

Daily Analysis Runlog For Sequence/QC Batch ID # LB88643

Review By

SubDirectory

Review On

Test : Cyanide

LB88643

STD. NAME		STD REF.#				
ICAL Standard		WP56342,WP56343,WP56344,WP56345,WP56346,WP56347,WP56348,WP56349				
ICV Standard		W1541				
CCV Standard		WP56351				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56350,WP55836,WP55355				

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	07/11/17 12:06		OK
2	5.0PPBCN	5.0PPBCN	CAL2	07/11/17 12:06		OK
3	10PPBCN	10PPBCN	CAL3	07/11/17 12:06		OK
4	50PPBCN	50PPBCN	CAL4	07/11/17 12:06		OK
5	100PPBCN	100PPBCN	CAL5	07/11/17 12:06		OK
6	250PPBCN	250PPBCN	CAL6	07/11/17 12:06		OK
7	500PPBCN	500PPBCN	CAL7	07/11/17 12:06		OK
8	ICV1	ICV1	ICV	07/11/17 13:16		OK
9	ICB1	ICB1	ICB	07/11/17 13:16		OK
10	CCV1	CCV1	CCV	07/11/17 13:16		OK
11	CCB1	CCB1	CCB	07/11/17 13:16		OK
12	PB100507BL	PB100507BL	MB	07/11/17 13:16		OK
13	PB100507BS	PB100507BS	LCS	07/11/17 13:16		OK
14	HIGHPB100507	HIGHPB100507	SAM	07/11/17 13:16		OK
15	I4071-01	HR-06-070617-A	SAM	07/11/17 13:16		OK
16	I4071-01DUP	HR-06-070617-ADUP	DUP	07/11/17 13:24		OK
17	I4071-01MS	HR-06-070617-AMS	MS	07/11/17 13:24		OK
18	I4071-01MSD	HR-06-070617-AMSD	MSD	07/11/17 13:24		OK
19	I4071-04	HR-06-070617-B	SAM	07/11/17 13:24		OK
20	I4071-07	HR-06-070617-C	SAM	07/11/17 13:24		OK
21	CCV2	CCV2	CCV	07/11/17 13:24		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB88643

Review By		Review On				
SubDirectory		LB88643		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP56342,WP56343,WP56344,WP56345,WP56346,WP56347,WP56348,WP56349				
ICV Standard		W1541				
CCV Standard		WP56351				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56350,WP55836,WP55355				
22	CCB2	CCB2	CCB	07/11/17 13:24		OK
23	I4078-01	VNJ-228	SAM	07/11/17 13:24		OK
24	I4078-05	VNJ-211	SAM	07/11/17 13:24		OK
25	I4082-03	BIN-6-COMP	SAM	07/11/17 13:31		OK
26	I4084-01	TP11-MH2111-COMP	SAM	07/11/17 13:31		OK
27	I4084-06	TP9-MH2108-COMP	SAM	07/11/17 13:31		OK
28	I4108-01	BU-01-070617-A	SAM	07/11/17 13:31		OK
29	I4108-04	BU-01-070617-B	SAM	07/11/17 13:31		OK
30	I4108-07	BU-01-070617-C	SAM	07/11/17 13:31		OK
31	I4114-01	NAA-SAND	SAM	07/11/17 13:31		OK
32	I4119-01	EO-03-070717-A	SAM	07/11/17 13:31		OK
33	CCV3	CCV3	CCV	07/11/17 13:31		OK
34	CCB3	CCB3	CCB	07/11/17 13:31		OK
35	I4119-04	EO-03-070717-B	SAM	07/11/17 13:31		OK
36	I4119-07	EO-03-070717-C	SAM	07/11/17 13:36		OK
37	LOWPB100507	LOWPB100507	SAM	07/11/17 14:13		OK
38	CCV4	CCV4	CCV	07/11/17 14:13		OK
39	CCB4	CCB4	CCB	07/11/17 14:13		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB88643	Date Received:	
Client Sample ID:	HIGHPB100507	SDG No.:	LB88643
Lab Sample ID:	HIGHPB100507	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	0.48		1	0.003		0.005	mg/L		07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	HR-06-070617-A	SDG No.:	LB88643
Lab Sample ID:	I4071-01	Matrix:	Solid
Level (low/med):	low	% Solid:	94.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.16	U	1	0.034		0.26	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	HR-06-070617-B	SDG No.:	LB88643
Lab Sample ID:	I4071-04	Matrix:	Solid
Level (low/med):	low	% Solid:	94.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.22	U	1	0.034		0.25	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	HR-06-070617-C	SDG No.:	LB88643
Lab Sample ID:	I4071-07	Matrix:	Solid
Level (low/med):	low	% Solid:	94.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.18	U	1	0.033		0.25	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	VNJ-228	SDG No.:	LB88643
Lab Sample ID:	I4078-01	Matrix:	Solid
Level (low/med):	low	% Solid:	92

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.26	U	1	0.034		0.26	mg/Kg	07/08/2017	07/11/2017	9012B

Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	VNJ-211	SDG No.:	LB88643
Lab Sample ID:	I4078-05	Matrix:	Solid
Level (low/med):	low	% Solid:	93.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.23	U	1	0.034		0.26	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	BIN-6-COMP	SDG No.:	LB88643
Lab Sample ID:	I4082-03	Matrix:	Solid
Level (low/med):	low	% Solid:	68.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.033	U	1	0.047		0.36	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	TP11-MH2111-COMP	SDG No.:	LB88643
Lab Sample ID:	I4084-01	Matrix:	Solid
Level (low/med):	low	% Solid:	85

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.9		1	0.037		0.28	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	TP9-MH2108-COMP	SDG No.:	LB88643
Lab Sample ID:	I4084-06	Matrix:	Solid
Level (low/med):	low	% Solid:	85.2

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	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	BU-01-070617-A	SDG No.:	LB88643
Lab Sample ID:	I4108-01	Matrix:	Solid
Level (low/med):	low	% Solid:	85.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.22	U	1	0.037		0.28	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	BU-01-070617-B	SDG No.:	LB88643
Lab Sample ID:	I4108-04	Matrix:	Solid
Level (low/med):	low	% Solid:	89.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.24	U	1	0.035		0.27	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/6/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/6/2017 12:00:00 AM
Client Sample ID:	BU-01-070617-C	SDG No.:	LB88643
Lab Sample ID:	I4108-07	Matrix:	Solid
Level (low/med):	low	% Solid:	84

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.19	U	1	0.039		0.29	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/7/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/7/2017 12:00:00 AM
Client Sample ID:	NAA-SAND	SDG No.:	LB88643
Lab Sample ID:	I4114-01	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	-0.061	U	1	0.033		0.25	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/7/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/7/2017 12:00:00 AM
Client Sample ID:	EO-03-070717-A	SDG No.:	LB88643
Lab Sample ID:	I4119-01	Matrix:	Solid
Level (low/med):	low	% Solid:	90.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.19	U	1	0.035		0.27	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/7/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/7/2017 12:00:00 AM
Client Sample ID:	EO-03-070717-B	SDG No.:	LB88643
Lab Sample ID:	I4119-04	Matrix:	Solid
Level (low/med):	low	% Solid:	86.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.24	U	1	0.036		0.27	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/7/2017 12:00:00 AM
Project:	LB88643	Date Received:	7/7/2017 12:00:00 AM
Client Sample ID:	EO-03-070717-C	SDG No.:	LB88643
Lab Sample ID:	I4119-07	Matrix:	Solid
Level (low/med):	low	% Solid:	86.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.22	U	1	0.036		0.27	mg/Kg	07/08/2017	07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB88643	Date Received:	
Client Sample ID:	LOWPB100507	SDG No.:	LB88643
Lab Sample ID:	LOWPB100507	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	0.0095		1	0.003		0.005	mg/L		07/11/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB88643	Date Received:	
Client Sample ID:	LOWPB100507	SDG No.:	LB88643
Lab Sample ID:	LOWPB100507	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: LB88643

SDG No.: LB88643

Contract: _____ Lab Code: CHEM

Case No.: LB88643

SAS No.: LB88643

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		07/11/2017	13:16	LB88643
CCV2	Cyanide	0.25	0.25	100	0	90 - 110		07/11/2017	13:24	LB88643
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		07/11/2017	13:31	LB88643
CCV4	Cyanide	0.25	0.25	100	0	90 - 110		07/11/2017	14:13	LB88643



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB88643

SDG No.: LB88643

Contract:

Lab Code: CHEM

Case No.: LB88643

SAS No.: LB88643

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00043	+/-0.005	U		0.005		07/11/2017	13:16	LB88643

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00036	+/-0.005	U		0.005		07/11/2017	13:16	LB88643
CCB2	Cyanide	-0.0002	+/-0.005	U		0.005		07/11/2017	13:24	LB88643
CCB3	Cyanide	-0.00017	+/-0.005	U		0.005		07/11/2017	13:31	LB88643
CCB4	Cyanide	-0.00041	+/-0.005	U		0.005		07/11/2017	14:13	LB88643



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB88643

SDG No.: LB88643

Contract: Lab Code: CHEM

Case No.: LB88643

SAS No.: LB88643

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB88643

SDG No.: LB88643

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
PB100507BL		SOLID		Batch Number:		PB100507		Prep Date:	07/08/2017	
	Cyanide	-0.03	<0.25	U		0.25		07/11/2017	13:16	LB88643



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB88643 level: low sdg no.: LB88643
contract: lab code: CHEM case no.: LB88643 sas no.: LB88643
matrix: Solid sample id: I4071-01 client id: HR-06-070617-AMS
Percent Solids for Sample: 94.4 Spiked ID: I4071-01MS Percent Solids for Spike Sample: 94.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	0.89		0.034	U	2.1	42.4	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB88643 level: low sdg no.: LB88643
contract: lab code: CHEM case no.: LB88643 sas no.: LB88643
matrix: Solid sample id: I4071-01 client id: HR-06-070617-AMSD
Percent Solids for Sample: 94.4 Spiked ID: I4071-01MSD Percent Solids for Spike Sample: 94.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	0.89		0.034	U	2.1	42.4	*	

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB88643 **Level:** LOW **SDG No.:** LB88643
Contract: **Lab Code:** CHEM **Case No.:** LB88643 **SAS No.:** LB88643
Matrix: Solid **Sample ID:** I4071-01 **Client ID:** HR-06-070617-ADUP
Percent Solids for Sample: 94.4 **Duplicate ID** I4071-01DUP **Percent Solids for Spike Sample:** 94.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.034	U	-0.19	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB88643 **Level:** LOW **SDG No.:** LB88643
Contract: **Lab Code:** CHEM **Case No.:** LB88643 **SAS No.:** LB88643
Matrix: Solid **Sample ID:** I4071-01MS **Client ID:** HR-06-070617-AMSD
Percent Solids for Sample: 94.4 **Duplicate ID** I4071-01MSD **Percent Solids for Spike Sample:** 94.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.89		0.89		0		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB88643

SDG No.: LB88643

Contract:

Lab Code: CHEM

Case No.: LB88643

SAS No.: LB88643

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB100507BS Cyanide	mg/Kg	4.9	4.9		100	85 - 115	