

Daily Analysis Runlog For Sequence/QC Batch ID # LB90437

Review By		Review On				
SubDirectory		LB90437		Test : Reactive Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		wp58393,wp58394,wp583295,wp58396,wp58397,wp58398,wp58391				
ICV Standard		wp58399				
CCV Standard		wp58400				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		wp58401,wp55355,wp55836				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	09/29/17 11:18		OK
2	5.0PPBCN	5.0PPBCN	CAL2	09/29/17 11:18		OK
3	10PPBCN	10PPBCN	CAL3	09/29/17 11:18		OK
4	50PPBCN	50PPBCN	CAL4	09/29/17 11:18		OK
5	100PPBCN	100PPBCN	CAL5	09/29/17 11:18		OK
6	250PPBCN	250PPBCN	CAL6	09/29/17 11:18		OK
7	500PPBCN	500PPBCN	CAL7	09/29/17 11:18		OK
8	ICV1	ICV1	ICV	09/29/17 13:46		OK
9	ICB1	ICB1	ICB	09/29/17 13:46		OK
10	CCV1	CCV1	CCV	09/29/17 13:46		OK
11	CCB1	CCB1	CCB	09/29/17 13:46		OK
12	PB102697BL	PB102697BL	MB	09/29/17 13:46		OK
13	I5450-13	20170660-A-C-1	SAM	09/29/17 13:53		OK
14	I5450-13DUP	20170660-A-C-1DUP	DUP	09/29/17 13:53		OK
15	I5450-14	20170661-A-C-2	SAM	09/29/17 13:53		OK
16	I5450-15	20170662-A-C-3	SAM	09/29/17 13:53		OK
17	I5450-16	20170663-A-C-4	SAM	09/29/17 13:53		OK
18	I5450-17	20170664-A-C-5	SAM	09/29/17 13:53		OK
19	I5450-19	20170666-A-C-7	SAM	09/29/17 13:53		OK
20	I5450-20	20170667-A-C-8	SAM	09/29/17 13:53		OK
21	CCV2	CCV2	CCV	09/29/17 13:53		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB90437

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ICAL Standard		wp58393,wp58394,wp583295,wp58396,wp58397,wp58398,wp58391				
ICV Standard		wp58399				
CCV Standard		wp58400				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		wp58401,wp55355,wp55836				
22	CCB2	CCB2	CCB	09/29/17 13:53		OK
23	I5450-21	20170668-A-C-9	SAM	09/29/17 14:01		OK
24	I5450-22	20170669-A-C-10	SAM	09/29/17 14:01		OK
25	I5450-23	20170670-A-C-11	SAM	09/29/17 14:01		OK
26	I5450-24	20170671-A-C-12	SAM	09/29/17 14:01		OK
27	I5472-02	TP-1-2-3-4-COMP	SAM	09/29/17 14:01		OK
28	I5473-03	TR-04-092717	SAM	09/29/17 14:01		OK
29	I5475-03	WS-20408-COMP	SAM	09/29/17 14:01		OK
30	I5478-01	1612	SAM	09/29/17 14:01		OK
31	I5481-03	HR-06-092717	SAM	09/29/17 14:01		OK
32	I5487-03	CL-02-092717-A	SAM	09/29/17 14:01		OK
33	CCV3	CCV3	CCV	09/29/17 14:01		OK
34	CCB3	CCB3	CCB	09/29/17 14:05		OK
35	I5491-03	OR-02-092717	SAM	09/29/17 14:05		OK
36	I5450-18	20170665-A-C-6	SAM	09/29/17 14:17		OK
37	CCV4	CCV4	CCV	09/29/17 14:36		OK
38	CCB4	CCB4	CCB	09/29/17 14:36		OK



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Report of Analysis

Client:		Date Collected:	9/20/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170660-A-C-1	SDG No.:	LB90437
Lab Sample ID:	I5450-13	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0019	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/20/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170661-A-C-2	SDG No.:	LB90437
Lab Sample ID:	I5450-14	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0012	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B

Report of Analysis

Client:		Date Collected:	9/20/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170662-A-C-3	SDG No.:	LB90437
Lab Sample ID:	I5450-15	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0033	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/20/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170663-A-C-4	SDG No.:	LB90437
Lab Sample ID:	I5450-16	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.00098	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170664-A-C-5	SDG No.:	LB90437
Lab Sample ID:	I5450-17	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0057	U	1	0.025		0.049	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170665-A-C-6	SDG No.:	LB90437
Lab Sample ID:	I5450-18	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.00023	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170666-A-C-7	SDG No.:	LB90437
Lab Sample ID:	I5450-19	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0012	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B

Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170667-A-C-8	SDG No.:	LB90437
Lab Sample ID:	I5450-20	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0014	U	1	0.025		0.049	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170668-A-C-9	SDG No.:	LB90437
Lab Sample ID:	I5450-21	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0027	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170669-A-C-10	SDG No.:	LB90437
Lab Sample ID:	I5450-22	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.00097	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170670-A-C-11	SDG No.:	LB90437
Lab Sample ID:	I5450-23	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.00086	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	20170671-A-C-12	SDG No.:	LB90437
Lab Sample ID:	I5450-24	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.001	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	TP-1-2-3-4-COMP	SDG No.:	LB90437
Lab Sample ID:	I5472-02	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0006	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	TR-04-092717	SDG No.:	LB90437
Lab Sample ID:	I5473-03	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0012	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	WS-20408-COMP	SDG No.:	LB90437
Lab Sample ID:	I5475-03	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.
	Reactive Cyanide	-0.0033	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	1612	SDG No.:	LB90437
Lab Sample ID:	I5478-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0013	U	1	0.025		0.049	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	HR-06-092717	SDG No.:	LB90437
Lab Sample ID:	I5481-03	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0023	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	CL-02-092717-A	SDG No.:	LB90437
Lab Sample ID:	I5487-03	Matrix:	Solid
Level (low/med):	low	% Solid:	95

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0021	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	OR-02-092717	SDG No.:	LB90437
Lab Sample ID:	I5491-03	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	-0.0018	U	1	0.025		0.05	mg/Kg	09/28/2017	09/29/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/27/2017 12:00:00 AM
Project:	LB90437	Date Received:	9/27/2017 12:00:00 AM
Client Sample ID:	OR-02-092717	SDG No.:	LB90437
Lab Sample ID:	I5491-03	Matrix:	Solid
Level (low/med):	low	% Solid:	100

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: LB90437

SDG No.: LB90437

Contract: _____ Lab Code: CHEM

Case No.: LB90437

SAS No.: LB90437

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
ICV1	Reactive Cyanide	0.097	0.099	98	0	85 - 115		09/29/2017	13:46	LB90437



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90437

SDG No.: LB90437

Contract: _____ Lab Code: CHEM

Case No.: LB90437

SAS No.: LB90437

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	Reactive Cyanide	0.25	0.25	100	0	90 - 110		09/29/2017	13:46	LB90437
CCV2	Reactive Cyanide	0.24	0.25	96	0	90 - 110		09/29/2017	13:53	LB90437
CCV3	Reactive Cyanide	0.24	0.25	96	0	90 - 110		09/29/2017	14:01	LB90437
CCV4	Reactive Cyanide	0.26	0.25	104	0	90 - 110		09/29/2017	14:36	LB90437



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90437

SDG No.: LB90437

Contract:

Lab Code: CHEM

Case No.: LB90437

SAS No.: LB90437

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Reactive Cyanide	0.00016	+/-0.005	U		0.005		09/29/2017	13:46	LB90437

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Reactive Cyanide	0.0012	+/-0.005	U		0.005		09/29/2017	13:46	LB90437
CCB2	Reactive Cyanide	0.00098	+/-0.005	U		0.005		09/29/2017	13:53	LB90437
CCB3	Reactive Cyanide	-0.0001	+/-0.005	U		0.005		09/29/2017	14:05	LB90437
CCB4	Reactive Cyanide	0.00025	+/-0.005	U		0.005		09/29/2017	14:36	LB90437



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90437

SDG No.: LB90437

Contract: Lab Code: CHEM

Case No.: LB90437

SAS No.: LB90437

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: LB90437

SDG No.: LB90437

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
PB102697BL	Reactive Cyanide	SOLID 0.0021	<0.05	Batch Number: U		PB102697 0.05		Prep Date: 09/29/2017	09/28/2017 13:46	LB90437

GENCHEM**- 6 -****DUPLICATE SAMPLE SUMMARY**

Client: LB90437 **Level:** LOW **SDG No.:** LB90437
Contract: **Lab Code:** CHEM **Case No.:** LB90437 **SAS No.:** LB90437
Matrix: Solid **Sample ID:** I5450-13 **Client ID:** 20170660-A-C-1DUP
Percent Solids for Sample: 100 **Duplicate ID** I5450-13DUP **Percent Solids for Spike Sample:** 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Reactive Cyanide	mg/Kg	20	0.025	U	-0.002	U			