eurofins | Air Toxics

Electronic Comprehensive Validation Package (eCVP)

eurofins | Air Toxics

COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15 (5&20 ppbv)

INVENTORY SHEET

Work Order #: 1510223A

	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	68
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)	69	75
b. Surrogate Recover Summary Form (If Applicable)	76	76
c. Internal Standard Summary Form (If Applicable)	77	77
d. Duplicate Results Summary Sheet	--	--
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	78	86
g. MDL Study (If Applicable)	--	--
h. Continuing Calibration Verification Data (Summary Sheet	87	92
i. Second Source LCS(Summary + Raw Data)	--	--
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	93	93
l. GC/MS Tune (Results + Raw Data)	94	97
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	98	99
b. Chain-of-Custody Records	100	100
c. Sample Log-In Sheet	101	101
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	102	103
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	--	--
c. Manual Calculations	--	--
d. Canister Dilution Factors	104	106
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	107	107
g. Variance Table	--	--
h. Canister Certification	108	119
i. Data Review Check Sheet	120	121

Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	11/10/15
(Signature)	(Print Name & Title)	(Date)

CONFIDENTIALITY NOTICE: This communication and any accompanying documents are confidential and privileged. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If you received this transmission in error, you are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication is strictly prohibited. If you have received this communication in error, please contact Eurofins Air Toxics, Inc. at (916)-985-1000.

eurofins | Air Toxics

WORK ORDER #: 1510223A

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:	10/13/2015	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	10/16/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B30-1101015	Modified TO-15 (5&20 ppbv	3.7 "Hg	14.6 psi
02A	B30-2100915	Modified TO-15 (5&20 ppbv	3.9 "Hg	14.7 psi
03A	B30-3101015	Modified TO-15 (5&20 ppbv	4.3 "Hg	14.9 psi
04A	B30-4100915	Modified TO-15 (5&20 ppbv	3.3 "Hg	14.6 psi
05A	B30-4D100915	Modified TO-15 (5&20 ppbv	4.3 "Hg	15 psi
06A	B30-5100915	Modified TO-15 (5&20 ppbv	4.7 "Hg	14.8 psi
07A	B42-1101015	Modified TO-15 (5&20 ppbv	3.9 "Hg	14.7 psi
08A	B42-2101015	Modified TO-15 (5&20 ppbv	3.7 "Hg	14.7 psi
09A	B42-3101015	Modified TO-15 (5&20 ppbv	4.7 "Hg	14.8 psi
10A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
11A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 10/16/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

eurofins | Air Toxics

LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
Anderson Mulholland & Associates, Inc.
Workorder# 1510223A

Nine 1 Liter Summa Canister (100% Certified) samples were received on October 13, 2015. 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

The Chain of Custody (COC) information for sample B42-2101015 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

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
B30-1101015	1510223A-01A	10/10/2015	10/13/2015	NA	5	10/15/2015	NA	Good
B30-2100915	1510223A-02A	10/ 9/2015	10/13/2015	NA	6	10/15/2015	NA	Good
B30-3101015	1510223A-03A	10/10/2015	10/13/2015	NA	5	10/15/2015	NA	Good
B30-4100915	1510223A-04A	10/ 9/2015	10/13/2015	NA	6	10/15/2015	NA	Good
B30-4D100915	1510223A-05A	10/ 9/2015	10/13/2015	NA	6	10/15/2015	NA	Good
B30-5100915	1510223A-06A	10/ 9/2015	10/13/2015	NA	6	10/15/2015	NA	Good
B42-1101015	1510223A-07A	10/10/2015	10/13/2015	NA	5	10/15/2015	NA	Good
B42-2101015	1510223A-08A	10/10/2015	10/13/2015	NA	5	10/15/2015	NA	Good
B42-3101015	1510223A-09A	10/10/2015	10/13/2015	NA	5	10/15/2015	NA	Good
Lab Blank	1510223A-10A	NA	NA	NA	NA	10/15/2015	NA	Good
CCV	1510223A-11A	NA	NA	NA	NA	10/15/2015	NA	Good

Sample Results and Raw Data

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

Client Sample ID: B30-1101015

Lab ID#: 1510223A-01A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-1101015

Lab ID#: 1510223A-01A

EPA METHOD TO-15 GC/MS

File Name:	**14101505**	**Date of Collection:**	**10/10/15 10:22:00 A**
Dil. Factor:	**2.27**	**Date of Analysis:**	**10/15/15 01:37 PM**

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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101505.d
Lab Smp Id: 1510223A-01A
Inj Date : 15-OCT-2015 13:37
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #20780
Misc Info : 3.7"Hg -> 14.6psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.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

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	46999	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37608			45.12- 105.12	80.02
4.749	4.734 (1.000)	49	78034			101.60- 161.60	166.03
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	232171	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	39223			0.00- 45.35	16.89
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	194314	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	135236			23.98- 83.98	69.60
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	93876	418.792	418.79	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	46492			18.29- 78.29	49.53
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	249475	399.793	399.79	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	30330			0.00- 41.01	12.16

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	156211			34.42- 94.42	62.62
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	112976	416.658	416.66	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	171632			103.22- 163.22	151.92
9.283	9.283	(1.090)	176	108490			67.52- 127.52	96.03

Report Date: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101505.d
Lab Smp Id: 1510223A-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.7"Hg -> 14.6psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	46999	-13.72
92 1,4-Difluorobenze	251602	150961	352243	232171	-7.72
125 Chlorobenzene-d5	205981	123589	288373	194314	-5.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-01A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.7"Hg -> 14.6psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	418.79	104.70	70-130
$ 107 Toluene-d8	400.00	399.79	99.95	70-130
$ 138 Bromofluorobenzene	400.00	416.66	104.16	70-130

Data File: /chem/msd14.i/15oct15a.b/14101505.d

Date : 15-OCT-2015 13:37

Client ID:

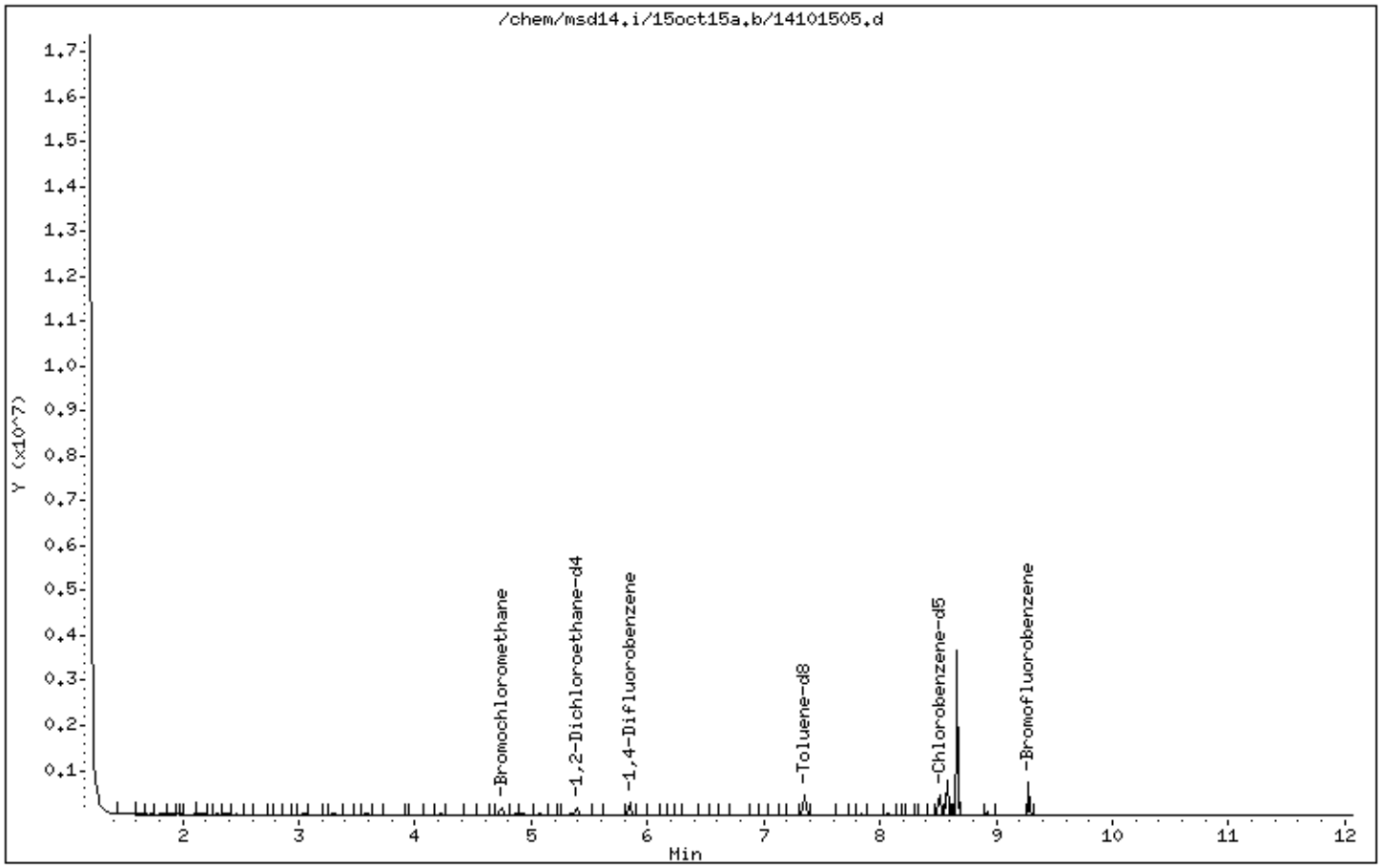
Instrument: msd14.i

Sample Info: 50ml #20780

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B30-2100915

Lab ID#: 1510223A-02A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-2100915

Lab ID#: 1510223A-02A

EPA METHOD TO-15 GC/MS

File Name:	**14101506**	**Date of Collection:**	**10/9/15 3:40:00 PM**
Dil. Factor:	**2.30**	**Date of Analysis:**	**10/15/15 01:54 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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101506.d
Lab Smp Id: 1510223A-02A
Inj Date : 15-OCT-2015 13:54
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #31767
Misc Info : 3.9"Hg -> 14.7psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 2
Dil Factor: 2.30000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	48159	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	38706			45.12- 105.12	80.37
4.749	4.734 (1.000)	49	78068			101.60- 161.60	162.10
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	232353	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	40235			0.00- 45.35	17.32
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	194162	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	130290			23.98- 83.98	67.10
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	94645	412.050	412.05	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	47213			18.29- 78.29	49.89
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	244799	391.991	391.99	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	29051			0.00- 41.01	11.87

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	155846			34.42- 94.42	63.66
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	108217	399.418	399.42	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	167287			103.22- 163.22	154.58
9.283	9.283	(1.090)	176	104943			67.52- 127.52	96.97

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101506.d
Lab Smp Id: 1510223A-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.9"Hg -> 14.7psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	48159	-11.59
92 1,4-Difluorobenze	251602	150961	352243	232353	-7.65
125 Chlorobenzene-d5	205981	123589	288373	194162	-5.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-02A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.9"Hg -> 14.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	412.05	103.01	70-130
$ 107 Toluene-d8	400.00	391.99	98.00	70-130
$ 138 Bromofluorobenzene	400.00	399.42	99.85	70-130

Data File: /chem/msd14.i/15oct15a.b/14101506.d

Date : 15-OCT-2015 13:54

Client ID:

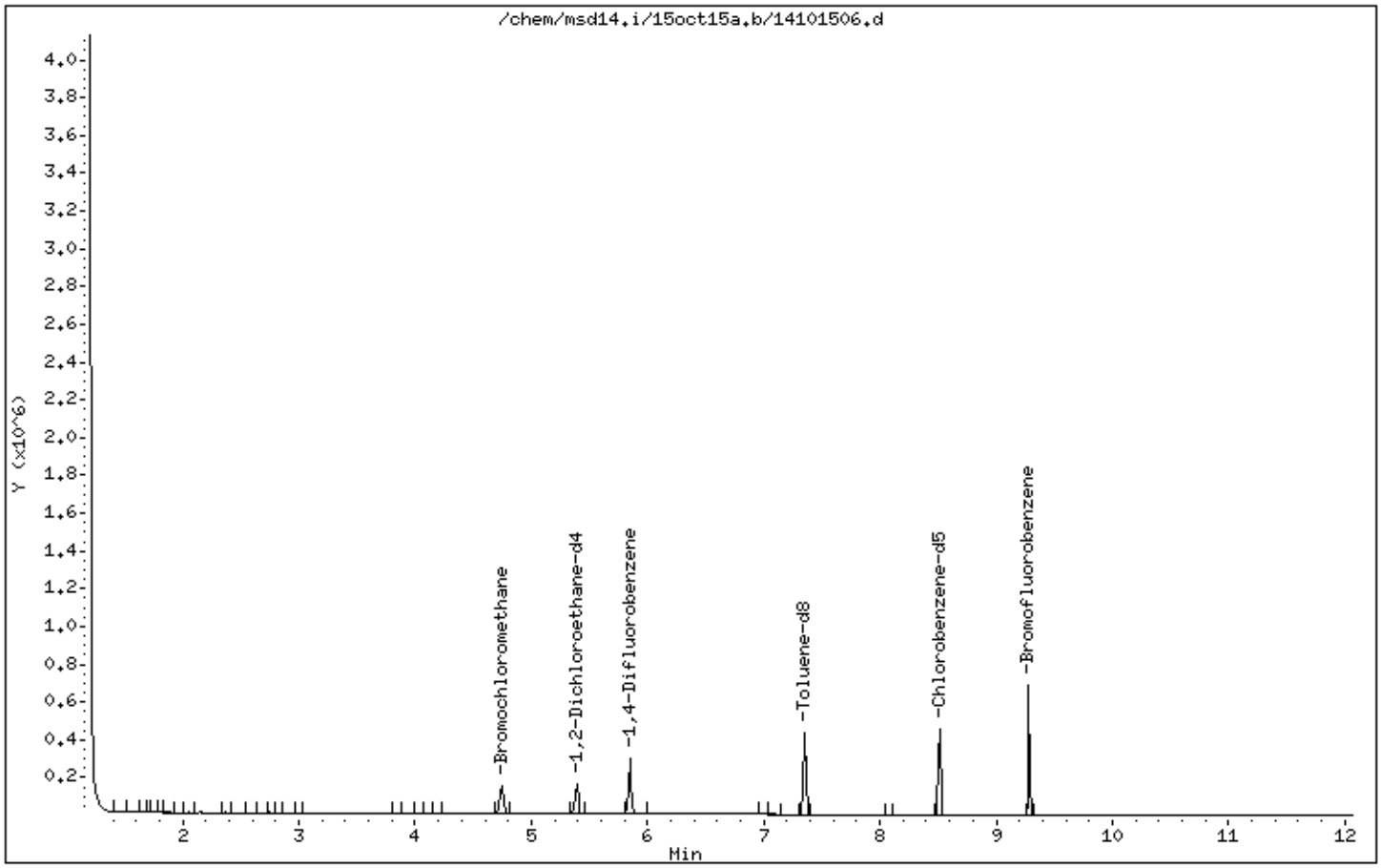
Instrument: msd14.i

Sample Info: 50ml #31767

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B30-3101015

Lab ID#: 1510223A-03A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-3101015

Lab ID#: 1510223A-03A

EPA METHOD TO-15 GC/MS

File Name:	**14101507**	**Date of Collection:**	**10/10/15 10:42:00 A**
Dil. Factor:	**2.35**	**Date of Analysis:**	**10/15/15 02:11 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 (100% Certified)

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

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101507.d
Lab Smp Id: 1510223A-03A
Inj Date : 15-OCT-2015 14:11
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #36440
Misc Info : 4.3"Hg -> 14.9psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 3
Dil Factor: 2.35000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	47427	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	36757			45.12- 105.12	77.50
4.749	4.734 (1.000)	49	75230			101.60- 161.60	158.62
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	218143	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	38096			0.00- 45.35	17.46
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	186945	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	124786			23.98- 83.98	66.75
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	91138	402.907	402.91	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	44141			18.29- 78.29	48.43
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	236962	404.159	404.16	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	28307			0.00- 41.01	11.95

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	151528			34.42- 94.42	63.95
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	107345	411.495	411.50	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	163278			103.22- 163.22	152.11
9.283	9.283	(1.090)	176	100650			67.52- 127.52	93.76

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101507.d
Lab Smp Id: 1510223A-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.3"Hg -> 14.9psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	47427	-12.93
92 1,4-Difluorobenze	251602	150961	352243	218143	-13.30
125 Chlorobenzene-d5	205981	123589	288373	186945	-9.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-03A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.3"Hg -> 14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	402.91	100.73	70-130
$ 107 Toluene-d8	400.00	404.16	101.04	70-130
$ 138 Bromofluorobenzene	400.00	411.50	102.87	70-130

Data File: /chem/msd14.i/15oct15a.b/14101507.d

Date : 15-OCT-2015 14:11

Client ID:

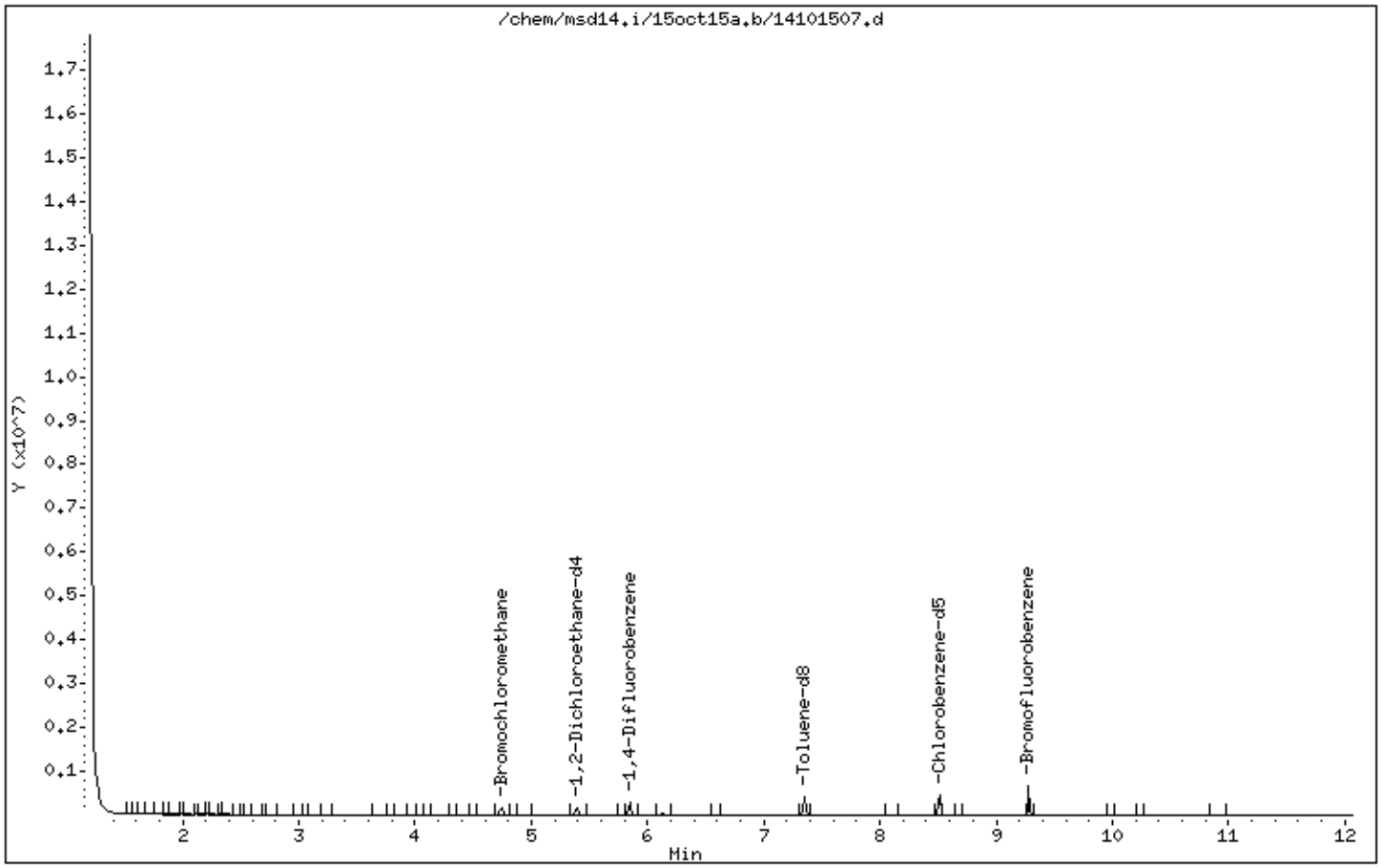
Instrument: msd14.i

Sample Info: 50ml #36440

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B30-4100915

Lab ID#: 1510223A-04A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-4100915

Lab ID#: 1510223A-04A

EPA METHOD TO-15 GC/MS

File Name:	**14101508**	**Date of Collection:**	**10/9/15 12:31:00 PM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**10/15/15 02:28 PM**

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 (100% Certified)

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.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101508.d
Lab Smp Id: 1510223A-04A
Inj Date : 15-OCT-2015 14:28
Operator : mjs Inst ID: msd14.i
Smp Info : 50ml #31788
Misc Info : 3.3"Hg -> 14.6psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 4
Dil Factor: 2.24000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	49796	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37235			45.12- 105.12	74.78
4.749	4.734 (1.000)	49	79677			101.60- 161.60	160.01
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	230643	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	40574			0.00- 45.35	17.59
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	193534	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	127829			23.98- 83.98	66.05
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	94809	399.195	399.19	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	47441			18.29- 78.29	50.04
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	249773	402.920	402.92	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	28637			0.00- 41.01	11.47

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	156506			34.42- 94.42	62.66
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	108299	401.015	401.02	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	168733			103.22- 163.22	155.80
9.283	9.283	(1.090)	176	103877			67.52- 127.52	95.92

Report Date: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101508.d
Lab Smp Id: 1510223A-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.3"Hg -> 14.6psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	49796	-8.58
92 1,4-Difluorobenze	251602	150961	352243	230643	-8.33
125 Chlorobenzene-d5	205981	123589	288373	193534	-6.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-04A
Level: LOW
Operator: mjs
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.3"Hg -> 14.6psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	399.19	99.80	70-130
$ 107 Toluene-d8	400.00	402.92	100.73	70-130
$ 138 Bromofluorobenzene	400.00	401.02	100.25	70-130

Data File: /chem/msd14.i/15oct15a.b/14101508.d

Date : 15-OCT-2015 14:28

Client ID:

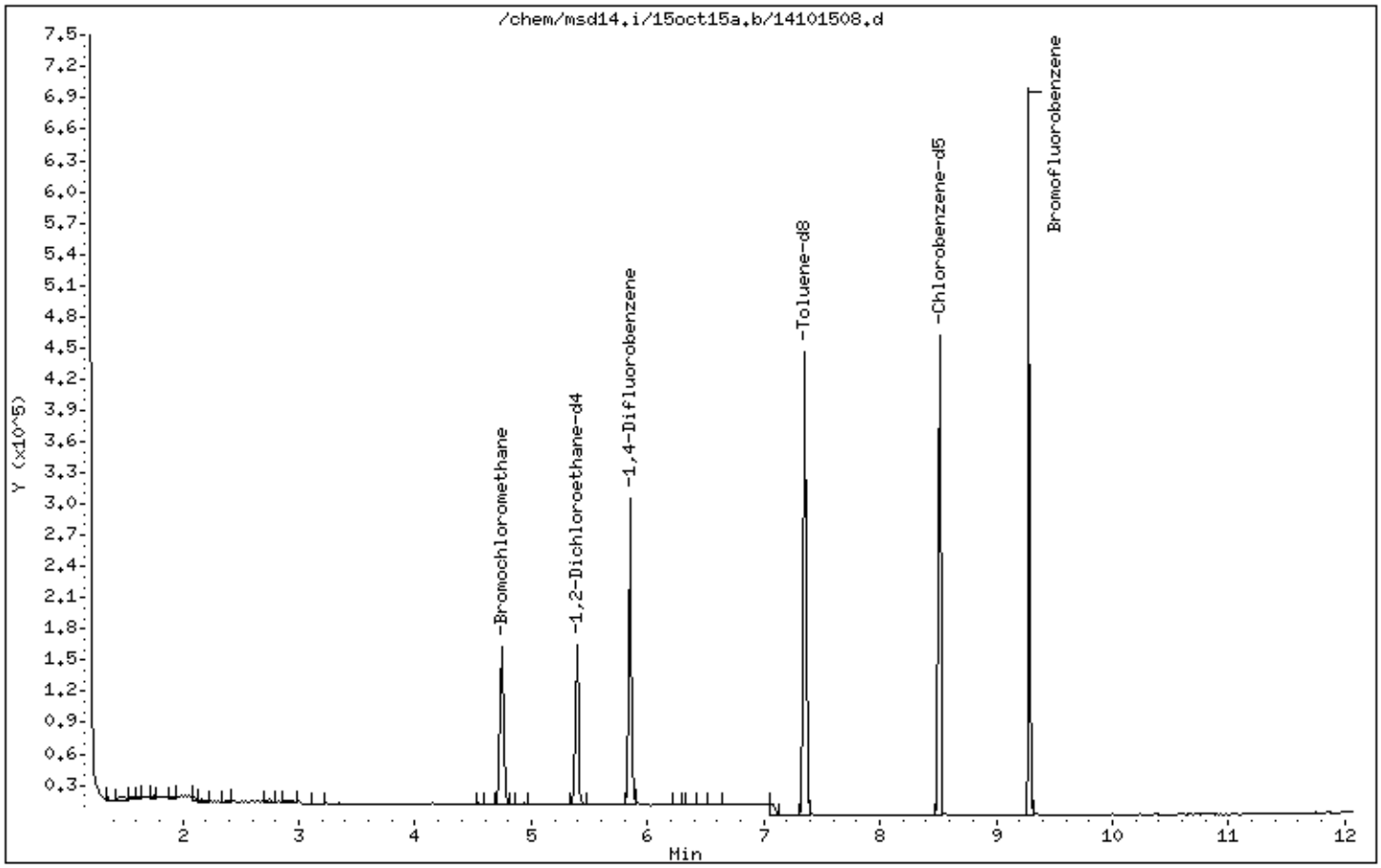
Instrument: msd14.i

Sample Info: 50ml #31788

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B30-4D100915

Lab ID#: 1510223A-05A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-4D100915

Lab ID#: 1510223A-05A

EPA METHOD TO-15 GC/MS

File Name:	**14101509**	**Date of Collection:**	**10/9/15 12:31:00 PM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**10/15/15 02:52 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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101509.d
Lab Smp Id: 1510223A-05A
Inj Date : 15-OCT-2015 14:52
Operator : gd Inst ID: msd14.i
Smp Info : 50ml #37314
Misc Info : 4.3"Hg -> 15psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 4
Dil Factor: 2.36000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	47417	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37433			45.12- 105.12	78.94
4.749	4.734 (1.000)	49	77529			101.60- 161.60	163.50
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	224707	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	38644			0.00- 45.35	17.20
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	188652	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	123437			23.98- 83.98	65.43
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	94947	419.834	419.83	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	46428			18.29- 78.29	48.90
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	240673	398.498	398.50	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	29524			0.00- 41.01	12.27

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	152835			34.42- 94.42	63.50
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	103667	393.802	393.80	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	159817			103.22- 163.22	154.16
9.283	9.283	(1.090)	176	101191			67.52- 127.52	97.61

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101509.d
Lab Smp Id: 1510223A-05A
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.3"Hg -> 15psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	47417	-12.95
92 1,4-Difluorobenze	251602	150961	352243	224707	-10.69
125 Chlorobenzene-d5	205981	123589	288373	188652	-8.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-05A
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.3"Hg -> 15psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	419.83	104.96	70-130
$ 107 Toluene-d8	400.00	398.50	99.62	70-130
$ 138 Bromofluorobenzene	400.00	393.80	98.45	70-130

Data File: /chem/msd14.i/15oct15a.b/14101509.d

Date : 15-OCT-2015 14:52

Client ID:

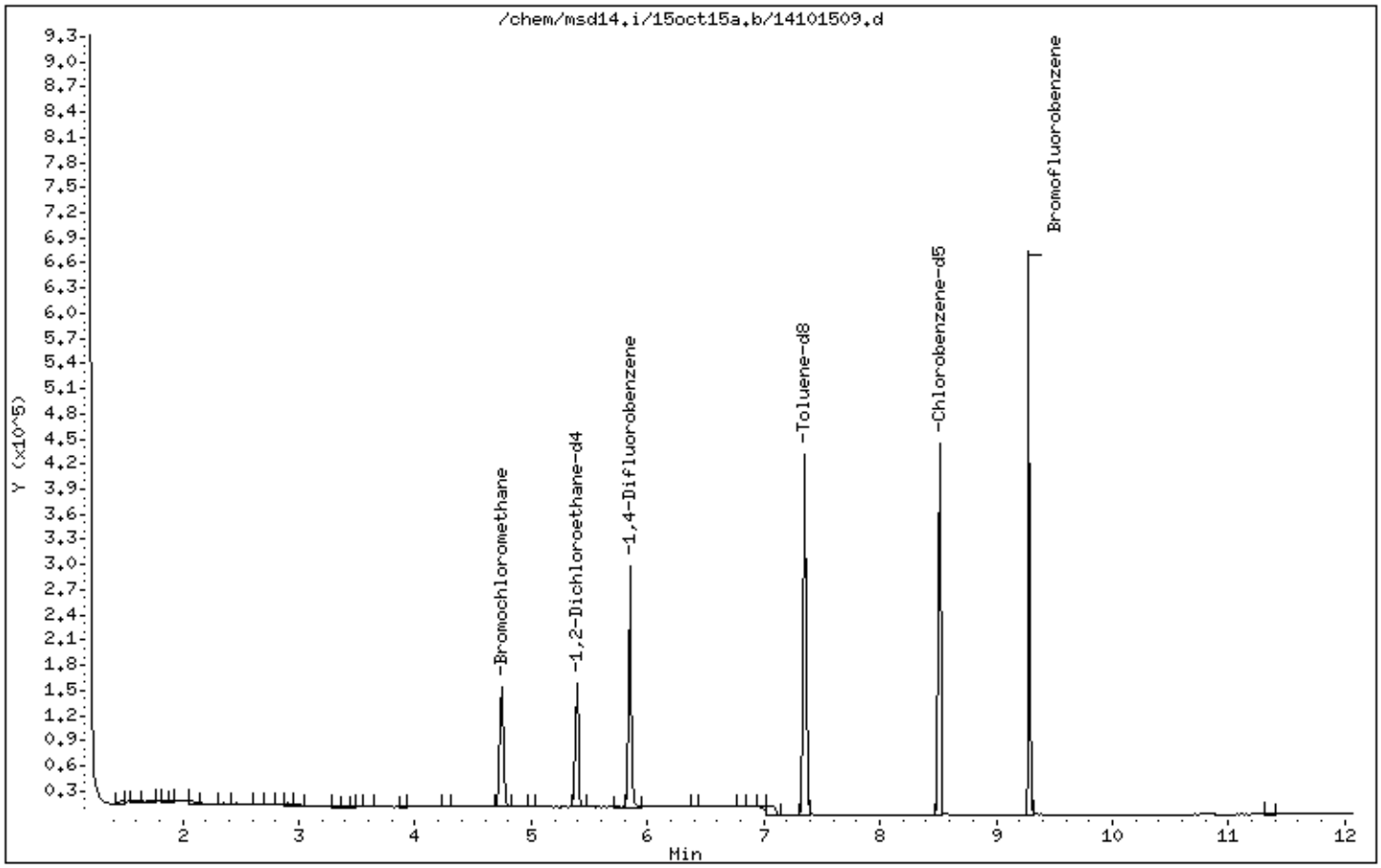
Instrument: msd14.i

Sample Info: 50ml #37314

Operator: gd

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B30-5100915

Lab ID#: 1510223A-06A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B30-5100915

Lab ID#: 1510223A-06A

EPA METHOD TO-15 GC/MS

File Name:	**14101510**	**Date of Collection:**	**10/9/15 1:36:00 PM**
Dil. Factor:	**2.38**	**Date of Analysis:**	**10/15/15 03:10 PM**

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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101510.d
Lab Smp Id: 1510223A-06A
Inj Date : 15-OCT-2015 15:10
Operator : gd Inst ID: msd14.i
Smp Info : 50ml #2056
Misc Info : 4.7"Hg -> 14.8psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 4
Dil Factor: 2.38000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	48731	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37506			45.12- 105.12	76.96
4.749	4.734 (1.000)	49	76558			101.60- 161.60	157.10
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	225244	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	38265			0.00- 45.35	16.99
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	187429	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	125385			23.98- 83.98	66.90
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	91597	394.099	394.10	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	45069			18.29- 78.29	49.20
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	239466	395.554	395.55	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	29003			0.00- 41.01	12.11

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	151557			34.42- 94.42	63.29
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	106056	405.504	405.50	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	160639			103.22- 163.22	151.47
9.283	9.283	(1.090)	176	102973			67.52- 127.52	97.09

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101510.d
Lab Smp Id: 1510223A-06A
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.7"Hg -> 14.8psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	48731	-10.54
92 1,4-Difluorobenze	251602	150961	352243	225244	-10.48
125 Chlorobenzene-d5	205981	123589	288373	187429	-9.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-06A
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.7"Hg -> 14.8psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	394.10	98.52	70-130
$ 107 Toluene-d8	400.00	395.55	98.89	70-130
$ 138 Bromofluorobenzene	400.00	405.50	101.38	70-130

Data File: /chem/msd14.i/15oct15a.b/14101510.d

Date : 15-OCT-2015 15:10

Client ID:

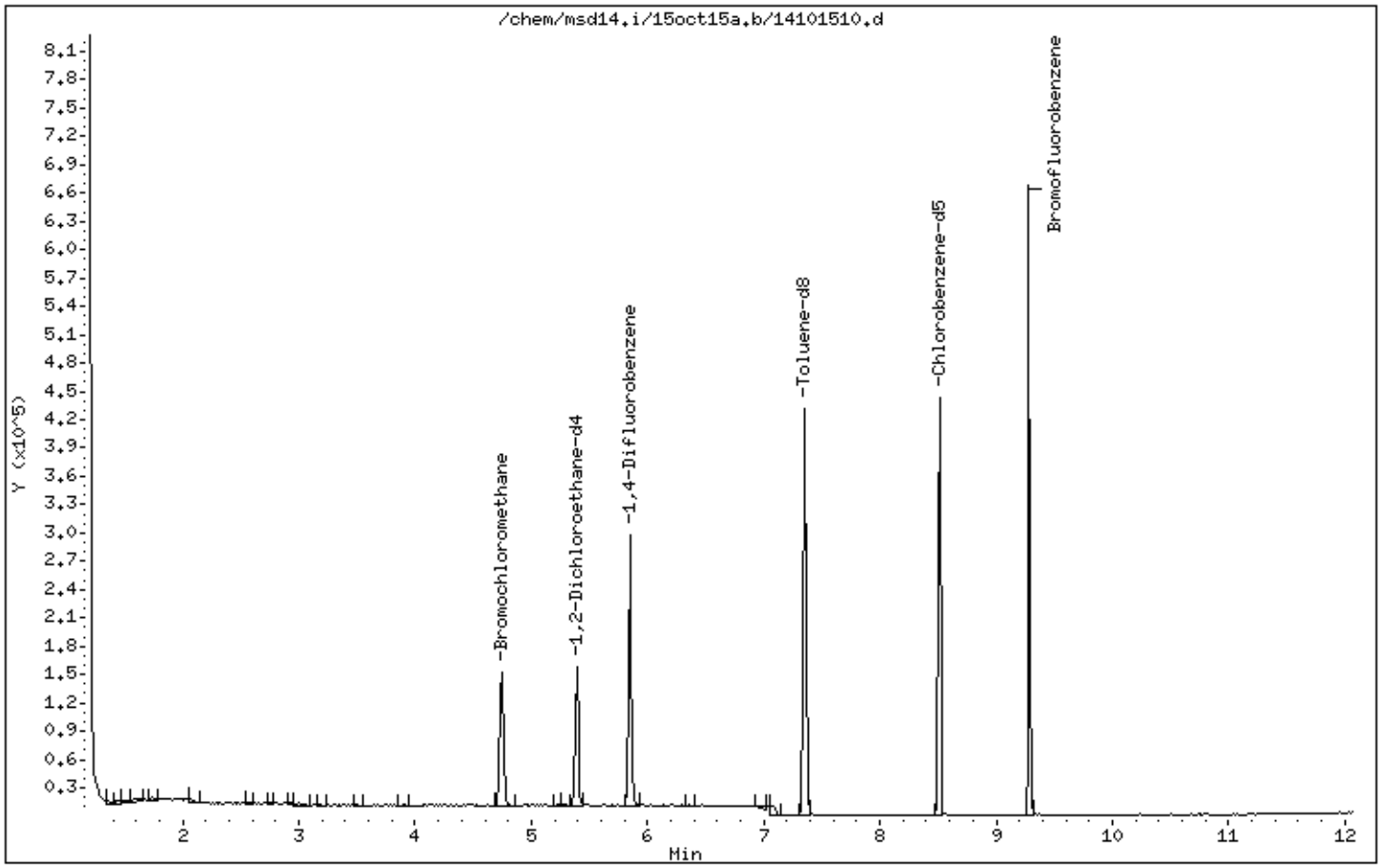
Instrument: msd14.i

Sample Info: 50ml #2056

Operator: gd

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B42-1101015

Lab ID#: 1510223A-07A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B42-1101015

Lab ID#: 1510223A-07A

EPA METHOD TO-15 GC/MS

File Name:	**14101511**	**Date of Collection:**	**10/10/15 11:31:00 A**
Dil. Factor:	**2.30**	**Date of Analysis:**	**10/15/15 03:33 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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101511.d
Lab Smp Id: 1510223A-07A
Inj Date : 15-OCT-2015 15:33
Operator : gd Inst ID: msd14.i
Smp Info : 50ml #11430
Misc Info : 3.9"Hg -> 14.7psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 4
Dil Factor: 2.30000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	47664	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37787			45.12- 105.12	79.28
4.749	4.734 (1.000)	49	77897			101.60- 161.60	163.43
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	229453	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	39906			0.00- 45.35	17.39
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	188864	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	127435			23.98- 83.98	67.47
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	93500	411.300	411.30	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	45540			18.29- 78.29	48.71
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	244032	395.702	395.70	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	28976			0.00- 41.01	11.87

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	154429			34.42- 94.42	63.28
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	109254	414.557	414.56	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	166229			103.22- 163.22	152.15
9.283	9.283	(1.090)	176	104662			67.52- 127.52	95.80

Report Date: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101511.d
Lab Smp Id: 1510223A-07A
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.9"Hg -> 14.7psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	47664	-12.50
92 1,4-Difluorobenze	251602	150961	352243	229453	-8.80
125 Chlorobenzene-d5	205981	123589	288373	188864	-8.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-07A
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.9"Hg -> 14.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	411.30	102.83	70-130
$ 107 Toluene-d8	400.00	395.70	98.93	70-130
$ 138 Bromofluorobenzene	400.00	414.56	103.64	70-130

Data File: /chem/msd14.i/15oct15a.b/14101511.d

Date : 15-OCT-2015 15:33

Client ID:

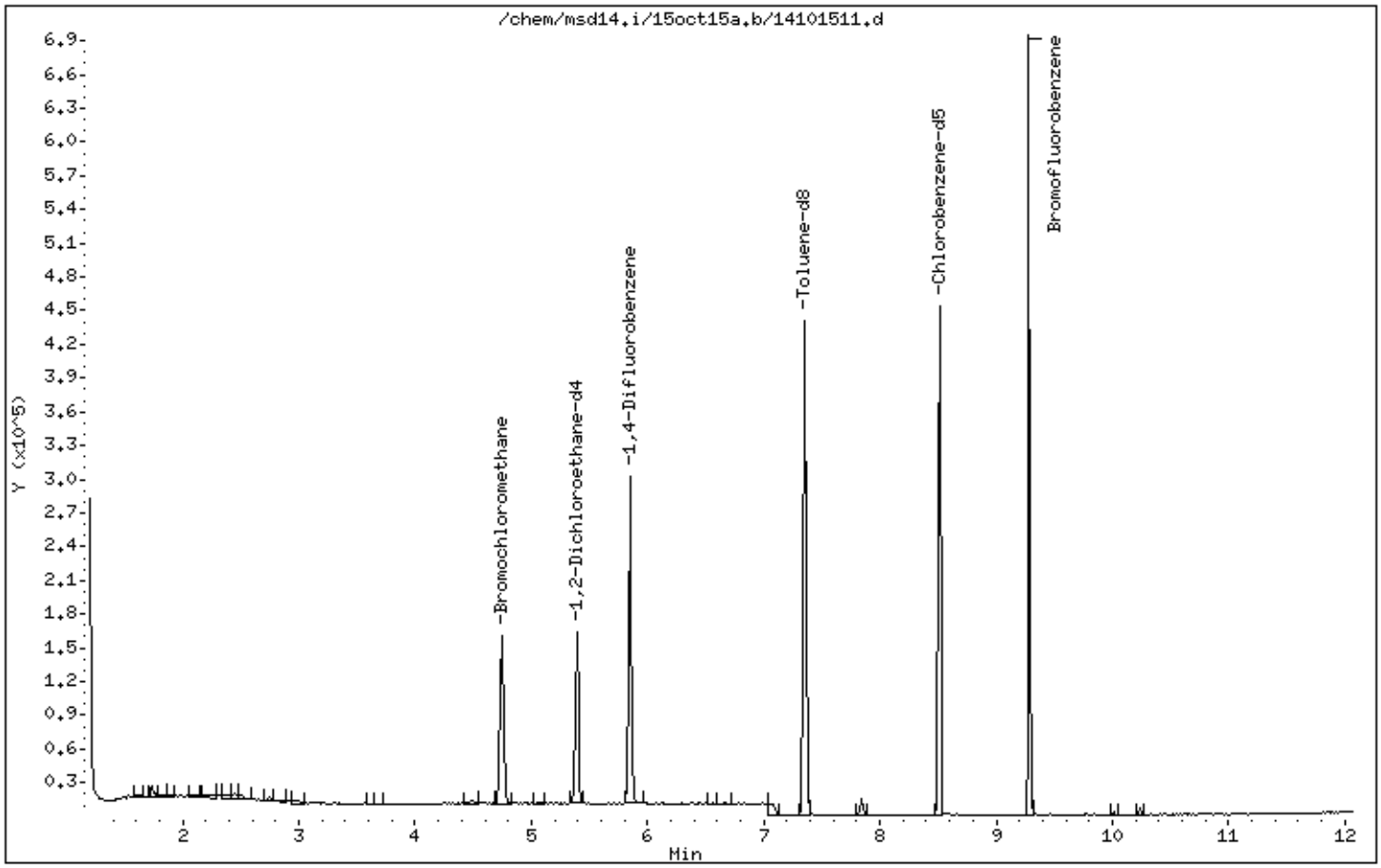
Instrument: msd14.i

Sample Info: 50ml #11430

Operator: gd

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B42-2101015

Lab ID#: 1510223A-08A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B42-2101015

Lab ID#: 1510223A-08A

EPA METHOD TO-15 GC/MS

File Name:	**14101512**	**Date of Collection:**	**10/10/15 12:10:00 P**
Dil. Factor:	**2.28**	**Date of Analysis:**	**10/15/15 03:50 PM**

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 (100% Certified)

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

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101512.d
Lab Smp Id: 1510223A-08A
Inj Date : 15-OCT-2015 15:50
Operator : gd Inst ID: msd14.i
Smp Info : 50ml #34661
Misc Info : 3.7"Hg -> 14.7psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 5
Dil Factor: 2.28000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	48538	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	37737			45.12- 105.12	77.75
4.749	4.734 (1.000)	49	77619			101.60- 161.60	159.91
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	224597	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	39032			0.00- 45.35	17.38
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	189650	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	125635			23.98- 83.98	66.25
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	95030	410.496	410.50	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	46262			18.29- 78.29	48.68
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	242649	401.965	401.96	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	28820			0.00- 41.01	11.88

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	149832			34.42- 94.42	61.75
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	106299	401.671	401.67	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	161986			103.22- 163.22	152.39
9.283	9.283	(1.090)	176	100935			67.52- 127.52	94.95

Report Date: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101512.d
Lab Smp Id: 1510223A-08A
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.7"Hg -> 14.7psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	48538	-10.89
92 1,4-Difluorobenze	251602	150961	352243	224597	-10.73
125 Chlorobenzene-d5	205981	123589	288373	189650	-7.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-08A
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 3.7"Hg -> 14.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	410.50	102.62	70-130
$ 107 Toluene-d8	400.00	401.96	100.49	70-130
$ 138 Bromofluorobenzene	400.00	401.67	100.42	70-130

Data File: /chem/msd14.i/15oct15a.b/14101512.d

Date : 15-OCT-2015 15:50

Client ID:

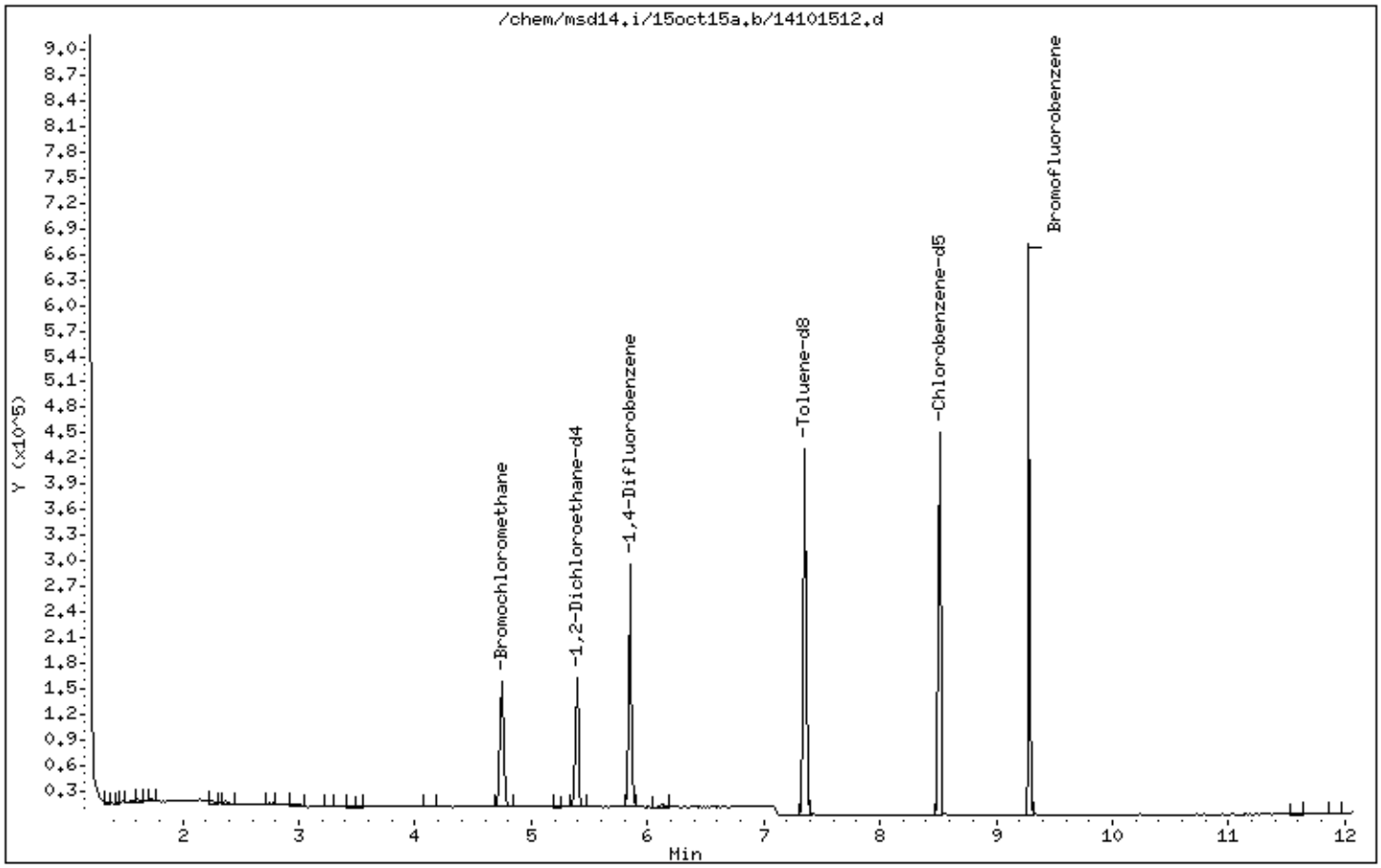
Instrument: msd14.i

Sample Info: 50ml #34661

Operator: gd

Column phase: RTx-624

Column diameter: 0.53



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

Client Sample ID: B42-3101015

Lab ID#: 1510223A-09A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B42-3101015

Lab ID#: 1510223A-09A

EPA METHOD TO-15 GC/MS

File Name:	**14101513**	**Date of Collection:**	**10/10/15 12:32:00 P**
Dil. Factor:	**2.38**	**Date of Analysis:**	**10/15/15 04:07 PM**

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 (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101513.d
Lab Smp Id: 1510223A-09A
Inj Date : 15-OCT-2015 16:07
Operator : gd Inst ID: msd14.i
Smp Info : 50ml #36464
Misc Info : 4.7"Hg -> 14.8psi
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 6
Dil Factor: 2.38000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	47409	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	36898			45.12- 105.12	77.83
4.749	4.734 (1.000)	49	75031			101.60- 161.60	158.26
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	225936	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	38087			0.00- 45.35	16.86
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	185919	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	123731			23.98- 83.98	66.55
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	94751	419.041	419.04	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	45732			18.29- 78.29	48.27
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	237738	391.496	391.50	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	29097			0.00- 41.01	12.24

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	148430			34.42- 94.42	62.43
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	107063	412.679	412.68	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	159758			103.22- 163.22	149.22
9.283	9.283	(1.090)	176	100489			67.52- 127.52	93.86

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101513.d
Lab Smp Id: 1510223A-09A
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.7"Hg -> 14.8psi

Calibration Date: 15-OCT-2015
Calibration Time: 12:37

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	47409	-12.96
92 1,4-Difluorobenze	251602	150961	352243	225936	-10.20
125 Chlorobenzene-d5	205981	123589	288373	185919	-9.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 16-Oct-2015 07:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1510223A-09A
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 4.7"Hg -> 14.8psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	419.04	104.76	70-130
$ 107 Toluene-d8	400.00	391.50	97.87	70-130
$ 138 Bromofluorobenzene	400.00	412.68	103.17	70-130

Data File: /chem/msd14.i/15oct15a.b/14101513.d

Date : 15-OCT-2015 16:07

Client ID:

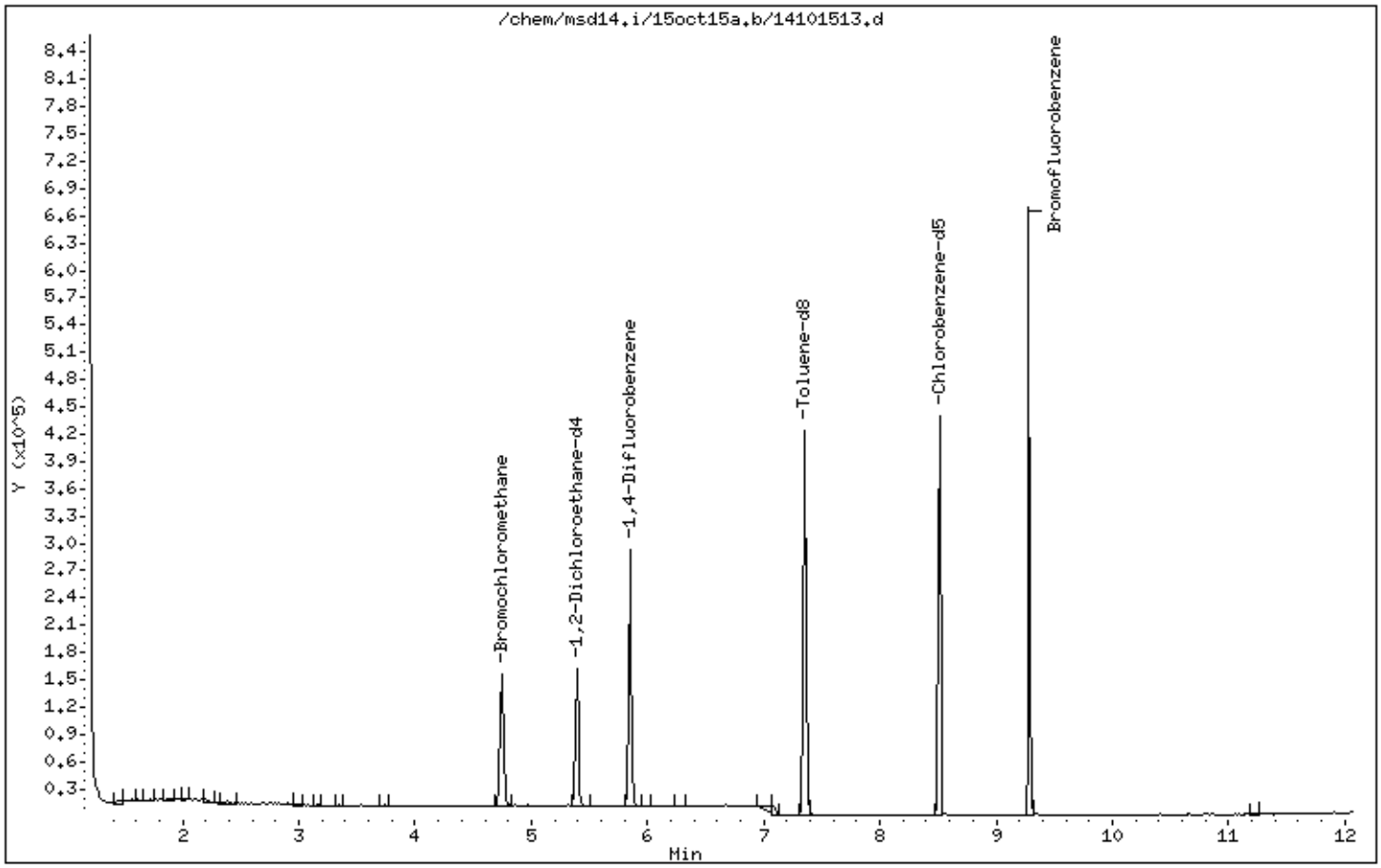
Instrument: msd14.i

Sample Info: 50ml #36464

Operator: gd

Column phase: RTx-624

Column diameter: 0.53



QC Results and Raw Data

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1510223A-10A

EPA METHOD TO-15 GC/MS

File Name:	**14101504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/15/15 01:11 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	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101504.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 15-OCT-2015 13:11
Operator : mjs Inst ID: msd14.i
Smp Info : 50mL #34496
Misc Info : Humid
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:23 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.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

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	54106	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	42244			45.12- 105.12	78.08
4.734	4.749 (1.000)	49	86087			101.60- 161.60	159.11
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	252703	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	42904			0.00- 45.35	16.98
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	210698	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	139604			23.98- 83.98	66.26
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	103298	400.297	400.30	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	51719			18.29- 78.29	50.07
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	268563	395.413	395.41	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	33057			0.00- 41.01	12.31

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	169352			34.42- 94.42	63.06
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	120190	408.793	408.79	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	183375			103.22- 163.22	152.57
9.283	9.283	(1.090)	176	115556			67.52- 127.52	96.14

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101504.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: Humid

Calibration Date: 15-OCT-2015
Calibration Time: 12:37
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	54106	-0.67
92 1,4-Difluorobenze	251602	150961	352243	252703	0.44
125 Chlorobenzene-d5	205981	123589	288373	210698	2.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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: 15-Oct-2015 13:32

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 15oct15a
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: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	400.30	100.07	70-130
$ 107 Toluene-d8	400.00	395.41	98.85	70-130
$ 138 Bromofluorobenzene	400.00	408.79	102.20	70-130

Data File: /chem/msd14.i/15oct15a.b/14101504.d

Date : 15-OCT-2015 13:11

Client ID: Lab Blank

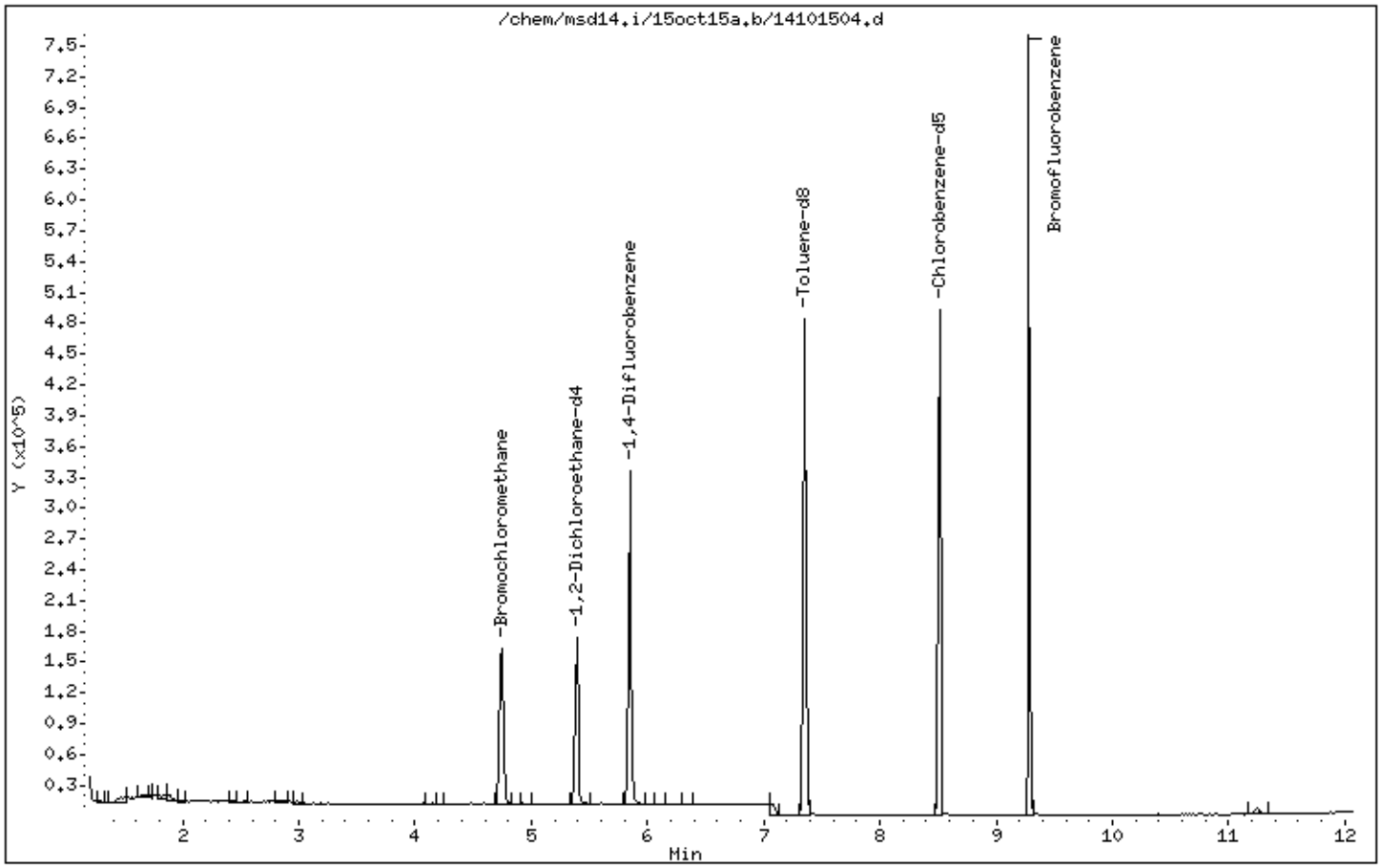
Instrument: msd14.i

Sample Info: 50mL #34496

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1510223A

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B30-1101015	105		100		104				0
02	B30-2100915	103		98		100				0
03	B30-3101015	101		101		103				0
04	B30-4100915	100		101		100				0
05	B30-4D100915	105		100		98				0
06	B30-5100915	98		99		101				0
07	B42-1101015	103		99		104				0
08	B42-2101015	103		100		100				0
09	B42-3101015	105		98		103				0
10	Lab Blank	100		99		102				0
11	CCV	100		100		100				0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

1,2-Dichloroethane-d4 70 - 130
Toluene-d8 70 - 130
4-Bromofluorobenzene 70 - 130

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

EPA Method TO-15 GC/MS

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1510223A
Lab File ID:	14101503a.d	Date Analyzed:	10/15/2015
Instrument ID:	msd14.i	Time Analyzed:	12:37 PM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	205981		8.51		251602		5.85		54471		4.75	
	UPPER LIMIT	288373		08.84		352243		06.18		76259		05.08	
	LOWER LIMIT	123589		08.18		150961		05.52		32683		04.42	
	CLIENT SAMPLE NO												
01	B30-1101015	194314		8.51		232171		5.85		46999		4.75	
02	B30-2100915	194162		8.51		232353		5.85		48159		4.75	
03	B30-3101015	186945		8.51		218143		5.85		47427		4.75	
04	B30-4100915	193534		8.51		230643		5.85		49796		4.75	
05	B30-4D100915	188652		8.51		224707		5.85		47417		4.75	
06	B30-5100915	187429		8.51		225244		5.85		48731		4.75	
07	B42-1101015	188864		8.51		229453		5.85		47664		4.75	
08	B42-2101015	189650		8.51		224597		5.85		48538		4.75	
09	B42-3101015	185919		8.51		225936		5.85		47409		4.75	
10	Lab Blank	210698		8.51		252703		5.85		54106		4.75	
11	CCV	205981		8.51		251602		5.85		54471		4.75	
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

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

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

* Designates values outside of QC limits

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-OCT-2015 12:37
End Cal Date : 15-OCT-2015 12:37
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Cal Date : 15-Oct-2015 13:23 mskidmor
Curve Type : Average

Calibration File Names:
Level 2: /chem/msd14.i/15oct15a.b/14101503.d

Compound	50.000 Level 2	RRF	% RSD
14 Methanol	3.27954	3.27954	0.000
$ 84 1,2-Dichloroethane-d4	1.90777	1.90777	0.000
$ 107 Toluene-d8	1.07509	1.07509	0.000
$ 138 Bromofluorobenzene	0.55817	0.55817	0.000

Calibration History

Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Start Cal Date: 15-OCT-2015 12:37
End Cal Date : 15-OCT-2015 12:37

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 50.00000		
15-OCT-2015 12:37	MeOHICAL	/chem/msd14.i/15oct15a.b/14101503.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 2

Ccal Level: 2 , Ccal Amount: 50.000		
15-OCT-2015 12:37	MeOHccv	/chem/msd14.i/15oct15a.b/14101503a.d
Ccal Level: 2 , Ccal Amount: 50.000		
15-OCT-2015 12:37	MeOHICAL	/chem/msd14.i/15oct15a.b/14101503.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-OCT-2015 12:37
End Cal Date : 15-OCT-2015 12:37
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Cal Date : 15-Oct-2015 13:08 mskidmor
Curve Type : Average

MB 10/15/15

Calibration File Names:
Level 2: /chem/msd14.i/15oct15a.b/14101503.d

Compound	50.000 Level 2	RRF	% RSD
14 Methanol	3.27954	3.27954	0.000
$ 84 1,2-Dichloroethane-d4	1.90777	1.90777	0.000
$ 107 Toluene-d8	1.07509	1.07509	0.000
$ 138 Bromofluorobenzene	0.55817	0.55817	0.000

MEOH1015a.M
Initial Calibration Narrative

A 1-point Methanol initial calibration was analyzed on MSD-14 on 10/15/15.

No ICV or MDL needed.

BFB Tune file - 14101501

MeOH only

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

BFB Verification of 176/174 m/z Ratio:	(64968/67592) * 100 = 96.12%
Method Name:	~~MEOH1015A.M~~ MEOH1015A.M MB 10/15/15

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

IS/S Std. #: 2736-293	Exp. Date: 1/7/16
BCM	54,471
1,4-DFB	251,602
CB-d5	205,981
Verified CCV IS vs ICAL mid-point (-40%D):	MB

0082 of 0122

Calculation Check: File ID: 14101503
Compound: Toluene-d8
Initials: MB

$$\text{ppbv of compound} = \frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}} = \frac{(270495)}{(251602)} \times \frac{(400.00)}{(1.07509)} = \text{Reported Result: } 400.0\text{U}$$

	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	✓	14101501	BFB Tune Check	2299-1265	50ng	2.0mL	NA	1.00	MB	10/15/15	1100	MB	
2	✓	02	System Blank	34496	Humid	50mL	↓	↓	↓	↓	1119	MB	
3	✓	03	ICAL Level #4	2759-16	50ppbv	12.5mL	↓	↓	↓	↓	1237	MB	Exp. 12/15/15
4	✓	04	Lab Blank	34496	Humid	50mL	↓	↓	↓	↓	1311	MB	
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

MB 10/15/15

MB
Reviewed

10/15/15
Date

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101503.d
Lab Smp Id: ICAL Level #2 Client Smp ID: ICAL Level #2
Inj Date : 15-OCT-2015 12:37
Operator : mjs Inst ID: msd14.i
Smp Info : 12.5ml #2759-16
Misc Info : 50ppbv(200ppbv)
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:08 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MeOHICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	54471	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	41933			45.12- 105.12	76.98
4.734	4.734 (1.000)	49	85608			101.60- 161.60	157.16
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	103918	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	51488			18.29- 78.29	49.55
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	251602	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	43377			0.00- 45.35	17.24
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	270495	400.000	400.00	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	31970			0.00- 41.01	11.82
7.352	7.352 (1.258)	100	169189			34.42- 94.42	62.55
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	205981	400.000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 125 Chlorobenzene-d5 (continued)								
8.513	8.513	(1.000)	82	139029			23.98- 83.98	67.50
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	114972	400.000	400.00	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	179996			103.22- 163.22	156.56
9.283	9.283	(1.090)	176	111267			67.52- 127.52	96.78
14 Methanol						CAS #: 67-56-1		
1.728	1.728	(0.364)	31	22330	50.0000	50.000	80.00- 120.00	100.00(a)
1.728	1.728	(0.364)	29	18460			0.00- 30.99	82.67
1.742	1.742	(0.367)	32	27679			61.63- 121.63	123.95

QC Flag Legend

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

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101503.d
Lab Smp Id: ICAL Level #2
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 15-OCT-2015
Calibration Time: 12:37
Client Smp ID: ICAL Level #2
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	54471	0.00
92 1,4-Difluorobenze	251602	150961	352243	251602	0.00
125 Chlorobenzene-d5	205981	123589	288373	205981	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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/15oct15a.b/14101503.d

Date : 15-OCT-2015 12:37

Client ID: ICAL Level #2

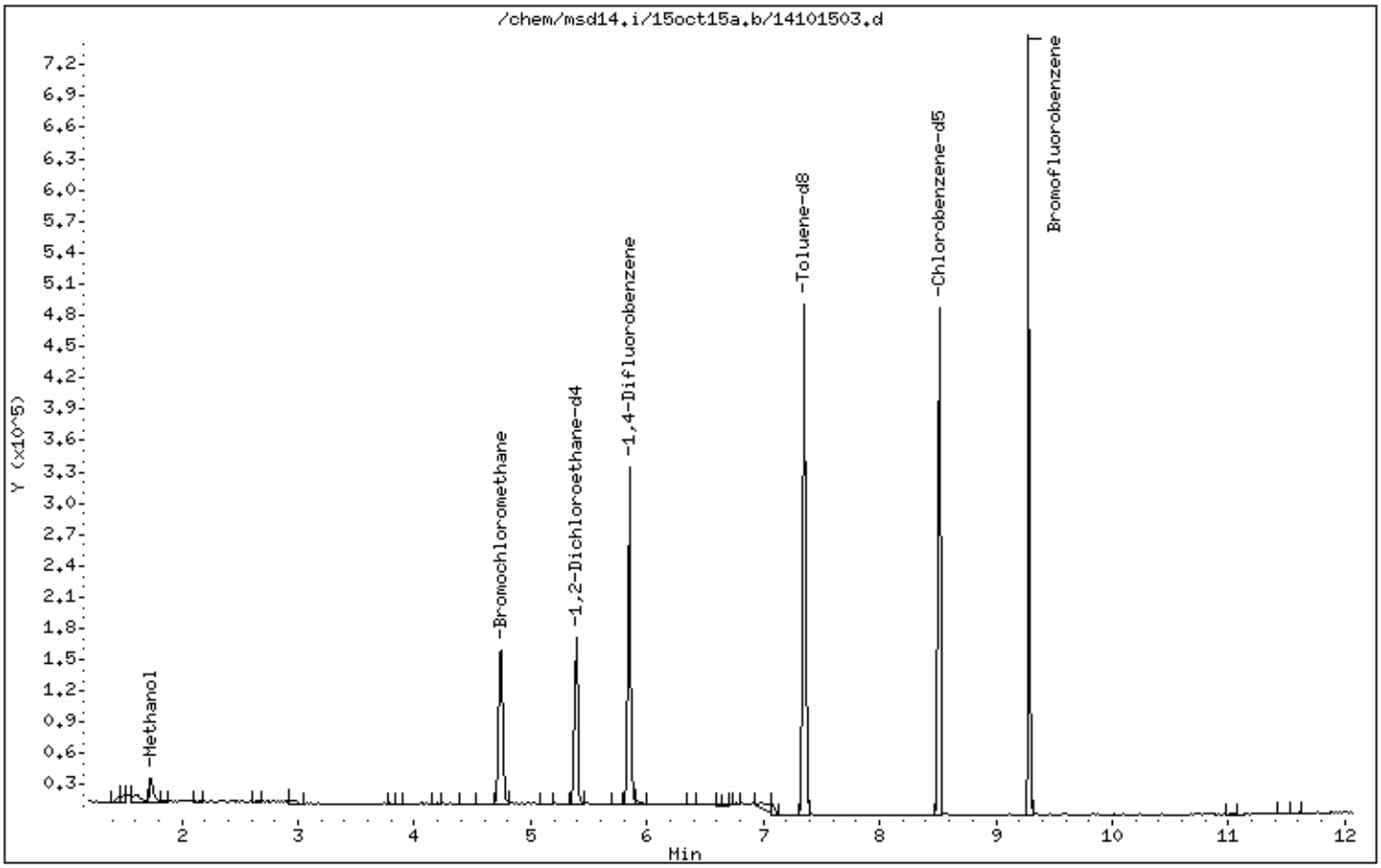
Instrument: msd14.i

Sample Info: 12.5ml #2759-16

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1510223A-11A

EPA METHOD TO-15 GC/MS

File Name:	**14101503a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/15/15 12:37 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

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 15-OCT-2015 12:37
Lab File ID: 14101503a.d Init. Cal. Date(s): 15-OCT-2015 15-OCT-2015
Analysis Type: AIR Init. Cal. Times: 12:37 12:37
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd14.i/15oct15a.b/MEOH1015a.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 84 1,2-Dichloroethane-d4	1.90777	1.90777	0.010	0.000e+00	30.00000	Averaged
$ 107 Toluene-d8	1.07509	1.07509	0.010	0.000e+00	30.00000	Averaged
$ 138 Bromofluorobenzene	0.55817	0.55817	0.010	0.000e+00	30.00000	Averaged
14 Methanol	3.27954	3.27954	0.010	0.000e+00	30.00000	Averaged

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/15oct15a.b/14101503a.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 15-OCT-2015 12:37
Operator : mjs Inst ID: msd14.i
Smp Info : 12.5ml #2759-16
Misc Info : 50ppbv(200ppbv)
Comment :
Method : /chem/msd14.i/15oct15a.b/MEOH1015a.m
Meth Date : 15-Oct-2015 13:48 mskidmor Quant Type: ISTD
Cal Date : 15-OCT-2015 12:37 Cal File: 14101503.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MeOHccv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane					CAS #: 74-97-5		
4.749	4.749 (1.000)	130	54471	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	41933			45.12- 105.12	76.98
4.734	4.734 (1.000)	49	85608			101.60- 161.60	157.16
* 92 1,4-Difluorobenzene					CAS #: 540-36-3		
5.846	5.846 (1.000)	114	251602	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	43377			0.00- 45.35	17.24
* 125 Chlorobenzene-d5					CAS #: 3114-55-4		
8.513	8.513 (1.000)	117	205981	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	139029			23.98- 83.98	67.50
$ 84 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
5.390	5.390 (1.135)	65	103918	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	51488			18.29- 78.29	49.55
$ 107 Toluene-d8					CAS #: 2037-26-5		
7.352	7.352 (1.258)	98	270495	400.000	400.00	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	31970			0.00- 41.01	11.82

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)							
7.352	7.352 (1.258)	100	169189			34.42- 94.42	62.55
$ 138 Bromofluorobenzene					CAS #: 460-00-4		
9.283	9.283 (1.090)	174	114972	400.000	400.00	80.00- 120.00	100.00
9.283	9.283 (1.090)	95	179996			103.22- 163.22	156.56
9.283	9.283 (1.090)	176	111267			67.52- 127.52	96.78
14 Methanol					CAS #: 67-56-1		
1.728	1.728 (0.364)	31	22330	50.0000	50.000	80.00- 120.00	100.00
1.728	1.728 (0.364)	29	18460			0.00- 30.99	82.67
1.742	1.742 (0.367)	32	27679			61.63- 121.63	123.95

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14101503a.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msd14.i/15oct15a.b/MEOH1015a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 15-OCT-2015
Calibration Time: 12:37
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	54471	32683	76259	54471	0.00
92 1,4-Difluorobenze	251602	150961	352243	251602	0.00
125 Chlorobenzene-d5	205981	123589	288373	205981	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 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/15oct15a.b/14101503a.d

Date : 15-OCT-2015 12:37

Client ID: CCV

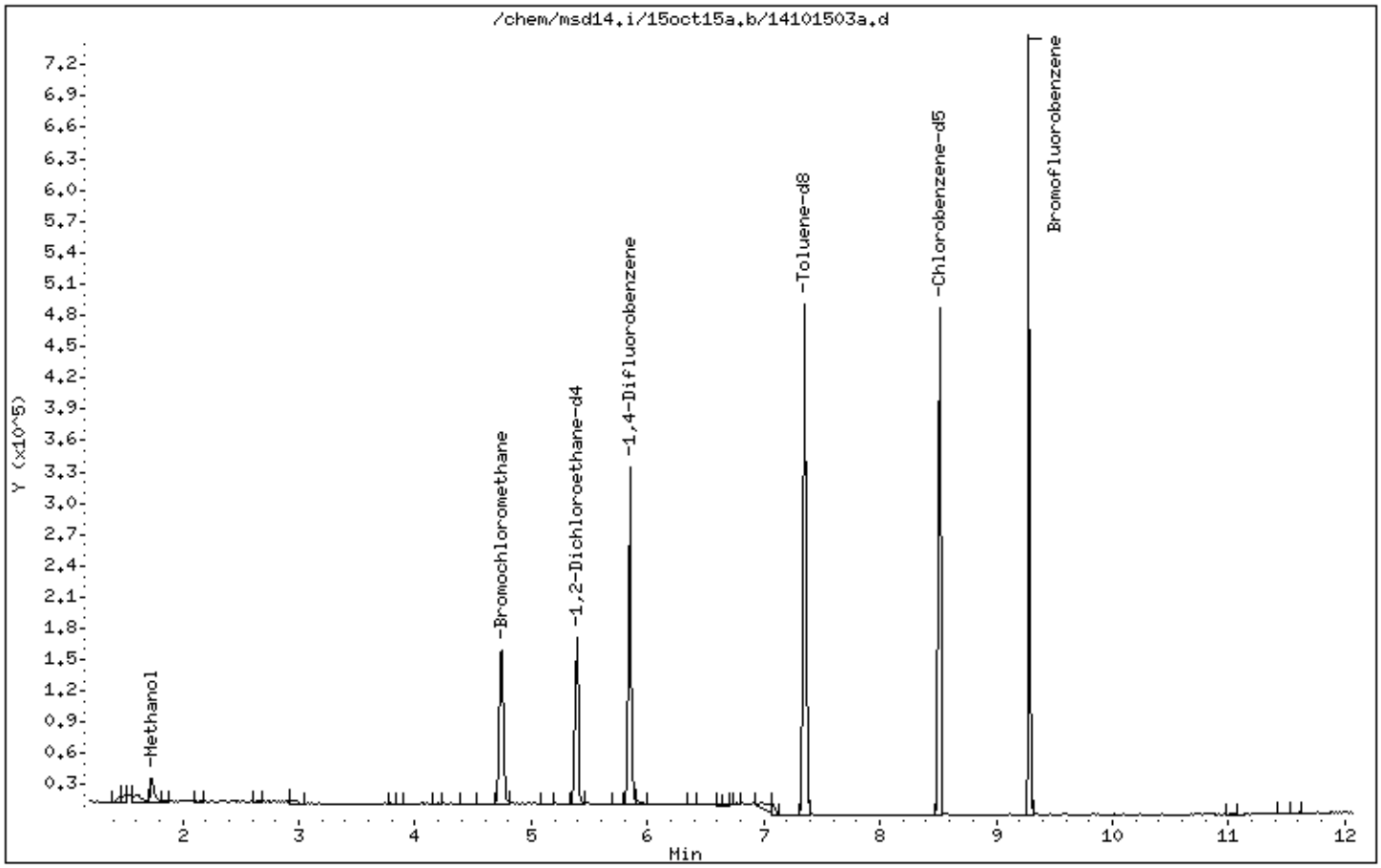
Instrument: msd14.i

Sample Info: 12.5ml #2759-16

Operator: mjs

Column phase: RTx-624

Column diameter: 0.53



MeOH only

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

BFB Verification of 176/174 m/z Ratio:	(64968/67592) * 100 = 96.12%
Method Name:	~~MEOH1015A.M~~ MEOH1015A.M MB 10/15/15

IS/S Std. #: 2736-293	Exp. Date: 1/7/16
BCM	54,471
1,4-DFB	251602
CB-d5	205981
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: 14101503
Compound: Toluene-d8
Initials: MB

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}} = \frac{(270495)}{(251602)} \times \frac{(400.00)}{(1.07509)}$ = 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	✓	14101501	BFB Tune Check	2299-1265	5ong	2.0mL	N/A	1.00	MB	10/15/15	1100	MB	
2	✓	02	System Blank	34496	Humid	50mL					1119	MB	
3	✓	03	ICAL Level #4	2759-16	50ppbv	12.5mL					1237	MB	Exp. 12/15/15
4	✓	04	Lab Blank	34496	Humid	50mL					1311	MB	
5	✓	05	1510223A-01A	20780	3.7"Hg→14.6psi	50mL		2.27	MB		1337	MB	
6	✓	06	-02A	31767	3.9"Hg→14.7psi	50mL		2.30	MB		1354	MB	
7	✓	07	-03A	36440	4.3"Hg→14.9psi	50mL		2.35	MB		1411	MB	
8	✓	08	-04A	31788	3.3"Hg→14.6psi	50mL		2.24	MB		1428	gd	
9	✓	09	-05A	37314	4.3"Hg-15psi			2.36	gd		1452		
10	✓	10	-06A	2056	4.7"Hg-14.8psi			2.38	gd		1510		
11	✓	11	-07A	11430	3.9"Hg-14.7psi			2.30			1533		
12	✓	12	-08A	34661	3.7"Hg-14.7psi			2.28			1550		
13	✓	13	-09A	36464	4.7"Hg-14.8psi			2.38			1607		
14													
15										gd 10/15/15			

gd
Reviewed

10/15/15
Date

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/15oct15a.b/14101501.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 15-OCT-2015 11:00
Operator : mjs Inst ID: msd14.i
Smp Info : 2.0ml #2299-1265;BFB;BFB
Misc Info : 50ng
Comment :
Method : /chem/msd14.i/15oct15a.b/bfb20.m
Meth Date : 14-Oct-2015 15:32 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	112064			100.00- 100.00	100.00
2.468	2.483	-0.015	50	24170			8.00- 40.00	21.57
2.468	2.483	-0.015	75	58256			30.00- 66.00	51.98
2.468	2.483	-0.015	96	7119			5.00- 9.00	6.35
2.468	2.483	-0.015	173	775			0.00- 1.99	1.15
2.468	2.483	-0.015	174	67592			50.01- 120.00	60.32
2.468	2.483	-0.015	175	4991			4.00- 9.00	7.38
2.468	2.483	-0.015	176	64968			93.00- 101.00	96.12
2.468	2.483	-0.015	177	4303			5.00- 9.00	6.62

Data File: /var/chem/msd14.i/15oct15a.b/14101501.d

Date : 15-OCT-2015 11:00

Client ID: BFB

Instrument: msd14.i

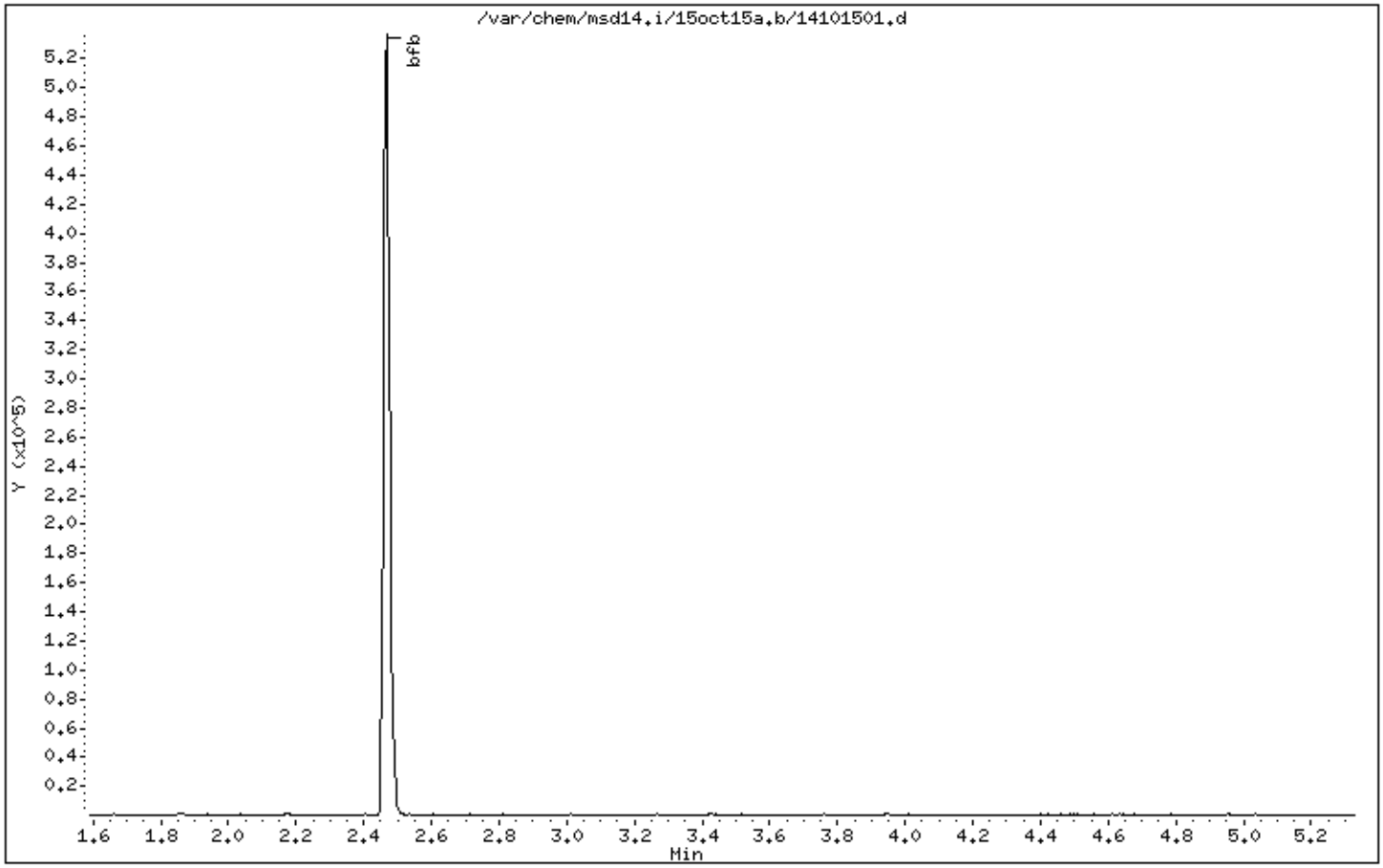
Sample Info: 2.0ml #2299-1265;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00



Data File: /var/chem/msd14.i/15oct15a.b/14101501.d

Date : 15-OCT-2015 11:00

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-1265;BFB;BFB

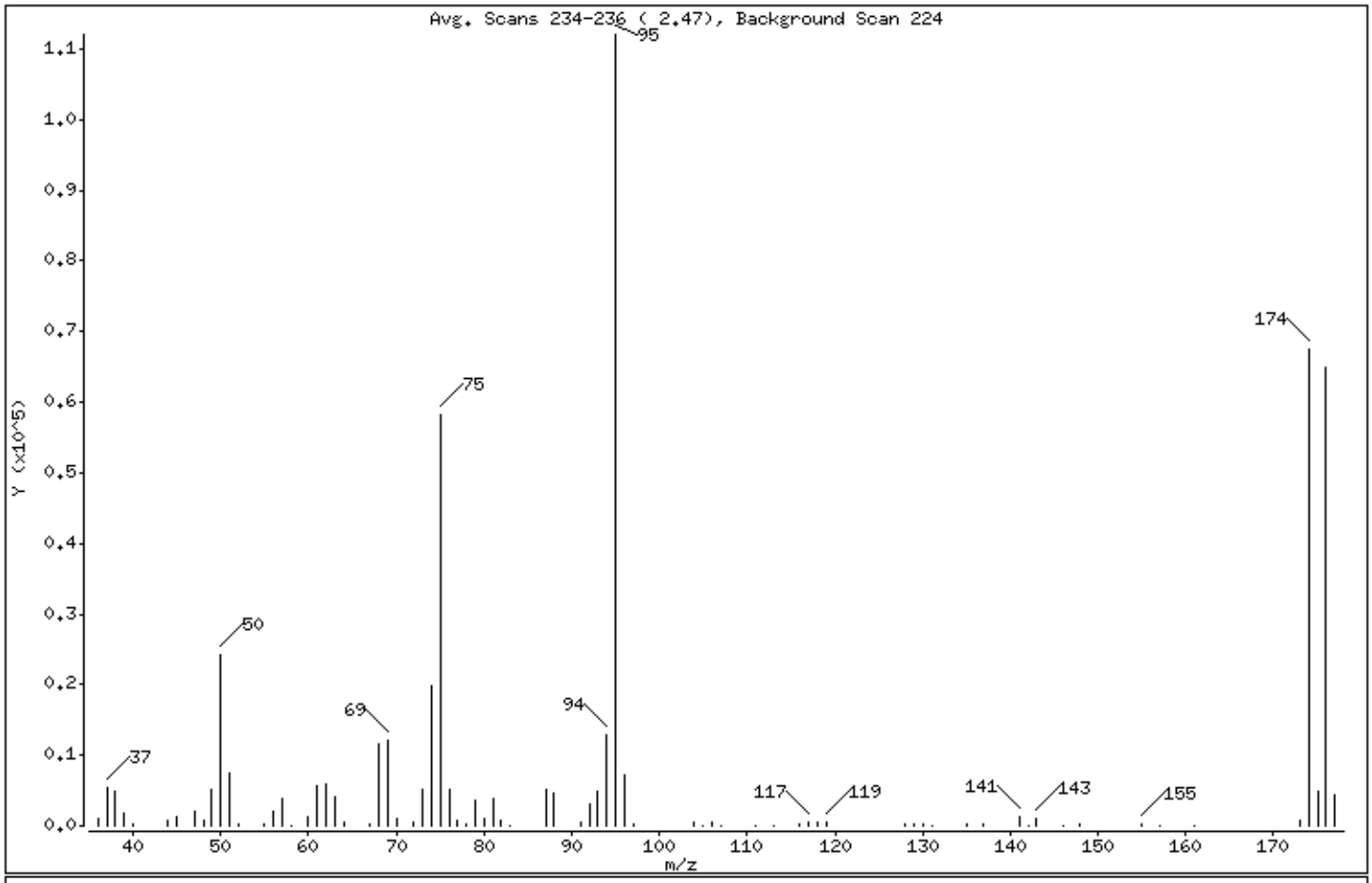
Volume Injected (uL): 1.0

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	21.57
75	30.00 - 66.00% of mass 95	51.98
96	5.00 - 9.00% of mass 95	6.35
173	Less than 1.99% of mass 174	0.69 (1.15)
174	50.01 - 120.00% of mass 95	60.32
175	4.00 - 9.00% of mass 174	4.45 (7.38)
176	93.00 - 101.00% of mass 174	57.97 (96.12)
177	5.00 - 9.00% of mass 176	3.84 (6.62)

Data File: /var/chem/msd14.i/15oct15a.b/14101501.d

Date : 15-OCT-2015 11:00

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-1265;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00

Data File: 14101501.d
Spectrum: Avg. Scans 234-236 (2.47), Background Scan 224
Location of Maximum: 95.00
Number of points: 76

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	942	63.00	4172	91.00	504	131.00	109
37.00	5346	64.00	417	92.00	3202	135.00	240
38.00	4878	67.00	308	93.00	4929	137.00	145
39.00	1728	68.00	11684	94.00	12973	141.00	1179
40.00	254	69.00	12218	95.00	112064	142.00	74
44.00	673	70.00	935	96.00	7119	143.00	1085
45.00	1180	72.00	501	97.00	143	146.00	112
47.00	2000	73.00	5126	104.00	440	148.00	265
48.00	679	74.00	19776	105.00	110	155.00	131
49.00	5271	75.00	58256	106.00	429	157.00	71
50.00	24168	76.00	5061	107.00	82	161.00	68
51.00	7428	77.00	759	111.00	66	173.00	775
52.00	359	78.00	366	113.00	54	174.00	67592
55.00	385	79.00	3672	116.00	384	175.00	4991
56.00	1970	80.00	920	117.00	599	176.00	64968
57.00	3743	81.00	3991	118.00	412	177.00	4303
58.00	52	82.00	820	119.00	545		
60.00	1288	83.00	56	128.00	351		
61.00	5760	87.00	5175	129.00	199		
62.00	6036	88.00	4715	130.00	339		

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 Haylore@amaicorp.com
Address 2200 Westchester Ave City Purchase State NY Zip 10577
Phone _____ Fax _____

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

Turn Around Time:
☐ Normal
☒ Rush 3-day (specify)

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

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	B30-1101015	20780	10/10/15	1022	TO-15, CH_4	30	5		
02A	B30-2100915	31767	10/9/15	1540	TO-15, CH_4	30	5		
03A	B30-3101015	36440	10/10/15	1042	TO-15, CH_4	30	5		
04A	B30-4100915	31788	10/9/15	1231	TO-15, CH_4	30	5		
05A	B30-4D100915	37314	10/9/15	1231	TO-15, CH_4	30	5		
06A	B30-5100915	N2056	10/9/15	1336	TO-15, CH_4	30	5		
07A	B42-1101015	11430	10/10/15	1131	TO-15, CH_4	30	5		
08A	B42-2101015 34461 →	~~36464~~	10/10/15	1210	TO-15, CH_4	30	5		
09A	B42-3101015	36464	10/10/15	1232	TO-15, CH_4	30	5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	10/12/15 12:00	MEATL	101315 0945

Notes:
Report results to MDL
Shipped via FedEx by AMAI
Tracking No. 7747 1483 9659

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	Yes No None	1510223

Form 1293 rev.11

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1510223A

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: 10/16/15 2:00 pm
Date Completed: 10/16/15
Date Received: 10/13/15
PO#:
Project#: BMS VI

Total $: $ 0.00
Logged By: MH

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B30-1101015	Modified TO-15 (5&20 ppbv)	10/10/2015	3.7 "Hg	$0.00
02A	B30-2100915	Modified TO-15 (5&20 ppbv)	10/9/2015	3.9 "Hg	$0.00
03A	B30-3101015	Modified TO-15 (5&20 ppbv)	10/10/2015	4.3 "Hg	$0.00
04A	B30-4100915	Modified TO-15 (5&20 ppbv)	10/9/2015	3.3 "Hg	$0.00
05A	B30-4D100915	Modified TO-15 (5&20 ppbv)	10/9/2015	4.3 "Hg	$0.00
06A	B30-5100915	Modified TO-15 (5&20 ppbv)	10/9/2015	4.7 "Hg	$0.00
07A	B42-1101015	Modified TO-15 (5&20 ppbv)	10/10/2015	3.9 "Hg	$0.00
08A	B42-2101015	Modified TO-15 (5&20 ppbv)	10/10/2015	3.7 "Hg	$0.00
09A	B42-3101015	Modified TO-15 (5&20 ppbv)	10/10/2015	4.7 "Hg	$0.00
10A	Lab Blank	Modified TO-15 (5&20 ppbv)	NA	NA	$0.00
11A	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)

REMARKS: A 50% surcharge is applied for a 72 hour turnaround time.

TERMS: NET 30

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

Sample Discrepancy Report

Identification

Initiated By: MH **Project ID:**19256 **PM**: BSW **Date:** 10/14/2015 **Discrepancy Type:** ☒ **1.** ☐ **2.** ☐ **3.**

Workorder(s) affected:1510223A **Sample(s) affected:** 08A

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.
1.2. ☐ No brass cap on canister.
1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: MH Date: 10/14/2015

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.
1.6. ☐ COC improperly relinquished / received.
1.7. ☒ Sample tags / can numbers do not match the COC.
1.8. ☐ Sample date ☐ error / ☐ missing on COC but noted on sample tag (check one).
1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).
1.10. ☐ ID-none on the sample Tag/Blank
1.11. ☐ Other (describe below).

Describe the Discrepancy: 1.7 08A sample tag and can number do not match the COC

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.
2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.
2.3. ☐ Incorrect sampling media / container for analysis requested.
2.4. ☐ Number of samples on the COC does not match the number of samples that were received.
2.5. ☐ Samples were received expired.
2.6. ☐ Sampling date (time for sulfur) is not documented for ☐ *some* / ☐ *any* samples (check one).
2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.
2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.
2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.
2.10. ☐ Tedlar Bag for Sulfur analysis has metal fitting.
2.11. ☐ Environmental Supply Company valves
2.12. ☐ Sorbent samples-sampling volume was not provided
2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.
2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):
- ☐ Canister failed leak check on two manifolds,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.
2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).
2.17. ☐ Canister Trip Blank received at low vacuum (<25"Hg).
2.18. ☐ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☐ ice / ☐ blue ice (check one) was present. A temp. Blank ☐ was / ☐ was not present (check one).
2.19. ☐ Flow Controller RPD of = 20% was not met.
2.20. ☐ Other (describe below)

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

Describe the Discrepancy:

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☐ Other (describe below).

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

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☐ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☐ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:_____ Person notified: _____ Date: _____

☐ Waiting for Client Reply

Comments: _____

_____

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

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

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

Media Certification Report

Canister Number: 1L# 20780
Can#: 103830-20780
Date : 10/02/15 22:01
Data File: i100213.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	99.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	99.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 31767
Can#: 103830-31767
Date : 10/02/15 23:16
Data File: i100215.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	104.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

eurofins | Air Toxics

www.airtoxics.com
1-800-985-5955

Media Certification Report

Canister Number: 1L# 36440
Can#: 103830-36440
Date : 10/02/15 19:32
Data File: i100209.d

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		103.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	103.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	99.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	99.00	% Recovery
Toluene-d8	2037-26-5	0.05	100.00	% Recovery
Toluene-d8	2037-26-5	0.25	100.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 31788w/Batch
Can#: 103830-31788
Date : 10/02/15 17:03
Data File: i100205.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		104.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	99.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	99.00	% Recovery
Toluene-d8	2037-26-5	0.05	103.00	% Recovery
Toluene-d8	2037-26-5	0.25	103.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 37314
Can#: 103830-37314
Date : 10/02/15 18:55
Data File: i100208.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		102.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	101.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 2056
Can#: 103830-2056
Date : 10/02/15 18:17
Data File: i100207.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	102.00	% Recovery
Toluene-d8	2037-26-5	0.05	103.00	% Recovery
Toluene-d8	2037-26-5	0.25	103.00	% Recovery

eurofins | Air Toxics

www.airtoxics.com
1-800-985-5955

Media Certification Report

Canister Number: 1L# 11430
Can#: 103830-11430
Date : 10/02/15 20:09
Data File: i100210.d

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		104.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	101.00	% Recovery
Toluene-d8	2037-26-5	0.05	100.00	% Recovery
Toluene-d8	2037-26-5	0.25	100.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 34661
Can#: 103830-34661
Date : 10/02/15 21:24
Data File: i100212.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		102.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	102.00	% Recovery
Toluene-d8	2037-26-5	0.05	101.00	% Recovery
Toluene-d8	2037-26-5	0.25	101.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 36464
Can#: 103830-36464
Date : 10/02/15 22:39
Data File: i100214.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		104.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	101.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 11427w/SGM
Can#: 103830-11427
Date : 10/02/15 17:40
Data File: i100206.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		99.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	99.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	101.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 12362
Can#: 103830-12362
Date : 10/03/15 0:31
Data File: i100217.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		108.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	108.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	102.00	% Recovery
Toluene-d8	2037-26-5	0.05	103.00	% Recovery
Toluene-d8	2037-26-5	0.25	103.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 1L# 36541
Can#: 103830-36541
Date : 10/02/15 23:54
Data File: i100216.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
2-Propanol	67-63-0	0.25	ND	ppbv
2-Propanol	67-63-0	1.00	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.05	ND	ppbv
4-Methyl-2-pentanone	108-10-1	0.25	ND	ppbv
Acetone	67-64-1	0.25	ND	ppbv
Acetone	67-64-1	2.50	ND	ppbv
Benzene	71-43-2	0.05	ND	ppbv
Benzene	71-43-2	0.25	ND	ppbv
Ethyl Benzene	100-41-4	0.05	ND	ppbv
Ethyl Benzene	100-41-4	0.25	ND	ppbv
m,p-Xylene	108-38-3	0.05	ND	ppbv
m,p-Xylene	108-38-3	0.25	ND	ppbv
o-Xylene	95-47-6	0.05	ND	ppbv
o-Xylene	95-47-6	0.25	ND	ppbv
Toluene	108-88-3	0.05	ND	ppbv
Toluene	108-88-3	0.25	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
1,2-Dichloroethane-d4	17060-07-0	0.25	101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.05	102.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.25	102.00	% Recovery
Toluene-d8	2037-26-5	0.05	102.00	% Recovery
Toluene-d8	2037-26-5	0.25	102.00	% Recovery

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 03/26/15
Workorder # 1510223A	Form F1.27	Revision #11	Revision date: 03/26/15	Page 1 of 2

S1	S2	S3	S4	D	Section 1 – Spec Out				
					Initials/Instrument/Date	S1: MSD-14 MB 10/15/15	S2:	S3:	S4:
✓				■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓				■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
✓				✓	Manual Integrations included and approved				
✓				■	Chain of Custody verified for special comments (add comments below)				
✓				■	Non-standard Target sublist printed				

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

S1: Ø out. MeOH 1-pt.

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: MB 10/15/15	A2: QL 10/15/15	A3:	A4:
✓	✓			✓	Internal Standard/Surrogate Recoveries, Dilution Factors, Load Volumes, Initial/Final Pressures, and Canister #s Verified				
✓	✓			NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg of instrument				
✓	✓			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	Re-analysis of sample(s) have been evaluated for comparability and/or samples have been checked for trends (Inf/Eff).				
✓	✓			✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds etc)				

Analytical and special notes:

A1: 01A-03A = full loads.
A2: 04A-09A Full loads

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/instrument/ Date	D1: MC 10/16/15	D2:	D3:	D4:
NA					■	CAR # (if applicable)				
✓					■	Spectra Verified (documentation of spectral defense included if applicable)				
NA					■	TICs resemble reference spectra/ TICs between sample dups. are consistent (if applicable)				
NA					■	Lab Narrative is correct				
					■	TPH/NMOC calculations complete and included in folder				

Special notes: MeOH 1pt circle, no NMOC Study, no U flag

A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
		Initials/Date: MC 10/16/15	3rd Tier: (needed only for DOD or per client request)	
✓		Sample Discrepancy Report (SDR) complete and approved (if applicable)		
NA		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

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

Eurofins Air Toxics, Inc.	Reissued - Data Review Checklist			Release Date 01/29/14
	Form F 1.27	Revision #8	Revision date 01/29/14	Page 2 of 2

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