



PWS_0430035_AC_20190812_Analysis Report
LCRA Environmental Laboratory Services
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September 18, 2019

ROBERT TODD
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FROGNOTWATERCORP@YAHOO.COM

RE: Final Analytical Report Q1954104004

Attn: ROBERT TODD(FROGNOT WSC)

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
Q1954104004	1953016	DW	E524.2 Volatiles by GC/MS	8/12/2019 13:39	8/14/2019 07:45
Q1954104004	1953016	DW	552.2 Haloacetic Acids by GC	8/12/2019 13:39	8/14/2019 07:45

Report Definitions

MRL - Minimum Reporting Limit
LOD - Limit of Detection
ML - Maximum Limit - Client Specified
MCL - Maximum Contaminant Level
LOQ - Limit of Quantitation - Client Specified
DF - Dilution Factor
Qual - Qualifier
(S) - Surrogate Spike
B- Analyte Detected in Method Blank
SL - Spike Recovery Low
SH - Spike Recovery High
R - RPD Outside Duplicate Precision Limit
J - Analyte detected below quantitation limit
RPD - Relative Percent Difference

Project Summary

Sample Analysis Comments

Lab ID: Q1954104004

Sample ID: 1953016

- Not Accredited - Bromochloroacetic Acid
- Not Accredited - Bromodichloromethane
- Not Accredited - Bromoform
- Not Accredited - Chloroform
- Not Accredited - Dibromoacetic Acid
- Not Accredited - Dibromochloromethane
- Not Accredited - Dichloroacetic Acid
- Not Accredited - Monobromoacetic Acid
- Not Accredited - Monochloroacetic Acid
- Not Accredited - Trichloroacetic acid

Analytical Results

Lab ID: Q1954104004	Date Received: 8/14/2019 07:45	Matrix: Drinking Water
Sample ID: 1953016	Date Collected: 8/12/2019 13:39	Sample Type: SAMPLE
Project ID: DRINKING WATER PROGRAM	Location: 9329 CR 628, BLUE RIDGE	
Facility: DS01	Client ID: TX0430035	
Sample Point: DBP2-01		

Parameter	Results Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
HALOACETIC ACIDS (552.2 Haloacetic Acids by GC)										
Bromochloroacetic Acid	2.00ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*
Dibromoacetic Acid	1.20ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*
Dichloroacetic Acid	2.80ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*
Monobromoacetic Acid	<1.00ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*
Monochloroacetic Acid	<1.00ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*
Total Regulated HAA	5.50ug/L	1.00	0.500	60		08/21/19 11:21	KMH	08/22/19 01:38	MF	
Trichloroacetic acid	1.50ug/L	1.00	0.500		1	08/21/19 11:21	KMH	08/22/19 01:38	MF	*

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
2,3-Dibromopropionic acid (S)	%	124	70 - 130

Volatiles (E524.2 Volatiles by GC/MS)

Chloroform	3.38ug/L	1.00	0.500		1	08/20/19 06:59	MH	*
Bromodichloromethane	4.97ug/L	1.00	0.500		1	08/20/19 06:59	MH	*
Dibromochloromethane	5.00ug/L	1.00	0.500		1	08/20/19 06:59	MH	*
Bromoform	1.65ug/L	1.00	0.500		1	08/20/19 06:59	MH	*
Total Trihalomethanes	15.0ug/L	1.00	0.500	80		08/20/19 06:59	MH	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,2-Dichlorobenzene-d4 (S)	%	78.7	70 - 130
4-Bromofluorobenzene (S)	%	71.9	70 - 130



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Quality Control

Quality Control (cont.)

Preparation Batch: OEXT / 7321
Preparation Method: 552.2 Haloacetic Acids by GC
Associated Lab IDs: Q1954104004

Analysis Method: 552.2 Haloacetic Acids by GC

Laboratory Reagent Blank (1316902)

Parameter	Results	Units	MRL	LOD	Qualifier
Monochloroacetic Acid	<1.00	ug/L	1.00	0.500	
Monobromoacetic Acid	<1.00	ug/L	1.00	0.500	
Dichloroacetic Acid	<1.00	ug/L	1.00	0.500	
Trichloroacetic acid	<1.00	ug/L	1.00	0.500	
Bromochloroacetic Acid	<1.00	ug/L	1.00	0.500	
Dibromoacetic Acid	<1.00	ug/L	1.00	0.500	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
2,3-Dibromopropionic acid (S)	%	90.8	70 - 130

Method Reporting Limit Check (1316904)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Bromochloroacetic Acid	ug/L	1	1.3	130	50 - 150	
Dibromoacetic Acid	ug/L	1	1	100	50 - 150	
Dichloroacetic Acid	ug/L	1	1.2	120	50 - 150	
Monobromoacetic Acid	ug/L	1	1.2	120	50 - 150	
Monochloroacetic Acid	ug/L	1	1.1	110	50 - 150	
Trichloroacetic acid	ug/L	1	1.1	110	50 - 150	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
2,3-Dibromopropionic acid (S)	%	92.4	50 - 150

Laboratory Fortified Blank (1316906); Lab Fortified Blank Duplicate (1316907)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Bromochloroacetic Acid	ug/L	50	45.4	90.8	70 - 130	49.2	98.4	8.03	30	
Dibromoacetic Acid	ug/L	50	45.4	90.8	70 - 130	49.6	99.2	8.84	30	
Dichloroacetic Acid	ug/L	50	47.4	94.8	70 - 130	51.6	103	8.48	30	
Monobromoacetic Acid	ug/L	50	46.1	92.2	70 - 130	49.6	99.2	7.31	30	
Monochloroacetic Acid	ug/L	50	47.2	94.4	70 - 130	50.9	102	7.54	30	
Trichloroacetic acid	ug/L	50	48.7	97.4	70 - 130	53.1	106	8.64	30	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
2,3-Dibromopropionic acid (S)	%	85.6	70 - 130	94.4

Laboratory Fortified Matrix (1316908) Original: Q1953470003

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Bromochloroacetic Acid	ug/L	100	91.9	89.8	70 - 130	
Dibromoacetic Acid	ug/L	100	93.1	93.1	70 - 130	
Dichloroacetic Acid	ug/L	100	93.1	93.1	70 - 130	
Monobromoacetic Acid	ug/L	100	91.2	91.2	70 - 130	

Quality Control (cont.)

Preparation Batch: OEXT / 7321

Analysis Method: 552.2 Haloacetic Acids by GC

Preparation Method: 552.2 Haloacetic Acids by GC

Associated Lab IDs: Q1954104004

(continued)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits	Qual
Monochloroacetic Acid	ug/L	100	96.2	96.2	70 - 130	
Trichloroacetic acid	ug/L	100	100	100	70 - 130	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
2,3-Dibromopropionic acid (S)	%	96.4	70 - 130

Laboratory Fortified Blank (1316909); Lab Fortified Blank Duplicate (1316910)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Bromochloroacetic Acid	ug/L	50	49.2	98.4	70 - 130	49.4	98.8	.406	30	
Dibromoacetic Acid	ug/L	50	49.6	99.2	70 - 130	50.2	100	1.2	30	
Dichloroacetic Acid	ug/L	50	51.6	103	70 - 130	51.4	103	.388	30	
Monobromoacetic Acid	ug/L	50	49.6	99.2	70 - 130	49.5	99	.202	30	
Monochloroacetic Acid	ug/L	50	50.9	102	70 - 130	50.6	101	.591	30	
Trichloroacetic acid	ug/L	50	53.1	106	70 - 130	52.8	106	.567	30	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
2,3-Dibromopropionic acid (S)	%	94.4	70 - 130	95

Laboratory Fortified Matrix (1316911) Original: Q1954104004

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Bromochloroacetic Acid	ug/L	100	98.1	96.1	70 - 130	
Dibromoacetic Acid	ug/L	100	103	102	70 - 130	
Dichloroacetic Acid	ug/L	100	99.2	96.4	70 - 130	
Monobromoacetic Acid	ug/L	100	96.4	96.4	70 - 130	
Monochloroacetic Acid	ug/L	100	91.2	91.2	70 - 130	
Trichloroacetic acid	ug/L	100	121	119	70 - 130	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
2,3-Dibromopropionic acid (S)	%	124	70 - 130

Quality Control (cont.)

Preparation Batch: OVOL / 4293

Analysis Method: E524.2 Volatiles by GC/MS

Preparation Method: E524.2 Volatiles by GC/MS

Associated Lab IDs: Q1954104004

Method Reporting Limit Check (1315882)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Qual
Bromodichloromethane	ug/L	1	1.12	112	50 - 150	
Bromoform	ug/L	1	1.12	112	50 - 150	
Chloroform	ug/L	1	1.17	117	50 - 150	
Dibromochloromethane	ug/L	1	1	100	50 - 150	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,2-Dichlorobenzene-d4 (S)	%	81.3	50 - 150
4-Bromofluorobenzene (S)	%	74.2	50 - 150

Laboratory Fortified Blank (1315884); Lab Fortified Blank Duplicate (1315885)

Parameter	Units	Spiked Amount	Spike Result	% Spike Recovery	Control Limits %	Dup Result	% Dup Recovery	RPD	RPD Limit %	Qual
Bromodichloromethane	ug/L	50	42.6	85.1	70 - 130	42.8	85.7	.468	30	
Bromoform	ug/L	50	43.9	87.7	70 - 130	44.1	88.2	.455	30	
Chloroform	ug/L	50	45.7	91.3	70 - 130	45.8	91.6	.219	30	
Dibromochloromethane	ug/L	50	41.2	82.5	70 - 130	41.4	82.7	.484	30	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %	% Dup Recovery
1,2-Dichlorobenzene-d4 (S)	%	82.5	70 - 130	82.3
4-Bromofluorobenzene (S)	%	79.2	70 - 130	77.6

Laboratory Reagent Blank (1315886)

Parameter	Results	Units	MRL	LOD	Qualifier
Chloroform	<1.00	ug/L	1.00	0.500	
Bromodichloromethane	<1.00	ug/L	1.00	0.500	
Dibromochloromethane	<1.00	ug/L	1.00	0.500	
Bromoform	<1.00	ug/L	1.00	0.500	

Surrogate(s)

Parameter	Units	% Spike Recovery	Control Limits %
1,2-Dichlorobenzene-d4 (S)	%	83.6	70 - 130
4-Bromofluorobenzene (S)	%	78.2	70 - 130

Quality Control Cross Reference

OVOL/4293 - E524.2 Volatiles by GC/MS

Lab ID	Sample ID	Prep Batch	Prep Method
Q1954104004	1953016		

ORG/8489 - 552.2 Haloacetic Acids by GC

Lab ID	Sample ID	Prep Batch	Prep Method
Q1954104004	1953016	OEXT/7321	552.2 Haloacetic Acids by GC