



GENCHEM

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86084

SDG No.: LB86084

Contract: _____

Lab Code: CHEM

Case No.: LB86084

SAS No.: LB86084

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	Cyanide	0.094	0.099	94.9	0	85 - 115		02/28/2017	14:30	LB86084



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- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86084

SDG No.: LB86084

Contract: _____ Lab Code: CHEM

Case No.: LB86084

SAS No.: LB86084

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		02/28/2017	14:30	LB86084
CCV2	Cyanide	0.25	0.25	100	0	90 - 110		02/28/2017	14:37	LB86084
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		02/28/2017	14:44	LB86084



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86084 **SDG No.:** LB86084
Contract: **Lab Code:** CHEM **Case No.:** LB86084 **SAS No.:** LB86084

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00052	+/-0.005	U		0.005		02/28/2017	14:30	LB86084

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00013	+/-0.005	U		0.005		02/28/2017	14:30	LB86084
CCB2	Cyanide	0.00084	+/-0.005	U		0.005		02/28/2017	14:37	LB86084
CCB3	Cyanide	0.00014	+/-0.005	U		0.005		02/28/2017	14:44	LB86084



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86084

SDG No.: LB86084

Contract: Lab Code: CHEM

Case No.: LB86084

SAS No.: LB86084

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:	LB86084	Date Received:	
Client Sample ID:	HIGHPB97233	SDG No.:	LB86084
Lab Sample ID:	HIGHPB97233	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		02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/23/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-CC9-CC10-CC11-CC12	SDG No.:	LB86084
Lab Sample ID:	I1989-01	Matrix:	Solid
Level (low/med):	low	% Solid:	96.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.02	U	1	0.032		0.24	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/23/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-BB13-BB14-CC13-CC14	SDG No.:	LB86084
Lab Sample ID:	I1990-01	Matrix:	Solid
Level (low/med):	low	% Solid:	96.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.017	U	1	0.033		0.25	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/23/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-DD13-DD14-EE13-EE14	SDG No.:	LB86084
Lab Sample ID:	I1991-01	Matrix:	Solid
Level (low/med):	low	% Solid:	96.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.011	U	1	0.032		0.24	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	FK-GF-02-003-A	SDG No.:	LB86084
Lab Sample ID:	I1992-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.051	J	1	0.035		0.26	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	FK-GF-02-003-B	SDG No.:	LB86084
Lab Sample ID:	I1992-03	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	0.029	U	1	0.035		0.27	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/22/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	U-1	SDG No.:	LB86084
Lab Sample ID:	I1995-01	Matrix:	Solid
Level (low/med):	low	% Solid:	90.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.19	J	1	0.035		0.27	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/22/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	U-2	SDG No.:	LB86084
Lab Sample ID:	I1995-03	Matrix:	Solid
Level (low/med):	low	% Solid:	91.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.15	J	1	0.034		0.26	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	ROLL-OFF-15-50-COMP	SDG No.:	LB86084
Lab Sample ID:	I1998-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.019	U	1	0.036		0.27	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	ROLL-OFF-15-41-COMP	SDG No.:	LB86084
Lab Sample ID:	I1998-04	Matrix:	Solid
Level (low/med):	low	% Solid:	89.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.094	J	1	0.037		0.28	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	ROLL-OFF-20-41-COMP	SDG No.:	LB86084
Lab Sample ID:	I1998-07	Matrix:	Solid
Level (low/med):	low	% Solid:	80.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.051	J	1	0.04		0.31	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/24/2017 12:00:00 AM
Project:	LB86084	Date Received:	2/24/2017 12:00:00 AM
Client Sample ID:	ROLL-OFF-1615-COMP	SDG No.:	LB86084
Lab Sample ID:	I1998-10	Matrix:	Solid
Level (low/med):	low	% Solid:	88.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.081	J	1	0.036		0.27	mg/Kg	02/28/2017	02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86084	Date Received:	
Client Sample ID:	LOWPB97233	SDG No.:	LB86084
Lab Sample ID:	LOWPB97233	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	0.0098		1	0.003		0.005	mg/L		02/28/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86084	Date Received:	
Client Sample ID:	LOWPB97233	SDG No.:	LB86084
Lab Sample ID:	LOWPB97233	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: LB86084

SDG No.: LB86084

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
PB97233BL		SOLID		Batch Number:		PB97233		Prep Date:	02/28/2017	
	Cyanide	-0.016	<0.25	U		0.25		02/28/2017	14:30	LB86084



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MATRIX SPIKE SUMMARY

client: LB86084 level: low sdg no.: LB86084
contract: lab code: CHEM case no.: LB86084 sas no.: LB86084
matrix: Solid sample id: I1989-01 client id: FK-BPM-01-CC9-CC10-CC11-CC12MS
Percent Solids for Sample: 96.3 Spiked ID: I1989-01MS Percent Solids for Spike Sample: 96.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.7		0.032	U	2.1	81		



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB86084 level: low sdg no.: LB86084
contract: lab code: CHEM case no.: LB86084 sas no.: LB86084
matrix: Solid sample id: I1989-01 client id: FK-BPM-01-CC9-CC10-CC11-CC12MSD
Percent Solids for Sample: 96.3 Spiked ID: I1989-01MSD Percent Solids for Spike Sample: 96.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.6		0.032	U	2	80		

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DUPLICATE SAMPLE SUMMARY

Client: LB86084 **Level:** LOW **SDG No.:** LB86084
Contract: **Lab Code:** CHEM **Case No.:** LB86084 **SAS No.:** LB86084
Matrix: Solid **Sample ID:** I1989-01 **Client ID:** FK-BPM-01-CC9-CC10-CC11-CC12DUP
Percent Solids for Sample: 96.3 **Duplicate ID** I1989-01DUP **Percent Solids for Spike Sample:** 96.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.032	U	-0.042	U			

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DUPLICATE SAMPLE SUMMARY

Client: LB86084 **Level:** LOW **SDG No.:** LB86084
Contract: **Lab Code:** CHEM **Case No.:** LB86084 **SAS No.:** LB86084
Matrix: Solid **Sample ID:** I1989-01MS **Client ID:** FK-BPM-01-CC9-CC10-CC11-CC12MSD
Percent Solids for Sample: 96.3 **Duplicate ID** I1989-01MSD **Percent Solids for Spike Sample:** 96.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.7		1.6		6		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86084 SDG No.: LB86084
Contract: Lab Code: CHEM Case No.: LB86084 SAS No.: LB86084

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97233BS Cyanide	mg/Kg	5	4.9		98	85 - 115	
