

Daily Analysis Runlog For Sequence/QC Batch ID # LB89144

Review By		Review On				
SubDirectory		LB89144		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP56789,WP56790,WP56791,WP56792,WP56793WP56794,WP56795,WP56796				
ICV Standard		W1541				
CCV Standard		WP56798				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56797,WP55355,WP55836				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	07/31/17 08:54		OK
2	5.0PPBCN	5.0PPBCN	CAL2	07/31/17 08:54		OK
3	10PPBCN	10PPBCN	CAL3	07/31/17 08:54		OK
4	50PPBCN	50PPBCN	CAL4	07/31/17 08:54		OK
5	100PPBCN	100PPBCN	CAL5	07/31/17 08:54		OK
6	250PPBCN	250PPBCN	CAL6	07/31/17 08:54		OK
7	500PPBCN	500PPBCN	CAL7	07/31/17 08:54		OK
8	ICV1	ICV1	ICV	07/31/17 09:28		OK
9	ICB1	ICB1	ICB	07/31/17 09:28		OK
10	CCV1	CCV1	CCV	07/31/17 09:28		OK
11	CCB1	CCB1	CCB	07/31/17 09:28		OK
12	PB101049BL	PB101049BL	MB	07/31/17 09:28		OK
13	PB101049BS	PB101049BS	LCS	07/31/17 09:28		OK
14	LOWPB101049	LOWPB101049	SAM	07/31/17 09:28		OK
15	HIGHPB101049	HIGHPB101049	SAM	07/31/17 09:28		OK
16	I4488-01	CL-02-072717-A	SAM	07/31/17 09:28		OK
17	I4488-01DUP	CL-02-072717-ADUP	DUP	07/31/17 09:28		OK
18	I4488-01MS	CL-02-072717-AMS	MS	07/31/17 09:35		OK
19	I4488-01MSD	CL-02-072717-AMSD	MSD	07/31/17 09:35		OK
20	I4488-04	CL-02-072717-B	SAM	07/31/17 09:35		OK
21	I4488-07	CL-02-072717-C	SAM	07/31/17 09:35		OK

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SubDirectory		LB89144		Test : Cyanide		
STD. NAME		STD REF.#				
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ICV Standard		W1541				
CCV Standard		WP56798				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56797,WP55355,WP55836				
22	CCV2	CCV2	CCV	07/31/17 09:35		OK
23	CCB2	CCB2	CCB	07/31/17 09:35		OK
24	I4488-10	CL-02-072717-D	SAM	07/31/17 09:35		OK
25	I4488-13	CL-02-072717-E	SAM	07/31/17 09:35		OK
26	I4490-01	FK-BPM-01-A2-B2-C	SAM	07/31/17 09:35		OK
27	I4491-01	FK-BPM-01-C3-C4-C	SAM	07/31/17 09:35		OK
28	I4492-01	FK-BPM-01-D3-D4-D	SAM	07/31/17 09:35		OK
29	I4497-01	TP-3-4	SAM	07/31/17 09:41		OK
30	I4497-05	TP-1	SAM	07/31/17 09:41		OK
31	I4497-09	TP-6	SAM	07/31/17 09:41		OK
32	CCV3	CCV3	CCV	07/31/17 09:41		OK
33	CCB3	CCB3	CCB	07/31/17 09:41		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB89144	Date Received:	
Client Sample ID:	HIGHPB101049	SDG No.:	LB89144
Lab Sample ID:	HIGHPB101049	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		07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	CL-02-072717-A	SDG No.:	LB89144
Lab Sample ID:	I4488-01	Matrix:	Solid
Level (low/med):	low	% Solid:	92.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.052	J	1	0.035		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	CL-02-072717-B	SDG No.:	LB89144
Lab Sample ID:	I4488-04	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.
57-12-5	Cyanide	0.014	U	1	0.034		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	CL-02-072717-C	SDG No.:	LB89144
Lab Sample ID:	I4488-07	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	0.05	J	1	0.033		0.25	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	CL-02-072717-D	SDG No.:	LB89144
Lab Sample ID:	I4488-10	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	0.024	U	1	0.038		0.29	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	CL-02-072717-E	SDG No.:	LB89144
Lab Sample ID:	I4488-13	Matrix:	Solid
Level (low/med):	low	% Solid:	91.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.018	U	1	0.035		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-A2-B2-C2-D2	SDG No.:	LB89144
Lab Sample ID:	I4490-01	Matrix:	Solid
Level (low/med):	low	% Solid:	92.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0067	U	1	0.035		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-C3-C4-C5-C6	SDG No.:	LB89144
Lab Sample ID:	I4491-01	Matrix:	Solid
Level (low/med):	low	% Solid:	92.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.01	U	1	0.034		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-D3-D4-D5-D6	SDG No.:	LB89144
Lab Sample ID:	I4492-01	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	0.021	U	1	0.034		0.26	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	TP-3-4	SDG No.:	LB89144
Lab Sample ID:	I4497-01	Matrix:	Solid
Level (low/med):	low	% Solid:	87

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0022	U	1	0.037		0.28	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	TP-1	SDG No.:	LB89144
Lab Sample ID:	I4497-05	Matrix:	Solid
Level (low/med):	low	% Solid:	84.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.018	U	1	0.037		0.28	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/27/2017 12:00:00 AM
Project:	LB89144	Date Received:	7/27/2017 12:00:00 AM
Client Sample ID:	TP-6	SDG No.:	LB89144
Lab Sample ID:	I4497-09	Matrix:	Solid
Level (low/med):	low	% Solid:	87.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.018	U	1	0.037		0.28	mg/Kg	07/28/2017	07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89144	Date Received:	
Client Sample ID:	LOWPB101049	SDG No.:	LB89144
Lab Sample ID:	LOWPB101049	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		07/31/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89144	Date Received:	
Client Sample ID:	LOWPB101049	SDG No.:	LB89144
Lab Sample ID:	LOWPB101049	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: LB89144

SDG No.: LB89144

Contract: _____ Lab Code: CHEM

Case No.: LB89144

SAS No.: LB89144

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		07/31/2017	09:28	LB89144
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		07/31/2017	09:35	LB89144
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		07/31/2017	09:41	LB89144



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB89144

SDG No.: LB89144

Contract:

Lab Code: CHEM

Case No.: LB89144

SAS No.: LB89144

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		07/31/2017	09:28	LB89144

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00029	+/-0.005	U		0.005		07/31/2017	09:28	LB89144
CCB2	Cyanide	0.00028	+/-0.005	U		0.005		07/31/2017	09:35	LB89144
CCB3	Cyanide	0.00026	+/-0.005	U		0.005		07/31/2017	09:41	LB89144



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB89144

SDG No.: LB89144

Contract: Lab Code: CHEM

Case No.: LB89144

SAS No.: LB89144

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: LB89144

SDG No.: LB89144

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
PB101049BL		SOLID		Batch Number:		PB101049		Prep Date:	07/28/2017	
	Cyanide	-0.013	<0.25	U		0.25		07/31/2017	09:28	LB89144



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB89144 level: low sdg no.: LB89144
contract: lab code: CHEM case no.: LB89144 sas no.: LB89144
matrix: Solid sample id: I4488-01 client id: CL-02-072717-AMS
Percent Solids for Sample: 92.3 Spiked ID: I4488-01MS Percent Solids for Spike Sample: 92.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.8		0.052	J	2.1	83		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB89144 level: low sdg no.: LB89144
contract: lab code: CHEM case no.: LB89144 sas no.: LB89144
matrix: Solid sample id: I4488-01 client id: CL-02-072717-AMSD
Percent Solids for Sample: 92.3 Spiked ID: I4488-01MSD Percent Solids for Spike Sample: 92.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.8		0.052	J	2.1	83		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB89144 **Level:** LOW **SDG No.:** LB89144
Contract: **Lab Code:** CHEM **Case No.:** LB89144 **SAS No.:** LB89144
Matrix: Solid **Sample ID:** I4488-01 **Client ID:** CL-02-072717-ADUP
Percent Solids for Sample: 92.3 **Duplicate ID** I4488-01DUP **Percent Solids for Spike Sample:** 92.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.052	J	0.023	U	200.0	*	

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB89144 **Level:** LOW **SDG No.:** LB89144
Contract: **Lab Code:** CHEM **Case No.:** LB89144 **SAS No.:** LB89144
Matrix: Solid **Sample ID:** I4488-01MS **Client ID:** CL-02-072717-AMSD
Percent Solids for Sample: 92.3 **Duplicate ID** I4488-01MSD **Percent Solids for Spike Sample:** 92.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.8		1.8		0		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB89144

SDG No.: LB89144

Contract:

Lab Code: CHEM

Case No.: LB89144

SAS No.: LB89144

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB101049BS Cyanide	mg/Kg	4.9	4.7		95.9	85 - 115	