

Daily Analysis Runlog For Sequence/QC Batch ID # LB96203

Review By		Review On				
SubDirectory		LB96203		Test : Anions		
STD. NAME		STD REF.#				
ICAL Standard		WP65185,WP65186,WP65187,WP65188,WP65189,WP65190,WP65191				
ICV Standard		WP65192				
CCV Standard		wp65490				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		wp65491				
Chk Standard		wp64736,wp65018				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	STD1	STD1	CAL1	06/11/18 10:31		OK
2	STD2	STD2	CAL2	06/11/18 11:01		OK
3	STD3	STD3	CAL3	06/11/18 11:31		OK
4	STD4	STD4	CAL4	06/11/18 12:01		OK
5	STD5	STD5	CAL5	06/11/18 12:31		OK
6	STD6	STD6	CAL6	06/11/18 13:01		OK
7	STD7	STD7	CAL7	06/11/18 13:31		OK
8	ICV1	ICV1	ICV	06/11/18 15:04		OK
9	ICB1	ICB1	ICB	06/11/18 15:33		OK
10	CCV1	CCV1	CCV	06/21/18 08:31		OK
11	CCB1	CCB1	CCB	06/21/18 09:01		OK
12	LB96203BLW	LB96203BLW	MB	06/21/18 09:31		OK
13	LB96203BSW	LB96203BSW	LCS	06/21/18 10:01		OK
14	J3640-01	CELL-A	SAM	06/21/18 12:10		OK
15	J3640-02	CELL-B-C	SAM	06/21/18 12:40		OK
16	J3640-03	CELL-D	SAM	06/21/18 13:10		OK
17	J3640-03DUP	CELL-DDUP	DUP	06/21/18 13:40		OK
18	J3640-03MS	CELL-DMS	MS	06/21/18 14:10		OK
19	J3640-03MSD	CELL-DMSD	MSD	06/21/18 14:40		OK
20	CCV2	CCV2	CCV	06/21/18 15:10		OK
21	CCB2	CCB2	CCB	06/21/18 15:40		OK



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Report of Analysis

Client:		Date Collected:	6/19/2018 12:00:00 AM
Project:	LB96203	Date Received:	6/21/2018 12:00:00 AM
Client Sample ID:	CELL-A	SDG No.:	LB96203
Lab Sample ID:	J3640-01	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		06/21/2018	300.0
	Chloride	0.23		1	0.075		0.15	mg/L		06/21/2018	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		06/21/2018	300.0
	Nitrate	0	U	1	0.027		0.13	mg/L		06/21/2018	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		06/21/2018	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		06/21/2018	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		06/21/2018	300.0



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Report of Analysis

Client:		Date Collected:	6/19/2018 12:00:00 AM
Project:	LB96203	Date Received:	6/21/2018 12:00:00 AM
Client Sample ID:	CELL-B-C	SDG No.:	LB96203
Lab Sample ID:	J3640-02	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		06/21/2018	300.0
	Chloride	0.21		1	0.075		0.15	mg/L		06/21/2018	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		06/21/2018	300.0
	Nitrate	0.15		1	0.027		0.13	mg/L		06/21/2018	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		06/21/2018	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		06/21/2018	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		06/21/2018	300.0



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Report of Analysis

Client:		Date Collected:	6/19/2018 12:00:00 AM
Project:	LB96203	Date Received:	6/21/2018 12:00:00 AM
Client Sample ID:	CELL-D	SDG No.:	LB96203
Lab Sample ID:	J3640-03	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	U	1	0.066		0.5	mg/L		06/21/2018	300.0
	Chloride	0.23		1	0.075		0.15	mg/L		06/21/2018	300.0
	Fluoride	0	U	1	0.043		0.1	mg/L		06/21/2018	300.0
	Nitrate	0.14		1	0.027		0.13	mg/L		06/21/2018	300.0
	Nitrite	0	U	1	0.022		0.15	mg/L		06/21/2018	300.0
	Phosphorus, Ortho	0	U	1	0.01		0.25	mg/L		06/21/2018	300.0
	Sulfate	0	U	1	0.13		0.75	mg/L		06/21/2018	300.0



Report of Analysis

Client:		Date Collected:	6/19/2018 12:00:00 AM
Project:	LB96203	Date Received:	6/21/2018 12:00:00 AM
Client Sample ID:	CELL-D	SDG No.:	LB96203
Lab Sample ID:	J3640-03	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
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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: LB96203

SDG No.: LB96203

Contract: _____ Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

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		06/11/2018	15:04	LB96203
	Chloride	2.9	3	96.7		90 - 110		06/11/2018	15:04	LB96203
	Fluoride	2.1	2	105		90 - 110		06/11/2018	15:04	LB96203
	Phosphorus, Ortho	5.3	5	106		90 - 110		06/11/2018	15:04	LB96203
	Nitrite	2.8	3	93.3		90 - 110		06/11/2018	15:04	LB96203
	Nitrate	2.4	2.5	96		90 - 110		06/11/2018	15:04	LB96203
	Sulfate	15.4	15	102.7		90 - 110		06/11/2018	15:04	LB96203



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- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB96203

SDG No.: LB96203

Contract: _____ Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

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
CCV1	Bromide	9.4	10	94		90 - 110		06/21/2018	08:31	LB96203
	Chloride	2.9	3	96.7		90 - 110		06/21/2018	08:31	LB96203
	Fluoride	2	2	100		90 - 110		06/21/2018	08:31	LB96203
	Phosphorus, Ortho	5	5	100		90 - 110		06/21/2018	08:31	LB96203
	Nitrite	2.8	3	93.3		90 - 110		06/21/2018	08:31	LB96203
	Nitrate	2.3	2.5	92		90 - 110		06/21/2018	08:31	LB96203
	Sulfate	14	15	93.3		90 - 110		06/21/2018	08:31	LB96203
CCV2	Bromide	9.4	10	94		90 - 110		06/21/2018	15:10	LB96203
	Chloride	2.9	3	96.7		90 - 110		06/21/2018	15:10	LB96203
	Fluoride	2.1	2	105		90 - 110		06/21/2018	15:10	LB96203
	Phosphorus, Ortho	5.4	5	108		90 - 110		06/21/2018	15:10	LB96203
	Nitrite	2.9	3	96.7		90 - 110		06/21/2018	15:10	LB96203
	Nitrate	2.3	2.5	92		90 - 110		06/21/2018	15:10	LB96203
	Sulfate	14.5	15	96.7		90 - 110		06/21/2018	15:10	LB96203



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB96203

SDG No.: LB96203

Contract: Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

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		06/11/2018	15:33	LB96203
	Chloride	0.075	+/-0.15	U		0.15		06/11/2018	15:33	LB96203
	Fluoride	0.043	+/-0.1	U		0.1		06/11/2018	15:33	LB96203
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		06/11/2018	15:33	LB96203
	Nitrite	0.022	+/-0.15	U		0.15		06/11/2018	15:33	LB96203
	Nitrate	0.027	+/-0.13	U		0.13		06/11/2018	15:33	LB96203
	Sulfate	0.13	+/-0.75	U		0.75		06/11/2018	15:33	LB96203



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB96203

SDG No.: LB96203

Contract:

Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

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		06/21/2018	09:01	LB96203
	Chloride	0.075	+/-0.15	U		0.15		06/21/2018	09:01	LB96203
	Fluoride	0.043	+/-0.1	U		0.1		06/21/2018	09:01	LB96203
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		06/21/2018	09:01	LB96203
	Nitrite	0.022	+/-0.15	U		0.15		06/21/2018	09:01	LB96203
	Nitrate	0.027	+/-0.13	U		0.13		06/21/2018	09:01	LB96203
	Sulfate	0.13	+/-0.75	U		0.75		06/21/2018	09:01	LB96203
CCB2	Bromide	0.066	+/-0.5	U		0.5		06/21/2018	15:40	LB96203
	Chloride	0.075	+/-0.15	U		0.15		06/21/2018	15:40	LB96203
	Fluoride	0.043	+/-0.1	U		0.1		06/21/2018	15:40	LB96203
	Phosphorus, Ortho	0.01	+/-0.25	U		0.25		06/21/2018	15:40	LB96203
	Nitrite	0.022	+/-0.15	U		0.15		06/21/2018	15:40	LB96203
	Nitrate	0.027	+/-0.13	U		0.13		06/21/2018	15:40	LB96203
	Sulfate	0.13	+/-0.75	U		0.75		06/21/2018	15:40	LB96203



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB96203

SDG No.: LB96203

Contract: Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

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: LB96203

SDG No.: LB96203

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
LB96203BLW		WATER		Batch Number:				Prep Date:		
	Bromide	0.066	<0.5	U		0.5		06/21/2018	09:31	LB96203
	Chloride	0.075	<0.15	U		0.15		06/21/2018	09:31	LB96203
	Fluoride	0.043	<0.1	U		0.1		06/21/2018	09:31	LB96203
	Phosphorus, Ortho	0.01	<0.25	U		0.25		06/21/2018	09:31	LB96203
	Nitrite	0.022	<0.15	U		0.15		06/21/2018	09:31	LB96203
	Nitrate	0.027	<0.13	U		0.13		06/21/2018	09:31	LB96203
	Sulfate	0.13	<0.75	U		0.75		06/21/2018	09:31	LB96203



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB96203 level: low sdg no.: LB96203
contract: lab code: CHEM case no.: LB96203 sas no.: LB96203
matrix: WATER sample id: J3640-03 client id: CELL-DMS
Percent Solids for Sample: 0 Spiked ID: J3640-03MS 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	9.7		0.066	U	10	97		
Chloride	mg/L	80 - 120	3		0.23		3	92		
Fluoride	mg/L	80 - 120	2		0.043	U	2	100		
Phosphorus, Ortho	mg/L	80 - 120	5.7		0.01	U	5	114		
Nitrite	mg/L	80 - 120	2.9		0.022	U	3	96.7		
Nitrate	mg/L	80 - 120	2.5		0.14		2.5	94		
Sulfate	mg/L	80 - 120	15.6		0.13	U	15	104		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB96203 **level:** low **sdg no.:** LB96203
contract: _____ **lab code:** CHEM **case no.:** LB96203 **sas no.:** LB96203
matrix: WATER **sample id:** J3640-03 **client id:** CELL-DMSD
Percent Solids for Sample: 0 **Spiked ID:** J3640-03MSD **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	9.5		0.066	U	10	95	
Chloride	mg/L	80 - 120	3		0.23		3	92	
Fluoride	mg/L	80 - 120	2.1		0.043	U	2	105	
Phosphorus, Ortho	mg/L	80 - 120	5.5		0.01	U	5	110	
Nitrite	mg/L	80 - 120	2.9		0.022	U	3	96.7	
Nitrate	mg/L	80 - 120	2.4		0.14		2.5	90	
Sulfate	mg/L	80 - 120	14.8		0.13	U	15	98.7	



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DUPLICATE SAMPLE SUMMARY

Client: LB96203 **Level:** LOW **SDG No.:** LB96203
Contract: **Lab Code:** CHEM **Case No.:** LB96203 **SAS No.:** LB96203
Matrix: WATER **Sample ID:** J3640-03 **Client ID:** CELL-DDUP
Percent Solids for Sample: 0 **Duplicate ID** J3640-03DUP **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	0.23		0.22		4		
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	0.14		0.14		0		
Sulfate	mg/L	20	0.13	U	0	U			

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DUPLICATE SAMPLE SUMMARY

Client: LB96203 **Level:** LOW **SDG No.:** LB96203
Contract: **Lab Code:** CHEM **Case No.:** LB96203 **SAS No.:** LB96203
Matrix: WATER **Sample ID:** J3640-03MS **Client ID:** CELL-DMSD
Percent Solids for Sample: 0 **Duplicate ID** J3640-03MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Bromide	mg/L	20	9.7		9.5		2		
Chloride	mg/L	20	3		3		0		
Fluoride	mg/L	20	2		2.1		5		
Phosphorus, Ortho	mg/L	20	5.7		5.5		4		
Nitrite	mg/L	20	2.9		2.9		0		
Nitrate	mg/L	20	2.5		2.4		4		
Sulfate	mg/L	20	15.6		14.8		5		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB96203

SDG No.: LB96203

Contract:

Lab Code: CHEM

Case No.: LB96203

SAS No.: LB96203

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
LB96203BSW							
Bromide	mg/L	10	9.3		93	90 - 110	
Chloride	mg/L	3	2.8		93.3	90 - 110	
Fluoride	mg/L	2	2		100	90 - 110	
Phosphorus, Ortho	mg/L	5	5.4		108	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	14.9		99.3	90 - 110	
