



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86295

SDG No.: LB86295

Contract: _____ Lab Code: CHEM

Case No.: LB86295

SAS No.: LB86295

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	Reactive Cyanide	0.094	0.099	94.9	0	85 - 115		03/10/2017	14:15	LB86295



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Client: LB86295

SDG No.: LB86295

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Case No.: LB86295

SAS No.: LB86295

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	Reactive Cyanide	0.24	0.25	96	0	90 - 110		03/10/2017	14:16	LB86295
CCV2	Reactive Cyanide	0.25	0.25	100	0	90 - 110		03/10/2017	14:23	LB86295
CCV3	Reactive Cyanide	0.27	0.25	108	0	90 - 110		03/10/2017	14:44	LB86295



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86295

SDG No.: LB86295

Contract:

Lab Code: CHEM

Case No.: LB86295

SAS No.: LB86295

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Reactive Cyanide	-0.00067	+/-0.005	U		0.005		03/10/2017	14:16	LB86295



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86295

SDG No.: LB86295

Contract:

Lab Code: CHEM

Case No.: LB86295

SAS No.: LB86295

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Reactive Cyanide	-0.00077	+/-0.005	U		0.005		03/10/2017	14:16	LB86295
CCB2	Reactive Cyanide	-0.00056	+/-0.005	U		0.005		03/10/2017	14:23	LB86295
CCB3	Reactive Cyanide	-0.00066	+/-0.005	U		0.005		03/10/2017	14:44	LB86295



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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86295

SDG No.: LB86295

Contract: Lab Code: CHEM

Case No.: LB86295

SAS No.: LB86295

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:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-38	SDG No.:	LB86295
Lab Sample ID:	I2172-21	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0068	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-41	SDG No.:	LB86295
Lab Sample ID:	I2172-22	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.006	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-44	SDG No.:	LB86295
Lab Sample ID:	I2172-23	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0024	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-47	SDG No.:	LB86295
Lab Sample ID:	I2172-24	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0053	U	1	0.025		0.049	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-49	SDG No.:	LB86295
Lab Sample ID:	I2172-25	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0028	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-51	SDG No.:	LB86295
Lab Sample ID:	I2172-26	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0081	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-53	SDG No.:	LB86295
Lab Sample ID:	I2172-27	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0079	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-55	SDG No.:	LB86295
Lab Sample ID:	I2172-28	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0083	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-57	SDG No.:	LB86295
Lab Sample ID:	I2172-29	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0049	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/7/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/7/2017 12:00:00 AM
Client Sample ID:	D-61	SDG No.:	LB86295
Lab Sample ID:	I2172-30	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0063	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/8/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/8/2017 12:00:00 AM
Client Sample ID:	TP-9-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2195-05	Matrix:	Solid
Level (low/med):	low	% Solid:	87.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0073	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/8/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/8/2017 12:00:00 AM
Client Sample ID:	TP-7-TP-6-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2195-10	Matrix:	Solid
Level (low/med):	low	% Solid:	92

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0054	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B

Report of Analysis

Client:		Date Collected:	3/8/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/8/2017 12:00:00 AM
Client Sample ID:	TP-5-TP-4-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2195-15	Matrix:	Solid
Level (low/med):	low	% Solid:	93.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.011	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/9/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/9/2017 12:00:00 AM
Client Sample ID:	TP-3-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2211-05	Matrix:	Solid
Level (low/med):	low	% Solid:	89.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0039	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/9/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/9/2017 12:00:00 AM
Client Sample ID:	TP-2-TP-1-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2211-10	Matrix:	Solid
Level (low/med):	low	% Solid:	89.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.00022	U	1	0.025		0.05	mg/Kg	03/10/2017	03/10/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/9/2017 12:00:00 AM
Project:	LB86295	Date Received:	3/9/2017 12:00:00 AM
Client Sample ID:	TP-2-TP-1-COMP-0-12FT	SDG No.:	LB86295
Lab Sample ID:	I2211-10	Matrix:	Solid
Level (low/med):	low	% Solid:	89.5

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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- 3b -
PREPARATION BLANK SUMMARY

Client: LB86295

SDG No.: LB86295

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
PB97512BL	SOLID			Batch Number:	PB97512			Prep Date:	03/10/2017	
	Reactive Cyanide	-0.0051	<0.05	U		0.05		03/10/2017	14:16	LB86295

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DUPLICATE SAMPLE SUMMARY

Client: LB86295 Level: LOW SDG No.: LB86295
Contract: _____ Lab Code: CHEM Case No.: LB86295 SAS No.: LB86295
Matrix: Solid Sample ID: I2172-21 Client ID: D-38DUP
Percent Solids for Sample: 100 Duplicate ID I2172-21DUP Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Reactive Cyanide	mg/Kg	20	0.025	U	0.0013	U			