

Daily Analysis Runlog For Sequence/QC Batch ID # LB93690

Review By		Review On				
SubDirectory		LB93690		Test : Anions		
STD. NAME		STD REF.#				
ICAL Standard		WP61820,WP61821,WP61822,WP61823,WP61824,WP61825,WP61826				
ICV Standard		WP61827				
CCV Standard		WP62423				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62424				
Chk Standard		WP62458,WP62459				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	STD1	STD1	CAL1	02/12/18 11:12		OK
2	STD2	STD2	CAL2	02/12/18 11:42		OK
3	STD3	STD3	CAL3	02/12/18 12:13		OK
4	STD4	STD4	CAL4	02/12/18 12:44		OK
5	STD5	STD5	CAL5	02/12/18 13:15		OK
6	STD6	STD6	CAL6	02/12/18 13:46		OK
7	STD7	STD7	CAL7	02/12/18 14:17		OK
8	ICV1	ICV1	ICV	02/12/18 15:55		OK
9	ICB1	ICB1	ICB	02/12/18 16:26		OK
10	CCV1	CCV1	CCV	03/02/18 10:18		OK
11	CCB1	CCB1	CCB	03/02/18 10:51		OK
12	LB93690BLW	LB93690BLW	MB	03/02/18 11:22		OK
13	LB93690BSW	LB93690BSW	LCS	03/02/18 11:53		OK
14	J1784-01	POOL-WATER	SAM	03/02/18 12:28	Cl high	Dilution
15	J1784-01DUP	POOL-WATERDUP	DUP	03/02/18 12:59		OK
16	J1784-01MS	POOL-WATERMS	MS	03/02/18 13:30		OK
17	CCV2	CCV2	CCV	03/02/18 19:06		OK
18	CCB2	CCB2	CCB	03/02/18 19:37		OK
19	CCV3	CCV3	CCV	03/05/18 09:33		OK
20	CCB3	CCB3	CCB	03/05/18 10:04		OK
21	LB93690BLW2	LB93690BLW2	MB	03/05/18 10:35		OK

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

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STD. NAME		STD REF.#				
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ICV Standard		WP61827				
CCV Standard		WP62423				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62424				
Chk Standard		WP62458,WP62459				
22	LB93690BSW2	LB93690BSW2	LCS	03/05/18 11:06		OK
23	J1784-01DL	POOL-WATERDL	SAM	03/05/18 14:31	5X for Cl	Confirms
24	J1804-01	MAIN-CELL	SAM	03/05/18 15:02		OK
25	J1804-01DUP	MAIN-CELLDUP	DUP	03/05/18 15:33		OK
26	J1804-01MS	MAIN-CELLMS	MS	03/05/18 16:04		OK
27	J1804-01MSD	MAIN-CELLMSD	MSD	03/05/18 16:35		OK
28	CCV4	CCV4	CCV	03/05/18 17:06		OK
29	CCB4	CCB4	CCB	03/05/18 17:37		OK



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Report of Analysis

Client:		Date Collected:	2/28/2018 12:00:00 AM
Project:	LB93690	Date Received:	3/2/2018 12:00:00 AM
Client Sample ID:	POOL-WATER	SDG No.:	LB93690
Lab Sample ID:	J1784-01	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		03/02/2018	300.0
	Chloride	18.2	OR	1	0.075		0.15	mg/L		03/02/2018	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		03/02/2018	300.0
	Nitrate	0.21		1	0.027		0.13	mg/L		03/02/2018	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		03/02/2018	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		03/02/2018	300.0
	Sulfate	2.4		1	0.13		0.75	mg/L		03/02/2018	300.0



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Report of Analysis

Client:		Date Collected:	2/28/2018 12:00:00 AM
Project:	LB93690	Date Received:	3/2/2018 12:00:00 AM
Client Sample ID:	POOL-WATERDL	SDG No.:	LB93690
Lab Sample ID:	J1784-01DL	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	5	0.33		2.5	mg/L		03/05/2018	300.0
	Chloride	17.3	D	5	0.38		0.75	mg/L		03/05/2018	300.0
	Fluoride	0	UD	5	0.22		0.5	mg/L		03/05/2018	300.0
	Nitrate	0	UD	5	0.14		0.63	mg/L		03/05/2018	300.0
	Nitrite	0	UD	5	0.11		0.75	mg/L		03/05/2018	300.0
	Phosphorus, Ortho	0	UD	5	0.05		1.3	mg/L		03/05/2018	300.0
	Sulfate	0	UD	5	0.66		3.8	mg/L		03/05/2018	300.0



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Report of Analysis

Client:		Date Collected:	3/2/2018 12:00:00 AM
Project:	LB93690	Date Received:	3/5/2018 12:00:00 AM
Client Sample ID:	MAIN-CELL	SDG No.:	LB93690
Lab Sample ID:	J1804-01	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		03/05/2018	300.0
	Chloride	0.14	J	1	0.075		0.15	mg/L		03/05/2018	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		03/05/2018	300.0
	Nitrate	0.24		1	0.027		0.13	mg/L		03/05/2018	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		03/05/2018	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		03/05/2018	300.0
	Sulfate	0.71	J	1	0.13		0.75	mg/L		03/05/2018	300.0



Report of Analysis

Client:		Date Collected:	3/2/2018 12:00:00 AM
Project:	LB93690	Date Received:	3/5/2018 12:00:00 AM
Client Sample ID:	MAIN-CELL	SDG No.:	LB93690
Lab Sample ID:	J1804-01	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



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- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB93690

SDG No.: LB93690

Contract: _____ Lab Code: CHEM

Case No.: LB93690

SAS No.: LB93690

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Bromide	9.5	10	95		90 - 110		02/12/2018	15:55	LB93690
	Chloride	2.8	3	93.3		90 - 110		02/12/2018	15:55	LB93690
	Fluoride	1.9	2	95		90 - 110		02/12/2018	15:55	LB93690
	Phosphorus, Ortho	5.2	5	104		90 - 110		02/12/2018	15:55	LB93690
	Nitrite	2.9	3	96.7		90 - 110		02/12/2018	15:55	LB93690
	Nitrate	2.4	2.5	96		90 - 110		02/12/2018	15:55	LB93690
	Sulfate	14.8	15	98.7		90 - 110		02/12/2018	15:55	LB93690



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB93690

SDG No.: LB93690

Contract:

Lab Code: CHEM

Case No.: LB93690

SAS No.: LB93690

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		02/12/2018	16:26	LB93690
	Chloride	0.075	+/-0.15	U		0.15		02/12/2018	16:26	LB93690
	Fluoride	0.043	+/-0.1	U		0.1		02/12/2018	16:26	LB93690
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		02/12/2018	16:26	LB93690
	Nitrite	0.022	+/-0.15	U		0.15		02/12/2018	16:26	LB93690
	Nitrate	0.027	+/-0.13	U		0.13		02/12/2018	16:26	LB93690
	Sulfate	0.13	+/-0.75	U		0.75		02/12/2018	16:26	LB93690

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		03/02/2018	10:51	LB93690
	Chloride	0.075	+/-0.15	U		0.15		03/02/2018	10:51	LB93690
	Fluoride	0.043	+/-0.1	U		0.1		03/02/2018	10:51	LB93690
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		03/02/2018	10:51	LB93690
	Nitrite	0.022	+/-0.15	U		0.15		03/02/2018	10:51	LB93690
	Nitrate	0.027	+/-0.13	U		0.13		03/02/2018	10:51	LB93690
	Sulfate	0.13	+/-0.75	U		0.75		03/02/2018	10:51	LB93690
CCB2	Bromide	0.066	+/-0.5	U		0.5		03/02/2018	19:37	LB93690
	Chloride	0.075	+/-0.15	U		0.15		03/02/2018	19:37	LB93690
	Fluoride	0.043	+/-0.1	U		0.1		03/02/2018	19:37	LB93690
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		03/02/2018	19:37	LB93690
	Nitrite	0.022	+/-0.15	U		0.15		03/02/2018	19:37	LB93690
	Nitrate	0.027	+/-0.13	U		0.13		03/02/2018	19:37	LB93690
	Sulfate	0.13	+/-0.75	U		0.75		03/02/2018	19:37	LB93690
CCB3	Bromide	0.066	+/-0.5	U		0.5		03/05/2018	10:04	LB93690
	Chloride	0.075	+/-0.15	U		0.15		03/05/2018	10:04	LB93690
	Fluoride	0.043	+/-0.1	U		0.1		03/05/2018	10:04	LB93690
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		03/05/2018	10:04	LB93690
	Nitrite	0.022	+/-0.15	U		0.15		03/05/2018	10:04	LB93690
	Nitrate	0.027	+/-0.13	U		0.13		03/05/2018	10:04	LB93690
	Sulfate	0.13	+/-0.75	U		0.75		03/05/2018	10:04	LB93690
CCB4	Bromide	0.066	+/-0.5	U		0.5		03/05/2018	17:37	LB93690
	Chloride	0.075	+/-0.15	U		0.15		03/05/2018	17:37	LB93690
	Fluoride	0.043	+/-0.1	U		0.1		03/05/2018	17:37	LB93690
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		03/05/2018	17:37	LB93690
	Nitrite	0.022	+/-0.15	U		0.15		03/05/2018	17:37	LB93690
	Nitrate	0.027	+/-0.13	U		0.13		03/05/2018	17:37	LB93690
	Sulfate	0.13	+/-0.75	U		0.75		03/05/2018	17:37	LB93690



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB93690

SDG No.: LB93690

Contract: Lab Code: CHEM

Case No.: LB93690

SAS No.: LB93690

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

Client: LB93690

SDG No.: LB93690

Instrument: IC-2

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
LB93690BLW		WATER		Batch Number:				Prep Date:		
	Bromide	0.066	<0.5	U		0.5		03/02/2018	11:22	LB93690
	Chloride	0.075	<0.15	U		0.15		03/02/2018	11:22	LB93690
	Fluoride	0.043	<0.1	U		0.1		03/02/2018	11:22	LB93690
	Phosphorus, Ortho	0.01	<0.25	U		0.25		03/02/2018	11:22	LB93690
	Nitrite	0.022	<0.15	U		0.15		03/02/2018	11:22	LB93690
	Nitrate	0.027	<0.13	U		0.13		03/02/2018	11:22	LB93690
	Sulfate	0.13	<0.75	U		0.75		03/02/2018	11:22	LB93690
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
LB93690BLW2		WATER		Batch Number:				Prep Date:		
	Bromide	0.066	<0.5	U		0.5		03/05/2018	10:35	LB93690
	Chloride	0.075	<0.15	U		0.15		03/05/2018	10:35	LB93690
	Fluoride	0.043	<0.1	U		0.1		03/05/2018	10:35	LB93690
	Phosphorus, Ortho	0.01	<0.25	U		0.25		03/05/2018	10:35	LB93690
	Nitrite	0.022	<0.15	U		0.15		03/05/2018	10:35	LB93690
	Nitrate	0.027	<0.13	U		0.13		03/05/2018	10:35	LB93690
	Sulfate	0.13	<0.75	U		0.75		03/05/2018	10:35	LB93690



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB93690 level: low sdg no.: LB93690
contract: lab code: CHEM case no.: LB93690 sas no.: LB93690
matrix: WATER sample id: J1784-01 client id: POOL-WATERMS
Percent Solids for Sample: 0 Spiked ID: J1784-01MS 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	19.9	OR	18.2	OR	3	57	*	
Fluoride	mg/L	80 - 120	2.1		0.043	U	2	105		
Phosphorus, Ortho	mg/L	80 - 120	5.2		0.01	U	5	104		
Nitrite	mg/L	80 - 120	2.9		0.022	U	3	96.7		
Nitrate	mg/L	80 - 120	2.6		0.21		2.5	96		
Sulfate	mg/L	80 - 120	15.9		2.4		15	90		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB93690 level: low sdg no.: LB93690
contract: lab code: CHEM case no.: LB93690 sas no.: LB93690
matrix: WATER sample id: J1804-01 client id: MAIN-CELLMS
Percent Solids for Sample: 0 Spiked ID: J1804-01MS 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		0.14	J	3	95		
Fluoride	mg/L	80 - 120	2		0.043	U	2	100		
Phosphorus, Ortho	mg/L	80 - 120	4.5		0.01	U	5	90		
Nitrite	mg/L	80 - 120	2.9		0.022	U	3	96.7		
Nitrate	mg/L	80 - 120	2.6		0.24		2.5	94		
Sulfate	mg/L	80 - 120	14.3		0.71	J	15	91		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB93690 **level:** low **sdg no.:** LB93690
contract: **lab code:** CHEM **case no.:** LB93690 **sas no.:** LB93690
matrix: WATER **sample id:** J1804-01 **client id:** MAIN-CELLMSD
Percent Solids for Sample: 0 **Spiked ID:** J1804-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance	MSD	Sample		Spike	%	Qual	M
		Limit %R	Result	C	Result	C	Added	Recovery	
Bromide	mg/L	80 - 120	9.6		0.066	U	10	96	
Chloride	mg/L	80 - 120	2.9		0.14	J	3	92	
Fluoride	mg/L	80 - 120	1.9		0.043	U	2	95	
Phosphorus, Ortho	mg/L	80 - 120	4.3		0.01	U	5	86	
Nitrite	mg/L	80 - 120	2.9		0.022	U	3	96.7	
Nitrate	mg/L	80 - 120	2.5		0.24		2.5	90	
Sulfate	mg/L	80 - 120	14		0.71	J	15	89	

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DUPLICATE SAMPLE SUMMARY

Client: LB93690 **Level:** LOW **SDG No.:** LB93690
Contract: **Lab Code:** CHEM **Case No.:** LB93690 **SAS No.:** LB93690
Matrix: WATER **Sample ID:** J1784-01 **Client ID:** POOL-WATERDUP
Percent Solids for Sample: 0 **Duplicate ID** J1784-01DUP **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	18.2	OR	18.2	OR	0		
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	0.21		0.21		0		
Sulfate	mg/L	20	2.4		2.4		0		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB93690 **Level:** LOW **SDG No.:** LB93690
Contract: _____ **Lab Code:** CHEM **Case No.:** LB93690 **SAS No.:** LB93690
Matrix: WATER **Sample ID:** J1804-01 **Client ID:** MAIN-CELLDUP
Percent Solids for Sample: 0 **Duplicate ID** J1804-01DUP **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	0.14	J	0.14	J	0		
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	0.24		0.24		0		
Sulfate	mg/L	20	0.71	J	0.71	J	0		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB93690 **Level:** LOW **SDG No.:** LB93690
Contract: **Lab Code:** CHEM **Case No.:** LB93690 **SAS No.:** LB93690
Matrix: WATER **Sample ID:** J1804-01MS **Client ID:** MAIN-CELLMSD
Percent Solids for Sample: 0 **Duplicate ID** J1804-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Bromide	mg/L	20	9.9		9.6		3		
Chloride	mg/L	20	3		2.9		3		
Fluoride	mg/L	20	2		1.9		5		
Phosphorus, Ortho	mg/L	20	4.5		4.3		5		
Nitrite	mg/L	20	2.9		2.9		0		
Nitrate	mg/L	20	2.6		2.5		4		
Sulfate	mg/L	20	14.3		14		2		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB93690

SDG No.: LB93690

Contract:

Lab Code: CHEM

Case No.: LB93690

SAS No.: LB93690

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB93690BSW							
Bromide	mg/L	10	9.4		94	90 - 110	
Chloride	mg/L	3	2.8		93.3	90 - 110	
Fluoride	mg/L	2	1.9		95	90 - 110	
Phosphorus, Ortho	mg/L	5	4.3		86	90 - 110	
Nitrite	mg/L	3	2.8		93.3	90 - 110	
Nitrate	mg/L	2.5	2.3		92	90 - 110	
Sulfate	mg/L	15	14.2		94.7	90 - 110	



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB93690

SDG No.: LB93690

Contract:

Lab Code: CHEM

Case No.: LB93690

SAS No.: LB93690

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB93690BSW2							
Bromide	mg/L	10	9.3		93	90 - 110	
Chloride	mg/L	3	2.8		93.3	90 - 110	
Fluoride	mg/L	2	1.9		95	90 - 110	
Phosphorus, Ortho	mg/L	5	4.4		88	90 - 110	
Nitrite	mg/L	3	2.8		93.3	90 - 110	
Nitrate	mg/L	2.5	2.3		92	90 - 110	
Sulfate	mg/L	15	14.2		94.7	90 - 110	