



PWS\_1120014\_AC\_20200330\_Analysis Report  
LCRA Environmental Laboratory Services  
3505 Montopolis Drive  
Austin, TX 78744  
Phone: (512) 730-6022  
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April 2, 2020

MICHAEL RAWSON  
PO BOX 1160  
SULPHUR SPRINGS, TX 75483

RE: Final Analytical Report Q2012915

Attn: MICHAEL RAWSON

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 730-6022. We look forward to assisting you again.

Authorized for release by:

Bhanu Acharya  
Account Manager  
bhanu.acharya@lcra.org



Enclosures:



## Sample Summary

Lab ID	Sample ID	Matrix	Method	Date Collected	Date Received
Q2012915001	2095302	DW	E524.2 Volatiles by GC/MS	3/30/2020 09:44	3/31/2020 08:30

## Report Definitions

- MRL - Minimum Reporting Limit
- LOD - Limit of Detection
- ML - Maximum Limit - Client Specified
- MCL - Maximum Contaminant Level
- MDL - Method Detection Limit
- LOQ - Limit of Quantitation - Client Specified
- DF - Dilution Factor
- Qual - Qualifier
- (S) - Surrogate Spike
- QC Qual - red font indicates Result Value outside acceptable range
- B- Analyte detected in method blank
- S - Spike recovery outside limit
- R - RPD outside duplicate precision limit
- J - Analyte detected below quantitation limit
- RPD - Relative Percent Difference
- SL - Spike Recovery Low
- SH - Spike Recovery High

## Project Summary

### Sample Analysis Comments

**Lab ID:** Q2012915001

**Sample ID:** 2095302

- Not Accredited - 1,1,1,2-Tetrachloroethane
- Not Accredited - 1,1,2,2-Tetrachloroethane
- Not Accredited - 1,1-Dichloroethane
- Not Accredited - 1,1-Dichloropropene
- Not Accredited - 1,2,3-Trichlorobenzene
- Not Accredited - 1,2,3-Trichloropropane
- Not Accredited - 1,2,4-Trimethylbenzene
- Not Accredited - 1,3,5-Trimethylbenzene
- Not Accredited - 1,3-Dichlorobenzene
- Not Accredited - 1,3-Dichloropropane
- Not Accredited - 2,2-Dichloropropane
- Not Accredited - 2-Butanone
- Not Accredited - 2-Chlorotoluene
- Not Accredited - 2-Hexanone
- Not Accredited - 4-Chlorotoluene
- Not Accredited - 4-Isopropyltoluene
- Not Accredited - 4-Methyl-2-pentanone
- Not Accredited - Acetone
- Not Accredited - Acrylonitrile
- Not Accredited - Bromobenzene
- Not Accredited - Bromochloromethane
- Not Accredited - Bromodichloromethane
- Not Accredited - Bromoform
- Not Accredited - Bromomethane
- Not Accredited - Carbon disulfide
- Not Accredited - Chloroethane
- Not Accredited - Chloroform
- Not Accredited - Chloromethane
- Not Accredited - Dibromochloromethane
- Not Accredited - Dibromomethane
- Not Accredited - Dichlorodifluoromethane
- Not Accredited - Ethyl methacrylate
- Not Accredited - Hexachlorobutadiene
- Not Accredited - Isopropylbenzene (Cumene)
- Not Accredited - Methyl iodide
- Not Accredited - Methyl methacrylate
- Not Accredited - Naphthalene
- Not Accredited - Tetrahydrofuran
- Not Accredited - Trichlorofluoromethane
- Not Accredited - Vinyl acetate
- Not Accredited - cis-1,3-Dichloropropene
- Not Accredited - n-Butylbenzene
- Not Accredited - n-Propylbenzene
- Not Accredited - sec-Butylbenzene
- Not Accredited - tert-Butyl methyl ether (MTBE)
- Not Accredited - tert-Butylbenzene



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## Project Summary (cont.)

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### Sample Analysis Comments

**Lab ID:** Q2012915001

**Sample ID:** 2095302

- Not Accredited - trans-1,3-Dichloropropene



## Analytical Results

Lab ID: Q2012915001	Date Received: 3/31/2020 08:30	Matrix: Drinking Water
Sample ID: 2095302	Date Collected: 3/30/2020 09:44	Sample Type: SAMPLE
Project ID: DRINKING WATER PROGRAM	Location: MT ZION PLANT - STANDPIPE	
Facility: EP002	Client ID: TX1120014	
Sample Point: TRT-TAP		

Parameter	Results	Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
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### E524.2 Regulated (E524.2 Volatiles by GC/MS)

Vinyl chloride	<0.500	ug/L	0.500	0.250	2	1			04/01/20 12:52	DD	
1,1-Dichloroethene	<0.500	ug/L	0.500	0.250	7	1			04/01/20 12:52	DD	
Methylene chloride	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
trans-1,2-Dichloroethene	<0.500	ug/L	0.500	0.250	100	1			04/01/20 12:52	DD	
cis-1,2-Dichloroethene	<0.500	ug/L	0.500	0.250	70	1			04/01/20 12:52	DD	
1,1,1-Trichloroethane	<0.500	ug/L	0.500	0.250	200	1			04/01/20 12:52	DD	
Carbon tetrachloride	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
1,2-Dichloroethane	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
Benzene	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
Trichloroethene	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
1,2-Dichloropropane	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
Toluene	<0.500	ug/L	0.500	0.250	1000	1			04/01/20 12:52	DD	
1,1,2-Trichloroethane	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
Tetrachloroethene	<0.500	ug/L	0.500	0.250	5	1			04/01/20 12:52	DD	
Chlorobenzene	<0.500	ug/L	0.500	0.250	100	1			04/01/20 12:52	DD	
Ethyl Benzene	<0.500	ug/L	0.500	0.250	700	1			04/01/20 12:52	DD	
m,p-Xylene	1.03	ug/L	1.00	0.500		1			04/01/20 12:52	DD	
Styrene	<0.500	ug/L	0.500	0.250	100	1			04/01/20 12:52	DD	
1,4-Dichlorobenzene	<0.500	ug/L	0.500	0.250	75	1			04/01/20 12:52	DD	
1,2-Dichlorobenzene	<0.500	ug/L	0.500	0.250	600	1			04/01/20 12:52	DD	
1,2,4-Trichlorobenzene	<0.500	ug/L	0.500	0.250	70	1			04/01/20 12:52	DD	
Xylene (total)	1.03	ug/L	0.500	0.250	10000	1			04/01/20 12:52	DD	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,2-Dichlorobenzene-d4 (S)	%	82.9	70 - 130
4-Bromofluorobenzene (S)	%	78.2	70 - 130

### E524.2 Unregulated (E524.2 Volatiles by GC/MS)

Dichlorodifluoromethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Chloromethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Bromomethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Chloroethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
4-Chlorotoluene	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Trichlorofluoromethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Acetone	<5.00	ug/L	5.00	2.50		1			04/01/20 12:52	DD	*
Methyl iodide	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Carbon disulfide	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Acrylonitrile	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
tert-Butyl methyl ether (MTBE)	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,1-Dichloroethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Vinyl acetate	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
2,2-Dichloropropane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
2-Butanone	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Bromochloromethane	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Tetrahydrofuran	<0.500	ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Chloroform	2.43	ug/L	1.00	0.500		1			04/01/20 12:52	DD	*



## Analytical Results (cont.)

<b>Lab ID:</b> Q2012915001	<b>Date Received:</b> 3/31/2020 08:30	<b>Matrix:</b> Drinking Water
<b>Sample ID:</b> 2095302	<b>Date Collected:</b> 3/30/2020 09:44	<b>Sample Type:</b> SAMPLE
<b>Project ID:</b> DRINKING WATER PROGRAM	<b>Location:</b> MT ZION PLANT - STANDPIPE	
<b>Facility:</b> EP002	<b>Client ID:</b> TX1120014	
<b>Sample Point:</b> TRT-TAP		

Parameter	Results Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
1,1-Dichloropropene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Methyl methacrylate	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Dibromomethane	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Bromodichloromethane	7.34 ug/L	1.00	0.500		1			04/01/20 12:52	DD	*
cis-1,3-Dichloropropene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
4-Methyl-2-pentanone	0.740 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
trans-1,3-Dichloropropene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Ethyl methacrylate	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,3-Dichloropropane	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
2-Hexanone	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Dibromochloromethane	20.6 ug/L	1.00	0.500		1			04/01/20 12:52	DD	*
1,1,1,2-Tetrachloroethane	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
o-Xylene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Bromoform	22.8 ug/L	1.00	0.500		1			04/01/20 12:52	DD	*
Isopropylbenzene (Cumene)	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,1,1,2-Tetrachloroethane	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Bromobenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,2,3-Trichloropropane	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
n-Propylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
2-Chlorotoluene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,3,5-Trimethylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
tert-Butylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,2,4-Trimethylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
sec-Butylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,3-Dichlorobenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
4-Isopropyltoluene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
n-Butylbenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Hexachlorobutadiene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
Naphthalene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*
1,2,3-Trichlorobenzene	<0.500 ug/L	0.500	0.250		1			04/01/20 12:52	DD	*



## Quality Control

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

### Laboratory Fortified Blank (1426246)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Dichlorodifluoromethane	ug/L	5	5.44	109	70 - 130	
Chloromethane	ug/L	5	5.2	104	70 - 130	
Vinyl chloride	ug/L	5	5.16	103	70 - 130	
Bromomethane	ug/L	5	5.09	102	70 - 130	
Chloroethane	ug/L	5	5.12	102	70 - 130	
4-Chlorotoluene	ug/L	5	5.02	100	70 - 130	
Trichlorofluoromethane	ug/L	5	5.33	107	70 - 130	
1,1-Dichloroethene	ug/L	5	5.02	100	70 - 130	
Acetone	ug/L	5	4.14	82.8	70 - 130	
Methyl iodide	ug/L	5	4.94	98.8	70 - 130	
Carbon disulfide	ug/L	5	4.92	98.4	70 - 130	
Methylene chloride	ug/L	5	4.98	99.6	70 - 130	
trans-1,2-Dichloroethene	ug/L	5	4.86	97.2	70 - 130	
Acrylonitrile	ug/L	5	4.93	98.6	70 - 130	
tert-Butyl methyl ether (MTBE)	ug/L	5	4.72	94.4	70 - 130	
1,1-Dichloroethane	ug/L	5	4.8	96	70 - 130	
Vinyl acetate	ug/L	5	4.93	98.6	70 - 130	
2,2-Dichloropropane	ug/L	5	5.3	106	70 - 130	
2-Butanone	ug/L	5	4.86	97.2	70 - 130	
cis-1,2-Dichloroethene	ug/L	5	5.02	100	70 - 130	
Bromochloromethane	ug/L	5	4.63	92.6	70 - 130	
Tetrahydrofuran	ug/L	5	5.04	101	70 - 130	
Chloroform	ug/L	5	5.11	102	70 - 130	
1,1,1-Trichloroethane	ug/L	5	4.91	98.2	70 - 130	
1,1-Dichloropropene	ug/L	5	5.13	103	70 - 130	
Carbon tetrachloride	ug/L	5	4.99	99.8	70 - 130	
1,2-Dichloroethane	ug/L	5	5.24	105	70 - 130	
Benzene	ug/L	5	4.91	98.2	70 - 130	
Trichloroethene	ug/L	5	4.95	99	70 - 130	
1,2-Dichloropropane	ug/L	5	4.92	98.4	70 - 130	
Methyl methacrylate	ug/L	5	4.84	96.8	70 - 130	
Dibromomethane	ug/L	5	4.84	96.8	70 - 130	
Bromodichloromethane	ug/L	5	4.93	98.6	70 - 130	
cis-1,3-Dichloropropene	ug/L	5	4.52	90.4	70 - 130	
4-Methyl-2-pentanone	ug/L	5	4.68	93.6	70 - 130	
Toluene	ug/L	5	4.61	92.2	70 - 130	
trans-1,3-Dichloropropene	ug/L	5	4.39	87.8	70 - 130	
Ethyl methacrylate	ug/L	5	3.86	77.2	70 - 130	
1,1,2-Trichloroethane	ug/L	5	4.8	96	70 - 130	
Tetrachloroethene	ug/L	5	4.7	94	70 - 130	
1,3-Dichloropropane	ug/L	5	4.68	93.6	70 - 130	
2-Hexanone	ug/L	5	4.41	88.2	70 - 130	
Dibromochloromethane	ug/L	5	4.36	87.2	70 - 130	
Chlorobenzene	ug/L	5	4.58	91.6	70 - 130	
1,1,1,2-Tetrachloroethane	ug/L	5	4.54	90.8	70 - 130	
Ethyl Benzene	ug/L	5	3.77	75.4	70 - 130	
m,p-Xylene	ug/L	10	8.5	85	70 - 130	
o-Xylene	ug/L	5	3.95	79	70 - 130	
Styrene	ug/L	5	4.01	80.2	70 - 130	
Bromoform	ug/L	5	3.82	76.4	70 - 130	
Isopropylbenzene (Cumene)	ug/L	5	3.87	77.4	70 - 130	
1,1,2,2-Tetrachloroethane	ug/L	5	4.83	96.6	70 - 130	
Bromobenzene	ug/L	5	4.5	90	70 - 130	



## Quality Control (cont.)

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
1,2,3-Trichloropropane	ug/L	5	4.79	95.8	70 - 130	
n-Propylbenzene	ug/L	5	4.85	97	70 - 130	
2-Chlorotoluene	ug/L	5	4.95	99	70 - 130	
1,3,5-Trimethylbenzene	ug/L	5	4.47	89.4	70 - 130	
tert-Butylbenzene	ug/L	5	3.94	78.8	70 - 130	
1,2,4-Trimethylbenzene	ug/L	5	4.12	82.4	70 - 130	
sec-Butylbenzene	ug/L	5	4.24	84.8	70 - 130	
1,3-Dichlorobenzene	ug/L	5	4.95	99	70 - 130	
4-Isopropyltoluene	ug/L	5	4	80	70 - 130	
1,4-Dichlorobenzene	ug/L	5	4.95	99	70 - 130	
n-Butylbenzene	ug/L	5	4.99	99.8	70 - 130	
1,2-Dichlorobenzene	ug/L	5	4.76	95.2	70 - 130	
1,2,4-Trichlorobenzene	ug/L	5	4.71	94.2	70 - 130	
Hexachlorobutadiene	ug/L	5	4.96	99.2	70 - 130	
Naphthalene	ug/L	5	3.7	74	70 - 130	
1,2,3-Trichlorobenzene	ug/L	5	4.82	96.4	70 - 130	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,2-Dichlorobenzene-d4 (S)	%	87.5	70 - 130	
4-Bromofluorobenzene (S)	%	90.9	70 - 130	

### Method Reporting Limit Check (1426247)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Acetone	ug/L	5	4.14	82.8	50 - 150	
2-Butanone	ug/L	5	4.86	97.2	50 - 150	
Tetrahydrofuran	ug/L	5	5.04	101	50 - 150	

### Method Reporting Limit Check (1426247)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Dichlorodifluoromethane	ug/L	.5	.53	106	50 - 150	
Chloromethane	ug/L	.5	.62	124	50 - 150	
Vinyl chloride	ug/L	.5	.55	110	50 - 150	
Bromomethane	ug/L	.5	.56	112	50 - 150	
Chloroethane	ug/L	.5	.53	106	50 - 150	
4-Chlorotoluene	ug/L	.5	.43	86	50 - 150	
Trichlorofluoromethane	ug/L	.5	.53	106	50 - 150	
1,1-Dichloroethene	ug/L	.5	.52	104	50 - 150	
Methyl iodide	ug/L	.5	.54	108	50 - 150	
Carbon disulfide	ug/L	.5	.53	106	50 - 150	
Methylene chloride	ug/L	.5	.51	102	50 - 150	
trans-1,2-Dichloroethene	ug/L	.5	.54	108	50 - 150	
Acrylonitrile	ug/L	.5	.66	132	50 - 150	
tert-Butyl methyl ether (MTBE)	ug/L	.5	.52	104	50 - 150	
1,1-Dichloroethane	ug/L	.5	.58	116	50 - 150	
Vinyl acetate	ug/L	.5	.6	120	50 - 150	
2,2-Dichloropropane	ug/L	.5	.61	122	50 - 150	
cis-1,2-Dichloroethene	ug/L	.5	.57	114	50 - 150	
Bromochloromethane	ug/L	.5	.48	96	50 - 150	



## Quality Control (cont.)

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Chloroform	ug/L	.5	.56	112	50 - 150	
1,1,1-Trichloroethane	ug/L	.5	.51	102	50 - 150	
1,1-Dichloropropene	ug/L	.5	.55	110	50 - 150	
Carbon tetrachloride	ug/L	.5	.49	98	50 - 150	
1,2-Dichloroethane	ug/L	.5	.56	112	50 - 150	
Benzene	ug/L	.5	.54	108	50 - 150	
Trichloroethene	ug/L	.5	.51	102	50 - 150	
1,2-Dichloropropane	ug/L	.5	.55	110	50 - 150	
Methyl methacrylate	ug/L	.5	.45	90	50 - 150	
Dibromomethane	ug/L	.5	.62	124	50 - 150	
Bromodichloromethane	ug/L	.5	.54	108	50 - 150	
cis-1,3-Dichloropropene	ug/L	.5	.47	94	50 - 150	
4-Methyl-2-pentanone	ug/L	.5	.52	104	50 - 150	
Toluene	ug/L	.5	.44	88	50 - 150	
trans-1,3-Dichloropropene	ug/L	.5	.45	90	50 - 150	
Ethyl methacrylate	ug/L	.5	.36	72	50 - 150	
1,1,2-Trichloroethane	ug/L	.5	.54	108	50 - 150	
Tetrachloroethene	ug/L	.5	.45	90	50 - 150	
1,3-Dichloropropane	ug/L	.5	.49	98	50 - 150	
2-Hexanone	ug/L	.5	.4	80	50 - 150	
Dibromochloromethane	ug/L	.5	.45	90	50 - 150	
Chlorobenzene	ug/L	.5	.44	88	50 - 150	
1,1,1,2-Tetrachloroethane	ug/L	.5	.45	90	50 - 150	
Ethyl Benzene	ug/L	.5	.34	68	50 - 150	
m,p-Xylene	ug/L	1	1.13	113	50 - 150	
o-Xylene	ug/L	.5	.29	58	50 - 150	
Styrene	ug/L	.5	.28	56	50 - 150	
Bromoform	ug/L	.5	.41	82	50 - 150	
Isopropylbenzene (Cumene)	ug/L	.5	.29	58	50 - 150	
1,1,2,2-Tetrachloroethane	ug/L	.5	.53	106	50 - 150	
Bromobenzene	ug/L	.5	.47	94	50 - 150	
1,2,3-Trichloropropane	ug/L	.5	.54	108	50 - 150	
n-Propylbenzene	ug/L	.5	.43	86	50 - 150	
2-Chlorotoluene	ug/L	.5	.45	90	50 - 150	
1,3,5-Trimethylbenzene	ug/L	.5	.54	108	50 - 150	
tert-Butylbenzene	ug/L	.5	.32	64	50 - 150	
1,2,4-Trimethylbenzene	ug/L	.5	.31	62	50 - 150	
sec-Butylbenzene	ug/L	.5	.33	66	50 - 150	
1,3-Dichlorobenzene	ug/L	.5	.48	96	50 - 150	
4-Isopropyltoluene	ug/L	.5	.29	58	50 - 150	
1,4-Dichlorobenzene	ug/L	.5	.48	96	50 - 150	
n-Butylbenzene	ug/L	.5	.48	96	50 - 150	
1,2-Dichlorobenzene	ug/L	.5	.53	106	50 - 150	
1,2,4-Trichlorobenzene	ug/L	.5	.49	98	50 - 150	
Hexachlorobutadiene	ug/L	.5	.53	106	50 - 150	
Naphthalene	ug/L	.5	.33	66	50 - 150	
1,2,3-Trichlorobenzene	ug/L	.5	.48	96	50 - 150	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,2-Dichlorobenzene-d4 (S)	%	84.7	50 - 150	
4-Bromofluorobenzene (S)	%	80.2	50 - 150	



## Quality Control (cont.)

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

### Laboratory Reagent Blank (1426248)

Parameter	Results	Units	MRL	LOD	Qualifier
Dichlorodifluoromethane	<0.500	ug/L	0.500	0.250	
Chloromethane	<0.500	ug/L	0.500	0.250	
Vinyl chloride	<0.500	ug/L	0.500	0.250	
Bromomethane	<0.500	ug/L	0.500	0.250	
Chloroethane	<0.500	ug/L	0.500	0.250	
4-Chlorotoluene	<0.500	ug/L	0.500	0.250	
Trichlorofluoromethane	<0.500	ug/L	0.500	0.250	
1,1-Dichloroethene	<0.500	ug/L	0.500	0.250	
Acetone	<5.00	ug/L	5.00	2.50	
Methyl iodide	<0.500	ug/L	0.500	0.250	
Carbon disulfide	<0.500	ug/L	0.500	0.250	
Methylene chloride	<0.500	ug/L	0.500	0.250	
trans-1,2-Dichloroethene	<0.500	ug/L	0.500	0.250	
Acrylonitrile	<0.500	ug/L	0.500	0.250	
tert-Butyl methyl ether (MTBE)	<0.500	ug/L	0.500	0.250	
1,1-Dichloroethane	<0.500	ug/L	0.500	0.250	
Vinyl acetate	<0.500	ug/L	0.500	0.250	
2,2-Dichloropropane	<0.500	ug/L	0.500	0.250	
2-Butanone	<0.500	ug/L	0.500	0.250	
cis-1,2-Dichloroethene	<0.500	ug/L	0.500	0.250	
Bromochloromethane	<0.500	ug/L	0.500	0.250	
Tetrahydrofuran	<0.500	ug/L	0.500	0.250	
Chloroform	<1.00	ug/L	1.00	0.500	
1,1,1-Trichloroethane	<0.500	ug/L	0.500	0.250	
1,1-Dichloropropene	<0.500	ug/L	0.500	0.250	
Carbon tetrachloride	<0.500	ug/L	0.500	0.250	
1,2-Dichloroethane	<0.500	ug/L	0.500	0.250	
Benzene	<0.500	ug/L	0.500	0.250	
Trichloroethene	<0.500	ug/L	0.500	0.250	
1,2-Dichloropropane	<0.500	ug/L	0.500	0.250	
Methyl methacrylate	<0.500	ug/L	0.500	0.250	
Dibromomethane	<0.500	ug/L	0.500	0.250	
Bromodichloromethane	<1.00	ug/L	1.00	0.500	
cis-1,3-Dichloropropene	<0.500	ug/L	0.500	0.250	
4-Methyl-2-pentanone	<0.500	ug/L	0.500	0.250	
Toluene	<0.500	ug/L	0.500	0.250	
trans-1,3-Dichloropropene	<0.500	ug/L	0.500	0.250	
Ethyl methacrylate	<0.500	ug/L	0.500	0.250	
1,1,2-Trichloroethane	<0.500	ug/L	0.500	0.250	
Tetrachloroethene	<0.500	ug/L	0.500	0.250	
1,3-Dichloropropane	<0.500	ug/L	0.500	0.250	
2-Hexanone	<0.500	ug/L	0.500	0.250	
Dibromochloromethane	<1.00	ug/L	1.00	0.500	
Chlorobenzene	<0.500	ug/L	0.500	0.250	
1,1,1,2-Tetrachloroethane	<0.500	ug/L	0.500	0.250	
Ethyl Benzene	<0.500	ug/L	0.500	0.250	
m,p-Xylene	<0.500	ug/L	1.00	0.500	
o-Xylene	<0.500	ug/L	0.500	0.250	
Styrene	<0.500	ug/L	0.500	0.250	
Bromoform	<1.00	ug/L	1.00	0.500	
Isopropylbenzene (Cumene)	<0.500	ug/L	0.500	0.250	
1,1,2,2-Tetrachloroethane	<0.500	ug/L	0.500	0.250	
Bromobenzene	<0.500	ug/L	0.500	0.250	
1,2,3-Trichloropropane	<0.500	ug/L	0.500	0.250	



## Quality Control (cont.)

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

(continued)

Parameter	Results	Units	MRL	LOD	Qualifier
n-Propylbenzene	<0.500	ug/L	0.500	0.250	
2-Chlorotoluene	<0.500	ug/L	0.500	0.250	
1,3,5-Trimethylbenzene	<0.500	ug/L	0.500	0.250	
tert-Butylbenzene	<0.500	ug/L	0.500	0.250	
1,2,4-Trimethylbenzene	<0.500	ug/L	0.500	0.250	
sec-Butylbenzene	<0.500	ug/L	0.500	0.250	
1,3-Dichlorobenzene	<0.500	ug/L	0.500	0.250	
4-Isopropyltoluene	<0.500	ug/L	0.500	0.250	
1,4-Dichlorobenzene	<0.500	ug/L	0.500	0.250	
n-Butylbenzene	<0.500	ug/L	0.500	0.250	
1,2-Dichlorobenzene	<0.500	ug/L	0.500	0.250	
1,2,4-Trichlorobenzene	<0.500	ug/L	0.500	0.250	
Hexachlorobutadiene	<0.500	ug/L	0.500	0.250	
Naphthalene	<0.500	ug/L	0.500	0.250	
1,2,3-Trichlorobenzene	<0.500	ug/L	0.500	0.250	

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,2-Dichlorobenzene-d4 (S)	%	80.9	70 - 130
4-Bromofluorobenzene (S)	%	72.4	70 - 130

### Duplicate (1426249); Original: Q2012910029

Parameter	Original	Duplicate	Units	RPD %	Limit	Qual
Dichlorodifluoromethane	0	0	ug/L	0	20	
Chloromethane	0	0	ug/L	0	20	
Vinyl chloride	0	0	ug/L	0	20	
Bromomethane	0	0	ug/L	0	20	
Chloroethane	0	0	ug/L	0	20	
4-Chlorotoluene	0	0	ug/L	0	20	
Trichlorofluoromethane	0	0	ug/L	0	20	
1,1-Dichloroethene	0	0	ug/L	0	20	
Acetone	0	0	ug/L	0	20	
Methyl iodide	0	0	ug/L	0	20	
Carbon disulfide	0	0	ug/L	0	20	
Methylene chloride	0	0	ug/L	0	20	
trans-1,2-Dichloroethene	0	0	ug/L	0	20	
Acrylonitrile	0	0	ug/L	0	20	
tert-Butyl methyl ether (MTBE)	0	0	ug/L	0	20	
1,1-Dichloroethane	0	0	ug/L	0	20	
Vinyl acetate	0	0	ug/L	0	20	
2,2-Dichloropropane	0	0	ug/L	0	20	
2-Butanone	0	0	ug/L	0	20	
cis-1,2-Dichloroethene	0	0	ug/L	0	20	
Bromochloromethane	0	0	ug/L	0	20	
Tetrahydrofuran	0	0	ug/L	0	20	
Chloroform	5	5.01	ug/L	.2	20	
1,1,1-Trichloroethane	0	0	ug/L	0	20	
1,1-Dichloropropene	0	0	ug/L	0	20	
Carbon tetrachloride	0	0	ug/L	0	20	
1,2-Dichloroethane	0	0	ug/L	0	20	
Benzene	0	0	ug/L	0	20	
Trichloroethene	0	0	ug/L	0	20	
1,2-Dichloropropane	0	0	ug/L	0	20	



## Quality Control (cont.)

**Preparation Batch:** OVOL / 4610      **Analysis Method:** E524.2 Volatiles by GC/MS  
**Preparation Method:** E524.2 Volatiles by GC/MS  
**Associated Lab IDs:** Q2012915001

(continued)

Parameter	Original	Duplicate	Units	RPD %	Limit	Qual
Methyl methacrylate	0	0	ug/L	0	20	
Dibromomethane	0	0	ug/L	0	20	
Bromodichloromethane	7.42	7.49	ug/L	.939	20	
cis-1,3-Dichloropropene	0	0	ug/L	0	20	
4-Methyl-2-pentanone	0	0	ug/L	0	20	
Toluene	0	0	ug/L	0	20	
trans-1,3-Dichloropropene	0	0	ug/L	0	20	
Ethyl methacrylate	0	0	ug/L	0	20	
1,1,2-Trichloroethane	0	0	ug/L	0	20	
Tetrachloroethene	0	0	ug/L	0	20	
1,3-Dichloropropane	0	0	ug/L	0	20	
2-Hexanone	0	0	ug/L	0	20	
Dibromochloromethane	8.78	8.99	ug/L	2.36	20	
Chlorobenzene	0	0	ug/L	0	20	
1,1,1,2-Tetrachloroethane	0	0	ug/L	0	20	
Ethyl Benzene	0	0	ug/L	0	20	
m,p-Xylene	.61	.62	ug/L	1.63	20	
o-Xylene	0	0	ug/L	0	20	
Styrene	0	0	ug/L	0	20	
Bromoform	1.75	1.77	ug/L	1.14	20	
Isopropylbenzene (Cumene)	0	0	ug/L	0	20	
1,1,2,2-Tetrachloroethane	0	0	ug/L	0	20	
Bromobenzene	0	0	ug/L	0	20	
1,2,3-Trichlorobenzene	0	0	ug/L	0	20	
n-Propylbenzene	0	0	ug/L	0	20	
2-Chlorotoluene	0	0	ug/L	0	20	
1,3,5-Trimethylbenzene	0	0	ug/L	0	20	
tert-Butylbenzene	0	0	ug/L	0	20	
1,2,4-Trimethylbenzene	0	0	ug/L	0	20	
sec-Butylbenzene	0	0	ug/L	0	20	
1,3-Dichlorobenzene	0	0	ug/L	0	20	
4-Isopropyltoluene	0	0	ug/L	0	20	
1,4-Dichlorobenzene	0	0	ug/L	0	20	
n-Butylbenzene	0	0	ug/L	0	20	
1,2-Dichlorobenzene	0	0	ug/L	0	20	
1,2,4-Trichlorobenzene	0	0	ug/L	0	20	
Hexachlorobutadiene	0	0	ug/L	0	20	
Naphthalene	0	0	ug/L	0	20	
1,2,3-Trichloropropane	0	0	ug/L	0	20	
Xylene (total)	0	0	ug/L	0		

### Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,2-Dichlorobenzene-d4 (S)	%			84.3
4-Bromofluorobenzene (S)	%			75.9



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## Quality Control Cross Reference

*OVOL/4610 - E524.2 Volatiles by GC/MS*

Lab ID	Sample ID	Prep Batch	Prep Method
Q2012915001	2095302		