

Daily Analysis Runlog For Sequence/QC Batch ID # LB90368

Review By

Review On

SubDirectory

LB90368

Test :

Cyanide

STD. NAME	STD REF.#
ICAL Standard	wp58321,wp58320,wp58319,wp58318,wp58317,wp58316
ICV Standard	wp58322
CCV Standard	wp58323
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	wp58334,wp55355,wp53945

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	09/27/17 16:34		OK
2	S5.0	S5.0	CAL2	09/27/17 16:34		OK
3	S10	S10.0	CAL3	09/27/17 16:34		OK
4	S100	S100.0	CAL4	09/27/17 16:34		OK
5	S250	S250.0	CAL5	09/27/17 16:34		OK
6	S500	S500.0	CAL6	09/27/17 16:34		OK
7	ICV	ICV	ICV	09/27/17 17:06		OK
8	ICB	ICB	ICB	09/27/17 17:06		OK
9	CCV001	CCV001	CCV	09/27/17 17:06		OK
10	CCB001	CCB001	CCB	09/27/17 17:06		OK
11	PB102657BL	PBS006	MB	09/27/17 17:06		OK
12	I5449-01	B-41(0-1)-092617	SAM	09/27/17 17:06	Cn high	Dilution
13	I5449-01DUP	B-41(0-1)-092617D	DUP	09/27/17 17:13	Cn high	Dilution
14	I5449-01MS	B-41(0-1)-092617S	MS	09/27/17 17:13	Cn high	Dilution
15	I5449-01MSD	B-41(0-1)-092617MS	MSD	09/27/17 17:13	Not used	Not Ok
16	I5449-02	B-40(0-1)-092617	SAM	09/27/17 17:13		OK
17	I5449-03	B-60(FILL)-092617	SAM	09/27/17 17:13		OK
18	I5449-04	B-60(0-1)-092617	SAM	09/27/17 17:13		OK
19	I5449-05	B-60(5-7)-092617	SAM	09/27/17 17:13		OK
20	CCV002	CCV002	CCV	09/27/17 17:13		OK
21	CCB002	CCB002	CCB	09/27/17 17:13		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB90368

Review By			Review On			
SubDirectory		LB90368		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		wp58321,wp58320,wp58319,wp58318,wp58317,wp58316				
ICV Standard		wp58322				
CCV Standard		wp58323				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		wp58334,wp55355,wp53945				
22	I5449-01DL	B-41(0-1)-092617DL	SAM	09/27/17 17:45	2x For Cn	Confirms
23	I5449-01DUPDL	B-41(0-1)-092617DD	DUP	09/27/17 17:45	2x For Cn	Confirms
24	I5449-01MSDL	B-41(0-1)-092617SD	MS	09/27/17 17:45	2x For Cn	Confirms
25	I5449-01MSDDL	B-41(0-1)-092617MS	MSD	09/27/17 17:45	Not used	Not Ok
26	CCV003	CCV003	CCV	09/27/17 17:45		OK
27	CCB003	CCB003	CCB	09/27/17 17:45		OK



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-41(0-1)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	38.2	OR	1	0.058	0.013	0.53	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-41(0-1)-092617DL	SDG No.:	LB90368
Lab Sample ID:	I5449-01DL	Matrix:	Solid
Level (low/med):	low	% Solid:	91.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	37.6	D	2	0.12	0.027	1.1	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-40(0-1)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-02	Matrix:	Solid
Level (low/med):	low	% Solid:	84.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	3.4		1	0.063	0.014	0.57	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-60(FILL)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-03	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	1.5		1	0.057	0.013	0.52	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-60(0-1)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-04	Matrix:	Solid
Level (low/med):	low	% Solid:	93.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.086	J	1	0.057	0.013	0.52	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-60(5-7)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-05	Matrix:	Solid
Level (low/med):	low	% Solid:	86.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.5		1	0.06	0.014	0.55	mg/kg	09/27/2017	09/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90368	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	B-60(5-7)-092617	SDG No.:	LB90368
Lab Sample ID:	I5449-05	Matrix:	Solid
Level (low/med):	low	% Solid:	86.9

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



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90368

SDG No.: LB90368

Contract: _____ **Lab Code:** CHEM

Case No.: LB90368

SAS No.: LB90368

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
ICV	Cyanide	93.3	99	94	0	85 - 115	CN	09/27/2017	17:06	LB90368



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90368

SDG No.: LB90368

Contract: _____ Lab Code: CHEM

Case No.: LB90368

SAS No.: LB90368

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	248	250	99	0	85 - 115	CN	09/27/2017	17:06	LB90368
CCV002	Cyanide	239	250	96	0	85 - 115	CN	09/27/2017	17:13	LB90368
CCV003	Cyanide	246	250	98	0	85 - 115	CN	09/27/2017	17:45	LB90368



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90368 **SDG No.:** LB90368
Contract: **Lab Code:** CHEM **Case No.:** LB90368 **SAS No.:** LB90368

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	09/27/2017	17:06	LB90368



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90368

SDG No.: LB90368

Contract:

Lab Code: CHEM

Case No.: LB90368

SAS No.: LB90368

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	0.44	+/-10.0	U	5.0	10.0	CN	09/27/2017	17:06	LB90368
CCB002	Cyanide	0.46	+/-10.0	U	5.0	10.0	CN	09/27/2017	17:13	LB90368
CCB003	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	09/27/2017	17:45	LB90368



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90368

SDG No.: LB90368

Contract: Lab Code: CHEM

Case No.: LB90368

SAS No.: LB90368

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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SDG No.: LB90368

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB102657BL		SOLID		Batch Number:		PB102657		Prep Date:	09/27/2017	
	Cyanide	0.032	<0.49	U	0.012	0.49	CN	09/27/2017	17:06	LB90368



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90368 level: low sdg no.: LB90368
contract: lab code: CHEM case no.: LB90368 sas no.: LB90368
matrix: Solid sample id: I5449-01 client id: B-41(0-1)-092617S
Percent Solids for Sample: 91.3 Spiked ID: I5449-01MS Percent Solids for Spike Sample: 91.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	42.1	OR	38.2	OR	5.4	72		CN



metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90368 level: low sdg no.: LB90368
contract: lab code: CHEM case no.: LB90368 sas no.: LB90368
matrix: Solid sample id: client id: B-41(0-1)-092617MSD
Percent Solids for Sample: 91.3 Spiked ID: I5449-01MSD Percent Solids for Spike Sample: 91.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	42.1	OR			5.3	794		CN



metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90368 level: low sdg no.: LB90368
contract: lab code: CHEM case no.: LB90368 sas no.: LB90368
matrix: Solid sample id: client id: B-41(0-1)-092617MSDDL
Percent Solids for Sample: 91.3 Spiked ID: I5449-01MSDDL Percent Solids for Spike Sample: 91.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	43.0	D			5.3	811		CN



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90368 level: low sdg no.: LB90368
contract: lab code: CHEM case no.: LB90368 sas no.: LB90368
matrix: Solid sample id: I5449-01DL client id: B-41(0-1)-092617SDL
Percent Solids for Sample: 91.3 Spiked ID: I5449-01MSDL Percent Solids for Spike Sample: 91.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	43.4	D	37.6	D	5.4	108		CN

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB90368 **Level:** LOW **SDG No.:** LB90368
Contract: **Lab Code:** CHEM **Case No.:** LB90368 **SAS No.:** LB90368
Matrix: Solid **Sample ID:** I5449-01 **Client ID:** B-41(0-1)-092617D
Percent Solids for Sample: 91.3 **Duplicate ID** I5449-01DUP **Percent Solids for Spike Sample:** 91.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	38.2	OR	37.7	OR	1		CN

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB90368 **Level:** LOW **SDG No.:** LB90368
Contract: **Lab Code:** CHEM **Case No.:** LB90368 **SAS No.:** LB90368
Matrix: Solid **Sample ID:** I5449-01DL **Client ID:** B-41(0-1)-092617DDL
Percent Solids for Sample: 91.3 **Duplicate ID** I5449-01DUPDL **Percent Solids for Spike Sample:** 91.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	37.6	D	38.3	D	2		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90368 **Level:** LOW **SDG No.:** LB90368
Contract: **Lab Code:** CHEM **Case No.:** LB90368 **SAS No.:** LB90368
Matrix: Solid **Sample ID:** I5449-01MS **Client ID:** B-41(0-1)-092617MSD
Percent Solids for Sample: 91.3 **Duplicate ID** I5449-01MSD **Percent Solids for Spike Sample:**

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	42.1	OR	42.1	OR	0		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90368 **Level:** LOW **SDG No.:** LB90368
Contract: **Lab Code:** CHEM **Case No.:** LB90368 **SAS No.:** LB90368
Matrix: Solid **Sample ID:** I5449-01MS **Client ID:** B-41(0-1)-092617MSDDL
Percent Solids for Sample: 91.3 **Duplicate ID** I5449-01MSDDL **Percent Solids for Spike Sample:**

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	42.1	OR	43.0	D	2		CN



Metals
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SAMPLE PREPARATION SUMMARY

Client: LB90368 SDG No.: LB90368
Contract: Lab Code: CHEM Method:
Case No.: LB90368 SAS No.: LB90368

					Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date			
Batch Number: PB102657							
PB102657BL	PBS006	MB	SOLID	09/27/2017	1.02	50.0	100.00
I5449-01	B-41(0-1)-092617	SAM	SOLID	09/27/2017	1.03	50.0	91.30
I5449-01DUP	B-41(0-1)-092617D	DUP	SOLID	09/27/2017	1.02	50.0	91.30
I5449-01MS	B-41(0-1)-092617S	MS	SOLID	09/27/2017	1.02	50.0	91.30
I5449-01MSD	B-41(0-1)-092617MSD	MSD	SOLID	09/27/2017	1.03	50.0	91.30
I5449-02	B-40(0-1)-092617	SAM	SOLID	09/27/2017	1.04	50.0	84.20
I5449-03	B-60(FILL)-092617	SAM	SOLID	09/27/2017	1.05	50.0	92.00
I5449-04	B-60(0-1)-092617	SAM	SOLID	09/27/2017	1.04	50.0	93.30
I5449-05	B-60(5-7)-092617	SAM	SOLID	09/27/2017	1.05	50.0	86.90
I5449-01DL	B-41(0-1)-092617DL	SAM	SOLID	09/27/2017	1.03	50.0	91.30
I5449-01DUPDL	B-41(0-1)-092617DDL	DUP	SOLID	09/27/2017	1.02	50.0	91.30
I5449-01MSDL	B-41(0-1)-092617SDL	MS	SOLID	09/27/2017	1.02	50.0	91.30
I5449-01MSDDL	B-41(0-1)-092617MSDDL	MSD	SOLID	09/27/2017	1.03	50.0	91.30



Start Date: _____ **End Date:** _____

[illegible]

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB90368 Contract: _____
Lab Code: CHEM Case No.: LB90368 MA No.: _____ SDG No.: LB90368
Instrument ID: CN Start Date: 09/27/2017
Analytical Method: _____ Run Batch: LB90368.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0	0.13	0	5	4.2	-16	10	9.9	-1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB90368 Contract: _____
Lab Code: CHEM Case No.: LB90368 MA No.: _____ SDG No.: LB90368
Instrument ID: CN Start Date: 09/27/2017
Analytical Method: _____ Run Batch: LB90368.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	100	98.5	-2	250	254	2	500	498	0