



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86971

SDG No.: LB86971

Contract: _____ Lab Code: CHEM

Case No.: LB86971

SAS No.: LB86971

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	9.8	10	98	0	90 - 110		04/14/2017	18:12	LB86971
	Chloride	3.1	3	103.3	0	90 - 110		04/14/2017	18:12	LB86971
	Fluoride	2.1	2	105	0	90 - 110		04/14/2017	18:12	LB86971
	Phosphorus, Ortho	5.5	5	110	0	90 - 110		04/14/2017	18:12	LB86971
	Nitrite	3.1	3	103.3	0	90 - 110		04/14/2017	18:12	LB86971
	Nitrate	2.4	2.5	96	0	90 - 110		04/14/2017	18:12	LB86971
	Sulfate	14.5	15	96.7	0	90 - 110		04/14/2017	18:12	LB86971



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86971

SDG No.: LB86971

Contract: Lab Code: CHEM

Case No.: LB86971

SAS No.: LB86971

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		04/14/2017	18:43	LB86971
	Chloride	0.075	+/-0.15	U		0.15		04/14/2017	18:43	LB86971
	Fluoride	0.043	+/-0.1	U		0.1		04/14/2017	18:43	LB86971
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/14/2017	18:43	LB86971
	Nitrite	0.022	+/-0.15	U		0.15		04/14/2017	18:43	LB86971
	Nitrate	0.027	+/-0.13	U		0.13		04/14/2017	18:43	LB86971
	Sulfate	0.13	+/-0.75	U		0.75		04/14/2017	18:43	LB86971



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86971

SDG No.: LB86971

Contract: _____ **Lab Code:** CHEM

Case No.: LB86971

SAS No.: LB86971

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		04/21/2017	09:45	LB86971
	Chloride	0.075	+/-0.15	U		0.15		04/21/2017	09:45	LB86971
	Fluoride	0.043	+/-0.1	U		0.1		04/21/2017	09:45	LB86971
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/21/2017	09:45	LB86971
	Nitrite	0.022	+/-0.15	U		0.15		04/21/2017	09:45	LB86971
	Nitrate	0.027	+/-0.13	U		0.13		04/21/2017	09:45	LB86971
	Sulfate	0.13	+/-0.75	U		0.75		04/21/2017	09:45	LB86971
CCB2	Bromide	0.066	+/-0.5	U		0.5		04/21/2017	14:23	LB86971
	Chloride	0.075	+/-0.15	U		0.15		04/21/2017	14:23	LB86971
	Fluoride	0.043	+/-0.1	U		0.1		04/21/2017	14:23	LB86971
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		04/21/2017	14:23	LB86971
	Nitrite	0.022	+/-0.15	U		0.15		04/21/2017	14:23	LB86971
	Nitrate	0.027	+/-0.13	U		0.13		04/21/2017	14:23	LB86971
	Sulfate	0.13	+/-0.75	U		0.75		04/21/2017	14:23	LB86971



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86971

SDG No.: LB86971

Contract: Lab Code: CHEM

Case No.: LB86971

SAS No.: LB86971

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:	4/16/2016 12:00:00 AM
Project:	LB86971	Date Received:	4/19/2017 12:00:00 AM
Client Sample ID:	POOLWATER	SDG No.:	LB86971
Lab Sample ID:	I2763-01	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		04/21/2017	300.0
	Chloride	0	U	1	0.075		0.15	mg/L		04/21/2017	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		04/21/2017	300.0
	Nitrate	0.25		1	0.027		0.13	mg/L		04/21/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/21/2017	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		04/21/2017	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		04/21/2017	300.0



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Report of Analysis

Client:		Date Collected:	4/19/2017 12:00:00 AM
Project:	LB86971	Date Received:	4/21/2017 12:00:00 AM
Client Sample ID:	CELL-A	SDG No.:	LB86971
Lab Sample ID:	I2781-01	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		04/21/2017	300.0
	Chloride	0.36		1	0.075		0.15	mg/L		04/21/2017	300.0
	Fluoride	0.21		1	0.043		0.1	mg/L		04/21/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		04/21/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/21/2017	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		04/21/2017	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		04/21/2017	300.0



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Report of Analysis

Client:		Date Collected:	4/19/2017 12:00:00 AM
Project:	LB86971	Date Received:	4/21/2017 12:00:00 AM
Client Sample ID:	CELLS-B-C	SDG No.:	LB86971
Lab Sample ID:	I2781-02	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	0	U	1	0.066		0.5	mg/L		04/21/2017	300.0
	Chloride	0.58		1	0.075		0.15	mg/L		04/21/2017	300.0
	Fluoride	0.2		1	0.043		0.1	mg/L		04/21/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		04/21/2017	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		04/21/2017	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		04/21/2017	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		04/21/2017	300.0



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Report of Analysis

Client:		Date Collected:	4/19/2017 12:00:00 AM
Project:	LB86971	Date Received:	4/21/2017 12:00:00 AM
Client Sample ID:	CELLS-B-C	SDG No.:	LB86971
Lab Sample ID:	I2781-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
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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: LB86971

SDG No.: LB86971

Instrument: IC-1

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
LB86971BLW		WATER		Batch Number:			Prep Date:			
	Bromide	0.066	<0.5	U		0.5		04/21/2017	10:16	LB86971
	Chloride	0.075	<0.15	U		0.15		04/21/2017	10:16	LB86971
	Fluoride	0.043	<0.1	U		0.1		04/21/2017	10:16	LB86971
	Phosphorus, Ortho	0.01	<0.25	U		0.25		04/21/2017	10:16	LB86971
	Nitrite	0.022	<0.15	U		0.15		04/21/2017	10:16	LB86971
	Nitrate	0.027	<0.13	U		0.13		04/21/2017	10:16	LB86971
	Sulfate	0.13	<0.75	U		0.75		04/21/2017	10:16	LB86971



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB86971 level: low sdg no.: LB86971
contract: lab code: CHEM case no.: LB86971 sas no.: LB86971
matrix: WATER sample id: I2763-01 client id: POOLWATERMS
Percent Solids for Sample: 0 Spiked ID: I2763-01MS 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	9.9		0.066	U	10	99		
Chloride	mg/L	80 - 120	3.1		0.075	U	3	103.3		
Fluoride	mg/L	80 - 120	1.8		0.043	U	2	90		
Phosphorus, Ortho	mg/L	80 - 120	5.5		0.01	U	5	110		
Nitrite	mg/L	80 - 120	3		0.022	U	3	100		
Nitrate	mg/L	80 - 120	2.7		0.25		2.5	98		
Sulfate	mg/L	80 - 120	15.3		0.13	U	15	102		



GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>LB86971</u>	Level:	<u>LOW</u>	SDG No.:	<u>LB86971</u>
Contract:	<u></u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>LB86971</u>
Matrix:	<u>WATER</u>	Sample ID:	<u>I2763-01</u>	Client ID:	<u>POOLWATERDUP</u>
Percent Solids for Sample:	0	Duplicate ID	I2763-01DUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance	Sample	Duplicate		RPD	Qual	M
		Limit	Result	C	Result			
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	0.25		0.25		0	
Sulfate	mg/L	20	0.13	U	0	U		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86971

SDG No.: LB86971

Contract:

Lab Code: CHEM

Case No.: LB86971

SAS No.: LB86971

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB86971BSW							
Bromide	mg/L	10	9.9		99	90 - 110	
Chloride	mg/L	3	3		100	90 - 110	
Fluoride	mg/L	2	1.9		95	90 - 110	
Phosphorus, Ortho	mg/L	5	5.9		118	90 - 110	
Nitrite	mg/L	3	3		100	90 - 110	
Nitrate	mg/L	2.5	2.4		96	90 - 110	
Sulfate	mg/L	15	14.8		98.7	90 - 110	
