

Daily Analysis Runlog For Sequence/QC Batch ID # LB92963

Review By		Review On				
SubDirectory		LB92963		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP61413,WP61414,WP61415,WP61416,WP61417,WP61418,WP61419				
ICV Standard		W1541				
CCV Standard		WP61420				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP58910				
Chk Standard		WP61397,WP59958,WP60878				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	01/29/18 14:28		OK
2	5.0PPBCN	5.0PPBCN	CAL2	01/29/18 14:28		OK
3	10PPBCN	10PPBCN	CAL3	01/29/18 14:28		OK
4	50PPBCN	50PPBCN	CAL4	01/29/18 14:28		OK
5	100PPBCN	100PPBCN	CAL5	01/29/18 14:28		OK
6	250PPBCN	250PPBCN	CAL6	01/29/18 14:28		OK
7	500PPBCN	500PPBCN	CAL7	01/29/18 14:28		OK
8	ICV1	ICV1	ICV	01/29/18 15:06		OK
9	ICB1	ICB1	ICB	01/29/18 15:06		OK
10	CCV1	CCV1	CCV	01/29/18 15:06		OK
11	CCB1	CCB1	CCB	01/29/18 15:06		OK
12	PB106067BL	PB106067BL	MB	01/29/18 15:06		OK
13	PB106067BS	PB106067BS	LCS	01/29/18 15:06		OK
14	LOWPB106067	LOWPB106067	SAM	01/29/18 15:06		OK
15	HIGHPB106067	HIGHPB106067	SAM	01/29/18 15:14		OK
16	J1322-01	M3-LEFT-RIGHT	SAM	01/29/18 15:14		OK
17	J1322-01DUP	M3-LEFT-RIGHTDUP	DUP	01/29/18 15:14		OK
18	J1322-01MS	M3-LEFT-RIGHTMS	MS	01/29/18 15:14		OK
19	J1322-01MSD	M3-LEFT-RIGHTMSD	MSD	01/29/18 15:14		OK
20	J1325-01	RO-4632	SAM	01/29/18 15:14		OK
21	J1325-04	RO-3025	SAM	01/29/18 15:14		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB92963

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SubDirectory		LB92963		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP61413,WP61414,WP61415,WP61416,WP61417,WP61418,WP61419				
ICV Standard		W1541				
CCV Standard		WP61420				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP58910				
Chk Standard		WP61397,WP59958,WP60878				
22	CCV2	CCV2	CCV	01/29/18 15:14		OK
23	CCB2	CCB2	CCB	01/29/18 15:14		OK
24	J1325-07	RO-2334	SAM	01/29/18 15:14		OK
25	J1326-01	RO200030	SAM	01/29/18 15:21		OK
26	J1328-01	RO-1-2	SAM	01/29/18 15:21		OK
27	PB106130BL	PB106130BL	MB	01/29/18 15:21		OK
28	PB106130BS	PB106130BS	LCS	01/29/18 15:21		OK
29	J1022-10	SU-03-012618	SAM	01/29/18 15:21		OK
30	J1022-10DUP	SU-03-012618DUP	DUP	01/29/18 15:21		OK
31	J1022-10MS	SU-03-012618MS	MS	01/29/18 15:21		OK
32	J1022-10MSD	SU-03-012618MSD	MSD	01/29/18 15:22		OK
33	CCV3	CCV3	CCV	01/29/18 15:22		OK
34	CCB3	CCB3	CCB	01/29/18 15:22		OK
35	J1338-01	OILY-STONES	SAM	01/29/18 15:22		OK
36	J1325-10	RO-2342	SAM	01/29/18 15:52		OK
37	J1346-01	FW-1-2	SAM	01/29/18 15:52		OK
38	CCV4	CCV4	CCV	01/29/18 15:52		OK
39	CCB4	CCB4	CCB	01/29/18 15:52		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB92963	Date Received:	
Client Sample ID:	HIGHPB106067	SDG No.:	LB92963
Lab Sample ID:	HIGHPB106067	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		01/29/2018	9012B

Report of Analysis

Client:		Date Collected:	1/26/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/26/2018 12:00:00 AM
Client Sample ID:	SU-03-012618	SDG No.:	LB92963
Lab Sample ID:	J1022-10	Matrix:	Solid
Level (low/med):	low	% Solid:	89.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.06	J	1	0.036		0.27	mg/Kg	01/29/2018	01/29/2018	9012B

Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	M3-LEFT-RIGHT	SDG No.:	LB92963
Lab Sample ID:	J1322-01	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.022	U	1	0.032		0.25	mg/Kg	01/26/2018	01/29/2018	9012B

Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO-4632	SDG No.:	LB92963
Lab Sample ID:	J1325-01	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	0.038	J	1	0.035		0.27	mg/Kg	01/26/2018	01/29/2018	9012B

Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO-3025	SDG No.:	LB92963
Lab Sample ID:	J1325-04	Matrix:	Solid
Level (low/med):	low	% Solid:	79.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.044	J	1	0.04		0.3	mg/Kg	01/26/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO-2334	SDG No.:	LB92963
Lab Sample ID:	J1325-07	Matrix:	Solid
Level (low/med):	low	% Solid:	74.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.058	J	1	0.043		0.33	mg/Kg	01/26/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO-2342	SDG No.:	LB92963
Lab Sample ID:	J1325-10	Matrix:	Solid
Level (low/med):	low	% Solid:	84.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0046	U	1	0.037		0.28	mg/Kg	01/26/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO200030	SDG No.:	LB92963
Lab Sample ID:	J1326-01	Matrix:	Solid
Level (low/med):	low	% Solid:	63.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.3		1	0.05		0.38	mg/Kg	01/26/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/25/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/25/2018 12:00:00 AM
Client Sample ID:	RO-1-2	SDG No.:	LB92963
Lab Sample ID:	J1328-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.029	U	1	0.036		0.27	mg/Kg	01/26/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/26/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/26/2018 12:00:00 AM
Client Sample ID:	OILY-STONES	SDG No.:	LB92963
Lab Sample ID:	J1338-01	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.055	J	1	0.033		0.25	mg/Kg	01/29/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	1/26/2018 12:00:00 AM
Project:	LB92963	Date Received:	1/26/2018 12:00:00 AM
Client Sample ID:	FW-1-2	SDG No.:	LB92963
Lab Sample ID:	J1346-01	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.5		1	0.032		0.25	mg/Kg	01/29/2018	01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB92963	Date Received:	
Client Sample ID:	LOWPB106067	SDG No.:	LB92963
Lab Sample ID:	LOWPB106067	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	0.0099		1	0.003		0.005	mg/L		01/29/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB92963	Date Received:	
Client Sample ID:	LOWPB106067	SDG No.:	LB92963
Lab Sample ID:	LOWPB106067	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: LB92963

SDG No.: LB92963

Contract: _____

Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Cyanide	0.099	0.099	100		85 - 115		01/29/2018	15:06	LB92963



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB92963

SDG No.: LB92963

Contract: _____ Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1	Cyanide	0.24	0.25	96		90 - 110		01/29/2018	15:06	LB92963
CCV2	Cyanide	0.24	0.25	96		90 - 110		01/29/2018	15:14	LB92963
CCV3	Cyanide	0.25	0.25	100		90 - 110		01/29/2018	15:22	LB92963
CCV4	Cyanide	0.26	0.25	104		90 - 110		01/29/2018	15:52	LB92963



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92963

SDG No.: LB92963

Contract:

Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.0001	+/-0.005	U		0.005		01/29/2018	15:06	LB92963



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92963

SDG No.: LB92963

Contract:

Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00018	+/-0.005	U		0.005		01/29/2018	15:06	LB92963
CCB2	Cyanide	0.00037	+/-0.005	U		0.005		01/29/2018	15:14	LB92963
CCB3	Cyanide	0.00046	+/-0.005	U		0.005		01/29/2018	15:22	LB92963
CCB4	Cyanide	0.00012	+/-0.005	U		0.005		01/29/2018	15:52	LB92963



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92963

SDG No.: LB92963

Contract: Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

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: LB92963

SDG No.: LB92963

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
PB106067BL	Cyanide	SOLID		Batch Number:		PB106067		Prep Date:	01/26/2018	
		0.006	<0.25	U		0.25		01/29/2018	15:06	LB92963
Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB106130BL	Cyanide	SOLID		Batch Number:		PB106130		Prep Date:	01/29/2018	
		0.015	<0.25	U		0.25		01/29/2018	15:21	LB92963

GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB92963 level: low sdg no.: LB92963
contract: lab code: CHEM case no.: LB92963 sas no.: LB92963
matrix: Solid sample id: J1022-10 client id: SU-03-012618MS
Percent Solids for Sample: 89.9 Spiked ID: J1022-10MS Percent Solids for Spike Sample: 89.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.6		0.06	J	2.2	70	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB92963 level: low sdg no.: LB92963
contract: lab code: CHEM case no.: LB92963 sas no.: LB92963
matrix: Solid sample id: J1022-10 client id: SU-03-012618MSD
Percent Solids for Sample: 89.9 Spiked ID: J1022-10MSD Percent Solids for Spike Sample: 89.9

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.7		0.06	J	2.2	75		

GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB92963 level: low sdg no.: LB92963
contract: lab code: CHEM case no.: LB92963 sas no.: LB92963
matrix: Solid sample id: J1322-01 client id: M3-LEFT-RIGHTMS
Percent Solids for Sample: 100 Spiked ID: J1322-01MS Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.4		0.032	U	1.9	126.3	*	



Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.5		0.032	U	1.9	131.6	*	

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92963 **Level:** LOW **SDG No.:** LB92963
Contract: **Lab Code:** CHEM **Case No.:** LB92963 **SAS No.:** LB92963
Matrix: Solid **Sample ID:** J1022-10 **Client ID:** SU-03-012618DUP
Percent Solids for Sample: 89.9 **Duplicate ID** J1022-10DUP **Percent Solids for Spike Sample:** 89.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.06	J	0.058	J	3		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92963 **Level:** LOW **SDG No.:** LB92963
Contract: **Lab Code:** CHEM **Case No.:** LB92963 **SAS No.:** LB92963
Matrix: Solid **Sample ID:** J1022-10MS **Client ID:** SU-03-012618MSD
Percent Solids for Sample: 89.9 **Duplicate ID** J1022-10MSD **Percent Solids for Spike Sample:** 89.9

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

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB92963 **Level:** LOW **SDG No.:** LB92963
Contract: **Lab Code:** CHEM **Case No.:** LB92963 **SAS No.:** LB92963
Matrix: Solid **Sample ID:** J1322-01 **Client ID:** M3-LEFT-RIGHTDUP
Percent Solids for Sample: 100 **Duplicate ID** J1322-01DUP **Percent Solids for Spike Sample:** 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.032	U	0.018	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB92963 **Level:** LOW **SDG No.:** LB92963
Contract: **Lab Code:** CHEM **Case No.:** LB92963 **SAS No.:** LB92963
Matrix: Solid **Sample ID:** J1322-01MS **Client ID:** M3-LEFT-RIGHTMSD
Percent Solids for Sample: 100 **Duplicate ID** J1322-01MSD **Percent Solids for Spike Sample:** 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.4		2.5		4		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB92963

SDG No.: LB92963

Contract:

Lab Code: CHEM

Case No.: LB92963

SAS No.: LB92963

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB106130BS Cyanide	mg/Kg	4.8	4.7		97.9	85 - 115	