



GENCHEM

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86570

SDG No.: LB86570

Contract: _____ Lab Code: CHEM

Case No.: LB86570

SAS No.: LB86570

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	0.24	0.25	96	0	90 - 110		03/27/2017	14:15	LB86570
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		03/27/2017	14:52	LB86570
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		03/27/2017	14:52	LB86570



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86570

SDG No.: LB86570

Contract:

Lab Code: CHEM

Case No.: LB86570

SAS No.: LB86570

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0	+/-0.005	U		0.005		03/27/2017	14:15	LB86570



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86570

SDG No.: LB86570

Contract:

Lab Code: CHEM

Case No.: LB86570

SAS No.: LB86570

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00038	+/-0.005	U		0.005		03/27/2017	14:15	LB86570
CCB2	Cyanide	0.00037	+/-0.005	U		0.005		03/27/2017	14:52	LB86570
CCB3	Cyanide	0.00052	+/-0.005	U		0.005		03/27/2017	14:52	LB86570



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	LB86570	SDG No.:	LB86570				
Contract:		Lab Code:	CHEM	Case No.:	LB86570	SAS No.:	LB86570

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:	LB86570	Date Received:	
Client Sample ID:	HIGHPB97809	SDG No.:	LB86570
Lab Sample ID:	HIGHPB97809	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		03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	B-1	SDG No.:	LB86570
Lab Sample ID:	I2379-01	Matrix:	Solid
Level (low/med):	low	% Solid:	78.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.13	J	1	0.04		0.31	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	B-2	SDG No.:	LB86570
Lab Sample ID:	I2379-02	Matrix:	Solid
Level (low/med):	low	% Solid:	88.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.014	U	1	0.035		0.27	mg/Kg	03/27/2017	03/27/2017	9012B

Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	B-3	SDG No.:	LB86570
Lab Sample ID:	I2379-03	Matrix:	Solid
Level (low/med):	low	% Solid:	80.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0056	U	1	0.04		0.3	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	B-4	SDG No.:	LB86570
Lab Sample ID:	I2379-04	Matrix:	Solid
Level (low/med):	low	% Solid:	91.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.015	U	1	0.035		0.26	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	B-5	SDG No.:	LB86570
Lab Sample ID:	I2379-05	Matrix:	Solid
Level (low/med):	low	% Solid:	86

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.054	J	1	0.037		0.28	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	3-4-DENSEGRADEAGGREGATE-RCA	SDG No.:	LB86570
Lab Sample ID:	I2381-01	Matrix:	Solid
Level (low/med):	low	% Solid:	96.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.084	J	1	0.033		0.25	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/23/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/23/2017 12:00:00 AM
Client Sample ID:	1-1-2-DENSEGRADEAGGREGATE-RCA	SDG No.:	LB86570
Lab Sample ID:	I2381-02	Matrix:	Solid
Level (low/med):	low	% Solid:	95.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.05	J	1	0.034		0.26	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/24/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/24/2017 12:00:00 AM
Client Sample ID:	TS-01	SDG No.:	LB86570
Lab Sample ID:	I2413-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.3		1	0.037		0.28	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/24/2017 12:00:00 AM
Project:	LB86570	Date Received:	3/24/2017 12:00:00 AM
Client Sample ID:	TS-02	SDG No.:	LB86570
Lab Sample ID:	I2413-02	Matrix:	Solid
Level (low/med):	low	% Solid:	86.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.089	J	1	0.037		0.28	mg/Kg	03/27/2017	03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86570	Date Received:	
Client Sample ID:	LOWPB97809	SDG No.:	LB86570
Lab Sample ID:	LOWPB97809	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	0.01		1	0.003		0.005	mg/L		03/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86570	Date Received:	
Client Sample ID:	LOWPB97809	SDG No.:	LB86570
Lab Sample ID:	LOWPB97809	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: LB86570

SDG No.: LB86570

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
PB97809BL		SOLID		Batch Number:		PB97809		Prep Date:	03/27/2017	
	Cyanide	0.011	<0.25	U		0.25		03/27/2017	14:15	LB86570



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MATRIX SPIKE SUMMARY

client: LB86570 level: low sdg no.: LB86570
contract: lab code: CHEM case no.: LB86570 sas no.: LB86570
matrix: Solid sample id: I2379-01 client id: B-1MS
Percent Solids for Sample: 78.7 Spiked ID: I2379-01MS Percent Solids for Spike Sample: 78.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.3		0.13	J	2.5	87		



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB86570 level: low sdg no.: LB86570
contract: lab code: CHEM case no.: LB86570 sas no.: LB86570
matrix: Solid sample id: I2379-01 client id: B-1MSD
Percent Solids for Sample: 78.7 Spiked ID: I2379-01MSD Percent Solids for Spike Sample: 78.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125		2	0.13	J	2.4	78		

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DUPLICATE SAMPLE SUMMARY

Client: LB86570 **Level:** LOW **SDG No.:** LB86570
Contract: **Lab Code:** CHEM **Case No.:** LB86570 **SAS No.:** LB86570
Matrix: Solid **Sample ID:** I2379-01 **Client ID:** B-1DUP
Percent Solids for Sample: 78.7 **Duplicate ID** I2379-01DUP **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.13	J	0.11	J	17		

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DUPLICATE SAMPLE SUMMARY

Client: LB86570 **Level:** LOW **SDG No.:** LB86570
Contract: **Lab Code:** CHEM **Case No.:** LB86570 **SAS No.:** LB86570
Matrix: Solid **Sample ID:** I2379-01MS **Client ID:** B-1MSD
Percent Solids for Sample: 78.7 **Duplicate ID** I2379-01MSD **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.3			2	14		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86570

SDG No.: LB86570

Contract:

Lab Code: CHEM

Case No.: LB86570

SAS No.: LB86570

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97809BS Cyanide	mg/Kg	5	4.9		98	85 - 115	