



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86694

SDG No.: LB86694

Contract: _____ Lab Code: CHEM

Case No.: LB86694

SAS No.: LB86694

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Bromide	24	25	96	0	90 - 110		03/16/2017	19:13	LB86694
	Chloride	7.1	7.5	94.7	0	90 - 110		03/16/2017	19:13	LB86694
	Fluoride	4.9	5	98	0	90 - 110		03/16/2017	19:13	LB86694
	Phosphorus, Ortho	12.5	12.5	100	0	90 - 110		03/16/2017	19:13	LB86694
	Nitrite	7.4	7.5	98.7	0	90 - 110		03/16/2017	19:13	LB86694
	Nitrate	6	6.25	96	0	90 - 110		03/16/2017	19:13	LB86694
	Sulfate	35.2	37.5	93.9	0	90 - 110		03/16/2017	19:13	LB86694



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86694

SDG No.: LB86694

Contract:

Lab Code: CHEM

Case No.: LB86694

SAS No.: LB86694

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Bromide	0.066	+/-0.5	U		0.5		03/16/2017	19:44	LB86694
	Chloride	0.075	+/-0.15	U		0.15		03/16/2017	19:44	LB86694
	Fluoride	0.043	+/-0.1	U		0.1		03/16/2017	19:44	LB86694
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		03/16/2017	19:44	LB86694
	Nitrite	0.022	+/-0.15	U		0.15		03/16/2017	19:44	LB86694
	Nitrate	0.027	+/-0.13	U		0.13		03/16/2017	19:44	LB86694
	Sulfate	0.13	+/-0.75	U		0.75		03/16/2017	19:44	LB86694

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Bromide	0.066	+/-0.5	U		0.5		04/04/2017	12:05	LB86694
	Chloride	0.075	+/-0.15	U		0.15		04/04/2017	12:05	LB86694
	Fluoride	0.043	+/-0.1	U		0.1		04/04/2017	12:05	LB86694
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/04/2017	12:05	LB86694
	Nitrite	0.022	+/-0.15	U		0.15		04/04/2017	12:05	LB86694
	Nitrate	0.027	+/-0.13	U		0.13		04/04/2017	12:05	LB86694
	Sulfate	0.13	+/-0.75	U		0.75		04/04/2017	12:05	LB86694
CCB2	Bromide	0.066	+/-0.5	U		0.5		04/04/2017	18:11	LB86694
	Chloride	0.075	+/-0.15	U		0.15		04/04/2017	18:11	LB86694
	Fluoride	0.043	+/-0.1	U		0.1		04/04/2017	18:11	LB86694
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/04/2017	18:11	LB86694
	Nitrite	0.022	+/-0.15	U		0.15		04/04/2017	18:11	LB86694
	Nitrate	0.027	+/-0.13	U		0.13		04/04/2017	18:11	LB86694
	Sulfate	0.13	+/-0.75	U		0.75		04/04/2017	18:11	LB86694
CCB3	Bromide	0.066	+/-0.5	U		0.5		04/04/2017	21:45	LB86694
	Chloride	0.075	+/-0.15	U		0.15		04/04/2017	21:45	LB86694
	Fluoride	0.043	+/-0.1	U		0.1		04/04/2017	21:45	LB86694
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/04/2017	21:45	LB86694
	Nitrite	0.022	+/-0.15	U		0.15		04/04/2017	21:45	LB86694
	Nitrate	0.027	+/-0.13	U		0.13		04/04/2017	21:45	LB86694
	Sulfate	0.13	+/-0.75	U		0.75		04/04/2017	21:45	LB86694



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86694

SDG No.: LB86694

Contract: Lab Code: CHEM

Case No.: LB86694

SAS No.: LB86694

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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Report of Analysis

Client:		Date Collected:	4/4/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/4/2017 12:00:00 AM
Client Sample ID:	DSN001	SDG No.:	LB86694
Lab Sample ID:	I2527-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	1.1		1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	50.4	OR	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0.25		1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	0.62		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	7		1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S1-JOINT3	SDG No.:	LB86694
Lab Sample ID:	I2529-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	1.3		1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	71.4	OR	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0.57		1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	3.6		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	5.4		1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	1.6		1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S1-JOINT3DL	SDG No.:	LB86694
Lab Sample ID:	I2529-01DL	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	0	UD	10	0.66		5	mg/L		04/04/2017	300.0
	Chloride	98.8	D	10	0.75		1.5	mg/L		04/04/2017	300.0
	Fluoride	0	UD	10	0.43		1	mg/L		04/04/2017	300.0
	Nitrate	5.7	D	10	0.27		1.3	mg/L		04/04/2017	300.0
	Nitrite	0	UD	10	0.22		1.5	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	15.4	D	10	0.1		2.5	mg/L		04/04/2017	300.0
	Sulfate	0	UD	10	1.3		7.5	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S2-MIDSTREAM	SDG No.:	LB86694
Lab Sample ID:	I2529-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	1.1		1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	47.8	OR	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0.41		1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	1.8		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0.87		1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	47		1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S2-MIDSTREAMDL	SDG No.:	LB86694
Lab Sample ID:	I2529-02DL	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	0	UD	10	0.66		5	mg/L		04/04/2017	300.0
	Chloride	49.8	D	10	0.75		1.5	mg/L		04/04/2017	300.0
	Fluoride	0	UD	10	0.43		1	mg/L		04/04/2017	300.0
	Nitrate	4	D	10	0.27		1.3	mg/L		04/04/2017	300.0
	Nitrite	0	UD	10	0.22		1.5	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0	UD	10	0.1		2.5	mg/L		04/04/2017	300.0
	Sulfate	54	D	10	1.3		7.5	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S3-DOWNSTREAM	SDG No.:	LB86694
Lab Sample ID:	I2529-03	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	1.1		1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	49.7	OR	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0.4		1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	1.7		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0.85		1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	46.7		1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S3-DOWNSTREAMDL	SDG No.:	LB86694
Lab Sample ID:	I2529-03DL	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	0	UD	10	0.66		5	mg/L		04/04/2017	300.0
	Chloride	53.7	D	10	0.75		1.5	mg/L		04/04/2017	300.0
	Fluoride	0	UD	10	0.43		1	mg/L		04/04/2017	300.0
	Nitrate	4	D	10	0.27		1.3	mg/L		04/04/2017	300.0
	Nitrite	0	UD	10	0.22		1.5	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0	UD	10	0.1		2.5	mg/L		04/04/2017	300.0
	Sulfate	53.7	D	10	1.3		7.5	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S4-UPSTREAM	SDG No.:	LB86694
Lab Sample ID:	I2529-04	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	1.1		1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	50.2	OR	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0.4		1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	1.7		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0.82		1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	47.3		1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	3/11/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/3/2017 12:00:00 AM
Client Sample ID:	S4-UPSTREAMDL	SDG No.:	LB86694
Lab Sample ID:	I2529-04DL	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	0	UD	10	0.66		5	mg/L		04/04/2017	300.0
	Chloride	54.5	D	10	0.75		1.5	mg/L		04/04/2017	300.0
	Fluoride	0	UD	10	0.43		1	mg/L		04/04/2017	300.0
	Nitrate	3.9	D	10	0.27		1.3	mg/L		04/04/2017	300.0
	Nitrite	0	UD	10	0.22		1.5	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0	UD	10	0.1		2.5	mg/L		04/04/2017	300.0
	Sulfate	54	D	10	1.3		7.5	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	4/3/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/4/2017 12:00:00 AM
Client Sample ID:	POOLWATER	SDG No.:	LB86694
Lab Sample ID:	I2531-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Bromide	0	U	1	0.066		0.5	mg/L		04/04/2017	300.0
	Chloride	0	U	1	0.075		0.15	mg/L		04/04/2017	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		04/04/2017	300.0
	Nitrate	0.32		1	0.027		0.13	mg/L		04/04/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/04/2017	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		04/04/2017	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		04/04/2017	300.0



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Report of Analysis

Client:		Date Collected:	4/3/2017 12:00:00 AM
Project:	LB86694	Date Received:	4/4/2017 12:00:00 AM
Client Sample ID:	POOLWATER	SDG No.:	LB86694
Lab Sample ID:	I2531-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
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Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits



GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB86694

SDG No.: LB86694

Instrument: IC Metrohm

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
LB86694BLW		WATER		Batch Number:				Prep Date:		
	Bromide	0.066	<0.5	U		0.5		04/04/2017	12:35	LB86694
	Chloride	0.075	<0.15	U		0.15		04/04/2017	12:35	LB86694
	Fluoride	0.043	<0.1	U		0.1		04/04/2017	12:35	LB86694
	Phosphorus, Ortho	0.01	<0.25	U		0.25		04/04/2017	12:35	LB86694
	Nitrite	0.022	<0.15	U		0.15		04/04/2017	12:35	LB86694
	Nitrate	0.027	<0.13	U		0.13		04/04/2017	12:35	LB86694
	Sulfate	0.13	<0.75	U		0.75		04/04/2017	12:35	LB86694



GENCHEM
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MATRIX SPIKE SUMMARY

client: LB86694 level: low sdg no.: LB86694
contract: lab code: CHEM case no.: LB86694 sas no.: LB86694
matrix: WATER sample id: I2531-01 client id: POOLWATERMS
Percent Solids for Sample: 0 Spiked ID: I2531-01MS Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Bromide	mg/L	80 - 120	24.7		0.066	U	25	98.8		
Chloride	mg/L	80 - 120	7.4		0.075	U	7.5	98.7		
Fluoride	mg/L	80 - 120	5.2		0.043	U	5	104		
Phosphorus, Ortho	mg/L	80 - 120	13.2		0.01	U	12.5	105.6		
Nitrite	mg/L	80 - 120	7.5		0.022	U	7.5	100		
Nitrate	mg/L	80 - 120	6.2		0.32		6.25	94		
Sulfate	mg/L	80 - 120	38.3		0.13	U	37.5	102.1		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB86694 **Level:** LOW **SDG No.:** LB86694
Contract: _____ **Lab Code:** CHEM **Case No.:** LB86694 **SAS No.:** LB86694
Matrix: WATER **Sample ID:** I2531-01 **Client ID:** POOLWATERDUP
Percent Solids for Sample: 0 **Duplicate ID** I2531-01DUP **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Bromide	mg/L	20	0.066	U	0	U			
Chloride	mg/L	20	0.075	U	0	U			
Fluoride	mg/L	20	0.043	U	0	U			
Phosphorus, Ortho	mg/L	20	0.01	U	0	U			
Nitrite	mg/L	20	0.022	U	0	U			
Nitrate	mg/L	20	0.32		0.32		0		
Sulfate	mg/L	20	0.13	U	0	U			



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86694

SDG No.: LB86694

Contract:

Lab Code: CHEM

Case No.: LB86694

SAS No.: LB86694

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB86694BSW							
Bromide	mg/L	25	24.1		96.4	90 - 110	
Chloride	mg/L	7.5	7.2		96	90 - 110	
Fluoride	mg/L	5	5.1		102	90 - 110	
Phosphorus, Ortho	mg/L	12.5	13.2		105.6	90 - 110	
Nitrite	mg/L	7.5	7.3		97.3	90 - 110	
Nitrate	mg/L	6.25	6		96	90 - 110	
Sulfate	mg/L	37.5	36.1		96.3	90 - 110	
