



GENCHEM

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86338

SDG No.: LB86338

Contract: _____ Lab Code: CHEM

Case No.: LB86338

SAS No.: LB86338

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	Cyanide	0.25	0.25	100	0	90 - 110		03/13/2017	13:32	LB86338
CCV2	Cyanide	0.25	0.25	100	0	90 - 110		03/13/2017	13:38	LB86338



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86338

SDG No.: LB86338

Contract:

Lab Code: CHEM

Case No.: LB86338

SAS No.: LB86338

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00011	+/-0.005	U		0.005		03/13/2017	13:32	LB86338

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00037	+/-0.005	U		0.005		03/13/2017	13:32	LB86338
CCB2	Cyanide	-0.00035	+/-0.005	U		0.005		03/13/2017	13:38	LB86338



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Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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ICB1	Cyanide	-0.00011	+/-0.005	U		0.005		03/13/2017	13:32	LB86338



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CCB1	Cyanide	-0.00037	+/-0.005	U		0.005		03/13/2017	13:32	LB86338
CCB2	Cyanide	-0.00035	+/-0.005	U		0.005		03/13/2017	13:38	LB86338



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86338

SDG No.: LB86338

Contract: Lab Code: CHEM

Case No.: LB86338

SAS No.: LB86338

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:	
Project:	LB86338	Date Received:	
Client Sample ID:	HIGHPB97568	SDG No.:	LB86338
Lab Sample ID:	HIGHPB97568	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.49		1	0.003		0.005	mg/L		03/13/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/10/2017 12:00:00 AM
Project:	LB86338	Date Received:	3/10/2017 12:00:00 AM
Client Sample ID:	FRAC-TANK-BOTTOM	SDG No.:	LB86338
Lab Sample ID:	I2233-01	Matrix:	Solid
Level (low/med):	low	% Solid:	45.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.4	J	1	0.069		0.53	mg/Kg	03/13/2017	03/13/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86338	Date Received:	
Client Sample ID:	LOWPB97568	SDG No.:	LB86338
Lab Sample ID:	LOWPB97568	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0093		1	0.003		0.005	mg/L		03/13/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86338	Date Received:	
Client Sample ID:	LOWPB97568	SDG No.:	LB86338
Lab Sample ID:	LOWPB97568	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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PREPARATION BLANK SUMMARY

Client: LB86338

SDG No.: LB86338

Instrument: Konelab 20

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB97568BL		SOLID		Batch Number:		PB97568		Prep Date:	03/13/2017	
	Cyanide	-0.019	<0.25	U		0.25		03/13/2017	13:32	LB86338



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MATRIX SPIKE SUMMARY

client: LB86338 level: low sdg no.: LB86338
contract: lab code: CHEM case no.: LB86338 sas no.: LB86338
matrix: Solid sample id: I2233-01 client id: FRAC-TANK-BOTTOMMS
Percent Solids for Sample: 45.7 Spiked ID: I2233-01MS Percent Solids for Spike Sample: 45.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	4.3		0.4	J	4.2	93		



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB86338 level: low sdg no.: LB86338
contract: lab code: CHEM case no.: LB86338 sas no.: LB86338
matrix: Solid sample id: I2233-01 client id: FRAC-TANK-BOTTOMMSD
Percent Solids for Sample: 45.7 Spiked ID: I2233-01MSD Percent Solids for Spike Sample: 45.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	4.5		0.4	J	4.3	95		

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DUPLICATE SAMPLE SUMMARY

Client: LB86338 **Level:** LOW **SDG No.:** LB86338
Contract: **Lab Code:** CHEM **Case No.:** LB86338 **SAS No.:** LB86338
Matrix: Solid **Sample ID:** I2233-01 **Client ID:** FRAC-TANK-BOTTOMDUP
Percent Solids for Sample: 45.7 **Duplicate ID** I2233-01DUP **Percent Solids for Spike Sample:** 45.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.4	J	0.37	J	8		

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DUPLICATE SAMPLE SUMMARY

Client: LB86338 **Level:** LOW **SDG No.:** LB86338
Contract: **Lab Code:** CHEM **Case No.:** LB86338 **SAS No.:** LB86338
Matrix: Solid **Sample ID:** I2233-01MS **Client ID:** FRAC-TANK-BOTTOMMSD
Percent Solids for Sample: 45.7 **Duplicate ID** I2233-01MSD **Percent Solids for Spike Sample:** 45.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	4.3		4.5		5		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86338

SDG No.: LB86338

Contract:

Lab Code: CHEM

Case No.: LB86338

SAS No.: LB86338

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97568BS Cyanide	mg/Kg	5	4.9		98	85 - 115	