



Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-1	SDG No.:	LB88713
Lab Sample ID:	I4047-01	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	0.25	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.081	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.075	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.16	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.64	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-2	SDG No.:	LB88713
Lab Sample ID:	I4047-02	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	0.28	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.079	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.081	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.17	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.63	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-3	SDG No.:	LB88713
Lab Sample ID:	I4047-03	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	0.26	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.082	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.086	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.14	J	1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.15	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.65	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-4	SDG No.:	LB88713
Lab Sample ID:	I4047-04	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	0.26	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.074	U	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.088	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.17	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.64	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-5	SDG No.:	LB88713
Lab Sample ID:	I4047-05	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	0.27	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.085	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.077	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.2	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.64	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-6	SDG No.:	LB88713
Lab Sample ID:	I4047-06	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	0.22	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.082	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.084	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.18	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.64	J	1	0.13		0.75	mg/L		07/11/2017	300.0

Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-7	SDG No.:	LB88713
Lab Sample ID:	I4047-07	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	0.24	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Bromide	0.25	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Bromide	0.24	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Bromide	0.25	J	1	0.066		0.5	mg/L		07/11/2017	300.0
	Chloride	0.078	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Chloride	0.079	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Chloride	0.078	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Chloride	0.079	J	1	0.075		0.15	mg/L		07/11/2017	300.0
	Fluoride	0.085	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Fluoride	0.09	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Fluoride	0.085	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Fluoride	0.09	J	1	0.043		0.1	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Nitrite	0.15		1	0.022		0.15	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.18	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.21	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.18	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Phosphorus, Ortho	-0.21	U	1	0.01		0.25	mg/L		07/11/2017	300.0
	Sulfate	0.62	J	1	0.13		0.75	mg/L		07/11/2017	300.0
	Sulfate	0.65	J	1	0.13		0.75	mg/L		07/11/2017	300.0
	Sulfate	0.62	J	1	0.13		0.75	mg/L		07/11/2017	300.0
	Sulfate	0.65	J	1	0.13		0.75	mg/L		07/11/2017	300.0



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Report of Analysis

Client:		Date Collected:	7/3/2017 12:00:00 AM
Project:	LB88713	Date Received:	7/3/2017 12:00:00 AM
Client Sample ID:	MDL-WATER-7	SDG No.:	LB88713
Lab Sample ID:	I4047-07	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

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB88713

SDG No.: LB88713

Contract: _____ Lab Code: CHEM

Case No.: LB88713

SAS No.: LB88713

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	10.3	10	103	0	90 - 110		07/11/2017	15:03	LB88713
	Chloride	3	3	100	0	90 - 110		07/11/2017	15:03	LB88713
	Fluoride	2.1	2	105	0	90 - 110		07/11/2017	15:03	LB88713
	Phosphorus, Ortho	5.3	5	106	0	90 - 110		07/11/2017	15:03	LB88713
	Nitrite	3	3	100	0	90 - 110		07/11/2017	15:03	LB88713
	Nitrate	2.5	2.5	100	0	90 - 110		07/11/2017	15:03	LB88713
	Sulfate	14.7	15	98	0	90 - 110		07/11/2017	15:03	LB88713



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB88713

SDG No.: LB88713

Contract: _____ Lab Code: CHEM

Case No.: LB88713

SAS No.: LB88713

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
CCV1	Bromide	10	10	100	0	90 - 110		07/11/2017	18:25	LB88713
	Chloride	3	3	100	0	90 - 110		07/11/2017	18:25	LB88713
	Fluoride	2	2	100	0	90 - 110		07/11/2017	18:25	LB88713
	Phosphorus, Ortho	5.2	5	104	0	90 - 110		07/11/2017	18:25	LB88713
	Nitrite	2.9	3	96.7	0	90 - 110		07/11/2017	18:25	LB88713
	Nitrate	2.5	2.5	100	0	90 - 110		07/11/2017	18:25	LB88713
	Sulfate	14.4	15	96	0	90 - 110		07/11/2017	18:25	LB88713
CCV2	Bromide	9.9	10	99	0	90 - 110		07/12/2017	00:12	LB88713
	Chloride	3	3	100	0	90 - 110		07/12/2017	00:12	LB88713
	Fluoride	2.1	2	105	0	90 - 110		07/12/2017	00:12	LB88713
	Phosphorus, Ortho	5.1	5	102	0	90 - 110		07/12/2017	00:12	LB88713
	Nitrite	2.9	3	96.7	0	90 - 110		07/12/2017	00:12	LB88713
	Nitrate	2.5	2.5	100	0	90 - 110		07/12/2017	00:12	LB88713
	Sulfate	14.6	15	97.3	0	90 - 110		07/12/2017	00:12	LB88713



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB88713

SDG No.: LB88713

Contract:

Lab Code: CHEM

Case No.: LB88713

SAS No.: LB88713

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		07/11/2017	15:32	LB88713
	Chloride	0.075	+/-0.15	U		0.15		07/11/2017	15:32	LB88713
	Fluoride	0.043	+/-0.1	U		0.1		07/11/2017	15:32	LB88713
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		07/11/2017	15:32	LB88713
	Nitrite	0.022	+/-0.15	U		0.15		07/11/2017	15:32	LB88713
	Nitrate	0.027	+/-0.13	U		0.13		07/11/2017	15:32	LB88713
	Sulfate	0.13	+/-0.75	U		0.75		07/11/2017	15:32	LB88713

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		07/11/2017	18:54	LB88713
	Chloride	0.075	+/-0.15	U		0.15		07/11/2017	18:54	LB88713
	Fluoride	0.043	+/-0.1	U		0.1		07/11/2017	18:54	LB88713
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		07/11/2017	18:54	LB88713
	Nitrite	0.022	+/-0.15	U		0.15		07/11/2017	18:54	LB88713
	Nitrate	0.027	+/-0.13	U		0.13		07/11/2017	18:54	LB88713
	Sulfate	0.13	+/-0.75	U		0.75		07/11/2017	18:54	LB88713
CCB2	Bromide	0.066	+/-0.5	U		0.5		07/12/2017	00:41	LB88713
	Chloride	0.075	+/-0.15	U		0.15		07/12/2017	00:41	LB88713
	Fluoride	0.043	+/-0.1	U		0.1		07/12/2017	00:41	LB88713
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		07/12/2017	00:41	LB88713
	Nitrite	0.022	+/-0.15	U		0.15		07/12/2017	00:41	LB88713
	Nitrate	0.027	+/-0.13	U		0.13		07/12/2017	00:41	LB88713
	Sulfate	0.13	+/-0.75	U		0.75		07/12/2017	00:41	LB88713



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB88713

SDG No.: LB88713

Contract: Lab Code: CHEM

Case No.: LB88713

SAS No.: LB88713

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB88713

SDG No.: LB88713

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
LB88713BLW		WATER		Batch Number:				Prep Date:		
	Bromide	0.066	<0.5	U		0.5		07/11/2017	19:23	LB88713
	Chloride	0.075	<0.15	U		0.15		07/11/2017	19:23	LB88713
	Fluoride	0.043	<0.1	U		0.1		07/11/2017	19:23	LB88713
	Phosphorus, Ortho	0.01	<0.25	U		0.25		07/11/2017	19:23	LB88713
	Nitrite	0.022	<0.15	U		0.15		07/11/2017	19:23	LB88713
	Nitrate	0.027	<0.13	U		0.13		07/11/2017	19:23	LB88713
	Sulfate	0.13	<0.75	U		0.75		07/11/2017	19:23	LB88713



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB88713

SDG No.: LB88713

Contract:

Lab Code: CHEM

Case No.: LB88713

SAS No.: LB88713

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB88713BSW							
Bromide	mg/L	10	10.2		102	90 - 110	
Chloride	mg/L	3	3		100	90 - 110	
Fluoride	mg/L	2	2.1		105	90 - 110	
Phosphorus, Ortho	mg/L	5	5.4		108	90 - 110	
Nitrite	mg/L	3	3		100	90 - 110	
Nitrate	mg/L	2.5	2.5		100	90 - 110	
Sulfate	mg/L	15	14.7		98	90 - 110	

Daily Analysis Runlog For Sequence/QC Batch ID # LB88713

Review By		Review On				
SubDirectory		LB88713		Test : Anions		
STD. NAME		STD REF.#				
ICAL Standard		WP56304,WP56305,WP56306,WP56307,WP56308,WP56309,WP56310				
ICV Standard		WP56311				
CCV Standard		WP56306				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP56311				
Chk Standard		WP56312,WP56313,WP56325				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	STD1	STD1	CAL1	07/11/17 10:41		OK
2	STD2	STD2	CAL2	07/11/17 11:10		OK
3	STD3	STD3	CAL3	07/11/17 11:39		OK
4	STD4	STD4	CAL4	07/11/17 12:08		OK
5	STD5	STD5	CAL5	07/11/17 12:37		OK
6	STD6	STD6	CAL6	07/11/17 13:06		OK
7	STD7	STD7	CAL7	07/11/17 13:35		OK
8	ICV1	ICV1	ICV	07/11/17 15:03		OK
9	ICB1	ICB1	ICB	07/11/17 15:32		OK
10	CCV1	CCV1	CCV	07/11/17 18:25		OK
11	CCB1	CCB1	CCB	07/11/17 18:54		OK
12	LB88713BLW	LB88713BLW	MB	07/11/17 19:23		OK
13	LB88713BSW	LB88713BSW	LCS	07/11/17 19:52		OK
14	I4047-01	MDL-WATER-1	SAM	07/11/17 20:21		OK
15	I4047-02	MDL-WATER-2	SAM	07/11/17 20:50		OK
16	I4047-03	MDL-WATER-3	SAM	07/11/17 21:19		OK
17	I4047-04	MDL-WATER-4	SAM	07/11/17 21:48		OK
18	I4047-05	MDL-WATER-5	SAM	07/11/17 22:17		OK
19	I4047-06	MDL-WATER-6	SAM	07/11/17 22:46		OK
20	I4047-07	MDL-WATER-7	SAM	07/11/17 23:15		OK
21	I4047-07	MDL-WATER-7	SAM	07/11/17 23:43		OK



Instrument ID : IC-1

284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Daily Analysis Runlog For Sequence/QC Batch ID # LB88713

Review By		Review On				
SubDirectory		LB88713		Test : Anions		
STD. NAME		STD REF.#				
ICAL Standard		WP56304,WP56305,WP56306,WP56307,WP56308,WP56309,WP56310				
ICV Standard		WP56311				
CCV Standard		WP56306				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP56311				
Chk Standard		WP56312,WP56313,WP56325				
22	CCV2	CCV2	CCV	07/12/17 00:12		OK
23	CCB2	CCB2	CCB	07/12/17 00:41		OK