	**Date of Collection:**	**1/31/16 10:58:00 AM**
Dil. Factor:	**1.87**	**Date of Analysis:**	**2/12/16 08:58 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	94	Not Detected	120	Not Detected

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

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

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021311.d
Lab Smp Id: 1602064C-06A
Inj Date : 12-FEB-2016 20:58
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #6L1296
Misc Info : 8.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 1.87000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.87000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	93887	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	74900			48.38- 108.38	79.78
4.735	4.749 (1.000)	49	171504			122.49- 182.49	182.67
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	425133	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	71365			0.00- 47.28	16.79
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	354134	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	245585			33.96- 93.96	69.35
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	176347	413.824	413.82	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	88860			22.50- 82.50	50.39

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	472259	408.596	408.60	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54998			0.00- 42.36	11.65
7.352	7.352	(1.258)	100	299505			36.13- 96.13	63.42
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	177054	407.677	407.68	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	298806			113.45- 173.45	168.76
9.283	9.283	(1.090)	176	168621			68.10- 128.10	95.24

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021311.d
Lab Smp Id: 1602064C-06A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 8.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	93887	-1.31
123 1,4-Difluorobenze	432238	259343	605133	425133	-1.64
163 Chlorobenzene-d5	350733	210440	491026	354134	0.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-06A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 8.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	413.82	103.46	70-130
$ 146 Toluene-d8	400.00	408.60	102.15	70-130
$ 177 4-Bromofluorobenze	400.00	407.68	101.92	70-130

Data File: /chem/msd14.i/13feb16.b/14021311.d

Date : 12-FEB-2016 20:58

Client ID:

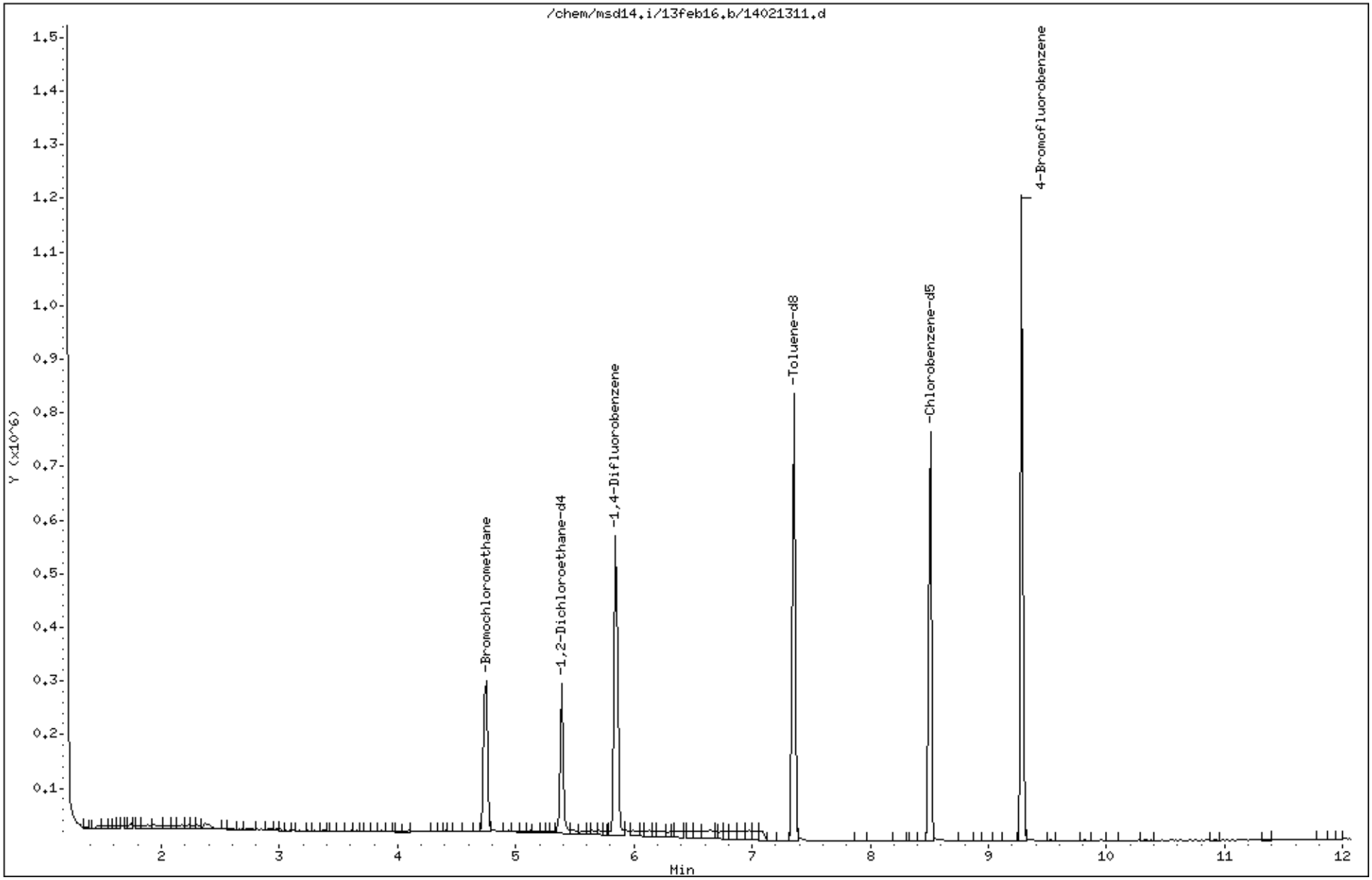
Sample Info: 50ml #6L1296

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B42-1IA013016

Lab ID#: 1602064C-07A

No Detections Were Found.

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Client Sample ID: B42-1IA013016

Lab ID#: 1602064C-07A

EPA METHOD TO-15 GC/MS

File Name:	**14021312**	**Date of Collection:**	**1/31/16 11:30:00 AM**
Dil. Factor:	**1.96**	**Date of Analysis:**	**2/12/16 09:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	98	Not Detected	130	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021312.d
Lab Smp Id: 1602064C-07A
Inj Date : 12-FEB-2016 21:16
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #34259
Misc Info : 9.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 1.96000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.96000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	95047	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	74192			48.38- 108.38	78.06
4.735	4.749 (1.000)	49	170599			122.49- 182.49	179.49
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	424987	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	74186			0.00- 47.28	17.46
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	353589	400.000		80.00- 120.00	100.00
8.499	8.513 (1.000)	82	238209			33.96- 93.96	67.37
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	172614	400.117	400.12	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	94000			22.50- 82.50	54.46

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	466346	403.620	403.62	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54774			0.00- 42.36	11.75
7.352	7.352	(1.258)	100	290985			36.13- 96.13	62.40
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	176818	407.761	407.76	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	303494			113.45- 173.45	171.64
9.283	9.283	(1.090)	176	164390			68.10- 128.10	92.97

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021312.d
Lab Smp Id: 1602064C-07A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 9.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	95047	-0.09
123 1,4-Difluorobenze	432238	259343	605133	424987	-1.68
163 Chlorobenzene-d5	350733	210440	491026	353589	0.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-07A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 9.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	400.12	100.03	70-130
$ 146 Toluene-d8	400.00	403.62	100.90	70-130
$ 177 4-Bromofluorobenze	400.00	407.76	101.94	70-130

Data File: /chem/msd14.i/13feb16.b/14021312.d

Date : 12-FEB-2016 21:16

Client ID:

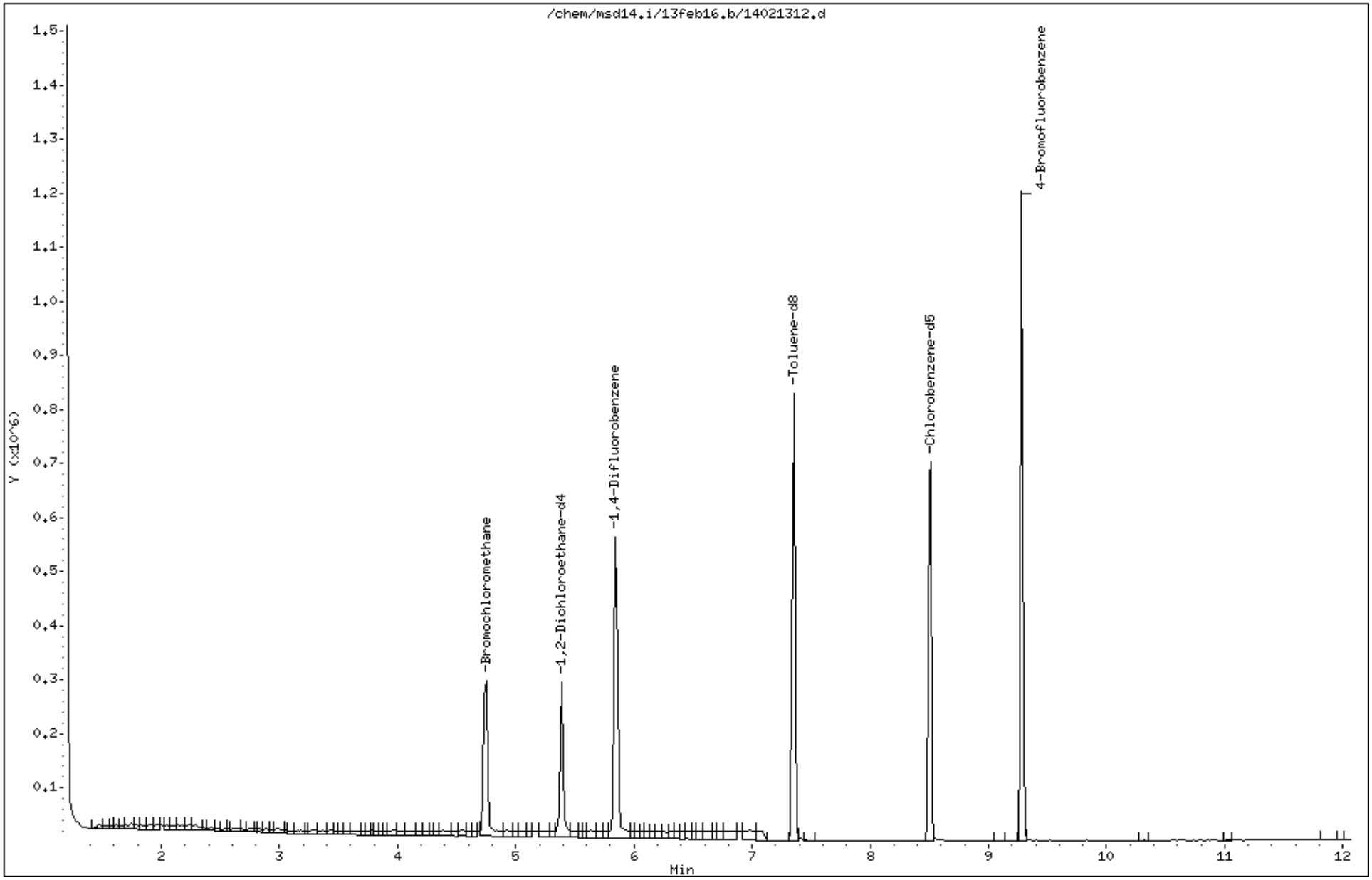
Sample Info: 50ml #34259

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B42-2IA013016

Lab ID#: 1602064C-08A

No Detections Were Found.

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Client Sample ID: B42-2IA013016

Lab ID#: 1602064C-08A

EPA METHOD TO-15 GC/MS

File Name:	**14021313**	**Date of Collection:**	**1/31/16 11:28:00 AM**
Dil. Factor:	**1.79**	**Date of Analysis:**	**2/12/16 09:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	90	Not Detected	120	Not Detected

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

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

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021313.d
Lab Smp Id: 1602064C-08A
Inj Date : 12-FEB-2016 21:35
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #96107
Misc Info : 7.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 2
Dil Factor: 1.79000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.79000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	94142	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	71999			48.38- 108.38	76.48
4.735	4.749 (1.000)	49	166150			122.49- 182.49	176.49
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	419432	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	70589			0.00- 47.28	16.83
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	346743	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	238695			33.96- 93.96	68.84
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	174037	407.295	407.29	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	87370			22.50- 82.50	50.20

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	461358	404.592	404.59	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	53126			0.00- 42.36	11.52
7.352	7.352	(1.258)	100	285562			36.13- 96.13	61.90
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	173356	407.670	407.67	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	296674			113.45- 173.45	171.14
9.283	9.283	(1.090)	176	166754			68.10- 128.10	96.19

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021313.d
Lab Smp Id: 1602064C-08A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 7.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	94142	-1.04
123 1,4-Difluorobenze	432238	259343	605133	419432	-2.96
163 Chlorobenzene-d5	350733	210440	491026	346743	-1.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-08A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 7.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	407.29	101.82	70-130
$ 146 Toluene-d8	400.00	404.59	101.15	70-130
$ 177 4-Bromofluorobenze	400.00	407.67	101.92	70-130

Data File: /chem/msd14.i/13feb16.b/14021313.d

Page 1

Date : 12-FEB-2016 21:35

Client ID:

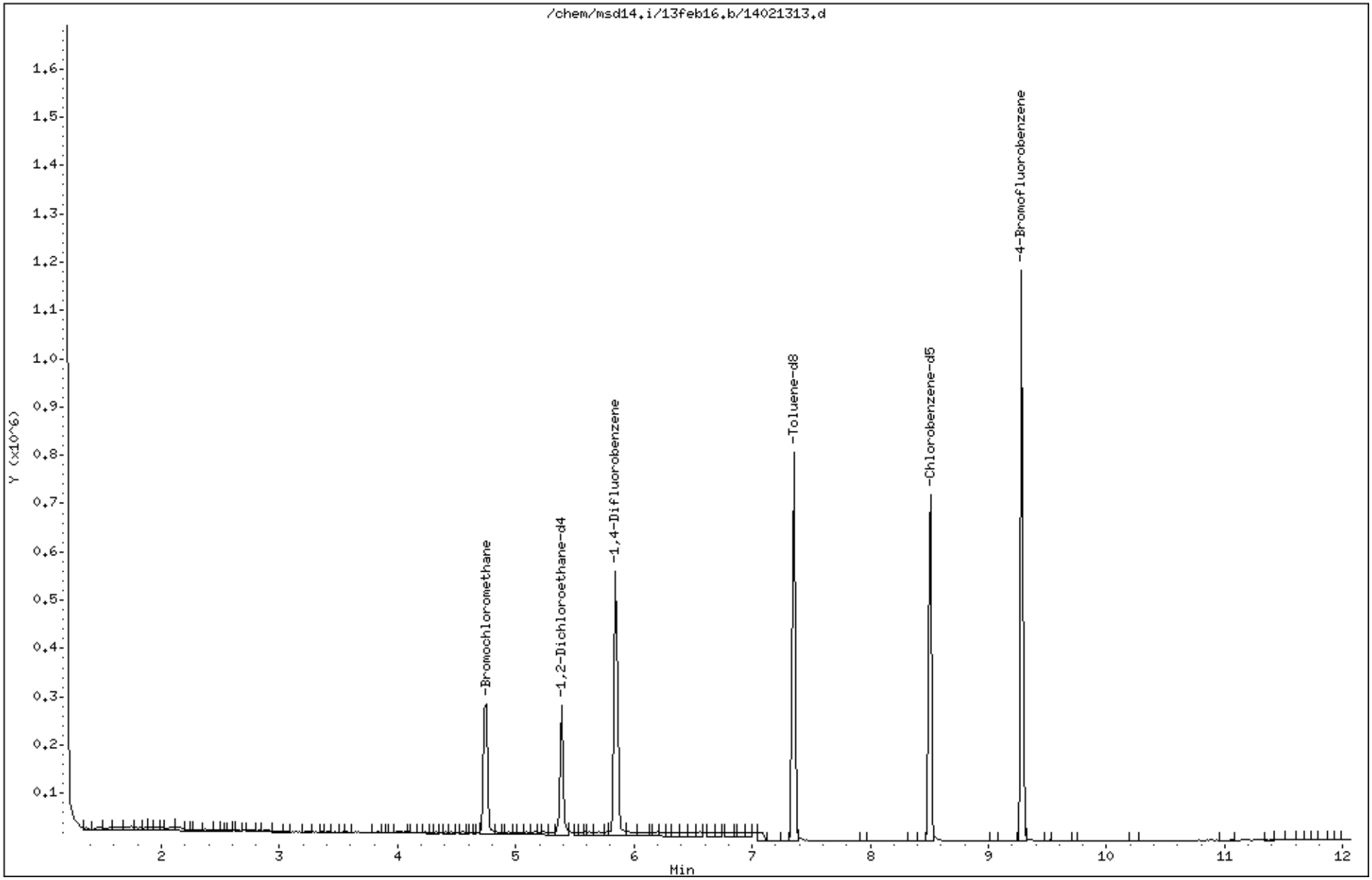
Instrument: msd14.i

Sample Info: 50ml #96107

Operator: mjs

Column phase: RTX-624

Column diameter: 0.18



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

Client Sample ID: B42-3IA013016

Lab ID#: 1602064C-09A

No Detections Were Found.

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Client Sample ID: B42-3IA013016

Lab ID#: 1602064C-09A

EPA METHOD TO-15 GC/MS

File Name:	**14021314**	**Date of Collection:**	**1/31/16 11:29:00 AM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**2/12/16 09:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	86	Not Detected	110	Not Detected

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

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

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021314.d
Lab Smp Id: 1602064C-09A
Inj Date : 12-FEB-2016 21:52
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #6L0402
Misc Info : 6.5"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 3
Dil Factor: 1.71000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.71000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	93965	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	74838			48.38- 108.38	79.64
4.735	4.749 (1.000)	49	169311			122.49- 182.49	180.18
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	414405	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	73474			0.00- 47.28	17.73
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	345170	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	236727			33.96- 93.96	68.58
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	173689	407.245	407.24	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	89064			22.50- 82.50	51.28

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	461255	409.407	409.41	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54086			0.00- 42.36	11.73
7.352	7.352	(1.258)	100	289900			36.13- 96.13	62.85
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	171609	405.400	405.40	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	295755			113.45- 173.45	172.34
9.283	9.283	(1.090)	176	162876			68.10- 128.10	94.91

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021314.d
Lab Smp Id: 1602064C-09A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.5"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	93965	-1.22
123 1,4-Difluorobenze	432238	259343	605133	414405	-4.13
163 Chlorobenzene-d5	350733	210440	491026	345170	-1.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-09A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	407.24	101.81	70-130
$ 146 Toluene-d8	400.00	409.41	102.35	70-130
$ 177 4-Bromofluorobenze	400.00	405.40	101.35	70-130

Data File: /chem/msd14.i/13feb16.b/14021314.d

Page 1

Date : 12-FEB-2016 21:52

Client ID:

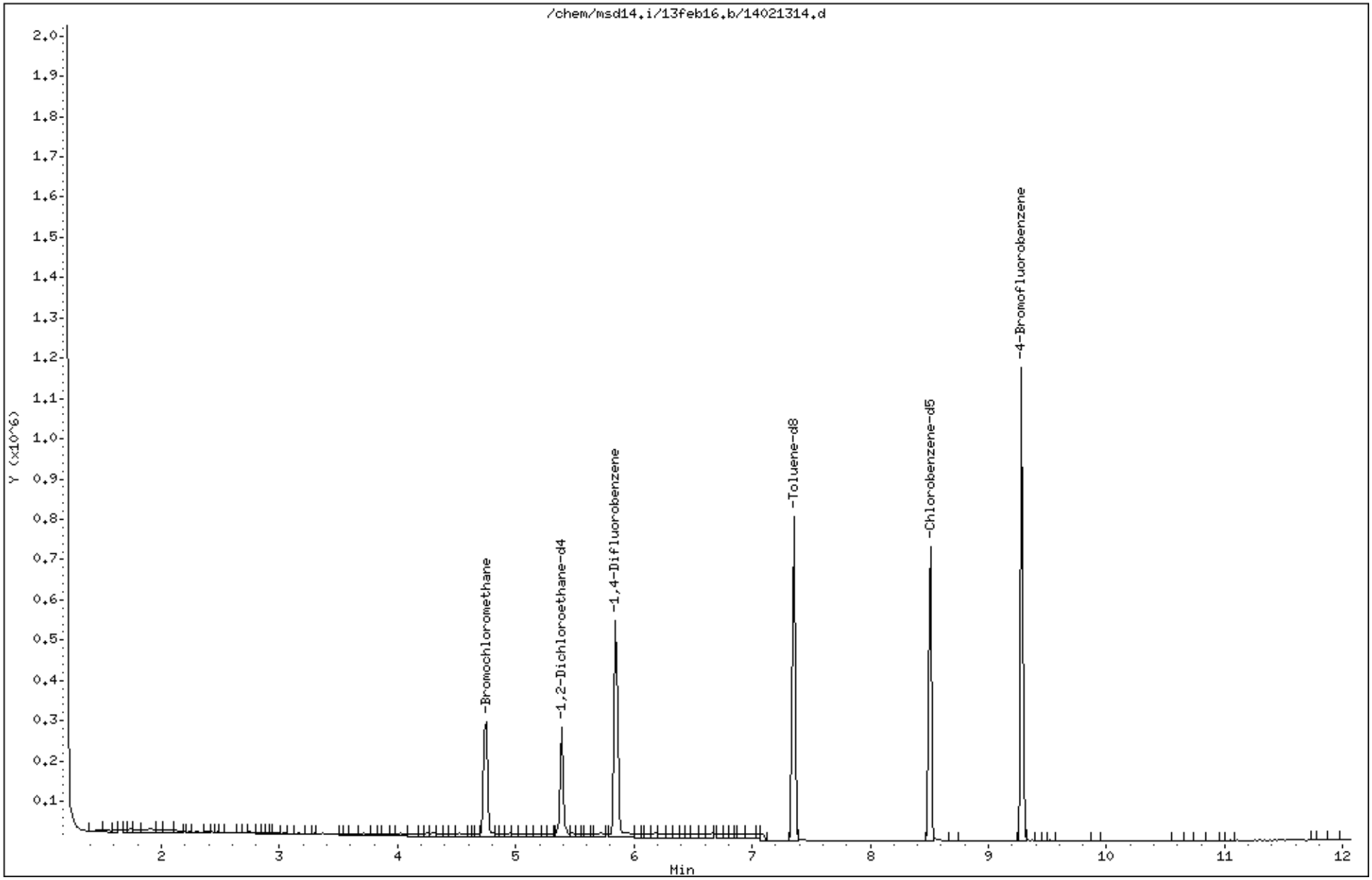
Instrument: msd14.i

Sample Info: 50ml #6L0402

Operator: mjs

Column phase: RTX-624

Column diameter: 0.18



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

Client Sample ID: B3042AA013016

Lab ID#: 1602064C-10A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B3042AA013016

Lab ID#: 1602064C-10A

EPA METHOD TO-15 GC/MS

File Name:	**14021315**	**Date of Collection:**	**1/31/16 11:07:00 AM**
Dil. Factor:	**1.91**	**Date of Analysis:**	**2/12/16 10:10 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	96	Not Detected	120	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021315.d
Lab Smp Id: 1602064C-10A
Inj Date : 12-FEB-2016 22:10
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #5672
Misc Info : 9.0"Hg -> 5.0psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 4
Dil Factor: 1.91000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.91000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	93229	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	71812			48.38- 108.38	77.03
4.735	4.749 (1.000)	49	169517			122.49- 182.49	181.83
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	422193	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	71944			0.00- 47.28	17.04
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	348402	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	235459			33.96- 93.96	67.58
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	173912	410.990	410.99	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	88751			22.50- 82.50	51.03

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	458338	399.314	399.31	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	56300			0.00- 42.36	12.28
7.352	7.352	(1.258)	100	290000			36.13- 96.13	63.27
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	174272	407.874	407.87	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	297230			113.45- 173.45	170.55
9.283	9.283	(1.090)	176	165694			68.10- 128.10	95.08

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021315.d
Lab Smp Id: 1602064C-10A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 9.0"Hg -> 5.0psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	93229	-2.00
123 1,4-Difluorobenze	432238	259343	605133	422193	-2.32
163 Chlorobenzene-d5	350733	210440	491026	348402	-0.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-10A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 9.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	410.99	102.75	70-130
$ 146 Toluene-d8	400.00	399.31	99.83	70-130
$ 177 4-Bromofluorobenze	400.00	407.87	101.97	70-130

Data File: /chem/msd14.i/13feb16.b/14021315.d

Date : 12-FEB-2016 22:10

Client ID:

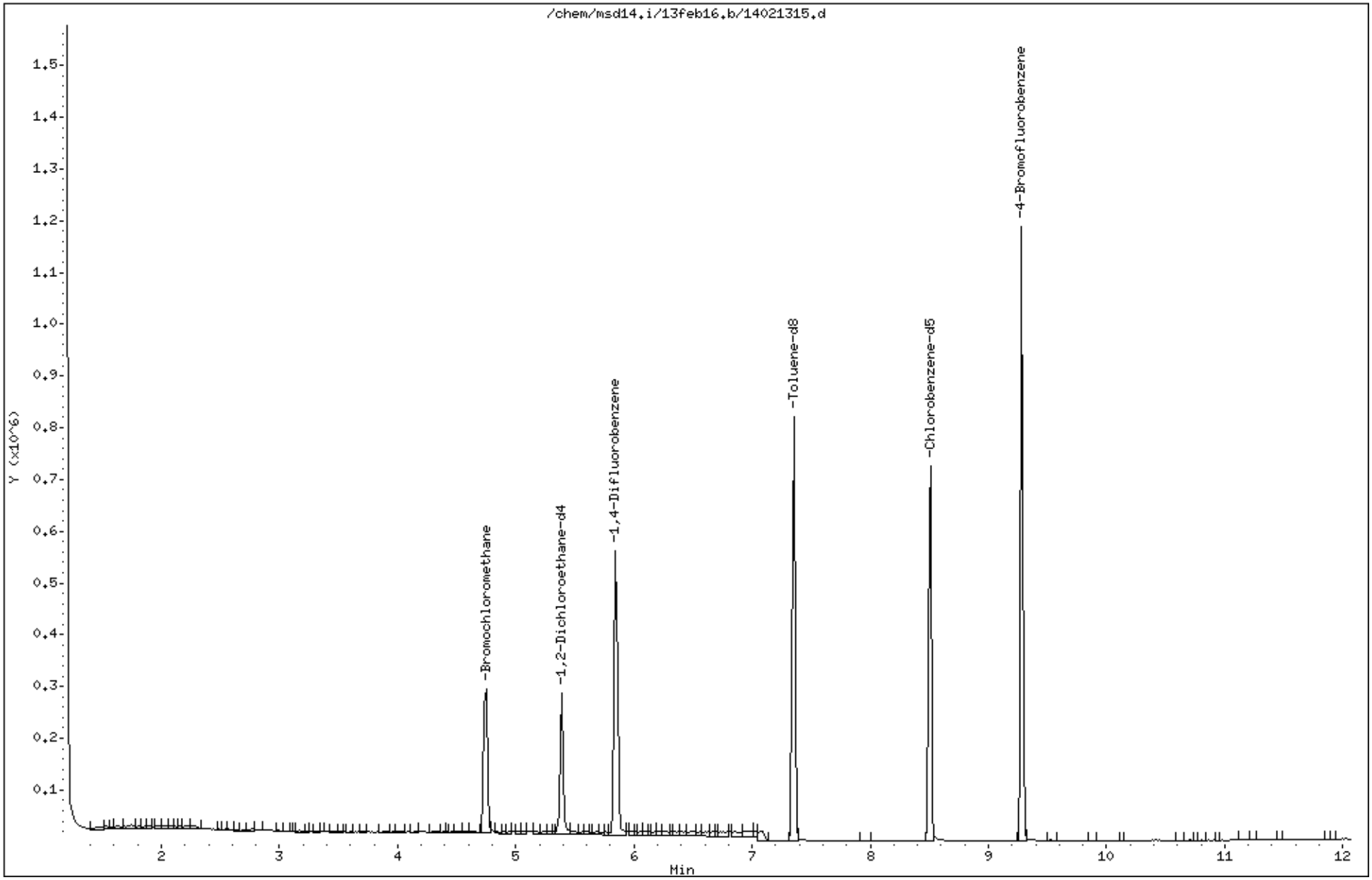
Sample Info: 50ml #5672

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-1SSV013116

Lab ID#: 1602064C-11A

No Detections Were Found.

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Client Sample ID: B30-1SSV013116

Lab ID#: 1602064C-11A

EPA METHOD TO-15 GC/MS

File Name:	**14021316**	**Date of Collection:**	**1/31/16 12:24:00 PM**
Dil. Factor:	**239**	**Date of Analysis:**	**2/12/16 10:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	12000	Not Detected	16000	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021316.d
Lab Smp Id: 1602064C-11A
Inj Date : 12-FEB-2016 22:30
Operator : mjs Inst ID: msd14.i
Smp Info : 0.5ml #1L1536
Misc Info : 4.7"Hg -> 14.9psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 5
Dil Factor: 239.00000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	239.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	91034	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	70805			48.38- 108.38	77.78
4.735	4.749 (1.000)	49	162422			122.49- 182.49	178.42
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	407153	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	67752			0.00- 47.28	16.64
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	335322	400.000		80.00- 120.00	100.00
8.499	8.513 (1.000)	82	227139			33.96- 93.96	67.74
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	165127	399.635	399.64	80.00- 120.00	100.00(a)
5.390	5.390 (1.135)	67	86913			22.50- 82.50	52.63

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	443270	400.451	400.45	80.00- 120.00	100.00(a)
7.352	7.352	(1.258)	70	51986			0.00- 42.36	11.73
7.352	7.352	(1.258)	100	281222			36.13- 96.13	63.44
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	165616	402.732	402.73	80.00- 120.00	100.00(a)
9.283	9.283	(1.090)	95	285094			113.45- 173.45	172.14
9.283	9.283	(1.090)	176	159896			68.10- 128.10	96.55

QC Flag Legend

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021316.d
Lab Smp Id: 1602064C-11A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.7"Hg -> 14.9psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	91034	-4.31
123 1,4-Difluorobenze	432238	259343	605133	407153	-5.80
163 Chlorobenzene-d5	350733	210440	491026	335322	-4.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-11A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.7"Hg -> 14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	399.64	99.91	70-130
$ 146 Toluene-d8	400.00	400.45	100.11	70-130
$ 177 4-Bromofluorobenze	400.00	402.73	100.68	70-130

Data File: /chem/msd14.i/13feb16.b/14021316.d

Date : 12-FEB-2016 22:30

Client ID:

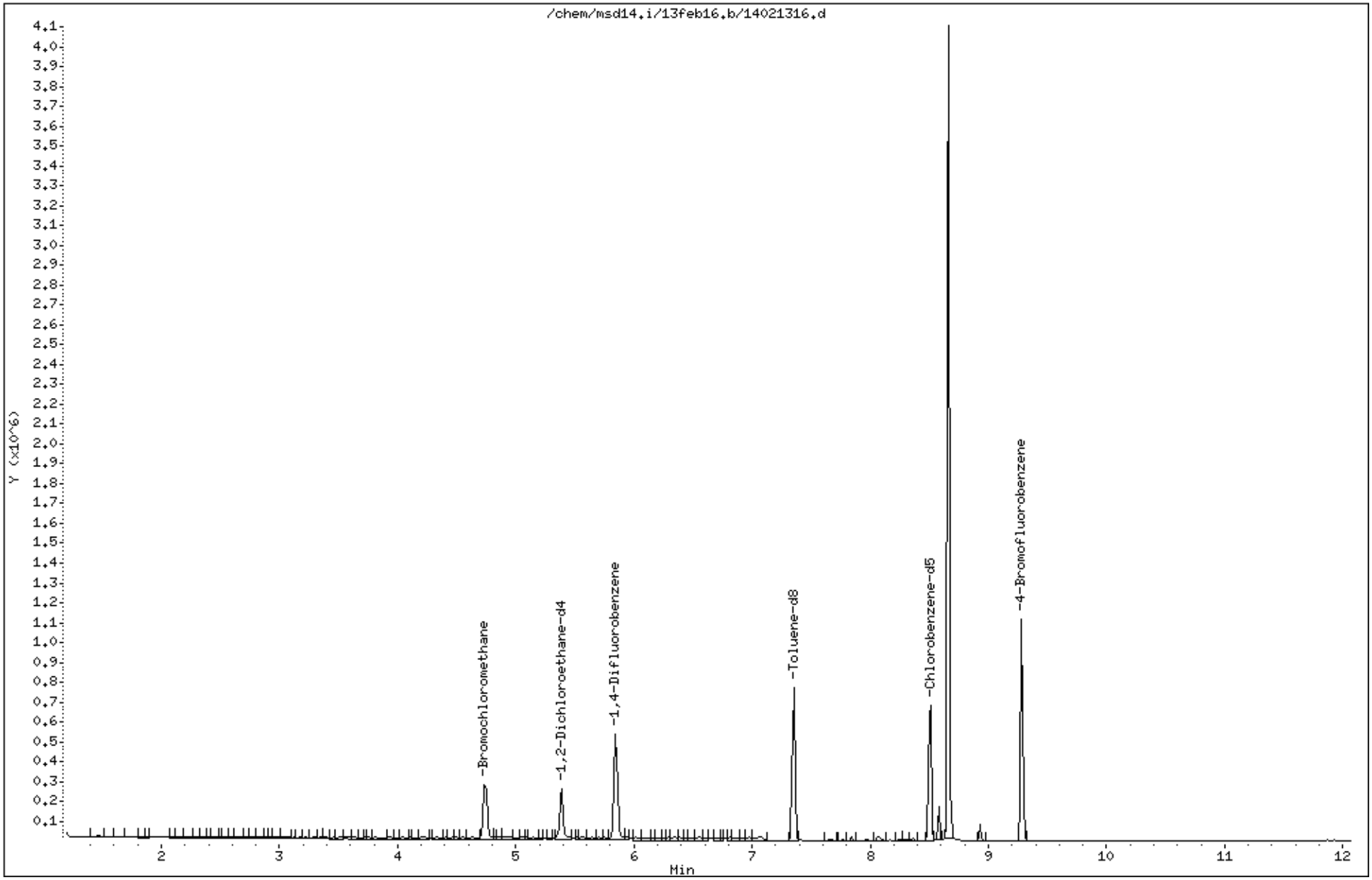
Sample Info: 0.5ml #1L1536

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-2SSV013116

Lab ID#: 1602064C-12A

No Detections Were Found.

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Client Sample ID: B30-2SSV013116

Lab ID#: 1602064C-12A

EPA METHOD TO-15 GC/MS

File Name:	**14021317**	**Date of Collection:**	**1/31/16 12:40:00 PM**
Dil. Factor:	**2.32**	**Date of Analysis:**	**2/12/16 10:50 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	120	Not Detected	150	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021317.d
Lab Smp Id: 1602064C-12A
Inj Date : 12-FEB-2016 22:50
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #8002
Misc Info : 4.3"Hg -> 14.5psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.32000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.32000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	93246	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	73022			48.38- 108.38	78.31
4.734	4.749 (1.000)	49	170576			122.49- 182.49	182.93
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	423062	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	69799			0.00- 47.28	16.50
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	347584	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	232596			33.96- 93.96	66.92
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	171946	406.267	406.27	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	90051			22.50- 82.50	52.37

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	464344	403.715	403.72	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	54228			0.00- 42.36	11.68
7.352	7.352	(1.258)	100	290916			36.13- 96.13	62.65
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	170445	399.854	399.85	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	298540			113.45- 173.45	175.15
9.283	9.283	(1.090)	176	163114			68.10- 128.10	95.70

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021317.d
Lab Smp Id: 1602064C-12A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.3"Hg -> 14.5psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	93246	-1.98
123 1,4-Difluorobenze	432238	259343	605133	423062	-2.12
163 Chlorobenzene-d5	350733	210440	491026	347584	-0.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-12A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.3"Hg -> 14.5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	406.27	101.57	70-130
$ 146 Toluene-d8	400.00	403.72	100.93	70-130
$ 177 4-Bromofluorobenze	400.00	399.85	99.96	70-130

Data File: /chem/msd14.i/13feb16.b/14021317.d

Date : 12-FEB-2016 22:50

Client ID:

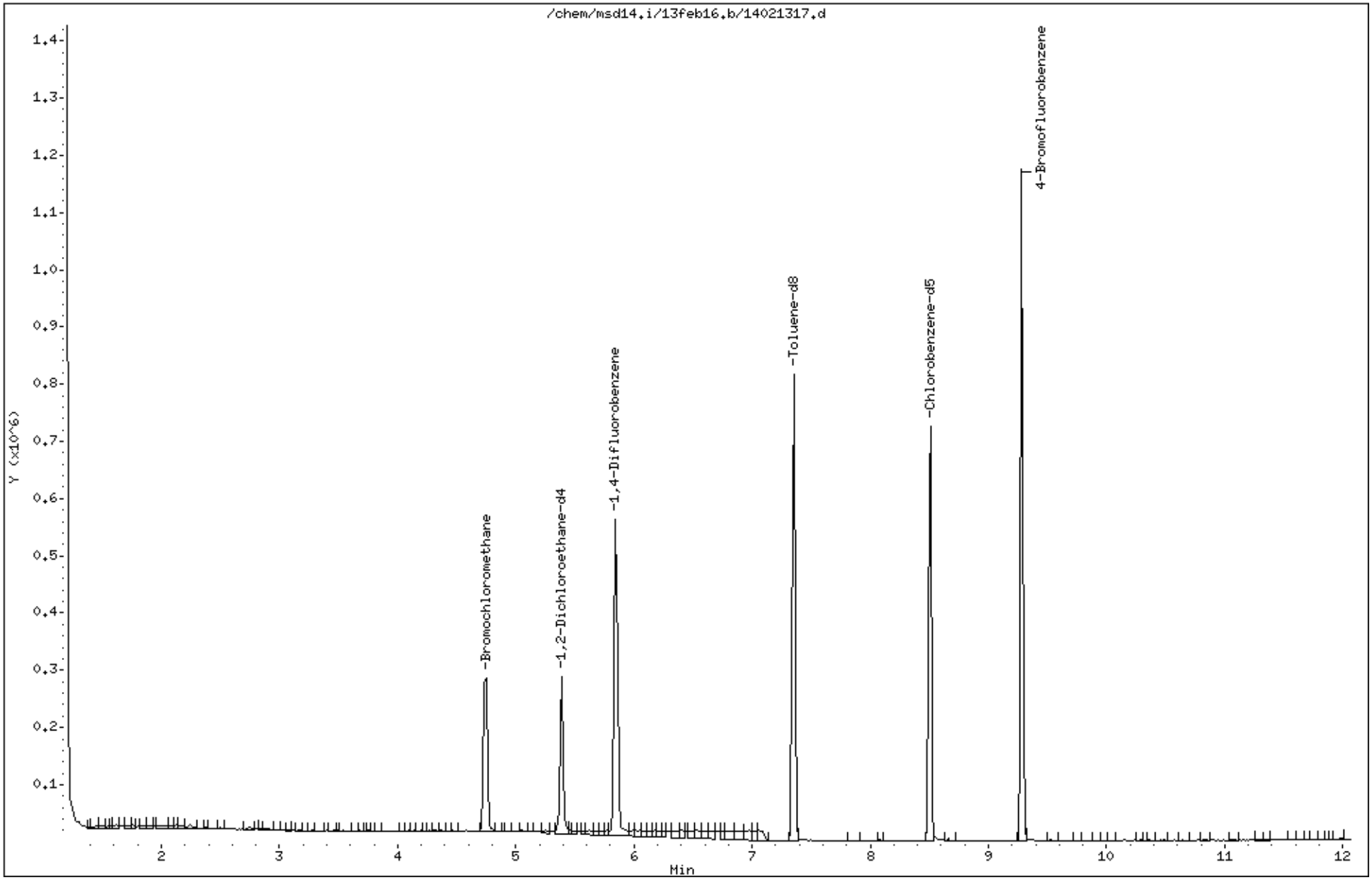
Sample Info: 50ml #8002

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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

Client Sample ID: B30-3SSV013116

Lab ID#: 1602064C-13A

No Detections Were Found.

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Client Sample ID: B30-3SSV013116

Lab ID#: 1602064C-13A

EPA METHOD TO-15 GC/MS

File Name:	**14021318**	**Date of Collection:**	**1/31/16 1:00:00 PM**
Dil. Factor:	**2.51**	**Date of Analysis:**	**2/13/16 06:18 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	120	Not Detected	160	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021318.d
Lab Smp Id: 1602064C-13A
Inj Date : 13-FEB-2016 06:18
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #34578
Misc Info : 6.1"Hg -> 14.7psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.51000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.51000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	95649	400.000		80.00- 120.00	100.00
4.734	4.749 (1.000)	128	74547			48.38- 108.38	77.94
4.734	4.749 (1.000)	49	174954			122.49- 182.49	182.91
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	426425	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	73378			0.00- 47.28	17.21
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	354152	400.000		80.00- 120.00	100.00
8.499	8.513 (1.000)	82	239940			33.96- 93.96	67.75
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	176146	405.736	405.74	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	92115			22.50- 82.50	52.30

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	462184	398.668	398.67	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	55124			0.00- 42.36	11.93
7.352	7.352	(1.258)	100	293608			36.13- 96.13	63.53
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	175808	404.788	404.79	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	299646			113.45- 173.45	170.44
9.283	9.283	(1.090)	176	171538			68.10- 128.10	97.57

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021318.d
Lab Smp Id: 1602064C-13A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.1"Hg -> 14.7psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	95649	0.55
123 1,4-Difluorobenze	432238	259343	605133	426425	-1.34
163 Chlorobenzene-d5	350733	210440	491026	354152	0.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-13A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.1"Hg -> 14.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	405.74	101.43	70-130
$ 146 Toluene-d8	400.00	398.67	99.67	70-130
$ 177 4-Bromofluorobenze	400.00	404.79	101.20	70-130

Data File: /chem/msd14.i/13feb16.b/14021318.d

Date : 13-FEB-2016 06:18

Client ID:

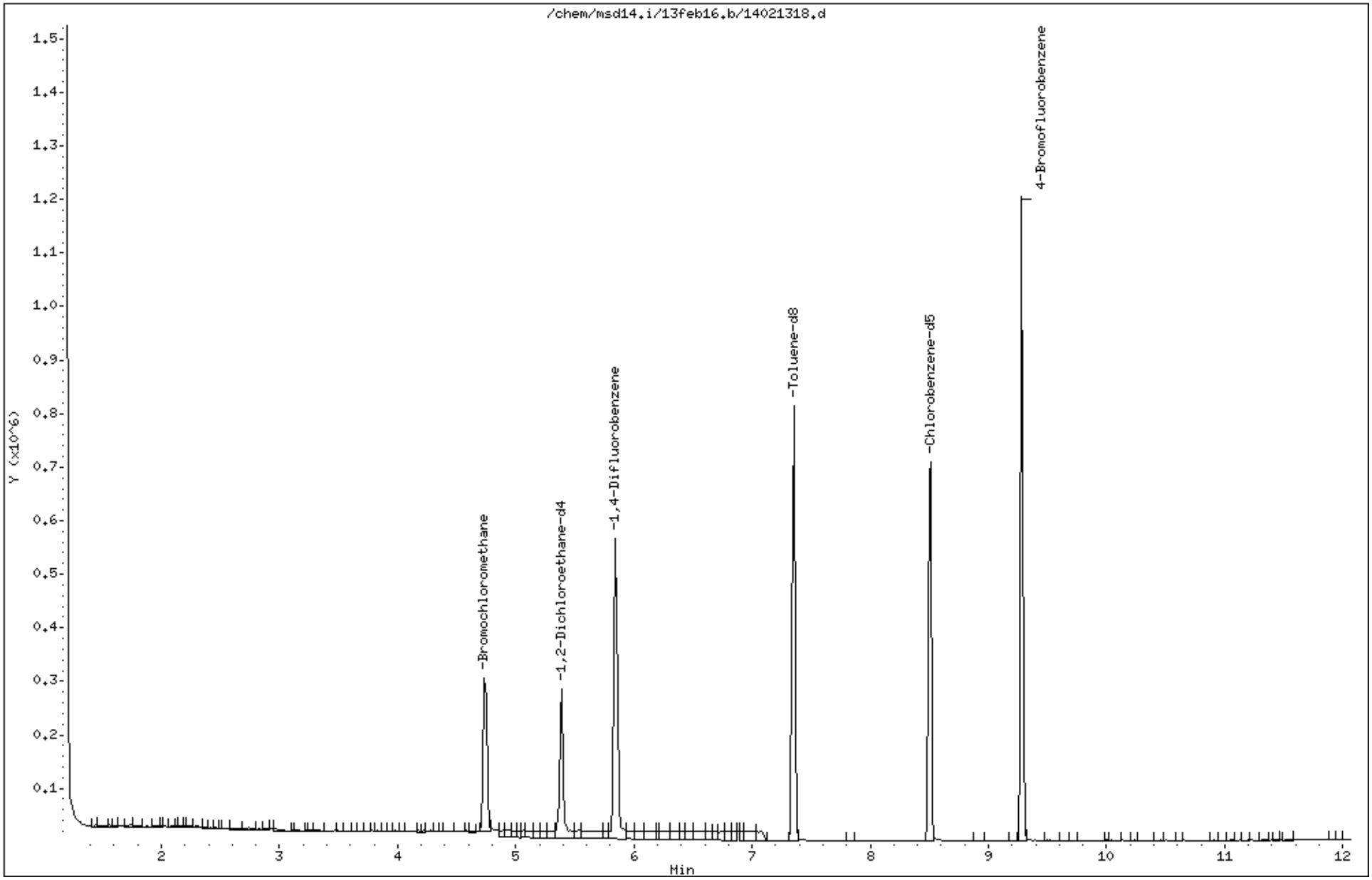
Sample Info: 50ml #34578

Column phase: RTX-624

Instrument: msd14.i

Operator: cb

Column diameter: 0.18



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

Client Sample ID: B30-4DSSV013116

Lab ID#: 1602064C-14A

No Detections Were Found.

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Client Sample ID: B30-4DSSV013116

Lab ID#: 1602064C-14A

EPA METHOD TO-15 GC/MS

File Name:	**14021319**	**Date of Collection:**	**1/31/16 1:20:00 PM**
Dil. Factor:	**2.56**	**Date of Analysis:**	**2/13/16 06:40 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	130	Not Detected	170	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021319.d
Lab Smp Id: 1602064C-14A
Inj Date : 13-FEB-2016 06:40
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #1L1942
Misc Info : 6.3"Hg -> 15psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.56000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.56000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	88665	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	70846			48.38- 108.38	79.90
4.734	4.749 (1.000)	49	166785			122.49- 182.49	188.11
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	403140	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	70686			0.00- 47.28	17.53
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	337212	400.000		80.00- 120.00	100.00
8.499	8.513 (1.000)	82	231076			33.96- 93.96	68.53
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	168301	418.204	418.20	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	85401			22.50- 82.50	50.74

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	447499	408.297	408.30	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	51712			0.00- 42.36	11.56
7.352	7.352	(1.258)	100	279056			36.13- 96.13	62.36
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	171093	413.721	413.72	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	292033			113.45- 173.45	170.69
9.283	9.283	(1.090)	176	164973			68.10- 128.10	96.42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021319.d
Lab Smp Id: 1602064C-14A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.3"Hg -> 15psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	88665	-6.80
123 1,4-Difluorobenze	432238	259343	605133	403140	-6.73
163 Chlorobenzene-d5	350733	210440	491026	337212	-3.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-14A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 6.3"Hg -> 15psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	418.20	104.55	70-130
$ 146 Toluene-d8	400.00	408.30	102.07	70-130
$ 177 4-Bromofluorobenze	400.00	413.72	103.43	70-130

Data File: /chem/msd14.i/13feb16.b/14021319.d

Date : 13-FEB-2016 06:40

Client ID:

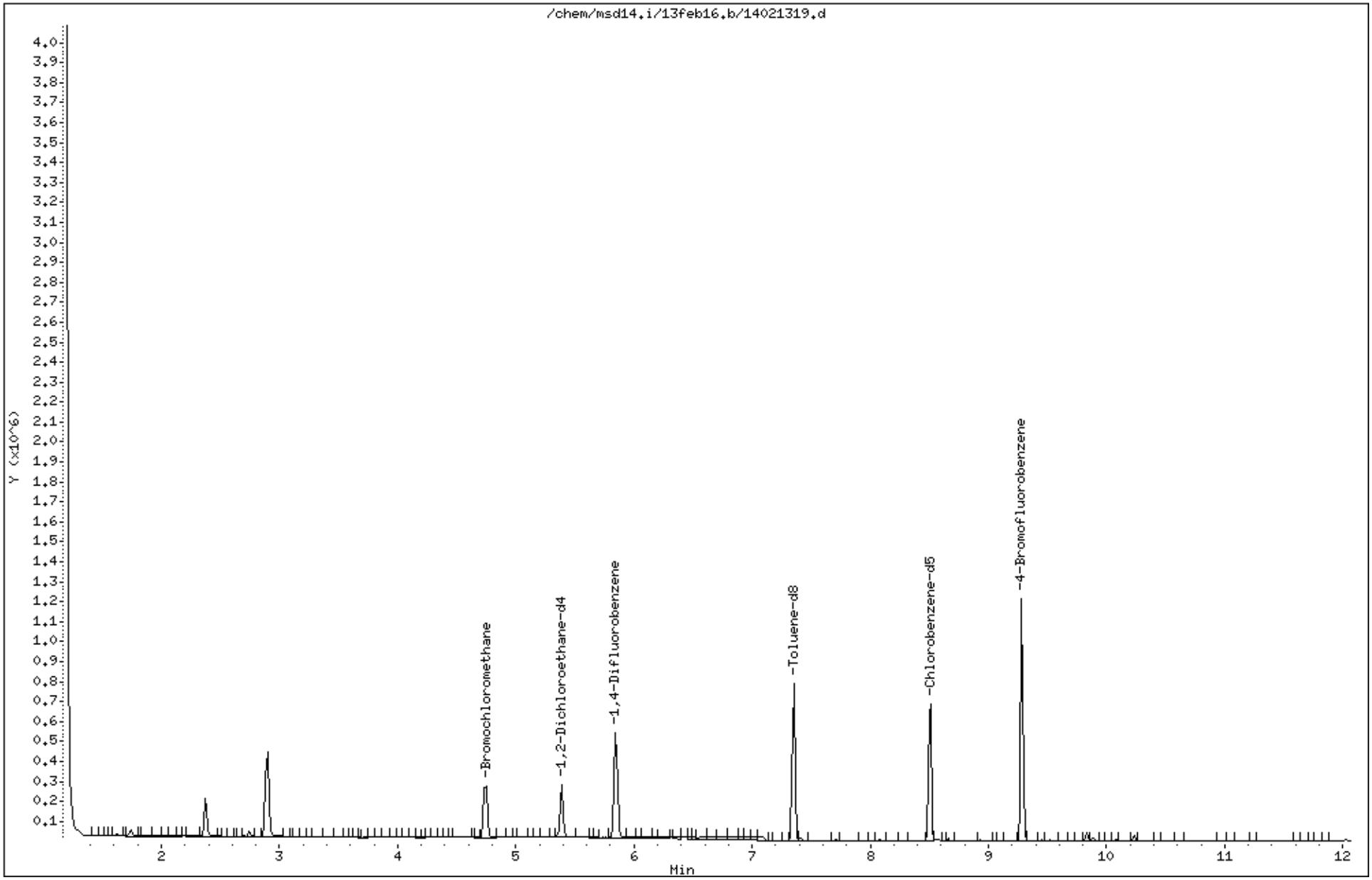
Instrument: msd14.i

Sample Info: 50ml #1L1942

Operator: cb

Column phase: RTX-624

Column diameter: 0.18



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

Client Sample ID: B30-5SSV013116

Lab ID#: 1602064C-15A

No Detections Were Found.

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Client Sample ID: B30-5SSV013116

Lab ID#: 1602064C-15A

EPA METHOD TO-15 GC/MS

File Name:	**14021320**	**Date of Collection:**	**1/31/16 1:49:00 PM**
Dil. Factor:	**2.15**	**Date of Analysis:**	**2/13/16 07:00 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	110	Not Detected	140	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021320.d
Lab Smp Id: 1602064C-15A
Inj Date : 13-FEB-2016 07:00
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #11446
Misc Info : 2.2"Hg -> 14.6psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.15000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.15000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	90933	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	71774			48.38- 108.38	78.93
4.734	4.749 (1.000)	49	169498			122.49- 182.49	186.40
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	411848	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	69227			0.00- 47.28	16.81
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	343963	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	229952			33.96- 93.96	66.85
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	166875	404.318	404.32	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	88948			22.50- 82.50	53.30

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	454904	406.276	406.28	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	50922			0.00- 42.36	11.19
7.352	7.352	(1.258)	100	285006			36.13- 96.13	62.65
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	169699	402.297	402.30	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	295477			113.45- 173.45	174.12
9.283	9.283	(1.090)	176	161339			68.10- 128.10	95.07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021320.d
Lab Smp Id: 1602064C-15A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 2.2"Hg -> 14.6psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	90933	-4.41
123 1,4-Difluorobenze	432238	259343	605133	411848	-4.72
163 Chlorobenzene-d5	350733	210440	491026	343963	-1.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-15A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 2.2"Hg -> 14.6psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	404.32	101.08	70-130
$ 146 Toluene-d8	400.00	406.28	101.57	70-130
$ 177 4-Bromofluorobenze	400.00	402.30	100.57	70-130

Data File: /chem/msd14.i/13feb16.b/14021320.d

Date : 13-FEB-2016 07:00

Client ID:

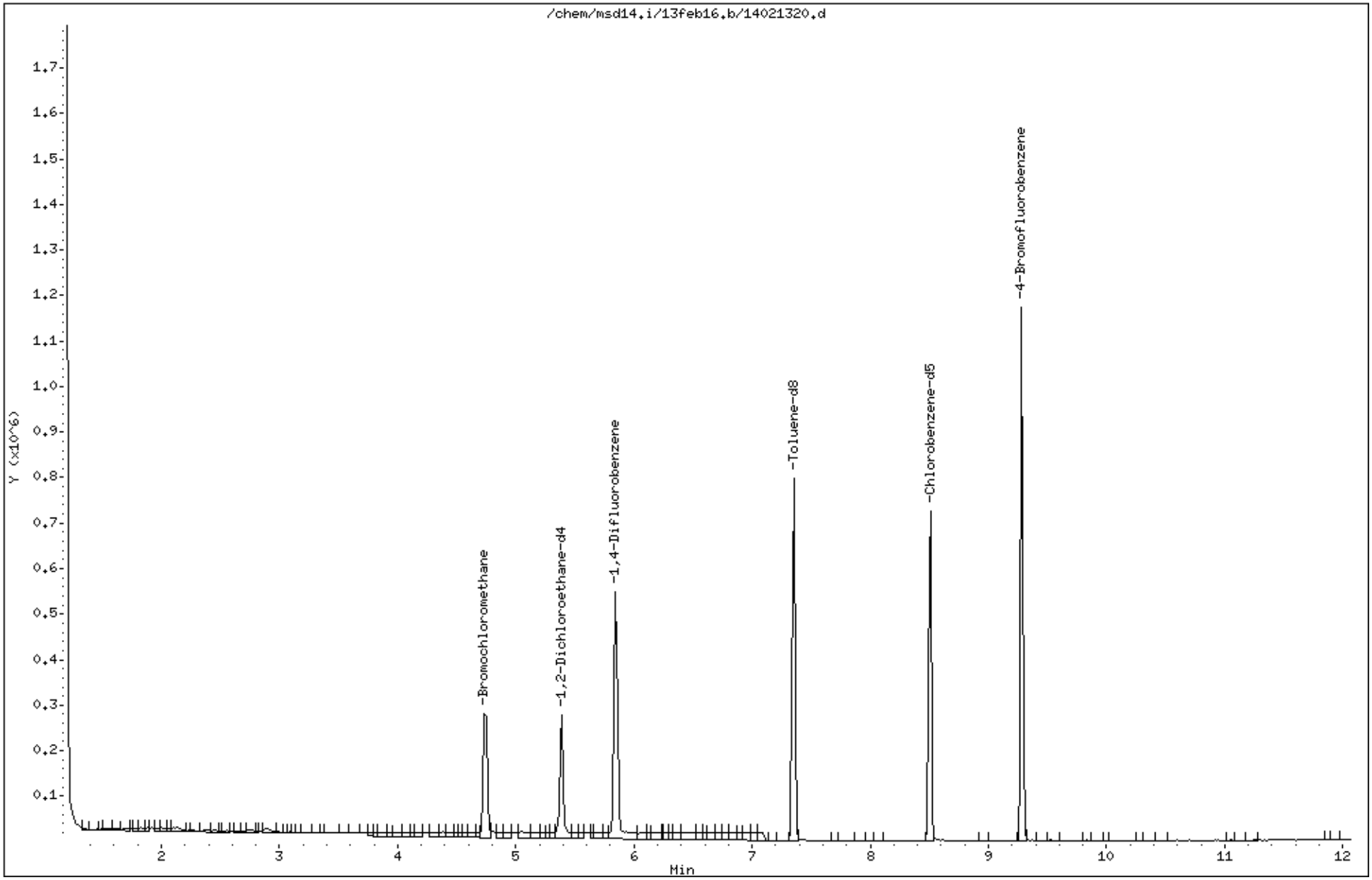
Instrument: msd14.i

Sample Info: 50ml #11446

Operator: cb

Column phase: RTX-624

Column diameter: 0.18



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

Client Sample ID: B42-1SSV013116

Lab ID#: 1602064C-16A

No Detections Were Found.

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Client Sample ID: B42-1SSV013116

Lab ID#: 1602064C-16A

EPA METHOD TO-15 GC/MS

File Name:	**14021321**	**Date of Collection:**	**1/31/16 4:40:00 PM**
Dil. Factor:	**2.37**	**Date of Analysis:**	**2/13/16 07:18 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	120	Not Detected	160	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021321.d
Lab Smp Id: 1602064C-16A
Inj Date : 13-FEB-2016 07:18
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #34579
Misc Info : 4.5"Hg -> 14.9psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.37000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.37000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	94234	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	72838			48.38- 108.38	77.30
4.749	4.749 (1.000)	49	172672			122.49- 182.49	183.24
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	422390	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	70124			0.00- 47.28	16.60
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	353585	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	241027			33.96- 93.96	68.17
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	173453	405.531	405.53	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	89397			22.50- 82.50	51.54

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	CONCENTRATIONS FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	459146	399.831	399.83	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	55855			0.00- 42.36	12.17
7.352	7.352	(1.258)	100	294212			36.13- 96.13	64.08
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	178729	412.171	412.17	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	301345			113.45- 173.45	168.60
9.283	9.283	(1.090)	176	167221			68.10- 128.10	93.56

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021321.d
Lab Smp Id: 1602064C-16A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.5"Hg -> 14.9psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	94234	-0.94
123 1,4-Difluorobenze	432238	259343	605133	422390	-2.28
163 Chlorobenzene-d5	350733	210440	491026	353585	0.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-16A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 4.5"Hg -> 14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	405.53	101.38	70-130
$ 146 Toluene-d8	400.00	399.83	99.96	70-130
$ 177 4-Bromofluorobenze	400.00	412.17	103.04	70-130

Data File: /chem/msd14.i/13feb16.b/14021321.d

Date : 13-FEB-2016 07:18

Client ID:

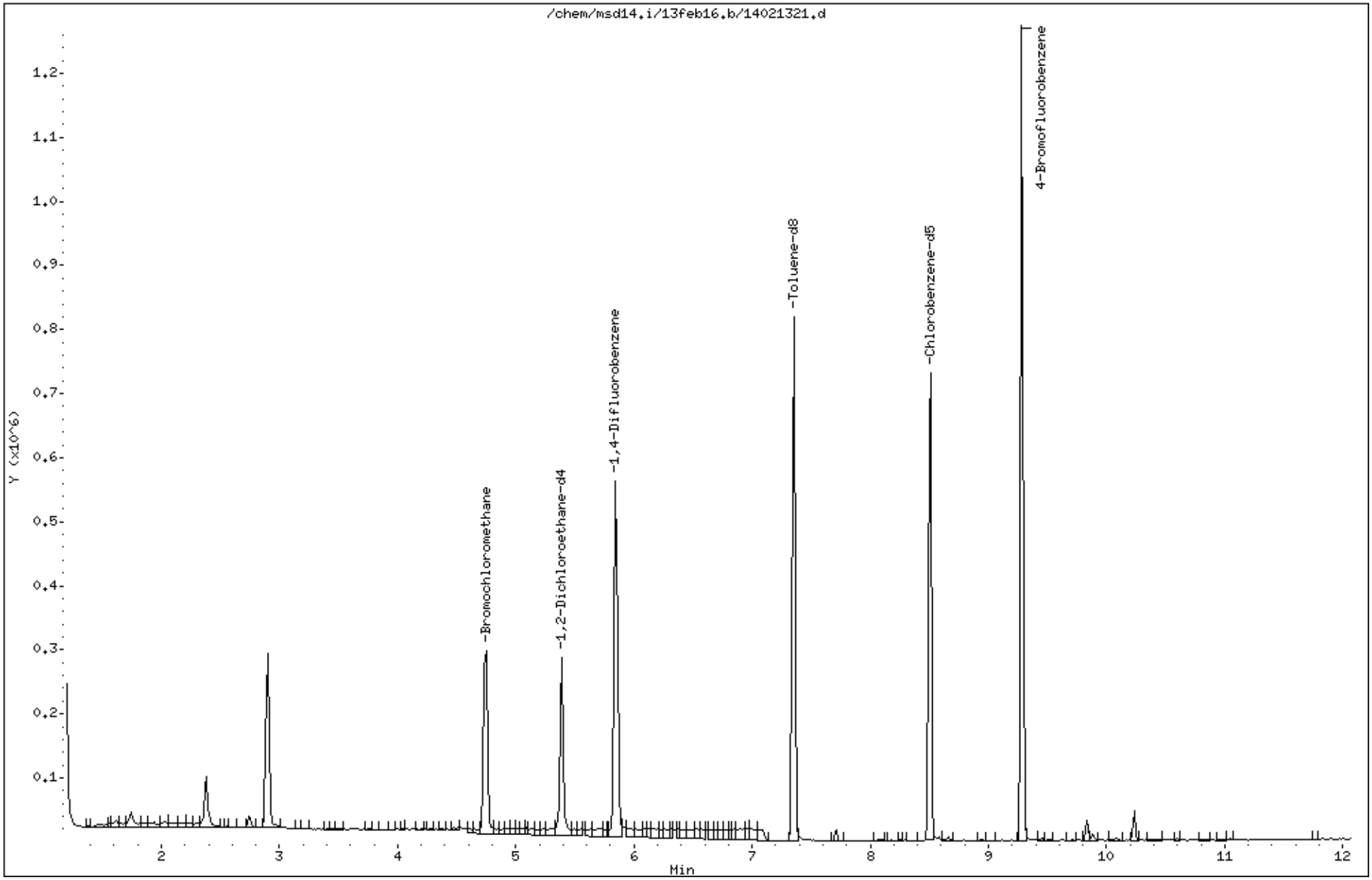
Sample Info: 50ml #34579

Column phase: RTX-624

Instrument: msd14.i

Operator: cb

Column diameter: 0.18



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

Client Sample ID: B42-2SSV013116

Lab ID#: 1602064C-17A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B42-2SSV013116

Lab ID#: 1602064C-17A

EPA METHOD TO-15 GC/MS

File Name:	**14021322**	**Date of Collection:**	**1/31/16 4:06:00 PM**
Dil. Factor:	**2.26**	**Date of Analysis:**	**2/13/16 07:36 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	110	Not Detected	150	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021322.d
Lab Smp Id: 1602064C-17A
Inj Date : 13-FEB-2016 07:36
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #37718
Misc Info : 3.3"Hg -> 14.9psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.26000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.26000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	93952	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	72498			48.38- 108.38	77.17
4.735	4.749 (1.000)	49	169469			122.49- 182.49	180.38
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	411584	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	69951			0.00- 47.28	17.00
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	349171	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	234327			33.96- 93.96	67.11
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	170223	399.176	399.18	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	87315			22.50- 82.50	51.29

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	452906	404.752	404.75	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	53302			0.00- 42.36	11.77
7.352	7.352	(1.258)	100	285038			36.13- 96.13	62.94
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	170876	399.044	399.04	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	298985			113.45- 173.45	174.97
9.283	9.283	(1.090)	176	166089			68.10- 128.10	97.20

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021322.d
Lab Smp Id: 1602064C-17A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 3.3"Hg -> 14.9psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	93952	-1.24
123 1,4-Difluorobenze	432238	259343	605133	411584	-4.78
163 Chlorobenzene-d5	350733	210440	491026	349171	-0.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-17A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 3.3"Hg -> 14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	399.18	99.79	70-130
$ 146 Toluene-d8	400.00	404.75	101.19	70-130
$ 177 4-Bromofluorobenze	400.00	399.04	99.76	70-130

Data File: /chem/msd14.i/13feb16.b/14021322.d

Date : 13-FEB-2016 07:36

Client ID:

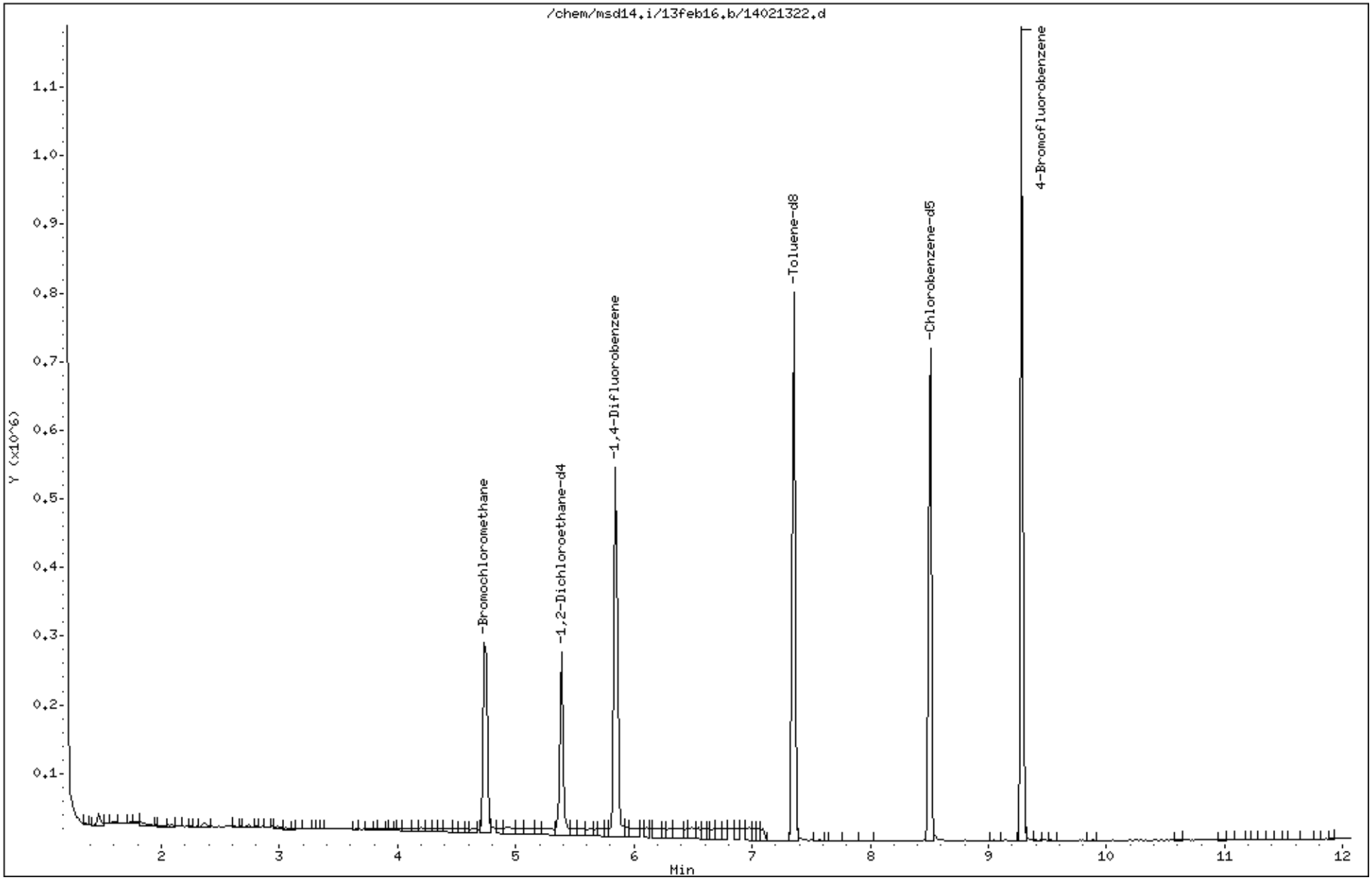
Sample Info: 50ml #37718

Column phase: RTX-624

Instrument: msd14.i

Operator: cb

Column diameter: 0.18



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

Client Sample ID: B42-3SSV013116

Lab ID#: 1602064C-18A

No Detections Were Found.

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Client Sample ID: B42-3SSV013116

Lab ID#: 1602064C-18A

EPA METHOD TO-15 GC/MS

File Name:	**14021323**	**Date of Collection:**	**1/31/16 4:24:00 PM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**2/13/16 07:54 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	110	Not Detected	150	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021323.d
Lab Smp Id: 1602064C-18A
Inj Date : 13-FEB-2016 07:54
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #36483
Misc Info : 3.3"Hg -> 15psi
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 21:37 mskidmor Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 2.27000
Integrator: HP RTE Compound Sublist: MEOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.27000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	94840	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	72662			48.38- 108.38	76.61
4.734	4.749 (1.000)	49	168473			122.49- 182.49	177.64
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	410180	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	72036			0.00- 47.28	17.56
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	347421	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	241353			33.96- 93.96	69.47
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	172881	401.610	401.61	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	89475			22.50- 82.50	51.76

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	462370	414.624	414.62	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	53485			0.00- 42.36	11.57
7.352	7.352	(1.258)	100	284444			36.13- 96.13	61.52
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	170896	401.100	401.10	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	295894			113.45- 173.45	173.14
9.283	9.283	(1.090)	176	165269			68.10- 128.10	96.71

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021323.d
Lab Smp Id: 1602064C-18A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 3.3"Hg -> 15psi

Calibration Date: 12-FEB-2016
Calibration Time: 18:21

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	94840	-0.30
123 1,4-Difluorobenze	432238	259343	605133	410180	-5.10
163 Chlorobenzene-d5	350733	210440	491026	347421	-0.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

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

Report Date: 13-Feb-2016 12:08

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602064C-18A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 3.3"Hg -> 15psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	401.61	100.40	70-130
$ 146 Toluene-d8	400.00	414.62	103.66	70-130
$ 177 4-Bromofluorobenze	400.00	401.10	100.28	70-130

Data File: /chem/msd14.i/13feb16.b/14021323.d

Date : 13-FEB-2016 07:54

Client ID:

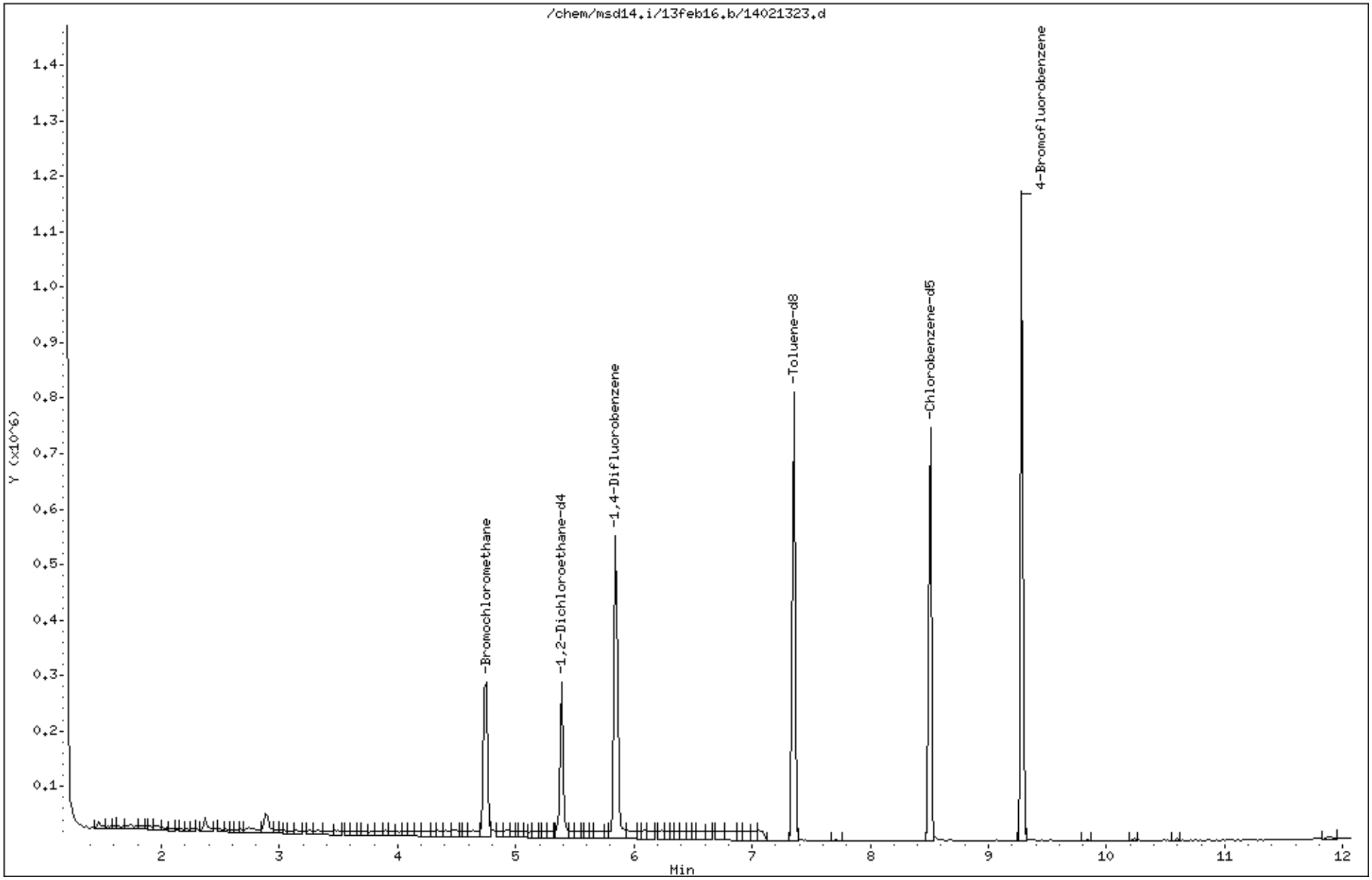
Sample Info: 50ml #36483

Column phase: RTX-624

Instrument: msd14.i

Operator: cb

Column diameter: 0.18



QC Results and Raw Data

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Client Sample ID: Lab Blank

Lab ID#: 1602064C-19A

EPA METHOD TO-15 GC/MS

File Name:	**14021305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/12/16 06:52 PM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Methanol	50	Not Detected	66	Not Detected

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021305.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 12-FEB-2016 18:52
Operator : mjs Inst ID: msd14.i
Smp Info : 50mL# 34496
Misc Info : Humid
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 20:16 cbond Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEOH.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
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	99179	400.000		80.00- 120.00	100.00
4.734	4.749 (1.000)	128	78189			48.38- 108.38	78.84
4.734	4.749 (1.000)	49	177565			122.49- 182.49	179.03
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	444527	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	74704			0.00- 47.28	16.81
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	376014	400.000		80.00- 120.00	100.00
8.499	8.513 (1.000)	82	247930			33.96- 93.96	65.94
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	178927	397.474	397.47	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	93434			22.50- 82.50	52.22

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	490186	405.605	405.60	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	57731			0.00- 42.36	11.78
7.352	7.352	(1.258)	100	307317			36.13- 96.13	62.69
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	183287	397.470	397.47	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	314278			113.45- 173.45	171.47
9.283	9.283	(1.090)	176	174139			68.10- 128.10	95.01

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021305.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: Humid

Calibration Date: 12-FEB-2016
Calibration Time: 18:21
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	99179	4.26
123 1,4-Difluorobenze	432238	259343	605133	444527	2.84
163 Chlorobenzene-d5	350733	210440	491026	376014	7.21

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	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: 12-Feb-2016 20:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 2926Spectra.spk
Quant Type: ISTD
Sublist File: MEOH.sub
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	400.00	397.47	99.37	70-130
$ 146 Toluene-d8	400.00	405.60	101.40	70-130
$ 177 4-Bromofluorobenze	400.00	397.47	99.37	70-130

Data File: /chem/msd14.i/13feb16.b/14021305.d

Date : 12-FEB-2016 18:52

Client ID: Lab Blank

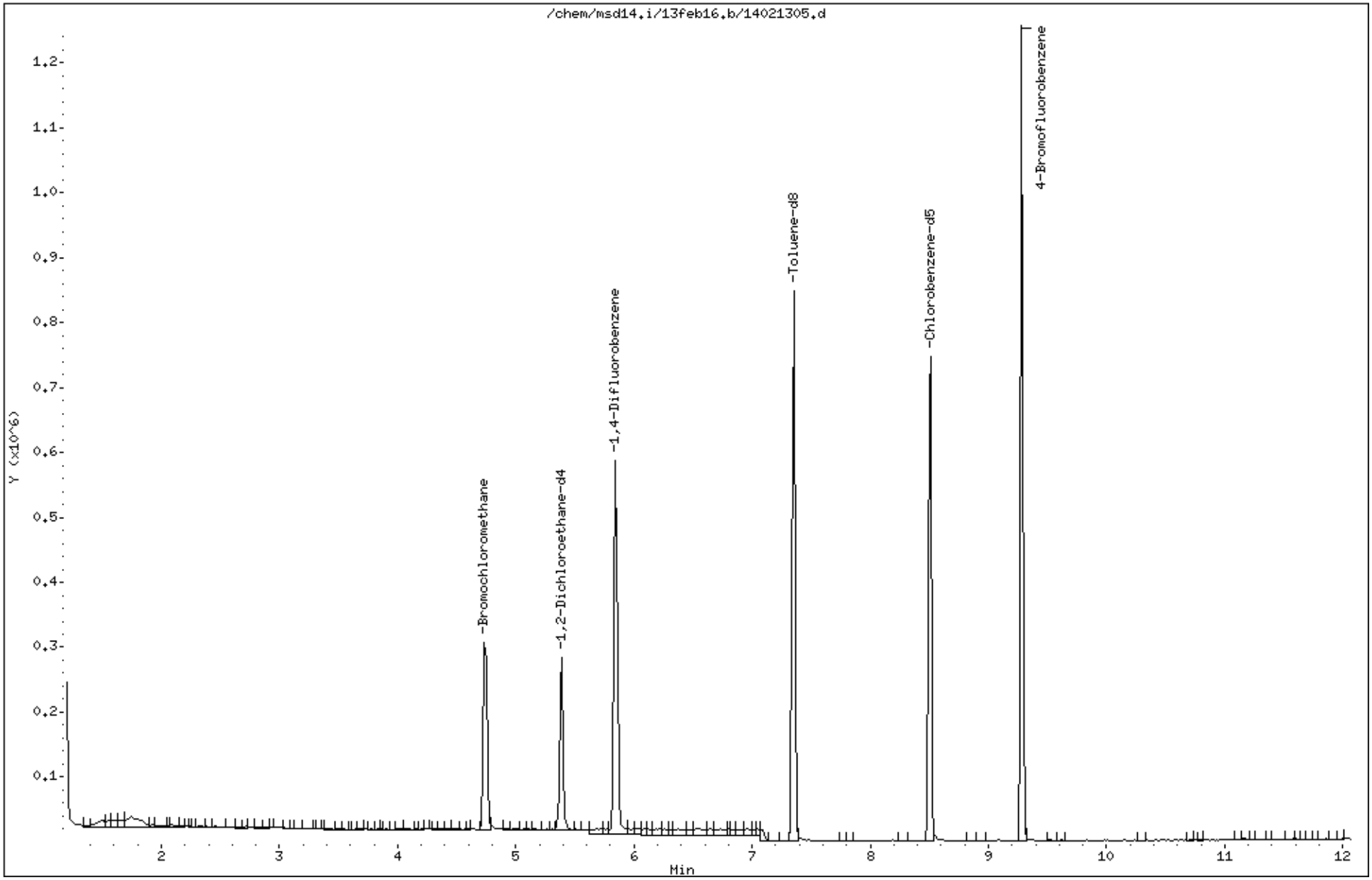
Sample Info: 50mL# 34496

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1602064C

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B30-1IA013016	99		100		101				0
02	B30-2IA013016	98		102		100				0
03	B30-3IA013016	100		103		102				0
04	B30-4IA013016	103		99		100				0
05	B30-4DIA013016	102		102		99				0
06	B30-5IA013016	103		102		102				0
07	B42-1IA013016	100		101		102				0
08	B42-2IA013016	102		101		102				0
09	B42-3IA013016	102		102		101				0
10	B3042AA013016	103		100		102				0
11	B30-1SSV013116	100		100		101				0
12	B30-2SSV013116	102		101		100				0
13	B30-3SSV013116	101		100		101				0
14	B30-4DSSV013116	104		102		103				0
15	B30-5SSV013116	101		102		100				0
16	B42-1SSV013116	101		100		103				0
17	B42-2SSV013116	100		101		100				0
18	B42-3SSV013116	100		104		100				0
19	Lab Blank	99		101		93				0
20	CCV	100		100		100				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

EPA Method TO-15 GC/MS

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1602064C
Lab File ID:	14021304a.d	Date Analyzed:	02/12/2016
Instrument ID:	msd14.i	Time Analyzed:	06:21 PM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	350733		8.51		432238		5.85		95130		4.75	
	UPPER LIMIT	491026		08.84		605133		06.18		133182		05.08	
	LOWER LIMIT	210440		08.18		259343		05.52		57078		04.42	
	CLIENT SAMPLE NO												
01	B30-1IA013016	372072		8.51		450234		5.85		100376		4.75	
02	B30-2IA013016	369887		8.51		443443		5.85		100330		4.75	
03	B30-3IA013016	361397		8.51		436629		5.85		96648		4.75	
04	B30-4IA013016	366912		8.51		439376		5.85		94404		4.75	
05	B30-4DIA013016	363400		8.51		428012		5.85		96768		4.75	
06	B30-5IA013016	354134		8.51		425133		5.85		93887		4.75	
07	B42-1IA013016	353589		8.51		424987		5.85		95047		4.75	
08	B42-2IA013016	346743		8.51		419432		5.85		94142		4.75	
09	B42-3IA013016	345170		8.51		414405		5.85		93965		4.75	
10	B3042AA013016	348402		8.51		422193		5.85		93229		4.75	
11	B30-1SSV013116	335322		8.51		407153		5.85		91034		4.75	
12	B30-2SSV013116	347584		8.51		423062		5.85		93246		4.75	
13	B30-3SSV013116	354152		8.51		426425		5.85		95649		4.75	
14	B30-4DSSV013116	337212		8.51		403140		5.85		88665		4.75	
15	B30-5SSV013116	343963		8.51		411848		5.85		90933		4.75	
16	B42-1SSV013116	353585		8.51		422390		5.85		94234		4.75	
17	B42-2SSV013116	349171		8.51		411584		5.85		93952		4.75	
18	B42-3SSV013116	347421		8.51		410180		5.85		94840		4.75	
19	Lab Blank	376014		8.51		444527		5.85		99179		4.75	
20	CCV	350733		8.51		432238		5.85		95130		4.75	
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

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-FEB-2016 18:21
End Cal Date : 12-FEB-2016 18:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/13feb16.b/MEOH0212a.m
Cal Date : 12-Feb-2016 20:15 cbond
Curve Type : Average

Calibration File Names:
Level 4: /chem/msd14.i/13feb16.b/14021304.d

Compound	50.000 Level 4	RRF	% RSD
28 Methanol	7.76436	7.76436	0.000
$ 117 1,2-Dichloroethane-d4	1.81555	1.81555	0.000
$ 146 Toluene-d8	1.08748	1.08748	0.000
$ 177 4-Bromofluorobenzene	0.49055	0.49055	0.000

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-FEB-2016 18:21
End Cal Date : 12-FEB-2016 18:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/13feb16.b/MEOH0212a.m
Cal Date : 12-Feb-2016 20:15 cbond
Curve Type : Average

```
 ____________________________________________
|Average %RSD Results.                       |
|============================================|
|Calculated Average %RSD =          0        |
|Maximun Average %RSD    =         30        |
|* Passed Average %RSD Test.                 |
|____________________________________________|
```

Calibration History

Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Start Cal Date: 12-FEB-2016 18:21
End Cal Date : 12-FEB-2016 18:21

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 50.00000		
12-FEB-2016 18:21	MEOH	/chem/msd14.i/13feb16.b/14021304.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 50.000		
12-FEB-2016 18:21	MEOH	/chem/msd14.i/13feb16.b/14021304a.d
Ccal Level: 4 , Ccal Amount: 50.000		
12-FEB-2016 18:21	MEOH	/chem/msd14.i/13feb16.b/14021304.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

MB
2/12/16

Start Cal Date : 12-FEB-2016 18:21
End Cal Date : 12-FEB-2016 18:21
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/13feb16.b/MEOH0212a.m
Cal Date : 12-Feb-2016 20:15 cbond
Curve Type : Average

OB
2/12/16

Calibration File Names:
Level 4: /chem/msd14.i/13feb16.b/14021304.d

Compound	50.000 Level 4	RRF	% RSD
28 Methanol	7.76436	7.76436	0.000
$ 117 1,2-Dichloroethane-d4	1.81555	1.81555	0.000
$ 146 Toluene-d8	1.08748	1.08748	0.000
$ 177 4-Bromofluorobenzene	0.49055	0.49055	0.000

MEOH0212a.M
Initial Calibration Narrative

A 1-point Methanol initial calibration was analyzed on MSD-14 on 2/12/16.

No ICV or MDL needed.

BFB Tune file - 14021301

(MeOH only Method)

Eurofins Air Toxics, Inc. **MSD-14** **Logbook #: 2756**

BFB Verification of 176/174 m/z Ratio:	(26013/26560) * 100 = 97.94%
Method Name:	MEOH0212A.M

IS/S Std. #: 2759-228	Exp. Date: 5/5/16
BCM	95130
1,4-DFB	432238
CB-d5	350733
Verified CCV IS vs ICAL mid-point (-40%D):	MB

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

Calculation Check: File ID: 14021304
Compound: Toluene-d8
Initials: MB

$$\text{ppbv of compound} = \frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}} = \frac{(470047)}{(432238)} \times \frac{(400.00)}{(1.08748)}$$

MB 2/12/16

Reported Result: 400.00

	Use	File	Lab ID#	Can#	Pressure	Amount Loaded	Verified Vol Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	14021301	BFB Tunecheck	2297-1275	50ng	2.0mL	NA	1.00	MB	2/12/16	1721	MB	
2	X	02	System Blank	34496	Humid	50mL	NA	1.00	MB	↓	1735	MB	
3	✓	03	↓	↓	↓	↓	↓	↓	↓	↓	1758	MB	
4	✓	04	ICAL Level #1 ~~#2~~ MB 2/12/16	2759-244	50ppbv	2.5mL	NA	1.00	MB	↓	~~1749~~ 1824 MB 2/12/16	MB	Exp. 5/10/16
5		05	Lab Blank	34496	Humid	50mL	NA	1.00	MB	↓	↓	↓	↓
6													
7													
8													
9													
10													
11													
12													
13													
14													
15											MB	2/12/16	

MB
Reviewed

2/12/16
Date

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021304.d
Lab Smp Id: ICAL Level #4 Client Smp ID: ICAL Level #4
Inj Date : 12-FEB-2016 18:21
Operator : mjs Inst ID: msd14.i
Smp Info : 2.5mL #2759-244
Misc Info : 50ppbv (1000ppbv) MeOH
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 20:15 cbond Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEOH.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
* 98 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	95130	400.000		80.00- 120.00	100.00
4.734	4.734 (1.000)	128	74458			48.38- 108.38	78.27
4.734	4.734 (1.000)	49	169645			122.49- 182.49	178.33
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	432238	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	73352			0.00- 47.28	16.97
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	350733	400.000		80.00- 120.00	100.00
8.499	8.499 (1.000)	82	235215			33.96- 93.96	67.06
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	172713	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	89043			22.50- 82.50	51.56

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	470049	400.000	400.00	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	51828			0.00- 42.36	11.03
7.352	7.352 (1.258)	100	296980			36.13- 96.13	63.18
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.283	9.283 (1.090)	174	172052	400.000	400.00	80.00- 120.00	100.00
9.283	9.283 (1.090)	95	296722			113.45- 173.45	172.46
9.283	9.283 (1.090)	176	165646			68.10- 128.10	96.28
28 Methanol					CAS #: 67-56-1		
1.728	1.728 (0.364)	31	92328	50.0000	50.000	0.00- 0.00	100.00
1.728	1.728 (0.364)	32	84657			0.00- 0.00	91.69

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021304.d
Lab Smp Id: ICAL Level #4
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 50ppbv (1000ppbv) MeOH

Calibration Date: 12-FEB-2016
Calibration Time: 18:21
Client Smp ID: ICAL Level #4
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	95130	0.00
123 1,4-Difluorobenze	432238	259343	605133	432238	0.00
163 Chlorobenzene-d5	350733	210440	491026	350733	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	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/msd14.i/13feb16.b/14021304.d

Date : 12-FEB-2016 18:21

Client ID: ICAL Level #4

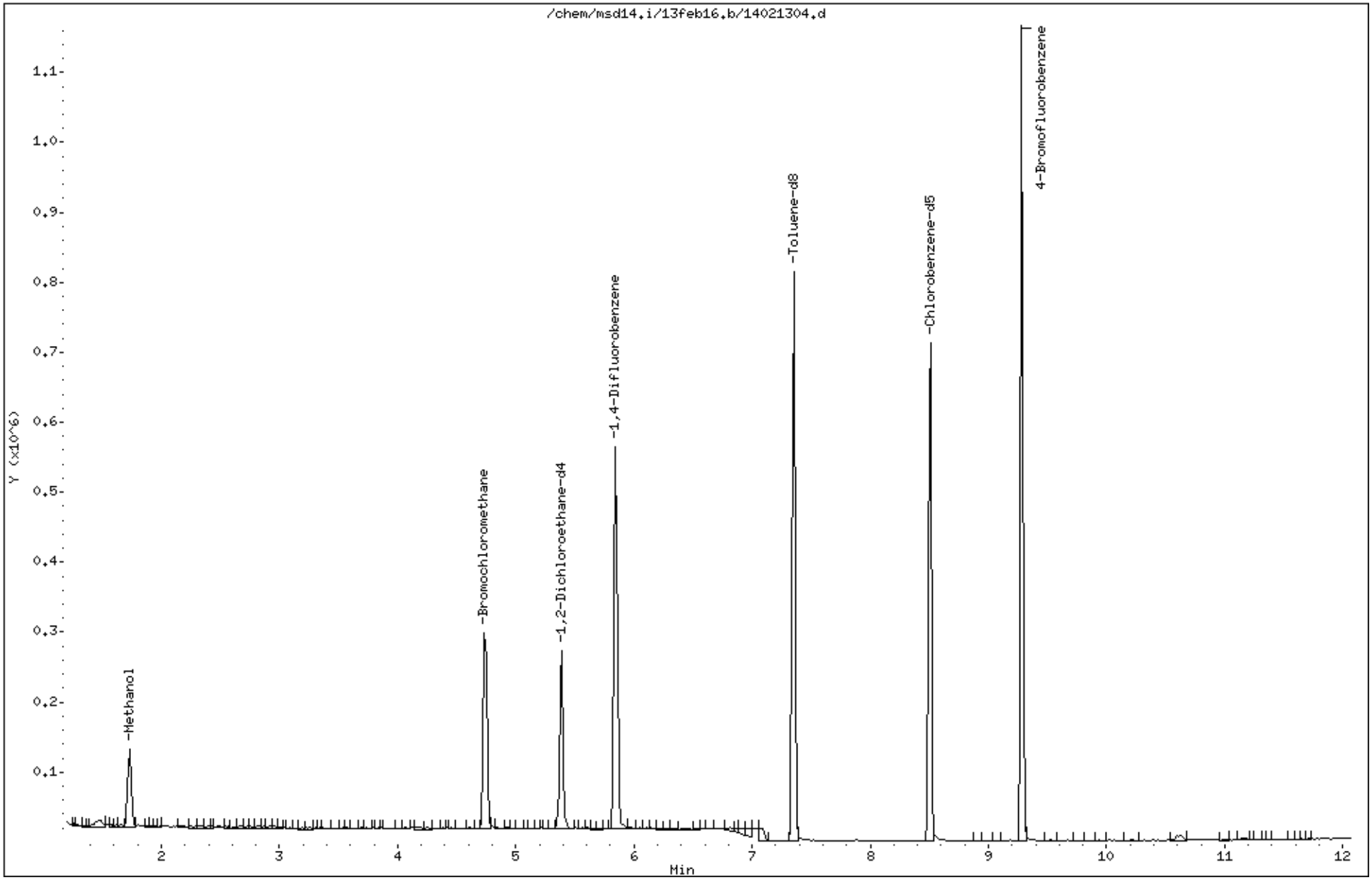
Sample Info: 2.5mL #2759-244

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



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Client Sample ID: CCV

Lab ID#: 1602064C-20A

EPA METHOD TO-15 GC/MS

File Name:	**14021304a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/12/16 06:21 PM**	

Compound	**%Recovery**
Methanol	100

Container Type: NA - Not Applicable

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

Report Date: 12-Feb-2016 20:15

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 12-FEB-2016 18:21
Lab File ID: 14021304a.d Init. Cal. Date(s): 12-FEB-2016 12-FEB-2016
Analysis Type: AIR Init. Cal. Times: 18:21 18:21
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd14.i/13feb16.b/MEOH0212a.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.81555	1.81555	0.010	0.000e+00	30.00000	Averaged
$ 146 Toluene-d8	1.08748	1.08748	0.010	0.000e+00	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.49055	0.49055	0.010	0.000e+00	30.00000	Averaged
28 Methanol	7.76436	7.76436	0.010	0.000e+00	30.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 100
Maximun Average %D/Drift = 30.00000
* Failed Average %D/Drift Test.

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/13feb16.b/14021304a.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 12-FEB-2016 18:21
Operator : mjs Inst ID: msd14.i
Smp Info : 2.5mL #2759-244
Misc Info : 50ppbv (1000ppbv) MeOH
Comment : 5 and 20 - GC/MS
Method : /chem/msd14.i/13feb16.b/MEOH0212a.m
Meth Date : 12-Feb-2016 20:15 cbond Quant Type: ISTD
Cal Date : 12-FEB-2016 18:21 Cal File: 14021304.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEOH.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
* 98 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	95130	400.000		80.00- 120.00	100.00
4.734	4.734 (1.000)	128	74458			48.38- 108.38	78.27
4.734	4.734 (1.000)	49	169645			122.49- 182.49	178.33
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	432238	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	73352			0.00- 47.28	16.97
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	350733	400.000		80.00- 120.00	100.00
8.499	8.499 (1.000)	82	235215			33.96- 93.96	67.06
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	172713	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	89043			22.50- 82.50	51.56

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.352	7.352	(1.258)	98	470049	400.000	400.00	80.00- 120.00	100.00
7.352	7.352	(1.258)	70	51828			0.00- 42.36	11.03
7.352	7.352	(1.258)	100	296980			36.13- 96.13	63.18
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	172052	400.000	400.00	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	296722			113.45- 173.45	172.46
9.283	9.283	(1.090)	176	165646			68.10- 128.10	96.28
28 Methanol						CAS #: 67-56-1		
1.728	1.728	(0.364)	31	92328	50.0000	50.000	0.00- 0.00	100.00
1.728	1.728	(0.364)	32	84657			0.00- 0.00	91.69

Report Date: 12-Feb-2016 20:15

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14021304a.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/13feb16.b/MEOH0212a.m
Misc Info: 50ppbv (1000ppbv) MeOH

Calibration Date: 12-FEB-2016
Calibration Time: 18:21
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	95130	57078	133182	95130	0.00
123 1,4-Difluorobenze	432238	259343	605133	432238	0.00
163 Chlorobenzene-d5	350733	210440	491026	350733	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
163 Chlorobenzene-d5	8.51	8.18	8.84	8.51	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/msd14.i/13feb16.b/14021304a.d

Date : 12-FEB-2016 18:21

Client ID: CCV

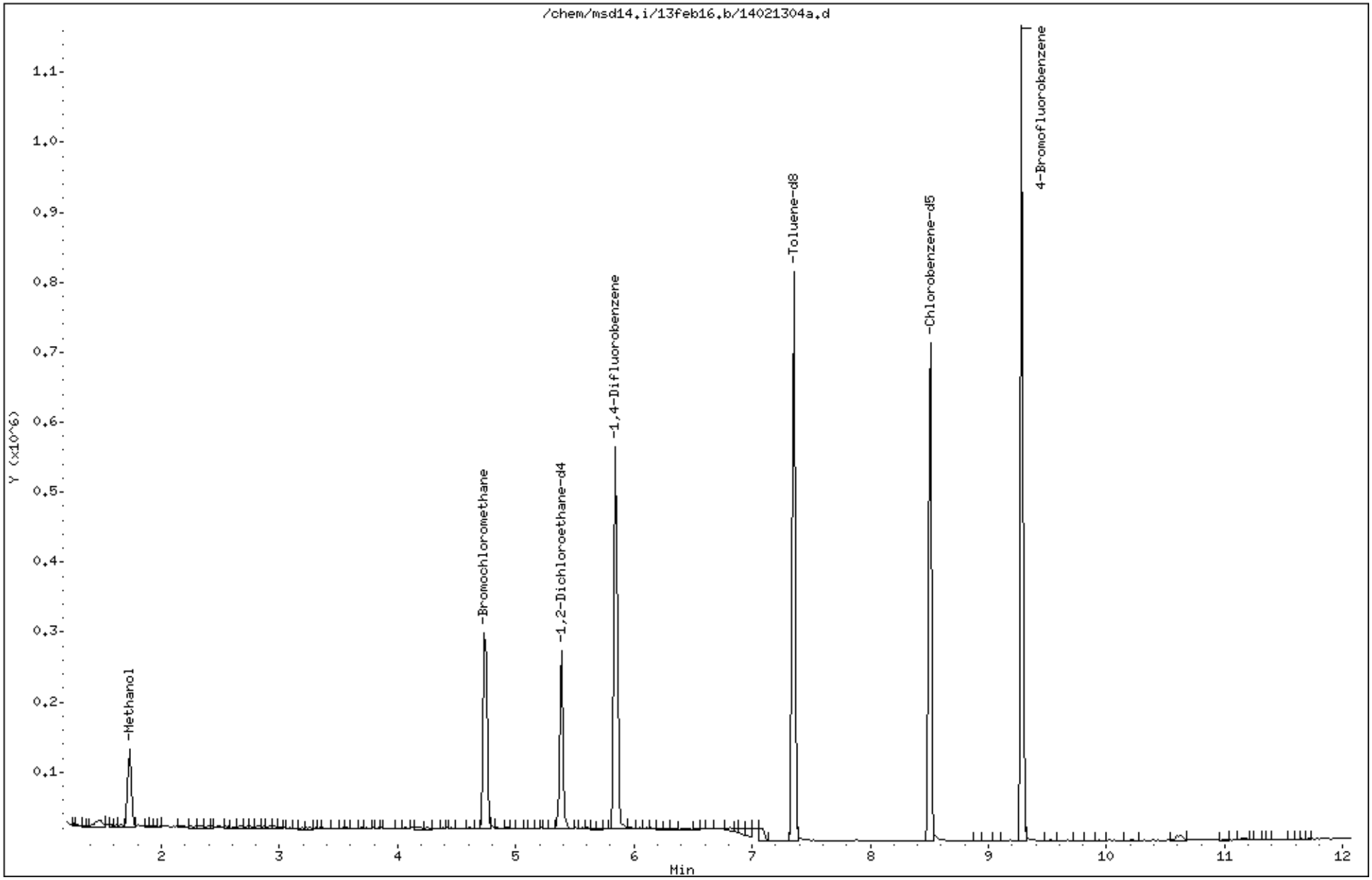
Sample Info: 2.5mL #2759-244

Column phase: RTX-624

Instrument: msd14.i

Operator: mjs

Column diameter: 0.18



(MeOH only method)

Eurofins Air Toxics, Inc.

MSD-14

Logbook #: 2756

BFB Verification of 176/174 m/z Ratio:	(26013/26560) * 100 = 97.94%
Method Name:	MEOH0212A.M

IS/S Std. #: 2759-228	Exp. Date: 5/5/16
BCM	95130
1,4-DFB	432238
CB-d5	350733
Verified CCV IS vs ICAL mid-point (-40%D):	MB

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

Calculation Check: File ID: 14021304 Compound: Toluene-d8 Initials: MB

$$\text{ppbv of compound} = \frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}} = \frac{(470047)}{(432238)} \times \frac{(400.00)}{(1.08748)}$$

MB 2/12/16

Reported Result: 400.00

	Use	File	Lab ID#	Can#	Pressure	Amount Loaded	Verified Vol Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	14021301	BFB Tunecheck	2299-1275	50ng	2.0mL	NA	1.00	MB	2/12/16	1721	MB	
2	X	02	System Blank	34496	Humid	50mL	NA	1.00	MB		1735	MB	
3	✓	03	↓	↓	↓	↓	↓	↓	↓		1758	MB	
4	✓	04	ICAL Level ~~#2~~ #1	2759-244	50ppbv	2.5mL	NA	1.00	MB		~~1724~~ 1821	MB	5/10/16
5	✓	05	Lab Blank	34496	Humid	50mL	NA	1.00	MB		1852	MB	
6	✓	06	1602064C-01A	6L1261	8.0"Hg→5.0psi	50mL	NA	1.83	MB		1927	MB	
7	✓	07	-02A	14872	6.5"Hg→5.0psi	50mL	NA	1.71	MB		1945	MB	
8	✓	08	-03A	34354	7.5"Hg→5.0psi	50mL	NA	1.79	MB		2003	MB	
9	✓	09	-04A	34212	2.5"Hg→5.0psi	50mL	NA	1.46	MB		2022	MB	
10	✓	10	-05A	6L0465	10"Hg→5.0psi	50mL	NA	2.01	MB		2039	MB	
11	✓	11	-06A	6L1296	6.5"Hg→5.0psi	50mL	NA	1.87	MB		2058	MB	
12	✓	12	-07A	34259	9.5"Hg→5.0psi	50mL	NA	1.96	MB		2116	MB	
13	✓	13	-08A	96107	7.5"Hg→5.0psi	50mL	NA	1.79	MB		2135	MB	
14	✓	14	-09A	6L0402	6.5"Hg→5.0psi	50mL	NA	1.71	MB		2152	MB	
15	✓	15	-10A	5672	9.0"Hg→5.0psi	50mL	NA	1.91	MB	↓	2210	MB	

MB
Reviewed

2/12/16
Date

Eurofins Air Toxics, Inc.

MSD-14

Logbook #: 2756

	Use	File	Lab ID#	Can#	Pressure	Amount Loaded	Verified Vol Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
16	✓	14021316	1602064C -11A	101536	4.7"Hg-14.9psi	0.5mL	NA	2.39	MB	2/12/16	2230	MB	P.I. MTC 1.0mL
17	✓	17	-12A	8002	4.3"Hg-14.9	50mL	NA	2.32	MB	↓	2250	CB	
18	✓	18	-13A	34578	6.1"Hg-14.7psi	50mL		2.51	CB	2/13/16	0618	CB	
19	✓	19	-14A	101942	6.3"Hg-15psi			2.56	CB		0640	CB	
20	✓	20	-15A	11446	2.2"Hg-14.6psi			2.15	CB		0700	CB	
21	✓	21	-16A	34579	4.5"Hg-14.9psi			2.37	CB		0718	CB	
22	✓	22	-17A	37718	3.3"Hg-14.9psi			2.26	CB		0736	CB	
23	✓	23	-18A	36483	3.3"Hg-15psi			2.27	CB		0754	CB	
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													CB 2/13/16
36													

Reviewed

2/13/16
Date

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/13feb16.b/14021301.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 12-FEB-2016 17:21
Operator : mjs Inst ID: msd14.i
Smp Info : 2.0uL# 2299-1275; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msd14.i/13feb16.b/bfb20.m
Meth Date : 12-Feb-2016 17:32 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		
2.468	2.483	-0.015	95	51714			100.00- 100.00	100.00
2.468	2.483	-0.015	50	12536			8.00- 40.00	24.24
2.468	2.483	-0.015	75	28181			30.00- 66.00	54.49
2.468	2.483	-0.015	96	3564			5.00- 9.00	6.89
2.468	2.483	-0.015	173	286			0.00- 1.99	1.08
2.468	2.483	-0.015	174	26560			50.01- 120.00	51.36
2.468	2.483	-0.015	175	2002			4.00- 9.00	7.54
2.468	2.483	-0.015	176	26013			93.00- 101.00	97.94
2.468	2.483	-0.015	177	1583			5.00- 9.00	6.09

Data File: /var/chem/msd14.i/13feb16.b/14021301.d

Date : 12-FEB-2016 17:21

Client ID: BFB

Instrument: msd14.i

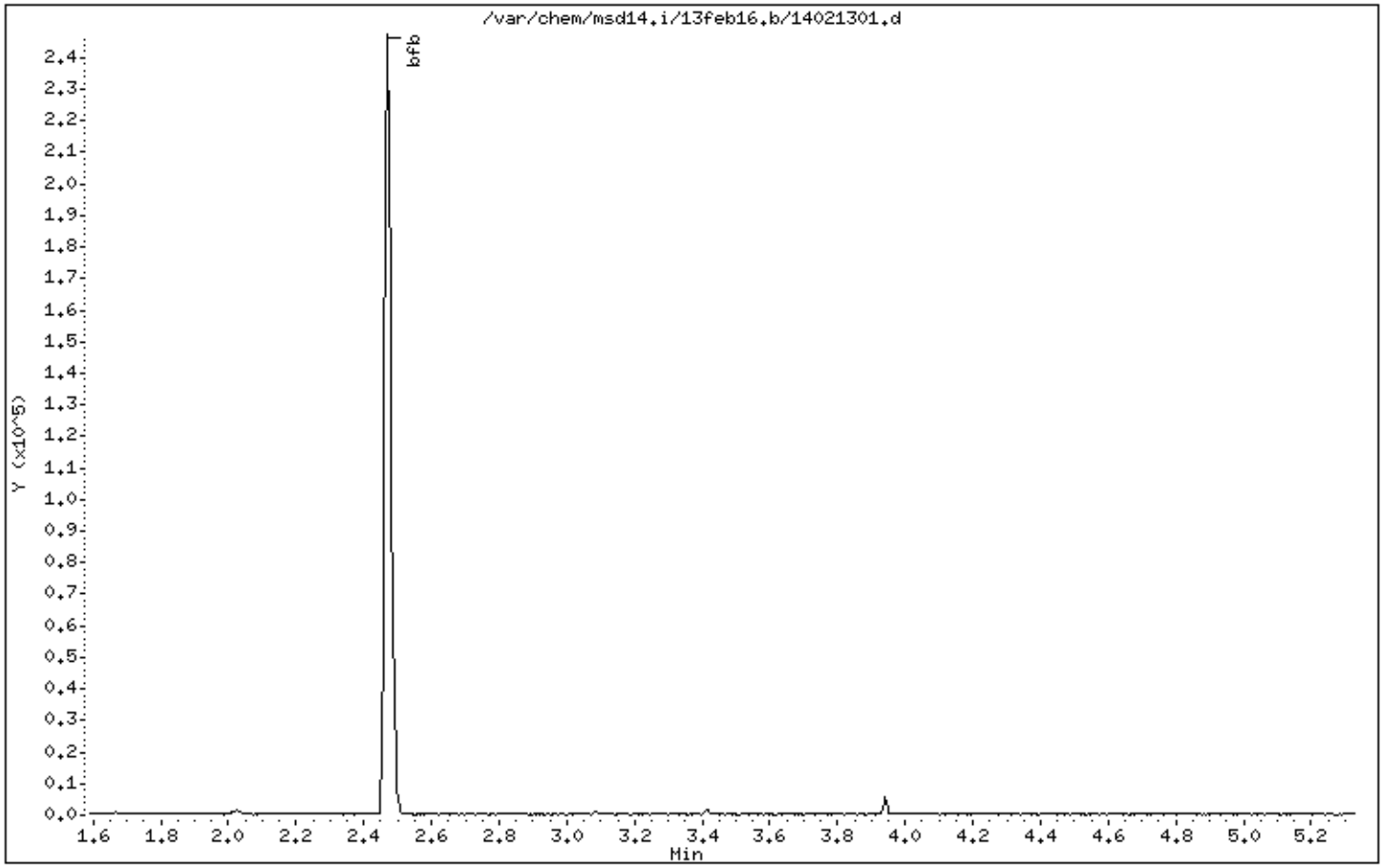
Sample Info: 2.0uL# 2299-1275; BFB; BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00



Data File: /var/chem/msd14.i/13feb16.b/14021301.d

Date : 12-FEB-2016 17:21

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0uL# 2299-1275; BFB; BFB

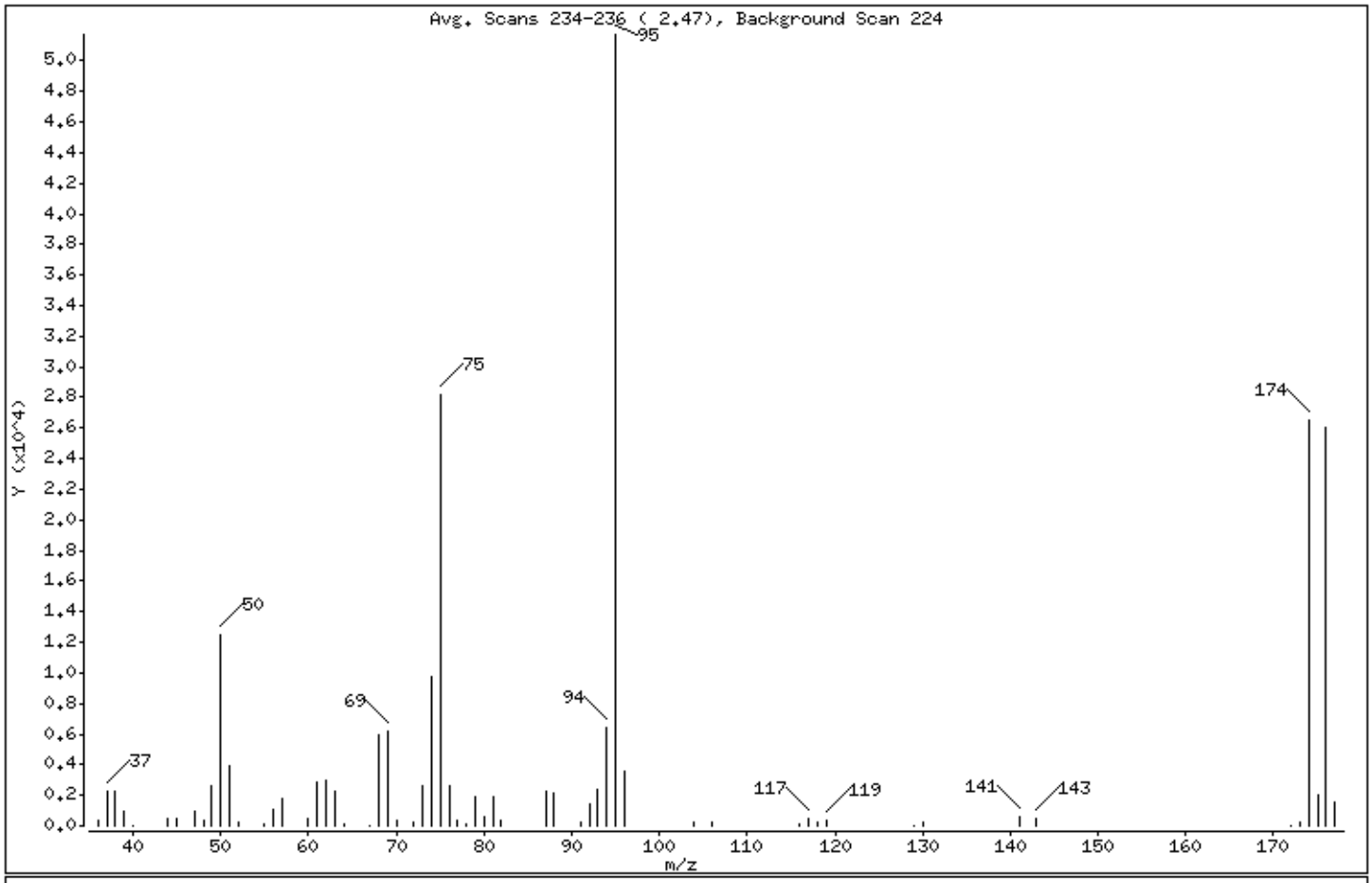
Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	24.24
75	30.00 - 66.00% of mass 95	54.49
96	5.00 - 9.00% of mass 95	6.89
173	Less than 1.99% of mass 174	0.55 (1.08)
174	50.01 - 120.00% of mass 95	51.36
175	4.00 - 9.00% of mass 174	3.87 (7.54)
176	93.00 - 101.00% of mass 174	50.30 (97.94)
177	5.00 - 9.00% of mass 176	3.06 (6.09)

Data File: /var/chem/msd14.i/13feb16.b/14021301.d

Date : 12-FEB-2016 17:21

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0uL# 2299-1275; BFB; BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00

Data File: 14021301.d
Spectrum: Avg. Scans 234-236 (2.47), Background Scan 224
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	340	60.00	496	79.00	1907	118.00	214
37.00	2300	61.00	2911	80.00	549	119.00	325
38.00	2277	62.00	2919	81.00	1849	129.00	51
39.00	931	63.00	2270	82.00	395	130.00	187
40.00	32	64.00	166	87.00	2272	141.00	632
44.00	465	67.00	56	88.00	2157	143.00	524
45.00	484	68.00	5969	91.00	225	172.00	51
47.00	951	69.00	6235	92.00	1454	173.00	286
48.00	362	70.00	382	93.00	2332	174.00	26560
49.00	2639	72.00	297	94.00	6464	175.00	2002
50.00	12536	73.00	2599	95.00	51712	176.00	26008
51.00	3912	74.00	9753	96.00	3564	177.00	1583
52.00	182	75.00	28176	104.00	286		
55.00	145	76.00	2557	106.00	257		
56.00	1012	77.00	392	116.00	112		
57.00	1788	78.00	165	117.00	422		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

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

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

For corrections call: **Brian Whittaker at 916-985-1000**

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

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

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

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

eurofins | Air Toxics

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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Terry Taylor
Collected by: (Print and Sign) Terry Taylor
Company: AMAI
Email:
Address: 2700 Westchester City: Purchase State: NY Zip: 10591
Phone:
Fax:

Project Info:
P.O. #:
Project #:
Project Name: BMS VI

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial in Hg	Final in Hg	Receipt	Final (psi)
01A	B30-1IA013016	GL1261	1-31-16	10:32	Full TO-15, CH_4, MeOH	-30+	7.0		
02A	B30-2IA013016	14872	1-31-16	10:33		-30	7.0		
03A	B30-3IA013016	34354	1-31-16	10:42		-30	-7.0		
04A	B30-4IA013016	34212	1-31-16	09:36		-30	-1.5		
05A	B30-4DIA013016	N0620	1-31-16	09:36		-26	-10.0		
06A	B30-5IA013016	GL1296	1-31-16	10:58		-28	-8.0		
07A	B42-1IA013016	34259	1-31-16	11:30		-30+	-8.5		
08A	B42-2IA013016	96107	1-31-16	11:28		-28	-8.0		
09A	B42-3IA013016	N0645	1-31-16	11:29		-30+	-6.0		
10A	B3042AA013016	5672	1-31-16	11:07		-30	-8.0		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	1/31/16 1725	[signature]	1/31/16 1725
[signature]	2/1/16 1200	[signature] EATL	2/2/16 10:20

Notes: Report to MDL

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed ex		N/A	Good	Yes No None	1602064

Form 1293 rev.11

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Sample Transportation Notice
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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Terry Taylor
Collected by: (Print and Sign) Terry Taylor
Company: AMAI
Email:
Address: 2700 Westchester City: Purchase State: NY Zip: 10591
Phone: Fax:

Project Info:
P.O. #:
Project #:
Project Name: BMS VI

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial (in Hg)	Final (in Hg)	Receipt	Final (psi)
11A	B30-1SSV013116	1L1536	1-31-16	1224	Full TO-15, CH_4, MeOH	-30	-5		
12A	B30-2SSV013116	8002	1-31-16	1240		-30	-5		
13A	B30-3SSV013116	34578	1-31-16	1300		-30	-5		
14A	B30-4DSSV013116	1L1942	1-31-16	1320		-25	-5		
15A	B30-5SSV013116	11446	1-31-16	1349		-30	-5		
16A	B42-1SSV013116	34579	1-31-16	1640		-26.5	-4		
17A	B42-2SSV013116	37718	1-31-16	1606		-30	-5		
18A	B42-3SSV013116	36483	1-31-16	1624		-30	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	1/31/16: 1725	[signature]	1/31/16 1725
[signature]	2/1/16 1200	[signature]	2/1/16 1120

Notes: Report to MDL

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed ex		N/A	Good	Yes No None	1602064

Form 1293 rev.11

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SAMPLE RECEIPT SUMMARY

WORKORDER 1602064C

Client

Mr. Terry Taylor
Anderson Mulholland &
Associates, Inc.
2700 Westchester Avenue
Suite 417
Purchase, NY 10577
Sales Rep: N/A

Phone

(914) 251-0400

Fax

Date Promised: 02/15/16
Date Completed: 2/13/16
Date Received: 2/2/16
PO#:
Project#: BMS VI

Total $: $ 1,440.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B30-1IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	8.0 "Hg	$75.00
02A	B30-2IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	6.5 "Hg	$75.00
03A	B30-3IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	7.5 "Hg	$75.00
04A	B30-4IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	2.5 "Hg	$75.00
05A	B30-4DIA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	10.0 "Hg	$75.00
06A	B30-5IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	8.5 "Hg	$75.00
07A	B42-1IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	9.5 "Hg	$75.00
08A	B42-2IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	7.5 "Hg	$75.00
09A	B42-3IA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	6.5 "Hg	$75.00
10A	B3042AA013016	Modified TO-15 (5&20 ppbv)	1/31/2016	9.0 "Hg	$75.00
11A	B30-1SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	4.7 "Hg	$75.00
12A	B30-2SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	4.3 "Hg	$75.00
13A	B30-3SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	6.1 "Hg	$75.00
14A	B30-4DSSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	6.3 "Hg	$75.00
15A	B30-5SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	2.2 "Hg	$75.00
16A	B42-1SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	4.5 "Hg	$75.00
17A	B42-2SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	3.3 "Hg	$75.00
18A	B42-3SSV013116	Modified TO-15 (5&20 ppbv)	1/31/2016	3.3 "Hg	$75.00
19A	Lab Blank	Modified TO-15 (5&20 ppbv)	NA	NA	$0.00
20A	CCV	Modified TO-15 (5&20 ppbv)	NA	NA	$0.00

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

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

Analysis Code: TO-15 (5&20)

TERMS:

Reporting Method: TO-15 (5&20 ppbv) (Sp)-Methanol Only

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SAMPLE RECEIPT SUMMARY Continued

Client

Phone

Fax

Date Promised:
Date Completed:
Date Received:
PO#:
Project#:

Sales Rep:

Total $: $ 1,440.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
Misc. Charges	eCVP (18) @ $5.00 each.				$90.00

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: TO-15 (5&20)

TERMS:

Reporting Method: TO-15 (5&20 ppbv) (Sp)-Methanol Only

Other Records

DILUTION FACTORS

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

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

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.5	1.36	1.71	2.05
1.0	1.39	1.74	2.09
1.5	1.41	1.77	2.13
2.0	1.44	1.80	2.16
2.5	1.46	1.83	2.20
3.0	1.49	1.87	2.24
3.5	1.52	1.90	2.29
4.0	1.55	1.94	2.33
4.5	1.58	1.98	2.38
5.0	1.61	2.02	2.42
5.5	1.64	2.06	2.47
6.0	1.68	2.10	2.53
6.5	1.71	2.15	2.58
7.0	1.75	2.19	2.64
7.5	1.79	2.24	2.69
8.0	1.83	2.29	2.76
8.5	1.87	2.34	2.82
9.0	1.91	2.40	2.89
9.5	1.96	2.46	2.96
10.0	2.01	2.52	3.03
10.5	2.06	2.59	3.11
11.0	2.12	2.65	3.19
11.5	2.17	2.72	3.28
12.0	2.23	2.80	3.37
12.5	2.30	2.88	3.46
13.0	2.36	2.97	3.57
13.5	2.44	3.06	3.67
14.0	2.51	3.15	3.79
14.5	2.59	3.25	3.91
15.0	2.68	3.36	4.04
15.5	2.77	3.48	4.18
16.0	2.87	3.60	4.33
16.5	2.98	3.73	4.49
17.0	3.09	3.88	4.66
17.5	3.22	4.03	4.85
18.0	3.35	4.20	5.05
18.5	3.50	4.38	5.27
19.0	3.65	4.58	5.51
19.5	3.83	4.80	5.77
20.0	4.02	5.04	6.06
20.5	4.23	5.31	6.38

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
21.0	4.47	5.60	6.73
21.5	4.73	5.93	7.13
22.0	5.03	6.30	7.58
22.5	5.36	6.72	8.08
23.0	5.74	7.20	8.66
23.5	6.19	7.76	9.32
24.0	6.70	8.40	10.10
24.5	7.31	9.17	11.02
25.0	8.04	10.08	12.12
25.5	8.93	11.20	13.47
26.0	10.05	12.60	15.15
26.5	11.49	14.40	17.32
27.0	13.40	16.80	20.20
27.5	16.08	20.16	24.24
28.0	20.10	25.20	30.31
28.5	26.80	33.61	40.41
29.0	40.20	50.41	60.61

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59

DILUTION FACTORS

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

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59
4.2	1.04	1.31	1.57
4.4	1.03	1.29	1.55
4.6	1.02	1.28	1.54
4.8	1.01	1.27	1.52
5.0	1.00	1.25	1.51
5.2	NA	1.24	1.49
5.4	NA	1.23	1.48
5.6	NA	1.22	1.46
5.8	NA	1.20	1.45
6.0	NA	1.19	1.43
6.2	NA	1.18	1.42
6.4	NA	1.17	1.41
6.6	NA	1.16	1.39
6.8	NA	1.15	1.38
7.0	NA	1.14	1.37
7.2	NA	1.13	1.36
7.4	NA	1.12	1.34

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
7.6	NA	1.11	1.33
7.8	NA	1.10	1.32
8.0	NA	1.09	1.31
8.2	NA	1.08	1.30
8.4	NA	1.07	1.29
8.6	NA	1.06	1.27
8.8	NA	1.05	1.26
9.0	NA	1.04	1.25
9.2	NA	1.03	1.24
9.4	NA	1.02	1.23
9.6	NA	1.02	1.22
9.8	NA	1.01	1.21
10.0	NA	1.00	1.20
10.2	NA	NA	1.19
10.4	NA	NA	1.18
10.6	NA	NA	1.17
10.8	NA	NA	1.16
11.0	NA	NA	1.16
11.2	NA	NA	1.15
11.4	NA	NA	1.14
11.6	NA	NA	1.13
11.8	NA	NA	1.12
12.0	NA	NA	1.11
12.2	NA	NA	1.10
12.4	NA	NA	1.10
12.6	NA	NA	1.09
12.8	NA	NA	1.08
13.0	NA	NA	1.07
13.2	NA	NA	1.06
13.4	NA	NA	1.06
13.6	NA	NA	1.05
13.8	NA	NA	1.04
14.0	NA	NA	1.03
14.2	NA	NA	1.03
14.4	NA	NA	1.02
14.6	NA	NA	1.01
14.8	NA	NA	1.01

Compound Listing

TO-15 (5&20 ppbv) (Sp)-Methanol Only

CAS Number	Compound	Detection Limit ppbv	Type
67-56-1	Methanol	50	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 11/11/15
Workorder # 1602064C	Form F1.27	Revision #12	Revision Date: 11/11/15	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out**				
					Initials/Instrument/Date	**S1:** MSD-14 MS 2/12/16	**S2:**	**S3:**	**S4:**
✓					Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓					Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
NA					Manual Integrations included and approved				
✓					Chain of Custody verified for special comments (add comments below)				
✓					Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

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

1-pt. MeOH.

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date	**A1:** MS 2/12/16	**A2:** CB/2-13-16	**A3:**	**A4:**
✓	✓				IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA	NA			NA	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
NA	NA				Manual integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓	✓				12/24 Hr clock time & Hold Time met for all samples				
NA	NA				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.				
✓	✓				All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: A1: 01A – 10A = full loads. 11A = DI, NTC.
A2 – 11A – 18A – full loads

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date MSD-14	**D1:** HOB 2/13/16	**D2:**	**D3:**	**D4:**
NA						CAR # *(if applicable)*				
NA						Spectra Verified *(documentation of spectral defense included if applicable)*				
						TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
						Lab Narrative is correct				
NA						TPH/NMOC calculations complete and included in folder				

Special notes: Meth only

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder** N/A	**Circle one: Yes/No**
		Initials/Date: HOB 2/13/16	**3rd Tier:** *(needed only for DOD or per client request)*	
NA		Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
NA		Manually entered results are checked		
		At least one result per sample is verified against Target quant sheets		
		Appropriate data qualifier flags are applied		
		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

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

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

Additional Comments:

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

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

Additional Comments:

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

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

Not Applicable