

Daily Analysis Runlog For Sequence/QC Batch ID # LB92002

Review By		Review On				
SubDirectory		LB92002		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP60172,WP60173,WP60174,WP60175,WP60176,WP60177,WP60178				
ICV Standard		W1541				
CCV Standard		WP60179				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP58910				
Chk Standard		WP60181,WP59958,WP60150				

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	12/07/17 08:38		OK
2	5.0PPBCN	5.0PPBCN	CAL2	12/07/17 08:38		OK
3	10PPBCN	10PPBCN	CAL3	12/07/17 08:38		OK
4	50PPBCN	50PPBCN	CAL4	12/07/17 08:38		OK
5	100PPBCN	100PPBCN	CAL5	12/07/17 08:38		OK
6	250PPBCN	250PPBCN	CAL6	12/07/17 08:38		OK
7	500PPBCN	500PPBCN	CAL7	12/07/17 08:38		OK
8	ICV1	ICV1	ICV	12/07/17 10:21		OK
9	ICB1	ICB1	ICB	12/07/17 10:21		OK
10	CCV1	CCV1	CCV	12/07/17 10:21		OK
11	CCB1	CCB1	CCB	12/07/17 10:21		OK
12	PB104766BL	PB104766BL	MB	12/07/17 10:21		OK
13	PB104766BS	PB104766BS	LCS	12/07/17 10:21		OK
14	LOWPB104766	LOWPB104766	SAM	12/07/17 10:21		OK
15	HIGHPB104766	HIGHPB104766	SAM	12/07/17 10:29		OK
16	I6303-01	HD-02-120417	SAM	12/07/17 10:29		OK
17	I6303-01DUP	HD-02-120417DUP	DUP	12/07/17 10:29		OK
18	I6303-01MS	HD-02-120417MS	MS	12/07/17 10:29		OK
19	I6303-01MSD	HD-02-120417MSD	MSD	12/07/17 10:29		OK
20	I6675-01	SU-04-120517	SAM	12/07/17 10:29		OK
21	I6683-01	EO-01-120517-A	SAM	12/07/17 10:29		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB92002

Review By		Review On				
SubDirectory		LB92002		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP60172,WP60173,WP60174,WP60175,WP60176,WP60177,WP60178				
ICV Standard		W1541				
CCV Standard		WP60179				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP58910				
Chk Standard		WP60181,WP59958,WP60150				
22	CCV2	CCV2	CCV	12/07/17 10:29		OK
23	CCB2	CCB2	CCB	12/07/17 10:29		OK
24	I6683-03	EO-01-120517-B	SAM	12/07/17 10:29		OK
25	I6683-05	EO-01-120517-C	SAM	12/07/17 10:29		OK
26	I6685-01	AU-06-120517-A	SAM	12/07/17 10:36		OK
27	I6685-03	AU-06-120517-B	SAM	12/07/17 10:36		OK
28	I6738-01	88-20-90-20	SAM	12/07/17 10:36		OK
29	I6741-01	DRUM-1-7	SAM	12/07/17 10:36		OK
30	PB104769BL	PB104769BL	MB	12/07/17 10:36		OK
31	PB104769BS	PB104769BS	LCS	12/07/17 10:36		OK
32	I6742-01	TOTES-1-4	SAM	12/07/17 10:36		OK
33	I6742-01DUP	TOTES-1-4DUP	DUP	12/07/17 10:36		OK
34	CCV3	CCV3	CCV	12/07/17 10:36		OK
35	CCB3	CCB3	CCB	12/07/17 10:36		OK
36	I6742-01MS	TOTES-1-4MS	MS	12/07/17 10:36		OK
37	I6742-01MSD	TOTES-1-4MSD	MSD	12/07/17 10:41		OK
38	CCV4	CCV4	CCV	12/07/17 10:41		OK
39	CCB4	CCB4	CCB	12/07/17 10:41		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB92002	Date Received:	
Client Sample ID:	HIGHPB104766	SDG No.:	LB92002
Lab Sample ID:	HIGHPB104766	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		12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/4/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/4/2017 12:00:00 AM
Client Sample ID:	HD-02-120417	SDG No.:	LB92002
Lab Sample ID:	I6303-01	Matrix:	Solid
Level (low/med):	low	% Solid:	97.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.013	U	1	0.033		0.25	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	SU-04-120517	SDG No.:	LB92002
Lab Sample ID:	I6675-01	Matrix:	Solid
Level (low/med):	low	% Solid:	94.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0025	U	1	0.034		0.26	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	EO-01-120517-A	SDG No.:	LB92002
Lab Sample ID:	I6683-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.031	U	1	0.035		0.26	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	EO-01-120517-B	SDG No.:	LB92002
Lab Sample ID:	I6683-03	Matrix:	Solid
Level (low/med):	low	% Solid:	92.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.017	U	1	0.034		0.26	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	EO-01-120517-C	SDG No.:	LB92002
Lab Sample ID:	I6683-05	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	0.041	J	1	0.034		0.26	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	AU-06-120517-A	SDG No.:	LB92002
Lab Sample ID:	I6685-01	Matrix:	Solid
Level (low/med):	low	% Solid:	87.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.017	U	1	0.036		0.27	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	AU-06-120517-B	SDG No.:	LB92002
Lab Sample ID:	I6685-03	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	0.15	J	1	0.035		0.26	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	88-20-90-20	SDG No.:	LB92002
Lab Sample ID:	I6738-01	Matrix:	Solid
Level (low/med):	low	% Solid:	84.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0084	U	1	0.039		0.3	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	DRUM-1-7	SDG No.:	LB92002
Lab Sample ID:	I6741-01	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	0.0014	U	1	0.031		0.24	mg/Kg	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	12/5/2017 12:00:00 AM
Project:	LB92002	Date Received:	12/5/2017 12:00:00 AM
Client Sample ID:	TOTES-1-4	SDG No.:	LB92002
Lab Sample ID:	I6742-01	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	0.0021	U	1	0.003		0.005	mg/L	12/06/2017	12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB92002	Date Received:	
Client Sample ID:	LOWPB104766	SDG No.:	LB92002
Lab Sample ID:	LOWPB104766	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	0.0096		1	0.003		0.005	mg/L		12/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB92002	Date Received:	
Client Sample ID:	LOWPB104766	SDG No.:	LB92002
Lab Sample ID:	LOWPB104766	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: LB92002

SDG No.: LB92002

Contract: _____ Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

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		12/07/2017	10:21	lb92002
CCV2	Cyanide	0.25	0.25	100	0	90 - 110		12/07/2017	10:29	lb92002
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		12/07/2017	10:36	lb92002
CCV4	Cyanide	0.26	0.25	104	0	90 - 110		12/07/2017	10:41	lb92002



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92002

SDG No.: LB92002

Contract:

Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.00051	+/-0.005	U		0.005		12/07/2017	10:21	lb92002



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92002

SDG No.: LB92002

Contract:

Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0	+/-0.005	U		0.005		12/07/2017	10:21	lb92002
CCB2	Cyanide	0.00051	+/-0.005	U		0.005		12/07/2017	10:29	lb92002
CCB3	Cyanide	0.00033	+/-0.005	U		0.005		12/07/2017	10:36	lb92002
CCB4	Cyanide	0	+/-0.005	U		0.005		12/07/2017	10:41	lb92002



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB92002

SDG No.: LB92002

Contract: Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

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: LB92002

SDG No.: LB92002

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
PB104766BL	Cyanide	SOLID		Batch Number:		PB104766		Prep Date:	12/06/2017	
		0.0068	<0.24	U		0.24		12/07/2017	10:21	lb92002
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB104769BL	Cyanide	WATER		Batch Number:		PB104769		Prep Date:	12/06/2017	
		-0.0001	<0.005	U		0.005		12/07/2017	10:36	lb92002



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB92002 level: low sdg no.: LB92002
contract: lab code: CHEM case no.: LB92002 sas no.: LB92002
matrix: Solid sample id: I6303-01 client id: HD-02-120417MS
Percent Solids for Sample: 97.2 Spiked ID: I6303-01MS Percent Solids for Spike Sample: 97.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.1		0.033	U	2	55	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB92002 level: low sdg no.: LB92002
contract: lab code: CHEM case no.: LB92002 sas no.: LB92002
matrix: Solid sample id: I6303-01 client id: HD-02-120417MSD
Percent Solids for Sample: 97.2 Spiked ID: I6303-01MSD Percent Solids for Spike Sample: 97.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.1		0.033	U	2	55	*	



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB92002 level: low sdg no.: LB92002
contract: lab code: CHEM case no.: LB92002 sas no.: LB92002
matrix: WATER sample id: I6742-01 client id: TOTES-1-4MS
Percent Solids for Sample: 0 Spiked ID: I6742-01MS Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.028		0.003	U	0.04	70	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB92002 level: low sdg no.: LB92002
contract: lab code: CHEM case no.: LB92002 sas no.: LB92002
matrix: WATER sample id: I6742-01 client id: TOTES-1-4MSD
Percent Solids for Sample: 0 Spiked ID: I6742-01MSD Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.029		0.003	U	0.04	72.5	*	

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92002 **Level:** LOW **SDG No.:** LB92002
Contract: **Lab Code:** CHEM **Case No.:** LB92002 **SAS No.:** LB92002
Matrix: Solid **Sample ID:** I6303-01 **Client ID:** HD-02-120417DUP
Percent Solids for Sample: 97.2 **Duplicate ID** I6303-01DUP **Percent Solids for Spike Sample:** 97.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.033	U	0.0067	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92002 **Level:** LOW **SDG No.:** LB92002
Contract: **Lab Code:** CHEM **Case No.:** LB92002 **SAS No.:** LB92002
Matrix: Solid **Sample ID:** I6303-01MS **Client ID:** HD-02-120417MSD
Percent Solids for Sample: 97.2 **Duplicate ID** I6303-01MSD **Percent Solids for Spike Sample:** 97.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.1		1.1		0		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92002 **Level:** LOW **SDG No.:** LB92002
Contract: **Lab Code:** CHEM **Case No.:** LB92002 **SAS No.:** LB92002
Matrix: WATER **Sample ID:** I6742-01 **Client ID:** TOTES-1-4DUP
Percent Solids for Sample: 0 **Duplicate ID** I6742-01DUP **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.003	U	0.0022	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB92002 **Level:** LOW **SDG No.:** LB92002
Contract: **Lab Code:** CHEM **Case No.:** LB92002 **SAS No.:** LB92002
Matrix: WATER **Sample ID:** I6742-01MS **Client ID:** TOTES-1-4MSD
Percent Solids for Sample: 0 **Duplicate ID** I6742-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.028		0.029		4		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB92002

SDG No.: LB92002

Contract:

Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB104766BS Cyanide	mg/Kg	4.9	4.8		98	85 - 115	



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB92002

SDG No.: LB92002

Contract:

Lab Code: CHEM

Case No.: LB92002

SAS No.: LB92002

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB104769BS Cyanide	mg/L	0.1	0.099		99	85 - 115	
