CHEMTECH

Instrument ID : KONELAB

284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Daily Analysis Runlog For Sequence/QCBatch ID # LB87941

Review By

Review On

SubDirectory LB87941

Test : Reactive Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP55447,WP55448,WP55449,WP55450,WP55451,WP55452,WP55453,WP55454
ICV Standard	WP55457
CCV Standard	WP55456
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP55455,WP51626,WP55355

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	06/07/17 09:25		OK
2	5.0PPBCN	5.0PPBCN	CAL2	06/07/17 09:25		OK
3	10PPBCN	10PPBCN	CAL3	06/07/17 09:25		OK
4	50PPBCN	50PPBCN	CAL4	06/07/17 09:25		OK
5	100PPBCN	100PPBCN	CAL5	06/07/17 09:25		OK
6	250PPBCN	250PPBCN	CAL6	06/07/17 09:25		OK
7	500PPBCN	500PPBCN	CAL7	06/07/17 09:25		OK
8	ICV1	ICV1	ICV	06/07/17 16:04		OK
9	ICB1	ICB1	ICB	06/07/17 16:04		OK
10	CCV1	CCV1	CCV	06/07/17 16:04		OK
11	CCB1	CCB1	CCB	06/07/17 16:04		OK
12	PB99554BL	PB99554BL	MB	06/07/17 16:04		OK
13	I3486-03	HD-RO-20397-06051	SAM	06/07/17 16:04		OK
14	I3486-03DUP	HD-RO-20397-06051	DUP	06/07/17 16:04		OK
15	I3487-03	OK-03-060517	SAM	06/07/17 16:04		OK
16	I3488-03	TR-04-060517-A	SAM	06/07/17 16:04		OK
17	I3488-06	TR-04-060517-B	SAM	06/07/17 16:04		OK
18	I3488-09	TR-04-060517-C	SAM	06/07/17 16:04		OK
19	I3488-12	TR-RO-211757-0605	SAM	06/07/17 16:10		OK
20	I3488-15	TR-RO-45-060517	SAM	06/07/17 16:10		OK
21	I3500-03	OR-01-060617	SAM	06/07/17 16:10		OK

CHEMTECH

Instrument ID : KONELAB

284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Daily Analysis Runlog For Sequence/QCBatch ID # LB87941

Review By

Review On

SubDirectory LB87941

Test : Reactive Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP55447,WP55448,WP55449,WP55450,WP55451,WP55452,WP55453,WP55454
ICV Standard	WP55457
CCV Standard	WP55456
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP55455,WP51626,WP55355

22	CCV2	CCV2	CCV	06/07/17 16:10		OK
23	CCB2	CCB2	CCB	06/07/17 16:10		OK
24	I3506-02	TP-1	SAM	06/07/17 16:10		OK
25	CCV3	CCV3	CCV	06/07/17 16:10		OK
26	CCB3	CCB3	CCB	06/07/17 16:10		OK

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	HD-RO-20397-060517	SDG No.:	LB87941
Lab Sample ID:	I3486-03	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.
	Reactive Cyanide	0.0042	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	OK-03-060517	SDG No.:	LB87941
Lab Sample ID:	I3487-03	Matrix:	Solid
Level (low/med):	low	% Solid:	93.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.004	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	TR-04-060517-A	SDG No.:	LB87941
Lab Sample ID:	I3488-03	Matrix:	Solid
Level (low/med):	low	% Solid:	86

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0066	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	TR-04-060517-B	SDG No.:	LB87941
Lab Sample ID:	I3488-06	Matrix:	Solid
Level (low/med):	low	% Solid:	89.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.004	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	TR-04-060517-C	SDG No.:	LB87941
Lab Sample ID:	I3488-09	Matrix:	Solid
Level (low/med):	low	% Solid:	94.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.006	U	1	0.025		0.049	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	TR-RO-211757-060517	SDG No.:	LB87941
Lab Sample ID:	I3488-12	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.
	Reactive Cyanide	0.0032	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/5/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/5/2017 12:00:00 AM
Client Sample ID:	TR-RO-45-060517	SDG No.:	LB87941
Lab Sample ID:	I3488-15	Matrix:	Solid
Level (low/med):	low	% Solid:	94.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0041	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/6/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/6/2017 12:00:00 AM
Client Sample ID:	OR-01-060617	SDG No.:	LB87941
Lab Sample ID:	I3500-03	Matrix:	Solid
Level (low/med):	low	% Solid:	90

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0043	U	1	0.025		0.05	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/6/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/6/2017 12:00:00 AM
Client Sample ID:	TP-1	SDG No.:	LB87941
Lab Sample ID:	I3506-02	Matrix:	Solid
Level (low/med):	low	% Solid:	87.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
	Reactive Cyanide	0.0094	U	1	0.025		0.049	mg/Kg	06/07/2017	06/07/2017	9012B

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	6/6/2017 12:00:00 AM
Project:	LB87941	Date Received:	6/6/2017 12:00:00 AM
Client Sample ID:	TP-1	SDG No.:	LB87941
Lab Sample ID:	I3506-02	Matrix:	Solid
Level (low/med):	low	% Solid:	87.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.

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

CHEMTECH

GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87941 **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

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	0.093	0.099	93.9	0	85 - 115		06/07/2017	16:04	LB87941

CHEMTECH

GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87941 **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

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	0.24	0.25	96	0	90 - 110		06/07/2017	16:04	LB87941
CCV2	Reactive Cyanide	0.25	0.25	100	0	90 - 110		06/07/2017	16:10	LB87941
CCV3	Reactive Cyanide	0.25	0.25	100	0	90 - 110		06/07/2017	16:10	LB87941

CHEMTECH

GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87941 **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Reactive Cyanide	0.00092	+/-0.005	U		0.005		06/07/2017	16:04	LB87941

CHEMTECH

GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87941 **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Reactive Cyanide	0.00085	+/-0.005	U		0.005		06/07/2017	16:04	LB87941
CCB2	Reactive Cyanide	0.00061	+/-0.005	U		0.005		06/07/2017	16:10	LB87941
CCB3	Reactive Cyanide	0.00098	+/-0.005	U		0.005		06/07/2017	16:10	LB87941

CHEMTECH

GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87941 **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number

CHEMTECH

GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB87941 **SDG No.:** LB87941

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
PB99554BL		**SOLID**		**Batch Number:**		**PB99554**		**Prep Date:**	**06/07/2017**	
	Reactive Cyanide	0.0078	<0.05	U		0.05		06/07/2017	16:04	LB87941

CHEMTECH

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB87941 **Level:** LOW **SDG No.:** LB87941

Contract: **Lab Code:** CHEM **Case No.:** LB87941 **SAS No.:** LB87941

Matrix: Solid **Sample ID:** I3486-03 **Client ID:** HD-RO-20397-060517DUP

Percent Solids for Sample: 84.3 **Duplicate ID** I3486-03DUP **Percent Solids for Spike Sample:** 84.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Reactive Cyanide	mg/Kg	20	0.025	U	0.0042	U			

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"