

Daily Analysis Runlog For Sequence/QC Batch ID # LB91097

Review By

SubDirectory

Review On

Test : Cyanide

LB91097

STD. NAME		STD REF.#				
ICAL Standard		WP59046,WP59045,WP59044,WP59043,WP59042,WP59041				
ICV Standard		WP59047				
CCV Standard		WP59048				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP58836,WP54147,WP59058				

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	10/25/17 14:12		OK
2	5.0PPBCN	5.0PPBCN	CAL2	10/25/17 14:12		OK
3	10PPBCN	10PPBCN	CAL3	10/25/17 14:12		OK
4	100PPBCN	100PPBCN	CAL4	10/25/17 14:12		OK
5	250PPBCN	250PPBCN	CAL5	10/25/17 14:12		OK
6	500PPBCN	500PPBCN	CAL6	10/25/17 14:12		OK
7	ICV	ICV	ICV	10/25/17 16:04		OK
8	ICB	ICB	ICB	10/25/17 16:04		OK
9	CCV001	CCV001	CCV	10/25/17 16:04		OK
10	CCB001	CCB001	CCB	10/25/17 16:04		OK
11	PB103456BL	PBW005	MB	10/25/17 16:04		OK
12	PB103455BL	PBS006	MB	10/25/17 16:12		OK
13	I5976-01	B-20(3.5-4)-101817	SAM	10/25/17 16:12		OK
14	I5976-02	B-20(5-6)-101817	SAM	10/25/17 16:12		OK
15	I6032-01	B-31(1-2)-101817	SAM	10/25/17 16:12		OK
16	I6032-02	B-31(5-5.5)-101817	SAM	10/25/17 16:12		OK
17	I6097-01	B-76(0-1)-102317	SAM	10/25/17 16:12		OK
18	I6097-02	B-76(1-3)-102317	SAM	10/25/17 16:12		OK
19	I6097-03	B-52(0-1)-102317	SAM	10/25/17 16:12		OK
20	I6097-04	B-52(0-1)-102317D	DUP	10/25/17 16:12		OK
21	I6097-05	B-52(0-1)-102317S	MS	10/25/17 16:12		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB91097

Review By		Review On				
SubDirectory		LB91097		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP59046,WP59045,WP59044,WP59043,WP59042,WP59041				
ICV Standard		WP59047				
CCV Standard		WP59048				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP58836,WP54147,WP59058				
22	I6097-06	B-52(1-3)-102317	SAM	10/25/17 16:12		OK
23	I6097-07	DUP-7	SAM	10/25/17 16:16		OK
24	I5976-03	EQB-4-101817	SAM	10/25/17 16:43		OK
25	CCV002	CCV002	CCV	10/25/17 16:43		OK
26	CCB002	CCB002	CCB	10/25/17 16:43		OK



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Report of Analysis

Client:		Date Collected:	10/18/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/18/2017 12:00:00 AM
Client Sample ID:	B-20(3.5-4)-101817	SDG No.:	LB91097
Lab Sample ID:	I5976-01	Matrix:	Solid
Level (low/med):	low	% Solid:	82.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.064	0.015	0.58	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/18/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/18/2017 12:00:00 AM
Client Sample ID:	B-20(5-6)-101817	SDG No.:	LB91097
Lab Sample ID:	I5976-02	Matrix:	Solid
Level (low/med):	low	% Solid:	83.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.007	U	1	0.062	0.014	0.57	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/18/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/18/2017 12:00:00 AM
Client Sample ID:	EQB-4-101817	SDG No.:	LB91097
Lab Sample ID:	I5976-03	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	U	1	1.5	5	10	ug/L	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/18/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/19/2017 12:00:00 AM
Client Sample ID:	B-31(1-2)-101817	SDG No.:	LB91097
Lab Sample ID:	I6032-01	Matrix:	Solid
Level (low/med):	low	% Solid:	83

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	11.7		1	0.064	0.014	0.58	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/18/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/19/2017 12:00:00 AM
Client Sample ID:	B-31(5-5.5)-101817	SDG No.:	LB91097
Lab Sample ID:	I6032-02	Matrix:	Solid
Level (low/med):	low	% Solid:	79.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	12.1		1	0.067	0.015	0.61	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	B-76(0-1)-102317	SDG No.:	LB91097
Lab Sample ID:	I6097-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.2	J	1	0.059	0.013	0.53	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	B-76(1-3)-102317	SDG No.:	LB91097
Lab Sample ID:	I6097-02	Matrix:	Solid
Level (low/med):	low	% Solid:	89.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.13	J	1	0.058	0.013	0.53	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	B-52(0-1)-102317	SDG No.:	LB91097
Lab Sample ID:	I6097-03	Matrix:	Solid
Level (low/med):	low	% Solid:	91

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.29	J	1	0.059	0.013	0.53	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	B-52(1-3)-102317	SDG No.:	LB91097
Lab Sample ID:	I6097-06	Matrix:	Solid
Level (low/med):	low	% Solid:	81

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.2	J	1	0.065	0.015	0.59	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	DUP-7	SDG No.:	LB91097
Lab Sample ID:	I6097-07	Matrix:	Solid
Level (low/med):	low	% Solid:	77.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.16	J	1	0.067	0.015	0.61	mg/kg	10/24/2017	10/25/2017	ISM02.4_CN



Report of Analysis

Client:		Date Collected:	10/23/2017 12:00:00 AM
Project:	LB91097	Date Received:	10/23/2017 12:00:00 AM
Client Sample ID:	DUP-7	SDG No.:	LB91097
Lab Sample ID:	I6097-07	Matrix:	Solid
Level (low/med):	low	% Solid:	77.9

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

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB91097 Contract: _____
Lab Code: CHEM Case No.: LB91097 MA No.: _____ SDG No.: LB91097
Instrument ID: CN Start Date: 10/25/2017
Analytical Method: _____ Run Batch: LB91097.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0	0	0	5	4.9	-2	10	9.4	-6

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB91097 Contract: _____
Lab Code: CHEM Case No.: LB91097 MA No.: _____ SDG No.: LB91097
Instrument ID: CN Start Date: 10/25/2017
Analytical Method: _____ Run Batch: LB91097.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	100	101	1	250	252	1	500	499	0



Metals
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SAMPLE PREPARATION SUMMARY

Client: LB91097 **SDG No.:** LB91097
Contract: **Lab Code:** CHEM **Method:**
Case No.: LB91097 **SAS No.:** LB91097

						Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date				
Batch Number: PB103455								
PB103455BL	PBS006	MB	SOLID	10/25/2017		1.02	50.0	100.00
I5976-01	B-20(3.5-4)-101817	SAM	SOLID	10/25/2017		1.04	50.0	82.40
I5976-02	B-20(5-6)-101817	SAM	SOLID	10/25/2017		1.05	50.0	83.90
I6032-01	B-31(1-2)-101817	SAM	SOLID	10/25/2017		1.04	50.0	83.00
I6032-02	B-31(5-5.5)-101817	SAM	SOLID	10/25/2017		1.03	50.0	79.30
I6097-01	B-76(0-1)-102317	SAM	SOLID	10/25/2017		1.05	50.0	89.20
I6097-02	B-76(1-3)-102317	SAM	SOLID	10/25/2017		1.06	50.0	89.20
I6097-03	B-52(0-1)-102317	SAM	SOLID	10/25/2017		1.03	50.0	91.00
I6097-04	B-52(0-1)-102317D	DUP	SOLID	10/25/2017		1.03	50.0	91.00
I6097-05	B-52(0-1)-102317S	MS	SOLID	10/25/2017		1.05	50.0	91.00
I6097-06	B-52(1-3)-102317	SAM	SOLID	10/25/2017		1.04	50.0	81.00
I6097-07	DUP-7	SAM	SOLID	10/25/2017		1.06	50.0	77.90



Metals
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SAMPLE PREPARATION SUMMARY

Client: LB91097

SDG No.: LB91097

Contract:

Lab Code: CHEM

Method:

Case No.: LB91097

SAS No.: LB91097

						Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date				
Batch Number: PB103456								
PB103456BL	PBW005	MB	WATER	10/25/2017		50.0	50.0	
I5976-03	EQB-4-101817	SAM	WATER	10/25/2017		50.0	50.0	

Metals**- 2a -****INITIAL AND CONTINUING CALIBRATION VERIFICATION****Client:** LB91097**SDG No.:** LB91097**Contract:** _____ **Lab Code:** CHEM**Case No.:** LB91097 **SAS No.:** LB91097**Initial Calibration Source:** _____**Continuing Calibration Source:** _____

Sample ID	Analyte	Result	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		ug/L								
ICV	Cyanide	97.3	99	98	0	85 - 115	CN	10/25/2017	16:04	LB91097



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB91097

SDG No.: LB91097

Contract: _____ Lab Code: CHEM

Case No.: LB91097 SAS No.: LB91097

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV001	Cyanide	252	250	101	0	85 - 115	CN	10/25/2017	16:04	LB91097
CCV002	Cyanide	257	250	103	0	85 - 115	CN	10/25/2017	16:43	LB91097



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB91097 **SDG No.:** LB91097
Contract: **Lab Code:** CHEM **Case No.:** LB91097 **SAS No.:** LB91097

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	10/25/2017	16:04	LB91097



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB91097

SDG No.: LB91097

Contract:

Lab Code: CHEM

Case No.: LB91097

SAS No.: LB91097

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	10/25/2017	16:04	LB91097
CCB002	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	10/25/2017	16:43	LB91097



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB91097

SDG No.: LB91097

Contract: Lab Code: CHEM

Case No.: LB91097

SAS No.: LB91097

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

Client: LB91097

SDG No.: LB91097

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB103455BL	SOLID		Batch Number:		PB103455		Prep Date:		10/24/2017	
	Cyanide	0.054	<0.49	U	0.012	0.49	CN	10/25/2017	16:12	LB91097
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB103456BL	WATER		Batch Number:		PB103456		Prep Date:		10/24/2017	
	Cyanide	1.5	<10	U	5.0	10	CN	10/25/2017	16:04	LB91097



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB91097 level: low sdg no.: LB91097
contract: lab code: CHEM case no.: LB91097 sas no.: LB91097
matrix: Solid sample id: I6097-03 client id: B-52(0-1)-102317S
Percent Solids for Sample: 91 Spiked ID: I6097-05 Percent Solids for Spike Sample: 91

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	4.7		0.29	J	5.2	84		CN

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB91097 **Level:** LOW **SDG No.:** LB91097
Contract: **Lab Code:** CHEM **Case No.:** LB91097 **SAS No.:** LB91097
Matrix: Solid **Sample ID:** I6097-03 **Client ID:** B-52(0-1)-102317D
Percent Solids for Sample: 91 **Duplicate ID** I6097-04 **Percent Solids for Spike Sample:** 91

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.29	J	0.32	J	10		CN



Hit Summary Sheet
SW-846

SDG No.: LB91097

Order ID: LB91097

Client: LB91097

Project ID: LB91097

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : I6032-01	B-31(1-2)-101817 B-31(1-2)-101817	Solid	Cyanide	11.700		0.064	0.29	0.58	mg/kg
Client ID : I6032-02	B-31(5-5.5)-101817 B-31(5-5.5)-101817	Solid	Cyanide	12.100		0.067	0.305	0.61	mg/kg
Client ID : I6097-01	B-76(0-1)-102317 B-76(0-1)-102317	Solid	Cyanide	0.200	J	0.059	0.265	0.53	mg/kg
Client ID : I6097-02	B-76(1-3)-102317 B-76(1-3)-102317	Solid	Cyanide	0.130	J	0.058	0.265	0.53	mg/kg
Client ID : I6097-03	B-52(0-1)-102317 B-52(0-1)-102317	Solid	Cyanide	0.290	J	0.059	0.265	0.53	mg/kg
Client ID : I6097-06	B-52(1-3)-102317 B-52(1-3)-102317	Solid	Cyanide	0.200	J	0.065	0.295	0.59	mg/kg
Client ID : I6097-07	DUP-7 DUP-7	Solid	Cyanide	0.160	J	0.067	0.305	0.61	mg/kg



Metals
- 10 -

Client: LB91097

SDG No.: LB91097

Contract:

Lab Code: CHEM

Case No.: LB91097

SAS No.: LB91097

Instrument ID: P4

Preparation Method:

Analyte	Wave- length (nm)	MDL	LOD	PQL	Date:
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LIQUID

Method: Cyanide	578.00
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SOLIDS

Method: Cyanide	578.00
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Start Date: _____ **End Date:** _____

[illegible]