

Daily Analysis Runlog For Sequence/QC Batch ID # LB90335

Review By		Review On				
SubDirectory		LB90335		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP58279,WP58280,WP58281,WP58282,WP58283,WP58284,WP58277				
ICV Standard		WP58286				
CCV Standard		WP58287				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP55355,WP55836,WP58285				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	09/26/17 13:53		OK
2	5.0PPBCN	5.0PPBCN	CAL2	09/26/17 13:53		OK
3	10PPBCN	10PPBCN	CAL3	09/26/17 13:54		OK
4	50PPBCN	50PPBCN	CAL4	09/26/17 13:54		OK
5	100PPBCN	100PPBCN	CAL5	09/26/17 13:54		OK
6	250PPBCN	250PPBCN	CAL6	09/26/17 13:54		OK
7	500PPBCN	500PPBCN	CAL7	09/26/17 13:54		OK
8	ICV1	ICV1	ICV	09/26/17 17:03		OK
9	ICB1	ICB1	ICB	09/26/17 17:04		OK
10	CCV1	CCV1	CCV	09/26/17 17:04		OK
11	CCB1	CCB1	CCB	09/26/17 17:04		OK
12	PB102621BL	PB102621BL	MB	09/26/17 17:04		OK
13	PB102621BS	PB102621BS	LCS	09/26/17 17:04		OK
14	LOWPB102621	LOWPB102621	SAM	09/26/17 17:11		OK
15	HIGHPB102621	HIGHPB102621	SAM	09/26/17 17:11		OK
16	I5396-01	PAMT-COMP-A	SAM	09/26/17 17:11		OK
17	I5396-01DUP	PAMT-COMP-ADUP	DUP	09/26/17 17:11		OK
18	I5396-01MS	PAMT-COMP-AMS	MS	09/26/17 17:11		OK
19	I5396-01MSD	PAMT-COMP-AMSD	MSD	09/26/17 17:11		OK
20	I5396-02	PAMT-COMP-B	SAM	09/26/17 17:11		OK
21	I5396-03	PAMT-COMP-E	SAM	09/26/17 17:11		OK

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ICV Standard		WP58286				
CCV Standard		WP58287				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP55355,WP55836,WP58285				
22	CCV2	CCV2	CCV	09/26/17 17:11		OK
23	CCB2	CCB2	CCB	09/26/17 17:19		OK
24	I5396-04	PAMT-COMP-A-DUP	SAM	09/26/17 17:19		OK
25	I5421-01	JC-DRUM	SAM	09/26/17 17:19		OK
26	I5423-01	SA-06-092517-A	SAM	09/26/17 17:19		OK
27	I5423-04	SA-06-092517-B	SAM	09/26/17 17:19		OK
28	I5428-01	A-B-C-DRUM-COMP	SAM	09/26/17 17:19		OK
29	PB102622BL	PB102622BL	MB	09/26/17 17:19		OK
30	PB102622BS	PB102622BS	LCS	09/26/17 17:19		OK
31	I5429-01	SV-26493-LM	SAM	09/26/17 17:19		OK
32	I5429-01DUP	SV-26493-LMDUP	DUP	09/26/17 17:19		OK
33	I5429-01MS	SV-26493-LMMS	MS	09/26/17 17:19		OK
34	CCV3	CCV3	CCV	09/26/17 17:23		OK
35	CCB3	CCB3	CCB	09/26/17 17:23		OK
36	I5429-01MSD	SV-26493-LMMSD	MSD	09/26/17 17:23		OK
37	CCV4	CCV4	CCV	09/26/17 17:23		OK
38	CCB4	CCB4	CCB	09/26/17 17:23		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB90335	Date Received:	
Client Sample ID:	HIGHPB102621	SDG No.:	LB90335
Lab Sample ID:	HIGHPB102621	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	0.49		1	0.003		0.005	mg/L		09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/21/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/22/2017 12:00:00 AM
Client Sample ID:	PAMT-COMP-A	SDG No.:	LB90335
Lab Sample ID:	I5396-01	Matrix:	Solid
Level (low/med):	low	% Solid:	68.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0063	U	1	0.047		0.36	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/21/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/22/2017 12:00:00 AM
Client Sample ID:	PAMT-COMP-B	SDG No.:	LB90335
Lab Sample ID:	I5396-02	Matrix:	Solid
Level (low/med):	low	% Solid:	63.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.034	U	1	0.05		0.38	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/21/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/22/2017 12:00:00 AM
Client Sample ID:	PAMT-COMP-E	SDG No.:	LB90335
Lab Sample ID:	I5396-03	Matrix:	Solid
Level (low/med):	low	% Solid:	57.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.051	U	1	0.055		0.41	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/21/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/22/2017 12:00:00 AM
Client Sample ID:	PAMT-COMP-A-DUP	SDG No.:	LB90335
Lab Sample ID:	I5396-04	Matrix:	Solid
Level (low/med):	low	% Solid:	68

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0071	U	1	0.047		0.35	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/25/2017 12:00:00 AM
Client Sample ID:	JC-DRUM	SDG No.:	LB90335
Lab Sample ID:	I5421-01	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	1.5		1	0.038		0.29	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/25/2017 12:00:00 AM
Client Sample ID:	SA-06-092517-A	SDG No.:	LB90335
Lab Sample ID:	I5423-01	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	-0.025	U	1	0.034		0.26	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/25/2017 12:00:00 AM
Client Sample ID:	SA-06-092517-B	SDG No.:	LB90335
Lab Sample ID:	I5423-04	Matrix:	Solid
Level (low/med):	low	% Solid:	95.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0058	U	1	0.033		0.25	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/25/2017 12:00:00 AM
Client Sample ID:	A-B-C-DRUM-COMP	SDG No.:	LB90335
Lab Sample ID:	I5428-01	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	-0.035	U	1	0.036		0.27	mg/Kg	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90335	Date Received:	9/25/2017 12:00:00 AM
Client Sample ID:	SV-26493-LM	SDG No.:	LB90335
Lab Sample ID:	I5429-01	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	-0.00061	U	1	0.003		0.005	mg/L	09/26/2017	09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB90335	Date Received:	
Client Sample ID:	LOWPB102621	SDG No.:	LB90335
Lab Sample ID:	LOWPB102621	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	0.0098		1	0.003		0.005	mg/L		09/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB90335	Date Received:	
Client Sample ID:	LOWPB102621	SDG No.:	LB90335
Lab Sample ID:	LOWPB102621	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

Sample ID	Analyte	Result	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		mg/L								
ICV1	Cyanide	0.097	0.099	98	0	85 - 115		09/26/2017	17:03	LB90335



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90335

SDG No.: LB90335

Contract: _____ Lab Code: CHEM

Case No.: LB90335

SAS No.: LB90335

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	0.24	0.25	96	0	90 - 110		09/26/2017	17:04	LB90335
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		09/26/2017	17:11	LB90335
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		09/26/2017	17:23	LB90335
CCV4	Cyanide	0.26	0.25	104	0	90 - 110		09/26/2017	17:23	LB90335



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90335 **SDG No.:** LB90335
Contract: **Lab Code:** CHEM **Case No.:** LB90335 **SAS No.:** LB90335

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.00019	+/-0.005	U		0.005		09/26/2017	17:04	LB90335

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00047	+/-0.005	U		0.005		09/26/2017	17:04	LB90335
CCB2	Cyanide	0.0001	+/-0.005	U		0.005		09/26/2017	17:19	LB90335
CCB3	Cyanide	-0	+/-0.005	U		0.005		09/26/2017	17:23	LB90335
CCB4	Cyanide	-0.00049	+/-0.005	U		0.005		09/26/2017	17:23	LB90335



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90335

SDG No.: LB90335

Contract: Lab Code: CHEM

Case No.: LB90335

SAS No.: LB90335

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: LB90335

SDG No.: LB90335

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
PB102621BL	Cyanide	SOLID		Batch Number:		PB102621		Prep Date:	09/26/2017	
		0.0057	<0.25	U		0.25		09/26/2017	17:04	LB90335
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB102622BL	Cyanide	WATER		Batch Number:		PB102622		Prep Date:	09/26/2017	
		-0.0001	<0.005	U		0.005		09/26/2017	17:19	LB90335



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB90335 level: low sdg no.: LB90335
contract: lab code: CHEM case no.: LB90335 sas no.: LB90335
matrix: Solid sample id: I5396-01 client id: PAMT-COMP-AMS
Percent Solids for Sample: 68.2 Spiked ID: I5396-01MS Percent Solids for Spike Sample: 68.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.6		0.047	U	2.9	89.7		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90335 level: low sdg no.: LB90335
contract: lab code: CHEM case no.: LB90335 sas no.: LB90335
matrix: Solid sample id: I5396-01 client id: PAMT-COMP-AMSD
Percent Solids for Sample: 68.2 Spiked ID: I5396-01MSD Percent Solids for Spike Sample: 68.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.6		0.047	U	2.8	92.9		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB90335 level: low sdg no.: LB90335
contract: lab code: CHEM case no.: LB90335 sas no.: LB90335
matrix: WATER sample id: I5429-01 client id: SV-26493-LMMS
Percent Solids for Sample: 0 Spiked ID: I5429-01MS 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	0.039		0.003	U	0.04	97.5		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90335 level: low sdg no.: LB90335
contract: lab code: CHEM case no.: LB90335 sas no.: LB90335
matrix: WATER sample id: I5429-01 client id: SV-26493-LMMSD
Percent Solids for Sample: 0 Spiked ID: I5429-01MSD 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	0.041		0.003	U	0.04	102.5		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90335 **Level:** LOW **SDG No.:** LB90335
Contract: **Lab Code:** CHEM **Case No.:** LB90335 **SAS No.:** LB90335
Matrix: Solid **Sample ID:** I5396-01 **Client ID:** PAMT-COMP-ADUP
Percent Solids for Sample: 68.2 **Duplicate ID** I5396-01DUP **Percent Solids for Spike Sample:** 68.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.047	U	0.0021	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90335 Level: LOW SDG No.: LB90335
Contract: _____ Lab Code: CHEM Case No.: LB90335 SAS No.: LB90335
Matrix: Solid Sample ID: I5396-01MS Client ID: PAMT-COMP-AMSD
Percent Solids for Sample: 68.2 Duplicate ID I5396-01MSD Percent Solids for Spike Sample: 68.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.6		2.6		0		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90335 **Level:** LOW **SDG No.:** LB90335
Contract: **Lab Code:** CHEM **Case No.:** LB90335 **SAS No.:** LB90335
Matrix: WATER **Sample ID:** I5429-01 **Client ID:** SV-26493-LMDUP
Percent Solids for Sample: 0 **Duplicate ID** I5429-01DUP **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	-0.00031	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90335 **Level:** LOW **SDG No.:** LB90335
Contract: **Lab Code:** CHEM **Case No.:** LB90335 **SAS No.:** LB90335
Matrix: WATER **Sample ID:** I5429-01MS **Client ID:** SV-26493-LMMSD
Percent Solids for Sample: 0 **Duplicate ID** I5429-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.039		0.041		5		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB90335

SDG No.: LB90335

Contract:

Lab Code: CHEM

Case No.: LB90335

SAS No.: LB90335

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB102622BS Cyanide	mg/L	0.1	0.098		98	85 - 115	