

Daily Analysis Runlog For Sequence/QC Batch ID # LB90839

Review By

SubDirectory

Review On

Test : Cyanide

LB90839

STD. NAME		STD REF.#				
ICAL Standard		WP58673,WP58672,WP58671,WP58670,WP58669,WP58668				
ICV Standard		WP58674				
CCV Standard		WP58675				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP58653,WP54147,WP55836				

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	10/10/17 17:25		OK
2	S5.0	S5.0	CAL2	10/10/17 17:25		OK
3	S10.0	S10.0	CAL3	10/10/17 17:25		OK
4	S100.0	S100.0	CAL4	10/10/17 17:25		OK
5	S250.0	S250.0	CAL5	10/10/17 17:25		OK
6	S500.0	S500.0	CAL6	10/10/17 17:25		OK
7	ICV	ICV	ICV	10/10/17 18:03		OK
8	ICB	ICB	ICB	10/10/17 18:03		OK
9	CCV001	CCV001	CCV	10/10/17 18:03		OK
10	CCB001	CCB001	CCB	10/10/17 18:03		OK
11	PB103138BL	PBS006	MB	10/10/17 18:03		OK
12	I5747-01	B-23(0-1)-100517	SAM	10/10/17 18:03		OK
13	I5747-01DUP	B-23(0-1)-100517DU	DUP	10/10/17 18:03		OK
14	I5747-01MS	B-23(0-1)-100517MS	MS	10/10/17 18:10		OK
15	I5747-02	B-23(1-3)-100517	SAM	10/10/17 18:11		OK
16	I5747-03	B-22(0-1)-100617	SAM	10/10/17 18:11		OK
17	I5747-04	B-22(1-3)-100617	SAM	10/10/17 18:11		OK
18	I5747-05	B-4(0-1)-100617	SAM	10/10/17 18:11		OK
19	I5747-06	B-4(1-3)-100617	SAM	10/10/17 18:11		OK
20	I5747-07	B-34(0-1)-100617	SAM	10/10/17 18:11		OK
21	I5747-08	B-34(5-5.5)-100617	SAM	10/10/17 18:11		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB90839

Review By		Review On				
SubDirectory		LB90839		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP58673,WP58672,WP58671,WP58670,WP58669,WP58668				
ICV Standard		WP58674				
CCV Standard		WP58675				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP58653,WP54147,WP55836				
22	PB103096BL	PBS006	MB	10/10/17 18:11		OK
23	I5720-01	B-36(0-1)-100417	SAM	10/10/17 18:11		OK
24	I5720-02	B-36(3-3.7)-100417	SAM	10/10/17 18:11		OK
25	I5720-03	B-35(1-2)-100417	SAM	10/10/17 18:18		OK
26	I5720-04	B-35(2-3.8)-100417	SAM	10/10/17 18:18		OK
27	I5720-05	B-37(0-1)-100417	SAM	10/10/17 18:18		OK
28	I5720-06	B-37(1-3)-100417	SAM	10/10/17 18:18		OK
29	I5720-07	B-25(0.5-1.5)-100517	SAM	10/10/17 18:18		OK
30	I5720-08	B-25(0.5-1.5)-100517	SAM	10/10/17 18:18		OK
31	I5720-09	B-25(0.5-1.5)-100517	SAM	10/10/17 18:18		OK
32	I5720-10	B-25(5-5.5)-100517	SAM	10/10/17 18:18		OK
33	I5720-11	B-24(0.5-1.5)-100517	SAM	10/10/17 18:18		OK
34	I5720-12	B-24(1.5-3.5)-100517	SAM	10/10/17 18:18		OK
35	I5720-13	B-27(0.5-1.5)-100517	SAM	10/10/17 18:18		OK
36	I5720-14	B-27(5-5.5)-100517	SAM	10/10/17 18:23		OK
37	I5720-15	B-26(5-5.8)-100517	SAM	10/10/17 18:23		OK
38	I5720-16	B-26(0.5-1.5)-100517	SAM	10/10/17 18:23		OK
39	I5720-17	DUP-3	SAM	10/10/17 18:23		OK
40	CCV002	CCV002	CCV	10/10/17 18:23		OK
41	CCB002	CCB002	CCB	10/10/17 18:23		OK



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-36(0-1)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-01	Matrix:	Solid
Level (low/med):	low	% Solid:	97.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.093	J	1	0.054	0.012	0.49	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-36(3-3.7)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-02	Matrix:	Solid
Level (low/med):	low	% Solid:	70.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.09	J	1	0.074	0.017	0.68	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-35(1-2)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-03	Matrix:	Solid
Level (low/med):	low	% Solid:	87.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.14	J	1	0.06	0.014	0.55	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-35(2-3.8)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-04	Matrix:	Solid
Level (low/med):	low	% Solid:	75.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.071	0.016	0.64	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-37(0-1)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-05	Matrix:	Solid
Level (low/med):	low	% Solid:	92.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.18	J	1	0.057	0.013	0.51	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-37(1-3)-100417	SDG No.:	LB90839
Lab Sample ID:	I5720-06	Matrix:	Solid
Level (low/med):	low	% Solid:	91.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.21	J	1	0.058	0.013	0.53	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-25(0.5-1.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-07	Matrix:	Solid
Level (low/med):	low	% Solid:	93.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.063	J	1	0.057	0.013	0.52	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-25(0.5-1.5)-100517D	SDG No.:	LB90839
Lab Sample ID:	I5720-08	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	0.074	J	1	0.058	0.013	0.53	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-25(0.5-1.5)-100517S	SDG No.:	LB90839
Lab Sample ID:	I5720-09	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	4.4		1	0.057	0.013	0.52	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-25(5-5.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-10	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	0.042	U	1	0.056	0.013	0.51	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-24(0.5-1.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-11	Matrix:	Solid
Level (low/med):	low	% Solid:	96.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.096	J	1	0.055	0.012	0.5	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-24(1.5-3.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-12	Matrix:	Solid
Level (low/med):	low	% Solid:	85.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.29	J	1	0.062	0.014	0.56	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-27(0.5-1.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-13	Matrix:	Solid
Level (low/med):	low	% Solid:	88.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.16	J	1	0.059	0.014	0.54	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-27(5-5.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-14	Matrix:	Solid
Level (low/med):	low	% Solid:	82.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.42	J	1	0.065	0.015	0.59	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-26(5-5.8)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-15	Matrix:	Solid
Level (low/med):	low	% Solid:	84.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.24	J	1	0.062	0.014	0.56	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	B-26(0.5-1.5)-100517	SDG No.:	LB90839
Lab Sample ID:	I5720-16	Matrix:	Solid
Level (low/med):	low	% Solid:	82.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.29	J	1	0.063	0.014	0.57	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/5/2017 12:00:00 AM
Client Sample ID:	DUP-3	SDG No.:	LB90839
Lab Sample ID:	I5720-17	Matrix:	Solid
Level (low/med):	low	% Solid:	84.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.21	J	1	0.063	0.014	0.57	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-23(0-1)-100517	SDG No.:	LB90839
Lab Sample ID:	I5747-01	Matrix:	Solid
Level (low/med):	low	% Solid:	95.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.056	0.013	0.51	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/5/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-23(1-3)-100517	SDG No.:	LB90839
Lab Sample ID:	I5747-02	Matrix:	Solid
Level (low/med):	low	% Solid:	88.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.06	0.014	0.55	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-22(0-1)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-03	Matrix:	Solid
Level (low/med):	low	% Solid:	94.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.23	J	1	0.056	0.013	0.51	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-22(1-3)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-04	Matrix:	Solid
Level (low/med):	low	% Solid:	91.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.15	J	1	0.056	0.013	0.51	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-4(0-1)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-05	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	0.57		1	0.058	0.013	0.53	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-4(1-3)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-06	Matrix:	Solid
Level (low/med):	low	% Solid:	88.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.56		1	0.06	0.014	0.55	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-34(0-1)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-07	Matrix:	Solid
Level (low/med):	low	% Solid:	92.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.057	0.013	0.52	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-34(5-5.5)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-08	Matrix:	Solid
Level (low/med):	low	% Solid:	90.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.26	J	1	0.059	0.013	0.54	mg/kg	10/10/2017	10/10/2017	ISM02.4_CN



Report of Analysis

Client:		Date Collected:	10/6/2017 12:00:00 AM
Project:	LB90839	Date Received:	10/6/2017 12:00:00 AM
Client Sample ID:	B-34(5-5.5)-100617	SDG No.:	LB90839
Lab Sample ID:	I5747-08	Matrix:	Solid
Level (low/med):	low	% Solid:	90.7

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: LB90839

SDG No.: LB90839

Contract: _____ **Lab Code:** CHEM

Case No.: LB90839

SAS No.: LB90839

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	97.1	99	98	0	85 - 115	CN	10/10/2017	18:03	LB90839



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90839

SDG No.: LB90839

Contract: _____ Lab Code: CHEM

Case No.: LB90839

SAS No.: LB90839

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	242	250	97	0	85 - 115	CN	10/10/2017	18:03	LB90839
CCV002	Cyanide	251	250	100	0	85 - 115	CN	10/10/2017	18:23	LB90839



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90839 **SDG No.:** LB90839
Contract: **Lab Code:** CHEM **Case No.:** LB90839 **SAS No.:** LB90839

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	0.98	+/-10.0	U	5.0	10.0	CN	10/10/2017	18:03	LB90839



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90839

SDG No.: LB90839

Contract:

Lab Code: CHEM

Case No.: LB90839

SAS No.: LB90839

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	1.6	+/-10.0	J	5.0	10.0	CN	10/10/2017	18:03	LB90839
CCB002	Cyanide	0.36	+/-10.0	U	5.0	10.0	CN	10/10/2017	18:23	LB90839



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90839

SDG No.: LB90839

Contract: Lab Code: CHEM

Case No.: LB90839

SAS No.: LB90839

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: LB90839

SDG No.: LB90839

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB103096BL	SOLID		Batch Number:		PB103096		Prep Date:		10/10/2017	
	Cyanide	0.054	<0.49	U	0.012	0.49	CN	10/10/2017	18:11	LB90839
Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB103138BL	SOLID		Batch Number:		PB103138		Prep Date:		10/10/2017	
	Cyanide	0.069	<0.49	J	0.012	0.49	CN	10/10/2017	18:03	LB90839



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90839 level: low sdg no.: LB90839
contract: lab code: CHEM case no.: LB90839 sas no.: LB90839
matrix: Solid sample id: I5747-01 client id: B-23(0-1)-100517MS
Percent Solids for Sample: 95.4 Spiked ID: I5747-01MS Percent Solids for Spike Sample: 95.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	2.7		0.11	J	5.1	52	*	CN

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB90839 **Level:** LOW **SDG No.:** LB90839
Contract: **Lab Code:** CHEM **Case No.:** LB90839 **SAS No.:** LB90839
Matrix: Solid **Sample ID:** I5747-01 **Client ID:** B-23(0-1)-100517DUP
Percent Solids for Sample: 95.4 **Duplicate ID** I5747-01DUP **Percent Solids for Spike Sample:** 95.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.11	J	0.11	J	0		CN



Hit Summary Sheet
SW-846

SDG No.: LB90839

Order ID: LB90839

Client: LB90839

Project ID: LB90839

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : I5720-01	B-36(0-1)-100417 B-36(0-1)-100417	Solid	Cyanide	0.093	J	0.054	0.245	0.49	mg/kg
Client ID : I5720-02	B-36(3-3.7)-100417 B-36(3-3.7)-100417	Solid	Cyanide	0.090	J	0.074	0.34	0.68	mg/kg
Client ID : I5720-03	B-35(1-2)-100417 B-35(1-2)-100417	Solid	Cyanide	0.140	J	0.06	0.275	0.55	mg/kg
Client ID : I5720-05	B-37(0-1)-100417 B-37(0-1)-100417	Solid	Cyanide	0.180	J	0.057	0.255	0.51	mg/kg
Client ID : I5720-06	B-37(1-3)-100417 B-37(1-3)-100417	Solid	Cyanide	0.210	J	0.058	0.265	0.53	mg/kg
Client ID : I5720-07	B-25(0.5-1.5)-100517 B-25(0.5-1.5)-100517	Solid	Cyanide	0.063	J	0.057	0.26	0.52	mg/kg
Client ID : I5720-08	B-25(0.5-1.5)-100517D B-25(0.5-1.5)-100517D	Solid	Cyanide	0.074	J	0.058	0.265	0.53	mg/kg
Client ID : I5720-09	B-25(0.5-1.5)-100517S B-25(0.5-1.5)-100517S	Solid	Cyanide	4.400		0.057	0.26	0.52	mg/kg
Client ID : I5720-11	B-24(0.5-1.5)-100517 B-24(0.5-1.5)-100517	Solid	Cyanide	0.096	J	0.055	0.25	0.5	mg/kg
Client ID : I5720-12	B-24(1.5-3.5)-100517 B-24(1.5-3.5)-100517	Solid	Cyanide	0.290	J	0.062	0.28	0.56	mg/kg
Client ID : I5720-13	B-27(0.5-1.5)-100517 B-27(0.5-1.5)-100517	Solid	Cyanide	0.160	J	0.059	0.27	0.54	mg/kg
Client ID : I5720-14	B-27(5-5.5)-100517 B-27(5-5.5)-100517	Solid	Cyanide	0.420	J	0.065	0.295	0.59	mg/kg
Client ID : I5720-15	B-26(5-5.8)-100517 B-26(5-5.8)-100517	Solid	Cyanide	0.240	J	0.062	0.28	0.56	mg/kg
Client ID : I5720-16	B-26(0.5-1.5)-100517 B-26(0.5-1.5)-100517	Solid	Cyanide	0.290	J	0.063	0.285	0.57	mg/kg
Client ID : I5720-17	DUP-3 DUP-3	Solid	Cyanide	0.210	J	0.063	0.285	0.57	mg/kg



Hit Summary Sheet
SW-846

SDG No.: LB90839

Order ID: LB90839

Client: LB90839

Project ID: LB90839

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : I5747-01	B-23(0-1)-100517	Solid	Cyanide	0.110	J	0.056	0.255	0.51	mg/kg
Client ID : I5747-02	B-23(1-3)-100517	Solid	Cyanide	0.120	J	0.06	0.275	0.55	mg/kg
Client ID : I5747-03	B-22(0-1)-100617	Solid	Cyanide	0.230	J	0.056	0.255	0.51	mg/kg
Client ID : I5747-04	B-22(1-3)-100617	Solid	Cyanide	0.150	J	0.056	0.255	0.51	mg/kg
Client ID : I5747-05	B-4(0-1)-100617	Solid	Cyanide	0.570		0.058	0.265	0.53	mg/kg
Client ID : I5747-06	B-4(1-3)-100617	Solid	Cyanide	0.560		0.06	0.275	0.55	mg/kg
Client ID : I5747-07	B-34(0-1)-100617	Solid	Cyanide	0.120	J	0.057	0.26	0.52	mg/kg
Client ID : I5747-08	B-34(5-5.5)-100617	Solid	Cyanide	0.260	J	0.059	0.27	0.54	mg/kg



Metals
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Client: LB90839

SDG No.: LB90839

Contract:

Lab Code: CHEM

Case No.: LB90839

SAS No.: LB90839

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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**Metals
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SAMPLE PREPARATION SUMMARY

Client: <u>LB90839</u>	SDG No.: <u>LB90839</u>	
Contract: _____	Lab Code: <u>CHEM</u>	Method: _____
	Case No.: <u>LB90839</u>	SAS No.: <u>LB90839</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB103096							
PB103096BL	PBS006	MB	SOLID	10/10/2017	1.02	50.0	100.00
I5720-01	B-36(0-1)-100417	SAM	SOLID	10/10/2017	1.04	50.0	97.60
I5720-02	B-36(3-3.7)-100417	SAM	SOLID	10/10/2017	1.05	50.0	70.50
I5720-03	B-35(1-2)-100417	SAM	SOLID	10/10/2017	1.04	50.0	87.50
I5720-04	B-35(2-3.8)-100417	SAM	SOLID	10/10/2017	1.03	50.0	75.40
I5720-05	B-37(0-1)-100417	SAM	SOLID	10/10/2017	1.05	50.0	92.60
I5720-06	B-37(1-3)-100417	SAM	SOLID	10/10/2017	1.04	50.0	91.20
I5720-07	B-25(0.5-1.5)-100517	SAM	SOLID	10/10/2017	1.03	50.0	93.70
I5720-08	B-25(0.5-1.5)-100517D	SAM	SOLID	10/10/2017	1.03	50.0	92.00
I5720-09	B-25(0.5-1.5)-100517S	SAM	SOLID	10/10/2017	1.04	50.0	92.00
I5720-10	B-25(5-5.5)-100517	SAM	SOLID	10/10/2017	1.06	50.0	92.00
I5720-11	B-24(0.5-1.5)-100517	SAM	SOLID	10/10/2017	1.04	50.0	96.20
I5720-12	B-24(1.5-3.5)-100517	SAM	SOLID	10/10/2017	1.05	50.0	85.10
I5720-13	B-27(0.5-1.5)-100517	SAM	SOLID	10/10/2017	1.04	50.0	88.90
I5720-14	B-27(5-5.5)-100517	SAM	SOLID	10/10/2017	1.03	50.0	82.50
I5720-15	B-26(5-5.8)-100517	SAM	SOLID	10/10/2017	1.05	50.0	84.30
I5720-16	B-26(0.5-1.5)-100517	SAM	SOLID	10/10/2017	1.06	50.0	82.80
I5720-17	DUP-3	SAM	SOLID	10/10/2017	1.04	50.0	84.50



Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: LB90839 SDG No.: LB90839
Contract: Lab Code: CHEM Method:
Case No.: LB90839 SAS No.: LB90839

						Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date				
Batch Number: PB103138								
PB103138BL	PBS006	MB	SOLID	10/10/2017		1.03	50.0	100.00
I5747-01	B-23(0-1)-100517	SAM	SOLID	10/10/2017		1.03	50.0	95.40
I5747-01DUP	B-23(0-1)-100517DUP	DUP	SOLID	10/10/2017		1.02	50.0	95.40
I5747-01MS	B-23(0-1)-100517MS	MS	SOLID	10/10/2017		1.02	50.0	95.40
I5747-02	B-23(1-3)-100517	SAM	SOLID	10/10/2017		1.04	50.0	88.20
I5747-03	B-22(0-1)-100617	SAM	SOLID	10/10/2017		1.05	50.0	94.10
I5747-04	B-22(1-3)-100617	SAM	SOLID	10/10/2017		1.06	50.0	91.90
I5747-05	B-4(0-1)-100617	SAM	SOLID	10/10/2017		1.04	50.0	91.30
I5747-06	B-4(1-3)-100617	SAM	SOLID	10/10/2017		1.03	50.0	88.70
I5747-07	B-34(0-1)-100617	SAM	SOLID	10/10/2017		1.05	50.0	92.40
I5747-08	B-34(5-5.5)-100617	SAM	SOLID	10/10/2017		1.03	50.0	90.70

[illegible]