

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers "P" for ICP instrument "PM" for ICP when Microwave Digestion is used "CV" for Manual Cold Vapor AA "AV" for automated Cold Vapor AA "CA" for MIDI-Distillation Spectrophotometric "AS" for Semi -Automated Spectrophotometric "C" for Manual Spectrophotometric "T" for Titrimetric "NR" for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1232	OrderDate:	1/19/2023 1:44:00 PM
Client:	Louis Berger U.S., Inc., A WSP Company	Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR
Contact:	Jonathan Ganz	Location:	N11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1232-03	WC-17	SOIL			01/18/23 10:10			01/19/23
			Corrosivity	9045D			01/20/23 16:40	
			Ignitability	1030			01/20/23 15:40	
			Paint Filter	9095B			01/20/23 13:45	
			Reactive Cyanide	9012B		01/20/23	01/20/23 14:30	
			Reactive Sulfide	9034		01/20/23	01/20/23 13:11	

SAMPLE DATA

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23 10:10
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	WC-17	SDG No.:	O1232
Lab Sample ID:	O1232-03	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	8.38	H	1	0	0	pH		01/20/23 16:40	9045D
Ignitability	NO		1	0	0	oC		01/20/23 15:40	1030
Paint Filter	1.00	U	1	1.00	1.00	ml/100gm		01/20/23 13:45	9095B
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	01/20/23 12:00	01/20/23 14:30	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	01/20/23 08:35	01/20/23 13:11	9034

Comments: pH result reported at temperature 20.6 °C

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

H = Sample Analysis Out Of Hold Time

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

QC RESULT SUMMARY



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

Initial and Continuing Calibration Verification

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CEQR

RunNo.: LB123753

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Reactive Cyanide	mg/L	0.098	0.099	99	85-115	01/20/2023
Sample ID: CCV1 Reactive Cyanide	mg/L	0.25	0.25	100	90-110	01/20/2023
Sample ID: CCV2 Reactive Cyanide	mg/L	0.26	0.25	104	90-110	01/20/2023
Sample ID: CCV3 Reactive Cyanide	mg/L	0.26	0.25	104	90-110	01/20/2023



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Initial and Continuing Calibration Verification

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CEQR

RunNo.: LB123757

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV						
Corrosivity		pH	6.99	7	100	90-110	01/20/2023
Sample ID:	CCV1						
Corrosivity		pH	2.02	2.00	101	90-110	01/20/2023
Sample ID:	CCV2						
Corrosivity		pH	12.03	12.00	100	90-110	01/20/2023



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Initial and Continuing Calibration Blank Summary

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CEQR

RunNo.: LB123753

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.0050	0.005	01/20/2023
Sample ID: CCB1 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.0050	0.005	01/20/2023
Sample ID: CCB2 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.0050	0.005	01/20/2023
Sample ID: CCB3 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.0050	0.005	01/20/2023



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Preparation Blank Summary

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CEQR

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: PB150286BL							
Reactive Sulfide	mg/Kg	< 5.0000	5.0000	U	10	10	01/20/2023
Sample ID: PB150350BL							
Reactive Cyanide	mg/Kg	< 0.0250	0.0250	U	0.05	0.05	01/20/2023



Matrix Spike Summary

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project:

Sample ID:

Client ID:

Percent Solids for Spike Sample:

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
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284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Duplicate Sample Summary

Client:	Louis Berger U.S., Inc., A WSP Company	SDG No.:	O1232
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Sample ID:	O1159-02
Client ID:	TP-EDUP	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Reactive Sulfide	mg/Kg	+/-20	10.0	U	10.0	U	1	0		01/20/2023



Duplicate Sample Summary

Client:	Louis Berger U.S., Inc., A WSP Company	SDG No.:	O1232
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Sample ID:	O1172-02
Client ID:	TP-FDUP	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Reactive Cyanide	mg/Kg	+/-20	0.050	U	0.050	U	1	0		01/20/2023



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Duplicate Sample Summary

Client:	Louis Berger U.S., Inc., A WSP Company	SDG No.:	O1232
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Sample ID:	O1229-01
Client ID:	OK-02-011923DUP	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Paint Filter	ml/100gm	+/-20	1.00	U	1.00	U	1	0		01/20/2023



Duplicate Sample Summary

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CEQR

Sample ID: O1232-03

Client ID: WC-17DUP

Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Ignitability	oC	+/-20	NO		NO		1	0		01/20/2023



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Duplicate Sample Summary

Client:	Louis Berger U.S., Inc., A WSP Company	SDG No.:	O1232
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Sample ID:	O1255-02
Client ID:	BORING-1DUP	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Corrosivity	pH	+/-20	6.76		6.77		1	0.15		01/20/2023



Laboratory Control Sample Summary

Client:

Louis Berger U.S., Inc., A WSP Company

SDG No.:

O1232

Project:

Run No.:

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID								

RAW DATA

Analysis Method: 9034

ANALYST: Rubina

Parameter: Reactive Sulfide

SUPERVISOR REVIEW BY: Iwona

Run Number: LB123748

Constant: 16000

Normality1: 0.025

Normality2: 0.025

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE, 0.025N, 4LITRE	W2941
IODINE SOLUTION .025N 1L	W2924
Starch Solution, 4L	W2977

Seq	Lab ID	True Value (mg/l)	DF	Initial Weight (g)	Final Volume (ml)	T1 (ml)	T2 Initial	T2 Final	T2 Diff. (ml)	T1 - T2 Diff (mL)	Value Corrected With Blank	Result (ppm)	Anal Date	Anal Time
1	PB150286BL		1	5.00	50	2.00	0.00	1.92	1.92	0.08	0.00	0.00	01/20/2023	12:30
2	O1159-02		1	5.04	50	2.00	0.00	1.86	1.86	0.14	0.06	4.76	01/20/2023	12:33
3	O1159-02DUP		1	5.02	50	2.00	0.00	1.82	1.82	0.18	0.10	7.97	01/20/2023	12:35
4	O1159-05		1	5.03	50	2.00	0.00	1.84	1.84	0.16	0.08	6.36	01/20/2023	12:38
5	O1172-02		1	5.04	50	2.00	0.00	1.82	1.82	0.18	0.10	7.94	01/20/2023	12:40
6	O1180-02		1	5.05	50	2.00	0.00	1.88	1.88	0.12	0.04	3.17	01/20/2023	12:43
7	O1214-03		1	5.04	50	2.00	0.00	1.90	1.90	0.10	0.02	1.59	01/20/2023	12:46
8	O1214-06		1	5.06	50	2.00	0.00	1.84	1.84	0.16	0.08	6.32	01/20/2023	12:49
9	O1214-09		1	5.07	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	01/20/2023	12:52
10	O1214-12		1	5.02	50	2.00	0.00	1.82	1.82	0.18	0.10	7.97	01/20/2023	12:55
11	O1214-15		1	5.07	50	2.00	0.00	1.84	1.84	0.16	0.08	6.31	01/20/2023	12:58
12	O1217-02		1	5.06	50	2.00	0.00	1.86	1.86	0.14	0.06	4.74	01/20/2023	13:00

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 * Normality1) - ((T1 - Value Corrected With Blank) * Normality2)) * Constant / Initial Volume

Analysis Method: 9034

ANALYST: Rubina

Parameter: Reactive Sulfide

SUPERVISOR REVIEW BY: Iwona

Run Number: LB123748

Constant: 16000

Normality1: 0.025

Normality2: 0.025

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE, 0.025N, 4LITRE	W2941
IODINE SOLUTION .025N 1L	W2924
Starch Solution, 4L	W2977

Seq	Lab ID	True Value (mg/l)	DF	Initial Weight (g)	Final Volume (ml)	T1 (ml)	T2 Initial	T2 Final	T2 Diff. (ml)	T1 - T2 Diff (mL)	Value Corrected With Blank	Result (ppm)	Anal Date	Anal Time
13	O1217-15		1	5.02	50	2.00	0.00	1.82	1.82	0.18	0.10	7.97	01/20/2023	13:03
14	O1220-02		1	5.03	50	2.00	0.00	1.82	1.82	0.18	0.10	7.95	01/20/2023	13:06
15	O1220-05		1	5.06	50	2.00	0.00	1.82	1.82	0.18	0.10	7.91	01/20/2023	13:09
16	O1232-03		1	5.07	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	01/20/2023	13:11
17	O1233-10		1	5.05	50	2.00	0.00	1.88	1.88	0.12	0.04	3.17	01/20/2023	13:14
18	O1237-04		1	5.08	50	2.00	0.00	1.84	1.84	0.16	0.08	6.30	01/20/2023	13:17
19	O1238-02		1	5.06	50	2.00	0.00	1.86	1.86	0.14	0.06	4.74	01/20/2023	13:20
20	O1239-02		1	5.08	50	2.00	0.00	1.86	1.86	0.14	0.06	4.72	01/20/2023	13:23

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 * Normality1) - ((T1 - Value Corrected With Blank) * Normality2)) * Constant / Initial Volume

Analytical Summary Report

Analysis Method: 9095B

Reviewed By: RUBINA

Parameter: Paint Filter

Supervisor Review By: Iwona

Run Number: LB123751

BalanceID: WC-SC-4

Seq	LabID	ClientID	Dilution	Weight(g)	Inst.Conc (ml/100g)	Anal Date	Anal Time
1	O1229-01	OK-02-011923	1	100.04	0.00	01/20/2023	13:30
2	O1229-01DUP	OK-02-011923DUP	1	100.05	0.00	01/20/2023	13:38
3	O1232-03	WC-17	1	100.07	0.00	01/20/2023	13:45
4	O1233-10	WC-38	1	100.05	0.00	01/20/2023	13:52
5	O1234-01	EO-02-11923	1	100.05	0.00	01/20/2023	14:00
6	O1237-01	COMP-1-2-3A	1	100.02	0.00	01/20/2023	14:07
7	O1239-01	BORING-3	1	100.07	0.00	01/20/2023	14:15
8	O1239-02	BORING-3	1	100.05	0.00	01/20/2023	14:22
9	O1240-01	TR-05-011923	1	100.05	0.00	01/20/2023	14:30

WORKLIST(Hardcopy Internal Chain)

6123751

WorkList Name : pf1-20

WorkList ID : 166705

Department : Wet-Chemistry

Date : 01-20-2023 08:15:51

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/19/2023	Solid	O1229-01	Paint Filter	Cool 4 deg C	PSEG05	N11	OK-02-011923	01/19/2023	9095B
01/18/2023	Solid	O1232-03	Paint Filter	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	9095B
01/18/2023	Solid	O1233-10	Paint Filter	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	9095B
01/19/2023	Solid	O1234-01	Paint Filter	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	9095B
01/19/2023	Solid	O1237-01	Paint Filter	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	9095B
01/19/2023	Solid	O1239-01	Paint Filter	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	9095B
01/19/2023	Solid	O1239-02	Paint Filter	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	9095B
01/19/2023	Solid	O1240-01	Paint Filter	Cool 4 deg C	PSEG05	N12	TR-05-011923	01/19/2023	9095B

Date/Time 01/26/2023 13:15
 Raw Sample Received by: RM
 Raw Sample Relinquished by: R(COC)

Date/Time 01/26/2023 14:46
 Raw Sample Received by: R(COC)
 Raw Sample Relinquished by: RM

LB123753

Test results

Aquakem 7.2AQ1

Page:

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : 12 Instrument ID : Konelab

1/20/2023 14:53

Test: Total CN

Sample Id	^{mg/l} Result	Dil. 1 +	Response	Errors
ICV1	98.330	0.0	0.066	
ICB1	1.000	0.0	0.002	
CCV1	247.371	0.0	0.164	
CCB1	0.378	0.0	0.001	
PB150350BL	0.692	0.0	0.002	
O1172-02	0.442	0.0	0.001	
O1172-02DUP	0.193	0.0	0.001	
O1180-02	0.271	0.0	0.001	
O1214-03	0.243	0.0	0.001	
O1214-06	0.332	0.0	0.001	
O1214-09	0.243	0.0	0.001	
O1214-12	0.279	0.0	0.001	
O1214-15	0.304	0.0	0.001	
O1217-02	0.256	0.0	0.001	
CCV2	258.627	0.0	0.171	
CCB2	0.529	0.0	0.001	
O1217-15	0.116	0.0	0.001	
O1220-02	0.100	0.0	0.001	
O1220-05	0.297	0.0	0.001	
O1232-03	0.313	0.0	0.001	
O1233-10	0.307	0.0	0.001	
O1237-04	0.177	0.0	0.001	
O1238-02	0.334	0.0	0.001	
O1239-02	0.198	0.0	0.001	
CCV3	257.436	0.0	0.170	
CCB3	0.620	0.0	0.001	
N	26			
Mean	33.438			
SD	83.6553			
CV%	250.18			

Aquakem v. 7.2AQ1

Results from time period:

Fri Jan 20 10:35:15 2023

Fri Jan 20 14:34:06 2023

Sample Id	Sam/Ctr/c	Test short	Test type	Result	Result unit	Result date and time	Stat
0.0PPBCN	A	Total CN	P	0.3934	µg/l	1/20/2023 11:00:34	
5.0PPBCN	A	Total CN	P	4.3622	µg/l	1/20/2023 11:00:35	
10PPBCN	A	Total CN	P	10.9073	µg/l	1/20/2023 11:00:36	
50PPBCN	A	Total CN	P	53.7141	µg/l	1/20/2023 11:00:37	
100PPBCN	A	Total CN	P	103.6105	µg/l	1/20/2023 11:00:38	
250PPBCN	A	Total CN	P	236.2356	µg/l	1/20/2023 11:00:39	
500PPBCN	A	Total CN	P	505.7769	µg/l	1/20/2023 11:00:40	
ICV1	S	Total CN	P	98.3304	µg/l	1/20/2023 14:15:36	
ICB1	S	Total CN	P	0.9996	µg/l	1/20/2023 14:15:37	
CCV1	S	Total CN	P	247.3706	µg/l	1/20/2023 14:15:40	
CCB1	S	Total CN	P	0.3782	µg/l	1/20/2023 14:15:42	
PB150350BL	S	Total CN	P	0.6916	µg/l	1/20/2023 14:15:44	
O1172-02	S	Total CN	P	0.4417	µg/l	1/20/2023 14:15:45	
O1172-02DUP	S	Total CN	P	0.1933	µg/l	1/20/2023 14:23:07	
O1180-02	S	Total CN	P	0.2714	µg/l	1/20/2023 14:23:08	
O1214-03	S	Total CN	P	0.2432	µg/l	1/20/2023 14:23:09	
O1214-06	S	Total CN	P	0.3318	µg/l	1/20/2023 14:23:10	
O1214-09	S	Total CN	P	0.243	µg/l	1/20/2023 14:23:11	
O1214-12	S	Total CN	P	0.2787	µg/l	1/20/2023 14:23:12	
O1214-15	S	Total CN	P	0.3044	µg/l	1/20/2023 14:23:13	
O1217-02	S	Total CN	P	0.2558	µg/l	1/20/2023 14:23:14	
CCV2	S	Total CN	P	258.6273	µg/l	1/20/2023 14:23:16	
CCB2	S	Total CN	P	0.5287	µg/l	1/20/2023 14:23:17	
O1217-15	S	Total CN	P	0.1158	µg/l	1/20/2023 14:30:42	
O1220-02	S	Total CN	P	0.0996	µg/l	1/20/2023 14:30:43	
O1220-05	S	Total CN	P	0.2972	µg/l	1/20/2023 14:30:44	
O1232-03	S	Total CN	P	0.3131	µg/l	1/20/2023 14:30:45	
O1233-10	S	Total CN	P	0.3074	µg/l	1/20/2023 14:30:46	
O1237-04	S	Total CN	P	0.1767	µg/l	1/20/2023 14:30:47	
O1238-02	S	Total CN	P	0.3343	µg/l	1/20/2023 14:30:48	
O1239-02	S	Total CN	P	0.198	µg/l	1/20/2023 14:30:49	
CCV3	S	Total CN	P	257.4355	µg/l	1/20/2023 14:30:51	
CCB3	S	Total CN	P	0.6196	µg/l	1/20/2023 14:30:52	

Calibration results

Aquakem 7.2AQ1

Page:

CHEMTECH CONSULTING GROUP INC

284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : 12

Instrument ID : Konelab

1/20/2023 11:07

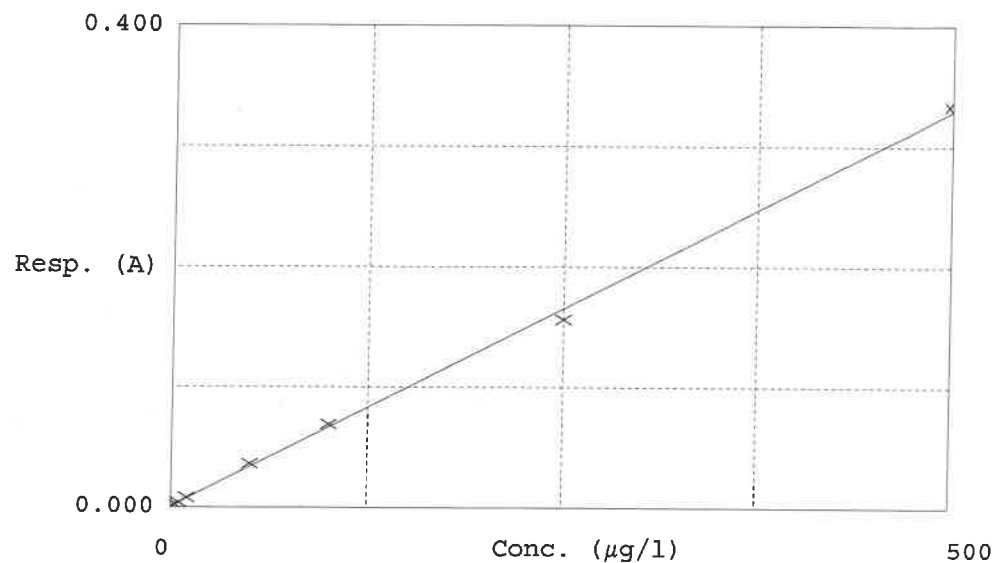
Test Total CN

Accepted 1/20/2023 11:07

Factor 1522
Bias 0.001

Coeff. of det. 0.998780

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN	0.001	0.3934	0.0000	—
2	5.0PPBCN	0.004	4.3622	5.0000	-12.8
3	10PPBCN	0.008	10.9073	10.0000	9.1
4	50PPBCN	0.036	53.7141	50.0000	7.4
5	100PPBCN	0.069	103.6105	100.0000	3.6
6	250PPBCN	0.156	236.2356	250.0000	-5.5
7	500PPBCN	0.333	505.7769	500.0000	12

12

1/20/23

Analytical Summary Report

Analysis Method: 1030
Parameter: Ignitability
Run Number: LB123756

Reviewed By: RUBINA
Supervisor Review By: Iwona

Seq	LabID	ClientID	DF	matrix	Result Status	Burning Rate	Anal Date	Anal Time
1	O1232-03	WC-17	1	Solid	NO	0.00	01/20/2023	15:40
2	O1232-03DUP	WC-17DUP	1	Solid	NO	0.00	01/20/2023	15:47
3	O1233-10	WC-38	1	Solid	NO	0.00	01/20/2023	15:55
4	O1237-04	COMP-1-2-3A	1	Solid	NO	0.00	01/20/2023	16:02
5	O1238-02	RBRB22281-OILY-DEBR	1	Solid	NO	0.00	01/20/2023	16:09
6	O1239-01	BORING-3	1	Solid	NO	0.00	01/20/2023	16:16
7	O1251-02	COMP-1	1	Solid	NO	0.00	01/20/2023	16:23
8	O1251-08	COMP-2	1	Solid	NO	0.00	01/20/2023	16:30
9	O1252-01	MH-9	1	Solid	NO	0.00	01/20/2023	16:37
10	O1255-01	BORING-1	1	Solid	NO	0.00	01/20/2023	16:45

$$\text{Burning Rate} = \frac{\text{Length (mm)}}{\text{Total Time (sec)}}$$

WORKLIST(Hardcopy Internal Chain)

66123756

WorkList Name: ign1-20 WorkList ID: 166706 Department: Wet-Chemistry Date: 01-20-2023 08:17:16

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/24/2023	Solid	O1232-03	Ignitability	Cool 4 deg C	louj01	N11	WC-17	01/18/2023	1030
01/24/2023	Solid	O1233-10	Ignitability	Cool 4 deg C	louj01	N11	WC-38	01/18/2023	1030
01/24/2023	Solid	O1237-04	Ignitability	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	1030
01/24/2023	Solid	O1238-02	Ignitability	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	1030
01/26/2023	Solid	O1239-01	Ignitability	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	1030
01/25/2023	Solid	O1251-02	Ignitability	Cool 4 deg C	SOUN03	N11	COMP-1	01/20/2023	1030
01/25/2023	Solid	O1251-08	Ignitability	Cool 4 deg C	SOUN03	N11	COMP-2	01/20/2023	1030
01/27/2023	Solid	O1252-01	Ignitability	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	1030
01/27/2023	Solid	O1255-01	Ignitability	Cool 4 deg C	PSEG03	N11	BORING-1	01/20/2023	1030

Date/Time 01/20/2023 15:40
 Raw Sample Received by: RM CWC
 Raw Sample Relinquished by: POC

Date/Time 01/20/2023
 Raw Sample Received by: POC
 Raw Sample Relinquished by: RM CWC

Analytical Summary Report

Analysis Method: 9045D

Analyst By : jignesh

Parameter: Corrosivity

Supervisor Review By : Iwona

Run Number: LB123757

Slope : 99.2

BalanceID: WC SC-4

pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W2980
BUFFER PH 7.00 GREEN 1PINT PK6	W2981
PH 10.01 BUFFER,COLOR CD 475ML	W2888
buffer solution pH 7 yellow	W2887
Buffer Solution, PH2 (500ml)	W2806
pH 12.00 Buffer	W2940

True Value of ICV = 7.00 Control Limits[+/- 0.1].

True Value of CCV1 = 2.00 Control Limits[+/- 0.1].

True Value of CCV2 = 12.00 Control Limits[+/- 0.1].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.8	4.01	01/20/2023	16:30
2	CAL2	1	Water	NA	NA	20.8	7.00	01/20/2023	16:31
3	CAL3	1	Water	NA	NA	20.8	10.03	01/20/2023	16:32
4	ICV	1	Water	NA	NA	20.7	6.99	01/20/2023	16:35
5	CCV1	1	Water	NA	NA	20.7	2.02	01/20/2023	16:37
6	O1232-03	1	Solid	20.02	20	20.6	8.38	01/20/2023	16:40
7	O1233-10	1	Solid	20.03	20	20.2	7.45	01/20/2023	16:42
8	O1237-04	1	Solid	20.04	20	21.8	6.13	01/20/2023	16:45
9	O1238-02	1	Solid	20.02	20	21.6	6.36	01/20/2023	16:48
10	O1239-02	1	Solid	20.03	20	21.9	7.33	01/20/2023	16:52
11	O1251-02	1	Solid	20.04	20	20.5	8.72	01/20/2023	17:00
12	O1251-08	1	Solid	20.03	20	20.5	8.94	01/20/2023	17:02
13	O1252-03	1	Solid	20.02	20	20.2	8.51	01/20/2023	17:05
14	O1255-02	1	Solid	20.03	20	20.5	6.76	01/20/2023	17:10
15	O1255-02DUP	1	Solid	20.04	20	20.5	6.77	01/20/2023	17:11
16	CCV2	1	Water	NA	NA	20.8	12.03	01/20/2023	17:12

WORKLIST(Hardcopy Internal Chain)

1234567

WorkList Name : CORROSIIVITY O1239

WorkList ID : 166736

Department : Wet-Chemistry

Date : 01-20-2023 12:10:42

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/18/2023	Solid	O1232-03	Corrosivity	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	9045D
01/18/2023	Solid	O1233-10	Corrosivity	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	9045D
01/19/2023	Solid	O1237-04	Corrosivity	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	9045D
01/19/2023	Solid	O1238-02	Corrosivity	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	9045D
01/19/2023	Solid	O1239-02	Corrosivity	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	9045D
01/20/2023	Solid	O1251-02	Corrosivity	Cool 4 deg C	SOUN03	N11	COMP-1	01/20/2023	9045D
01/20/2023	Solid	O1251-08	Corrosivity	Cool 4 deg C	SOUN03	N11	COMP-2	01/20/2023	9045D
01/20/2023	Solid	O1252-03	Corrosivity	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	9045D
01/20/2023	Solid	O1255-02	Corrosivity	Cool 4 deg C	PSEG03	N11	BORING-1	01/20/2023	9045D

Date/Time

01-20-23 16:10

Raw Sample Received by:

JP (WC)

Raw Sample Relinquished by:

JP (WC)

Date/Time

01-20-23

Raw Sample Received by:

JP (WC)

Raw Sample Relinquished by:

JP (WC)

SOP ID : M9030B-Sulfide-12

SDG No : N/A

Matrix : SOIL

Pipette ID : N/A

Balance ID : WC SC-4

Hood ID : HOOD#1

Block ID : MC-1,MC-2

Weigh By : RM

Start Digest Date: 01/20/2023 Time : 08:35 Temp : N/A

End Digest Date: 01/20/2023 Time : 10:05 Temp : N/A

Tub batch 01/20/2023 10:26
01/20/2023 11:50

Digestion tube ID : M5216

Block Thermometer ID : N/A

Filter paper ID : N/A

Prep Technician Signature: RM

pH Meter ID : N/A

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
PBS003	50ml	W2606
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.5M ZINC ACETATE	5.0ML	WP98732
FORMALDEHYDE	2.0ML	W2724
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
	Preparation Group	Analysis Group

01/24/2023

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
O1159-02	TP-E	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
O1159-02DUP	TP-EDUP	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1159-05	MH-6	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
O1172-02	TP-F	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
O1180-02	MH-7	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-03	TJRC-011723-B3-0-10	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-06	TJRC-011723-B3-10-20	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-09	TJRC-011723-B3-0-10-DUP	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-12	TJRC-011823-B3-20-30	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-15	TJRC-011823-B3-30-40	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
O1217-02	BORING-4	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1217-15	BORING-2	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1220-02	MH-8	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
O1220-05	TP-G	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1232-03	WC-17	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
O1233-10	WC-38	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1237-04	COMP-1-2-3A	5.08	50	N/A	N/A	N/A	N/A	N/A	N/A
O1238-02	RBRB22281-OILY-DEBRIS	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1239-02	BORING-3	5.08	50	N/A	N/A	N/A	N/A	N/A	N/A
PB150286BL	PBS286	5.00	50	N/A	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : R-S-S1-19 WorkList ID : 166702 Department : Distillation Date : 01-19-2023 17:04:05

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/20/2023	Solid	O1159-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N51	TP-E	01/13/2023	9034
01/20/2023	Solid	O1159-05	Reactive Sulfide	Cool 4 deg C	PSEG03	N51	MH-6	01/13/2023	9034
01/23/2023	Solid	O1172-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N61	TP-F	01/16/2023	9034
01/24/2023	Solid	O1180-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N11	MH-7	01/17/2023	9034
01/31/2023	Solid	O1214-03	Reactive Sulfide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-0-10	01/17/2023	9034
01/31/2023	Solid	O1214-06	Reactive Sulfide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-10-20	01/17/2023	9034
01/31/2023	Solid	O1214-09	Reactive Sulfide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-0-10-DUP	01/17/2023	9034
01/31/2023	Solid	O1214-12	Reactive Sulfide	Cool 4 deg C	ENTE01	N62	TJRC-011823-B3-20-30	01/18/2023	9034
01/31/2023	Solid	O1214-15	Reactive Sulfide	Cool 4 deg C	ENTE01	N62	TJRC-011823-B3-30-40	01/18/2023	9034
01/25/2023	Solid	O1217-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N62	BORING-4	01/18/2023	9034
01/25/2023	Solid	O1217-15	Reactive Sulfide	Cool 4 deg C	PSEG03	N62	BORING-2	01/18/2023	9034
01/25/2023	Solid	O1220-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N62	MH-8	01/18/2023	9034
01/25/2023	Solid	O1220-05	Reactive Sulfide	Cool 4 deg C	PSEG03	N62	TP-G	01/18/2023	9034
01/24/2023	Solid	O1232-03	Reactive Sulfide	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	9034
01/24/2023	Solid	O1233-10	Reactive Sulfide	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	9034
01/24/2023	Solid	O1237-04	Reactive Sulfide	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	9034
01/24/2023	Solid	O1238-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	9034
01/26/2023	Solid	O1239-02	Reactive Sulfide	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	9034

Date/Time 01/20/2023 08:20
Raw Sample Received by: RM CWG
Raw Sample Relinquished by: RCOG

Date/Time 01/20/2023 09:10
Raw Sample Received by: RCOG
Raw Sample Relinquished by: RCOG

SOP ID : M9012B-Total, Amenable and Reactive Cyanide-20

SDG No : N/A

Start Digest Date: 01/20/2023 **Time :** 12:00 **Temp :** N/A

Matrix : SOIL

End Digest Date: 01/20/2023 **Time :** 13:30 **Temp :** N/A

Pipette ID : N/A

Balance ID : WC SC-4

Hood ID : HOOD#1

Digestion tube ID : M5216

Block Thermometer ID : N/A

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: 12

Weigh By : IZ

pH Meter ID : N/A

Supervisor Signature: 14

Standardized Name	MLS USED	STD REF. # FROM LOG
PBS003	50ml	W2606
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.25N NaOH	50.0ML	WP99896
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Comment

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/20/23 13:45	12, 102	12 (JC)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
O1172-02	TP-F	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1172-02DUP	TP-FDUP	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
O1180-02	MH-7	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-03	TJRC-011723-B3-0-10	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-06	TJRC-011723-B3-10-20	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-09	TJRC-011723-B3-0-10-DUP	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-12	TJRC-011823-B3-20-30	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1214-15	TJRC-011823-B3-30-40	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
O1217-02	BORING-4	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
O1217-15	BORING-2	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
O1220-02	MH-8	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1220-05	TP-G	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
O1232-03	WC-17	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
O1233-10	WC-38	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1237-04	COMP-1-2-3A	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
O1238-02	RBRB22281-OILY-DEBRIS	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
O1239-02	BORING-3	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
PB150350BL	PBS350	5.00	50	N/A	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : RCN-012023

WorkList ID : 166717

Department : Distillation

Date : 01-20-2023 09:32:05

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/23/2023	Solid	O1172-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N61	TP-F	01/16/2023	9012B
01/24/2023	Solid	O1180-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N11	MH-7	01/17/2023	9012B
01/31/2023	Solid	O1214-03	Reactive Cyanide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-0-10	01/17/2023	9012B
01/31/2023	Solid	O1214-06	Reactive Cyanide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-10-20	01/17/2023	9012B
01/31/2023	Solid	O1214-09	Reactive Cyanide	Cool 4 deg C	ENTE01	N62	TJRC-011723-B3-0-10-DUP	01/17/2023	9012B
01/31/2023	Solid	O1214-12	Reactive Cyanide	Cool 4 deg C	ENTE01	N62	TJRC-011823-B3-20-30	01/18/2023	9012B
01/31/2023	Solid	O1214-15	Reactive Cyanide	Cool 4 deg C	ENTE01	N62	TJRC-011823-B3-30-40	01/18/2023	9012B
01/25/2023	Solid	O1217-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N62	BORING-4	01/18/2023	9012B
01/25/2023	Solid	O1217-15	Reactive Cyanide	Cool 4 deg C	PSEG03	N62	BORING-2	01/18/2023	9012B
01/25/2023	Solid	O1220-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N62	MH-8	01/18/2023	9012B
01/25/2023	Solid	O1220-05	Reactive Cyanide	Cool 4 deg C	PSEG03	N62	TP-G	01/18/2023	9012B
01/24/2023	Solid	O1232-03	Reactive Cyanide	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	9012B
01/24/2023	Solid	O1233-10	Reactive Cyanide	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	9012B
01/24/2023	Solid	O1237-04	Reactive Cyanide	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	9012B
01/24/2023	Solid	O1238-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	9012B
01/26/2023	Solid	O1239-02	Reactive Cyanide	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	9012B

Date/Time 01/20/23 11:40
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 01/20/23 12:15
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]



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

Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QC Batch ID # LB123748

Review By	Rubina	Review On	1/20/2023 2:03:16 PM
Supervise By	Iwona	Supervise On	1/20/2023 2:04:05 PM
SubDirectory	LB123748	Test	Reactive Sulfide
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W2941,W2924,W2977		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	PB150286BL	PB150286BL	MB	01/20/23 12:30		Rubina	OK
2	O1159-02	TP-E	SAM	01/20/23 12:33		Rubina	OK
3	O1159-02DUP	TP-EDUP	DUP	01/20/23 12:35		Rubina	OK
4	O1159-05	MH-6	SAM	01/20/23 12:38		Rubina	OK
5	O1172-02	TP-F	SAM	01/20/23 12:40		Rubina	OK
6	O1180-02	MH-7	SAM	01/20/23 12:43		Rubina	OK
7	O1214-03	TJRC-011723-B3-0-10	SAM	01/20/23 12:46		Rubina	OK
8	O1214-06	TJRC-011723-B3-10-2	SAM	01/20/23 12:49		Rubina	OK
9	O1214-09	TJRC-011723-B3-0-10	SAM	01/20/23 12:52		Rubina	OK
10	O1214-12	TJRC-011823-B3-20-3	SAM	01/20/23 12:55		Rubina	OK
11	O1214-15	TJRC-011823-B3-30-4	SAM	01/20/23 12:58		Rubina	OK
12	O1217-02	BORING-4	SAM	01/20/23 13:00		Rubina	OK
13	O1217-15	BORING-2	SAM	01/20/23 13:03		Rubina	OK
14	O1220-02	MH-8	SAM	01/20/23 13:06		Rubina	OK
15	O1220-05	TP-G	SAM	01/20/23 13:09		Rubina	OK
16	O1232-03	WC-17	SAM	01/20/23 13:11		Rubina	OK
17	O1233-10	WC-38	SAM	01/20/23 13:14		Rubina	OK
18	O1237-04	COMP-1-2-3A	SAM	01/20/23 13:17		Rubina	OK
19	O1238-02	RBRB22281-OILY-DE	SAM	01/20/23 13:20		Rubina	OK
20	O1239-02	BORING-3	SAM	01/20/23 13:23		Rubina	OK



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Instrument ID: FILTER/GRAVIMETRIC

Daily Analysis Runlog For Sequence/QC Batch ID # LB123751

Review By	RUBINA	Review On	1/20/2023 4:08:26 PM
Supervise By	Iwona	Supervise On	1/20/2023 4:15:58 PM
SubDirectory	LB123751	Test	Paint Filter
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	N/A		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	O1229-01	OK-02-011923	SAM	01/20/23 13:30		RUBINA	OK
2	O1229-01DUP	OK-02-011923DUP	DUP	01/20/23 13:38		RUBINA	OK
3	O1232-03	WC-17	SAM	01/20/23 13:45		RUBINA	OK
4	O1233-10	WC-38	SAM	01/20/23 13:52		RUBINA	OK
5	O1234-01	EO-02-11923	SAM	01/20/23 14:00		RUBINA	OK
6	O1237-01	COMP-1-2-3A	SAM	01/20/23 14:07		RUBINA	OK
7	O1239-01	BORING-3	SAM	01/20/23 14:15		RUBINA	OK
8	O1239-02	BORING-3	SAM	01/20/23 14:22		RUBINA	OK
9	O1240-01	TR-05-011923	SAM	01/20/23 14:30		RUBINA	OK



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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB123753

Review By	Iwona	Review On	1/23/2023 9:31:50 AM
Supervise By	Sohil	Supervise On	1/23/2023 10:53:17 AM
SubDirectory	LB123753	Test	Reactive Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP100714,WP100715,WP100716,WP100717,WP100718,WP100719,WP100720
ICV Standard	WP100721
CCV Standard	WP100715
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP99212,WP100011,WP100722

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	01/20/23 11:00		Iwona	
2	5.0PPBCN	5.0PPBCN	CAL2	01/20/23 11:00		Iwona	
3	10PPBCN	10PPBCN	CAL3	01/20/23 11:00		Iwona	
4	50PPBCN	50PPBCN	CAL4	01/20/23 11:00		Iwona	
5	100PPBCN	100PPBCN	CAL5	01/20/23 11:00		Iwona	
6	250PPBCN	250PPBCN	CAL6	01/20/23 11:00		Iwona	
7	500PPBCN	500PPBCN	CAL7	01/20/23 11:00		Iwona	
8	ICV1	ICV1	ICV	01/20/23 14:15		Iwona	
9	ICB1	ICB1	ICB	01/20/23 14:15		Iwona	
10	CCV1	CCV1	CCV	01/20/23 14:15		Iwona	
11	CCB1	CCB1	CCB	01/20/23 14:15		Iwona	
12	PB150350BL	PB150350BL	MB	01/20/23 14:15		Iwona	
13	O1172-02	TP-F	SAM	01/20/23 14:15		Iwona	
14	O1172-02DUP	TP-FDUP	DUP	01/20/23 14:23		Iwona	
15	O1180-02	MH-7	SAM	01/20/23 14:23		Iwona	
16	O1214-03	TJRC-011723-B3-0-10	SAM	01/20/23 14:23		Iwona	
17	O1214-06	TJRC-011723-B3-10-2	SAM	01/20/23 14:23		Iwona	
18	O1214-09	TJRC-011723-B3-0-10	SAM	01/20/23 14:23		Iwona	
19	O1214-12	TJRC-011823-B3-20-3	SAM	01/20/23 14:23		Iwona	
20	O1214-15	TJRC-011823-B3-30-4	SAM	01/20/23 14:23		Iwona	



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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB123753

Review By	Iwona	Review On	1/23/2023 9:31:50 AM
Supervise By	Sohil	Supervise On	1/23/2023 10:53:17 AM
SubDirectory	LB123753	Test	Reactive Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP100714,WP100715,WP100716,WP100717,WP100718,WP100719,WP100720
ICV Standard	WP100721
CCV Standard	WP100715
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP99212,WP100011,WP100722

21	O1217-02	BORING-4	SAM	01/20/23 14:23		Iwona	
22	CCV2	CCV2	CCV	01/20/23 14:23		Iwona	
23	CCB2	CCB2	CCB	01/20/23 14:23		Iwona	
24	O1217-15	BORING-2	SAM	01/20/23 14:30		Iwona	
25	O1220-02	MH-8	SAM	01/20/23 14:30		Iwona	
26	O1220-05	TP-G	SAM	01/20/23 14:30		Iwona	
27	O1232-03	WC-17	SAM	01/20/23 14:30		Iwona	
28	O1233-10	WC-38	SAM	01/20/23 14:30		Iwona	
29	O1237-04	COMP-1-2-3A	SAM	01/20/23 14:30		Iwona	
30	O1238-02	RBRB22281-OILY-DE	SAM	01/20/23 14:30		Iwona	
31	O1239-02	BORING-3	SAM	01/20/23 14:30		Iwona	
32	CCV3	CCV3	CCV	01/20/23 14:30		Iwona	
33	CCB3	CCB3	CCB	01/20/23 14:30		Iwona	



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Instrument ID: FLAME

Daily Analysis Runlog For Sequence/QC Batch ID # LB123756

Review By	RUBINA	Review On	1/20/2023 4:59:01 PM
Supervise By	Iwona	Supervise On	1/23/2023 9:44:10 AM
SubDirectory	LB123756	Test	Ignitability
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	N/A		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	O1232-03	WC-17	SAM	01/20/23 15:40		RUBINA	OK
2	O1232-03DUP	WC-17DUP	DUP	01/20/23 15:47		RUBINA	OK
3	O1233-10	WC-38	SAM	01/20/23 15:55		RUBINA	OK
4	O1237-04	COMP-1-2-3A	SAM	01/20/23 16:02		RUBINA	OK
5	O1238-02	RBRB22281-OILY-DE	SAM	01/20/23 16:09		RUBINA	OK
6	O1239-01	BORING-3	SAM	01/20/23 16:16		RUBINA	OK
7	O1251-02	COMP-1	SAM	01/20/23 16:23		RUBINA	OK
8	O1251-08	COMP-2	SAM	01/20/23 16:30		RUBINA	OK
9	O1252-01	MH-9	SAM	01/20/23 16:37		RUBINA	OK
10	O1255-01	BORING-1	SAM	01/20/23 16:45		RUBINA	OK



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Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB123757

Review By	jignesh	Review On	1/20/2023 5:13:58 PM
Supervise By	Iwona	Supervise On	1/23/2023 9:43:16 AM
SubDirectory	LB123757	Test	Corrosivity
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W2980,W2981,W2888,W2887,W2806,W2940		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	01/20/23 16:30		Jignesh	OK
2	CAL2	CAL2	CAL	01/20/23 16:31		Jignesh	OK
3	CAL3	CAL3	CAL	01/20/23 16:32		Jignesh	OK
4	ICV	ICV	ICV	01/20/23 16:35		Jignesh	OK
5	CCV1	CCV1	CCV	01/20/23 16:37		Jignesh	OK
6	O1232-03	WC-17	SAM	01/20/23 16:40		Jignesh	OK
7	O1233-10	WC-38	SAM	01/20/23 16:42		Jignesh	OK
8	O1237-04	COMP-1-2-3A	SAM	01/20/23 16:45		Jignesh	OK
9	O1238-02	RBRB22281-OILY-DE	SAM	01/20/23 16:48		Jignesh	OK
10	O1239-02	BORING-3	SAM	01/20/23 16:52		Jignesh	OK
11	O1251-02	COMP-1	SAM	01/20/23 17:00		Jignesh	OK
12	O1251-08	COMP-2	SAM	01/20/23 17:02		Jignesh	OK
13	O1252-03	MH-9	SAM	01/20/23 17:05		Jignesh	OK
14	O1255-02	BORING-1	SAM	01/20/23 17:10		Jignesh	OK
15	O1255-02DUP	BORING-1DUP	DUP	01/20/23 17:11		Jignesh	OK
16	CCV2	CCV2	CCV	01/20/23 17:12		Jignesh	OK



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Prep Standard - Chemical Standard Summary

Order ID : O1232

Test : Corrosivity, Ignitability, Paint Filter, Percent Solids, Reactive Cyanide, Reactive Sulfide

Prepbatch ID : PB150286, PB150350,

Sequence ID/Qc Batch ID: LB123748, LB123751, LB123753, LB123756, LB123757,

Standard ID :

WP100011, WP100234, WP100712, WP100714, WP100715, WP100716, WP100717, WP100718, WP100719, WP100720, W
P100721, WP100722, WP98732, WP99212, WP99896,

Chemical ID :

M5260, M5376, W2263, W2355, W2492, W2563, W2606, W2668, W2724, W2806, W2845, W2887, W2888, W2895, W2898, W
2924, W2940, W2941, W2977, W2980, W2981,

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
607	PYRIDINE-BARBITURIC ACID	WP100011	11/25/2022	04/17/2023	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Sohil Jodhani
<u>FROM</u>	145.00000ml of W2606 + 15.00000gram of W2492 + 15.00000ml of M5376 + 75.00000ml of W2355 = Final Quantity: 250.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3371	Cyanide LCS Spike Solution, 5PPM	WP100234	12/13/2022	05/15/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 12/20/2022
<u>FROM</u>	1.00000ml of W2895 + 199.00000ml of WP99896 = Final Quantity: 200.000 ml							

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3456	Cyanide Intermediate Working Std, 5PPM	WP100712	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u>	0.25000ml of W2898 + 49.75000ml of WP99896 = Final Quantity: 50.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4	Calibration standard 500 ppb	WP100714	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u> 45.00000ml of WP99896 + 5.00000ml of WP100712 = Final Quantity: 50.000 ml								

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3761	Calibration-CCV CN Standard 250 ppb	WP100715	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u> 2.50000ml of WP100712 + 47.50000ml of WP99896 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
6	Calibration Standard 100 ppb	WP100716	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u>	1.00000ml of WP100712 + 49.00000ml of WP99896 = Final Quantity: 50.000 ml							

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
7	Calibration Standard 50 ppb	WP100717	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u>	0.50000ml of WP100712 + 49.50000ml of WP99896 = Final Quantity: 50.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
8	Calibration Standard 10 ppb	WP100718	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u>	1.00000ml of WP100714 + 49.00000ml of WP99896 = Final Quantity: 50.000 ml							

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
9	Calibration Standard 5 ppb	WP100719	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 01/20/2023
<u>FROM</u>	0.50000ml of WP100714 + 49.50000ml of WP99896 = Final Quantity: 50.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
167	0 ppb CN calibration std	WP100720	01/20/2023	01/21/2023	Iwona Zarych	None	None	Sohil Jodhani 01/20/2023
<u>FROM</u> 50.00000ml of WP99896 = Final Quantity: 50.000 ml								

CHEMTECH

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Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2168	RCN ICV STD, 100 PPB	WP100721	01/20/2023	01/21/2023	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Sohil Jodhani 01/20/2023

FROM 1.00000ml of WP100234 + 49.00000ml of WP99896 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1582	Chloramine T solution, 0.014M	WP100722	01/20/2023	01/21/2023	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Sohil Jodhani 01/20/2023

FROM 0.08000gram of W2263 + 20.00000ml of W2606 = Final Quantity: 20.000 ml

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
160	0.5M ZINC ACETATE	WP98732	08/30/2022	02/04/2023	Iwona Zarych	WETCHEM_SCALE_5 (WC-5)	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 09/06/2022
<u>FROM</u>	0.88900L of W2606 + 1.00000ml of M5260 + 110.00000gram of W2563 = Final Quantity: 1000.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
539	CN BUFFER	WP99212	09/30/2022	03/30/2023	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Sohil Jodhani
<u>FROM</u>	138.00000gram of W2668 + 862.00000ml of W2606 = Final Quantity: 1000.000 ml							

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
11	Sodium hydroxide absorbing solution 0.25 N	WP99896	11/15/2022	05/15/2023	Jignesh Parikh	WETCHEM_SCALE_4 (WCS-4)	None	Iwona Zarych 11/15/2022
<u>FROM</u> 21.00000L of W2606 + 210.00000gram of W2845 = Final Quantity: 21.000 L								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22E1662006	02/04/2023	08/16/2022 / Al-Terek	08/16/2022 / Al-Terek	M5260

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22E1662006	05/14/2023	11/22/2022 / jaswal	04/11/2022 / Al-Terek	M5376

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JTE494-6 / CHLORAMINE-T BAKER 250GM	0000162244	03/31/2023	07/27/2017 / apatel	07/27/2017 / apatel	W2263

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	270970-1L / Pyridine 1L	SHBJ2146	04/17/2023	05/22/2018 / AMANDEEP	04/17/2018 / apatel	W2355

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-BX0035-3 / Barbituric Acid, 100 gms	L017156232813	02/19/2024	02/19/2019 / apatel	02/19/2019 / apatel	W2492

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J4296-1 / ZINC ACETATE,DIHYD,CRYST,AC S,500G	0000215661	03/14/2024	05/19/2021 / ketankumar	07/12/2019 / apatel	W2563

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYST, ACS, 2.5 KG	0000225799	12/03/2025	04/05/2021 / Alexander	02/10/2020 / apatel	W2668

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EMD-FX0410-5 / FORMALDEHYDE SOLUTION 450ML	60045	06/22/2025	08/12/2022 / ketankumar	06/22/2020 / apatel	W2724

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL13850-1 / Buffer Solution, PH2 (500ml)	4102M06	02/28/2023	03/16/2021 / apatel	03/15/2021 / apatel	W2806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	21C2456604	01/31/2024	03/30/2022 / JIGNESH	06/24/2021 / apatel	W2845

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14455-3 / buffer solution pH 7 yellow	211F16	11/30/2023	01/04/2022 / jignesh	12/29/2021 / JIGNESH	W2887

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	2110E30	04/30/2023	06/15/2022 / jignesh	12/29/2021 / JIGNESH	W2888

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	BCCD9263	10/31/2023	01/06/2022 / apatel	01/06/2022 / apatel	W2895

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	HC03107133	06/30/2023	01/24/2022 / apatel	01/24/2022 / apatel	W2898

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL35830-4 / IODINE SOLUTION .025N 1L	M046-10	09/02/2023	07/05/2022 / ketankumar	07/05/2022 / ketankumar	W2924

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
RICCA CHEMICAL COMPANY	1615-16 / pH 12.00 Buffer	4206h39	12/31/2023	09/01/2022 / jignesh	07/29/2022 / JIGNESH	W2940

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LITRE	M075-30	04/01/2023	10/31/2022 / Rubina	08/08/2022 / ketankumar	W2941



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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL70850-8 / Starch Solution, 4L	4210G90	10/31/2024	11/15/2022 / lwona	11/15/2022 / lwona	W2977

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	2206A61	05/31/2024	12/12/2022 / jignesh	12/05/2022 / jignesh	W2980

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	566002 / BUFFER PH 7.00 GREEN 1PINT PK6	4203B62	02/29/2024	12/12/2022 / jignesh	12/05/2022 / jignesh	W2981



Certificate of Analysis

1.00132.0100 Barbituric acid for analysis EMSURE®
Batch L017156232

	Spec. Values		Batch Values	
Assay (acidimetric)	≥ 99	%	99.3	%
Identity (IR-spectrum)	passes test		passes test	
Chloride (Cl)	≤ 40	ppm	≤ 40	ppm
Heavy metals (as Pb)	≤ 50	ppm	≤ 50	ppm
Fe (Iron)	≤ 10	ppm	≤ 10	ppm
Sulfated ash	≤ 0.1	%	≤ 0.1	%
Loss on Drying (105°C)	≤ 0.1	%	≤ 0.1	%
Suitability as reagent (for cyanide determination)	passes test		passes test	

Date of release (DD.MM.YYYY) 03.01.2018
Minimum shelf life (DD.MM.YYYY) 31.01.2023

Ioannis Chartomatsidis
Responsible laboratory manager quality control

This document has been produced electronically and is valid without a signature.



Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST $K_2[Zn(CN)_4]$ in H_2O
1000 mg/l CN Certipur®
Batch HC03107133

Batch Values

Concentration	β (CN ⁻)	1002	mg/l
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Determination method: Argentometric titration.

The content of this solution was determined with silver nitrate standard solution (article number 1.09081) standardized against volumetric standard sodium chloride (article number 1.02406). The expanded measurement uncertainty is $\pm 0.7\%$ ($k=2$ coverage factor for 95% coverage probability). The certified value is traceable to primary standard NIST SRM 999c (NIST: National Institute of Standards and Technology, USA) by means of volumetric standard sodium chloride, measured in the accredited calibration laboratory of Merck KGaA, Darmstadt, Germany in accordance to DIN EN ISO/IEC 17025.

Date of release (DD.MM.YYYY) 02.07.2020

Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim

Responsible laboratory manager quality control

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Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 21C2456604

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 01/06/2021
Expiration Date: 01/31/2024

Storage: Room Temperature

Pellets

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	<0.005 %	PASS
Heavy Metals	<= 0.002 %	<0.002 %	PASS
Iron	<= 0.001 %	<0.001 %	PASS
Magnesium	<= 0.002 %	<0.002 %	PASS
Mercury	<= 0.1 ppm	<0.1 ppm	PASS
Nickel	<= 0.001 %	<0.001 %	PASS
Nitrogen Compounds	<= 0.001 %	<0.001 %	PASS
Phosphate	<= 0.001 %	<0.001 %	PASS
Potassium	<= 0.02 %	<0.02 %	PASS
Purity	>= 97.0 %	98.7 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 603

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 21C2456604

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 01/06/2021
Expiration Date: 01/31/2024

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 603

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Pyridine - anhydrous, 99.8%

Product Number:

270970

Batch Number:

SHBJ2146

Brand:

SIAL

CAS Number:

110-86-1

MDL Number:

MFCD00011732

Formula:

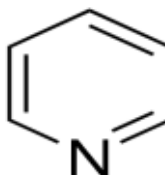
C₅H₅N

Formula Weight:

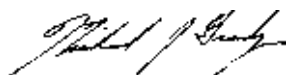
79.10 g/mol

Quality Release Date:

30 MAY 2017



Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 99.75 %	99.99 %
Water (by Karl Fischer)	≤ 0.003 %	0.002 %
Residue on Evaporation	≤ 0.0005 %	< 0.0001 %



Michael Grady, Manager

Quality Control

Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Certificate of Analysis

W2806 Recived by AP on 03/16/21

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C

Lot Number: 4102M06

Product Number: 1493

Manufacture Date: FEB 26, 2021

Expiration Date: FEB 2023

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	10	15	20	25	30	35	40	45	50
pH	1.93	1.98	1.98	2.00	2.01	2.03	2.03	2.04	2.04

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Hydrochloric Acid	7647-01-0	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	1.990-2.010	1.999	185i, 186-I-g, 186-II-g
pH at 25°C (Method: SQCP027, SQCP033)	0.02	0.02	
Uncertainty			

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1493-1	4 L natural poly	24 months
1493-16	500 mL natural poly	24 months
1493-1CT	4 L Cubitainer®	24 months
1493-2.5	10 L Cubitainer®	24 months
1493-32	1 L natural poly	24 months
1493-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jon Russell (02/26/2021)

Quality Control Supervisor

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."



This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Zinc Acetate, Dihydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent



Material No.: 4296-01
Batch No.: 0000215661
Manufactured Date: 2017/03/16
Retest Date: 2024/03/14
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS – Assay ((CH ₃ COO) ₂ Zn · 2H ₂ O)	99.0 – 101.0 %	100.0
ACS – Insoluble Matter	<= 0.005 %	< 0.001
ACS – pH of 5% Solution at 25°C	6.0 – 7.0	6.6
ACS – Sulfate (SO ₄)	<= 0.002 %	< 0.001
ACS – Calcium (Ca)	<= 0.005 %	< 0.001
ACS – Lead (Pb)	<= 0.002 %	< 0.001
ACS – Magnesium (Mg)	<= 0.005 %	< 0.001
ACS – Potassium (K)	<= 0.01 %	< 0.01
ACS – Sodium (Na)	<= 0.05 %	0.01
Chloride (Cl)	<= 5 ppm	< 3
Trace Impurities – Iron (Fe)	<= 5 ppm	< 3

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



Certificate of Analysis

Date of Release: 2/26/2020

Name: Formaldehyde Solution
GR ACS
Meets ACS Specifications

Item No: FX0410 all size codes

Lot / Batch No: 60045

Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay	36.5	38.0	36.71	%
Chloride (Cl)		5	<5	ppm
Color (APHA)		10	<10	
Form			Passes test	
Heavy metals (as Pb)		5	<5	ppm
Iron (Fe)		5	0.6	ppm
Residue after ignition		0.005	<0.0050	%
Sulfate (SO ₄)		0.002	<0.0020	%
Titrate acid		0.006	<0.0060	meq/g

Heather Sinn,

Quality Control Manager

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EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Chloramine-T, Trihydrate
BAKER



Material No.: E494-06
Batch No.: 0000162244
Manufactured Date: 2016/04/01
Retest Date: 2023/03/31

Certificate of Analysis

Test	Specification	Result
Active Chlorine	$\geq 11\%$	12

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008
Panoli, India 9001:2008

A handwritten signature in blue ink that reads 'Jamie Ethier'.
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor Performance Materials, LLC.

3477 Corporate Parkway. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



M5365 M5366 M5367
M5368 M5369 M5370

Material No.: 9530-33
Batch No.: 22E1662006
Manufactured Date: 2022-04-11
Retest Date: 2027-04-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	37.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	1.0 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 0.4 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	1.9 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530–33
Batch No.: 22E1662006

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530–33
Batch No.: 22E1662006
Manufactured Date: 2022–04–11
Retest Date: 2027–04–10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	37.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	1.0 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 0.4 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	1.9 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530–33
Batch No.: 22E1662006

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Sodium Phosphate, Monobasic, Monohydrate,
Crystal
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)



Material No.: 3818-05
Batch No.: 0000225799
Manufactured Date: 2018/12/05
Retest Date: 2025/12/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$)	98.0 – 102.0 %	99.5
pH of 5% Solution at 25°C	4.1 – 4.5	4.3
Insoluble Matter	$\leq 0.01 \%$	< 0.01
Chloride (Cl)	$\leq 5 \text{ ppm}$	< 5
ACS – Sulfate (SO_4)	$\leq 0.003 \%$	< 0.003
Calcium (Ca)	$\leq 0.005 \%$	< 0.005
Potassium (K)	$\leq 0.01 \%$	< 0.01
Heavy Metals (as Pb)	$\leq 0.001 \%$	< 0.001
Trace Impurities – Iron (Fe)	$\leq 0.001 \%$	< 0.001

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: IN
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



Certificate of Analysis

W2887
50

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 2111F16

Product Number: 1551

Manufacture Date: NOV 19, 2021

Expiration Date: NOV 2023

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	45	50
pH	7.12	7.09	7.06	7.04	7.02	7.00	6.99	6.98	6.98	6.97	6.97

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Phosphate Dibasic	7558-79-4	ACS
Potassium Dihydrogen Phosphate	7778-77-0	ACS
Preservative	Proprietary	
Yellow Dye	Proprietary	
Sodium Hydroxide	1310-73-2	Reagent.

Test	Specification	Result	NIST SRM#
Appearance	Yellow liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	6.990-7.010	7.007	186-I-g, 186-II-g, 191d
pH at 25°C (Method: SQCP027, SQCP033)	0.01	0.01	
Uncertainty			

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer A	ASTM (D 5464)
Buffer A	ASTM (D 5128)

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434: it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1551-1	4 L natural poly	24 months
1551-1CS	4 x 4 L natural poly	24 months
1551-1CT	4 L Cubitainer®	24 months
1551-2.5	10 L Cubitainer®	24 months
1551-32	1 L natural poly	24 months
1551-5	20 L Cubitainer®	24 months



Certificate of Analysis

W2886
LB

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 2110E30

Product Number: 1601

Manufacture Date: OCT 14, 2021

Expiration Date: APR 2023

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	50
pH	10.31	10.23	10.17	10.11	10.05	10.00	9.95	9.91	9.87	9.81

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Carbonate	497-19-8	ACS
Sodium Bicarbonate	144-55-8	ACS
Sodium Hydroxide	1310-73-2	Reagent
Preservative	Proprietary	
Blue Dye	Proprietary	

Test	Specification	Result	NIST SRM#
Appearance	Blue liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	9.990-10.010	10.005	186-I-g, 186-II-g, 191d
pH at 25°C (Method: SQCP027, SQCP033)	0.01	0.01	
Uncertainty			

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer C	ASTM (D 5464)
Buffer C	ASTM (D 5128)

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1601-1	4 L natural poly	18 months
1601-1CS	4 x 4 L natural poly	18 months
1601-1CT	4 L Cubitainer®	18 months
1601-2.5	10 L Cubitainer®	18 months
1601-32	1 L natural poly	18 months
1601-5	20 L Cubitainer®	18 months

Certificate of Analysis – Certified Reference Material

Cyanide Standard for IC

TraceCERT®
Traceable Certified Reference Materials

Product no.: 90157
Lot no.: BCCD9263
Description of CRM: $K_2[Zn(CN)_4]$ (pure material) in high-purity water (18.2 MΩ.cm, 0.22 μm filtered).
Expiry date: OCT 2023
Storage: Store at 5°C-25°C
Density (certified) at 20°C: 999.6 kg m⁻³ ± 0.5 kg m⁻³

Constituent	Certified values at 20°C and expanded uncertainties, $U = k \cdot u$ ($k = 2$) ^{[1][2]}			
Cyanide	1000 mg kg ⁻¹	± 9 mg kg ⁻¹	1000 mg L ⁻¹	± 9 mg L ⁻¹

Metrological traceability: Directly traceable to NIST SRM 919b. ^[3]
Measurement method: Argentometric titration
Intended use: Calibration of ion chromatography or any other analytical technique.
Instructions for handling and correct use: The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
Health and safety information: Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
Packaging: 100 mL HDPE bottle
Accreditation: Sigma-Aldrich Production GmbH is accredited by the Swiss accreditation authority SAS as registered reference material producer SRMS 0001 in accordance with ISO 17034 and registered testing laboratory STS 0490 according to ISO/IEC 17025. ^{[4][5]}
Certificate issue date: 15 DEC 2020

ISO 17034
SRMS 0001ISO/IEC 17025
STS 0490ISO 9001
005356 QM08

S. Matt

S. Matt – CRM Operations

Dr. P. Zell

Dr. P. Zell – Approving Officer



Certification process details:

The certified value of the content (mg/kg) is determined using argentometric titration. The mean value is based on seven individual measurements. All measurements are traced gravimetrically to an internationally accepted reference material e.g. from NIST (USA) or BAM (Germany).

Homogeneity assessment:

Due to the production process, a homogeneous solution derives. Nevertheless a small homogeneity contribution is included into the calculation of content uncertainty of this CRM.

Density Measurement:

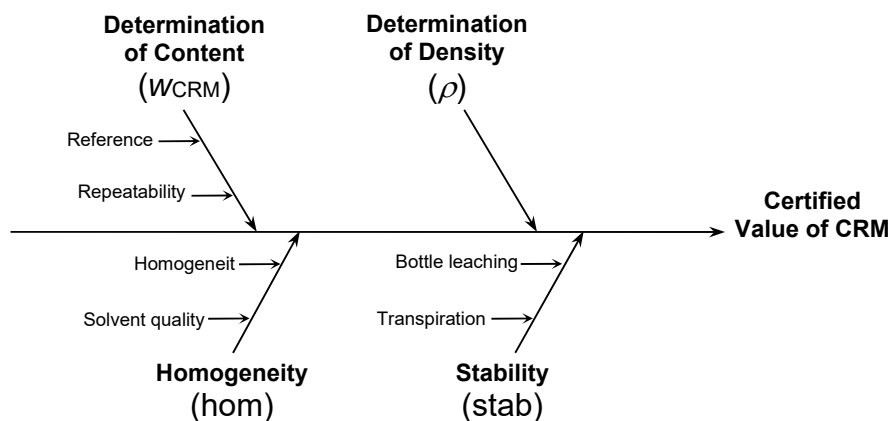
The density measurement is carried out under the scope of the ISO/IEC 17025 accreditation according to ISO 15212-1 [6] and using the digital density meter DMA 4500M from Anton Paar with an oscillating U-tube installed. The measurement uncertainty is calculated according to Eurachem/CITAC Guide and reported as combined expanded uncertainty at the 95% confidence level, using a coverage factor of $k = 2$.

Uncertainty evaluation:

The uncertainty contributions are illustrated by the following cause-effect diagram:

Typical relative contributions are:

$u(W_{\text{CRM}})$	0.1 – 0.3 %
u_{hom}	< 0.03 %
u_{stab}	< 0.09 %
$u(\rho)$	< 0.05 %



The combined standard uncertainty is calculated by combination of the standard uncertainties of the input estimates according to Eurachem/CITAC Guide "Quantifying Uncertainty in Analytical Measurement" and ISO 17034.[2][4]

Expanded uncertainty is then calculated to a confidence level of 95%, typically by multiplying with a confidence level factor of $k=2$.

Trace Impurities in bottled solution:

The following anions were measured as possible impurities (in $\mu\text{g kg}^{-1}$, <X = below detection limit, m = matrix):

Bromide	Chloride	Fluoride	Iodide	Nitrite	Nitrate	Phosphate	Sulfate
< 12.5	2950	69	< 12.5	54	34	40	383

References:

- [1] ISO Guide 35:2017, "Reference materials - Guidance for characterization and assessment of homogeneity and stability"
- [2] Eurachem/CITAC Guide, 3rd Ed. (2012), "Quantifying uncertainty in analytical measurement"
- [3] Eurachem/CITAC Guide, 2nd Ed. (2019), "Metrological Traceability in chemical measurement"
- [4] ISO 17034:2016, "General requirements for the competence of reference material producers"
- [5] ISO/IEC 17025:2017, "General requirements for the competence of testing and calibration laboratories"
- [6] DIN EN ISO 15212-1:1998, Oscillation-type density meters - Part 1: Laboratory instruments

Certificate of analysis revision history:

Certificate version	Certificate issue date	Reason for version
01	15 DEC 2020	Initial version

Disclaimer:

The purchaser must determine the suitability of this product for its particular use. Sigma-Aldrich Production GmbH makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich Production GmbH. We do not guarantee that the product can be used for a special application.





W 2924
W 2925
Open 7/5/22

CERTIFICATE OF ANALYSIS

Description: IODINE, 0.025N (0.0125M)

Mfg. Date: 03/02/2022

Catalog Number: LC15620

Exp. Date: 09/02/2023

Lot Number: M046-10

ANALYTICAL SECTION

Test	Specification	Test Result
Appearance	red-brown solution	Pass Test
Normality	0.0250N +/- 0.0003N	0.0252N
Traceable to NIST	Potassium Dichromate	136f

Intended Use - Product is intended for use in manufacturing procedures and laboratory procedures and protocols.

Storage Information - Unless otherwise noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.

Instructions for Handling and Use - Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.

Preparation - All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST standards.

Submitted by: Greg Albright, Chemist Supervisor

An ISO9001:2015 certified company. Registration # 0306-01

07/05/2022 3:46 PM

Form #17.13 07/28/2016



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Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C

Lot Number: 4206H39

Product Number: 1615

Manufacture Date: JUN 21, 2022

Expiration Date: DEC 2023

The certified value for this product is confirmed in independent testing by a second qualified chemist.

°C	15	20	25	30	35	40
pH	12.35	12.17	11.99	11.78	11.62	11.46

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	11.990-12.010	12.002	186-I-g, 186-II-g, 191d
pH at 25°C (Method: SQCP027, SQCP033)	0.02	0.02	
Uncertainty			

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by $k=2$, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1615-1	4 L natural poly	18 months
1615-16	500 mL clear PET-G	18 months
1615-2.5	10 L Cubitainer®	18 months
1615-32	1 L natural poly	18 months
1615-5	20 L Cubitainer®	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

W2941

**CERTIFICATE OF ANALYSIS**

Description: SODIUM THIOSULFATE, 0.025N (0.025M)

Mfg. Date: 03/31/2022

Catalog Number: LC25020

Exp. Date: 04/01/2023

Lot Number: M075-30

ANALYTICAL SECTION

Test	Specification	Test Result
Appearance	clear, colorless solution	Pass Test
Normality	0.0250N +/- 0.0002N	0.0249N
Traceable to NIST	Potassium Dichromate	136f

Intended Use - Product is intended for use in manufacturing procedures and laboratory procedures and protocols.

Storage Information - Unless otherwise noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.

Instructions for Handling and Use - Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.

Preparation - All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST standards.

Submitted by: Greg Albright, Chemist Supervisor

An ISO9001:2015 certified company. Registration # 0306-01

08/01/2022 3:08 PM

Form #17.13 07/28/2016



W2977 Rec 11/15/22

Certificate of Analysis

Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4210G90

Product Number: 8000

Manufacture Date: OCT 17, 2022

Expiration Date: OCT 2024

This product is Mercury-free.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Starch, soluble	9005-84-9	ACS
Salicylic Acid	69-72-7	ACS

Test	Specification	Result
Appearance	White translucent liquid	Passed
Suitability for Use	Colorless (Iodine absent) - Blue (Iodine present)	Passed

Specification	Reference
Starch Solution	APHA (4500-S2- F)
Starch Indicator Solution	APHA (4500-CI B)
Starch Indicator	APHA (4500-SO32- B)
Starch indicator solution	APHA (2350 B)
Starch indicator solution	APHA (2350 E)
Starch Solution	APHA (510 B)
Starch Solution	APHA (5530 C)
Starch Indicator	APHA (4500-CI C)
Starch Indicator	EPA (345.1)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
8000-1	4 L natural poly	24 months
8000-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (10/17/2022)

Production Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Certificate of Analysis

W2980
30
094141
12/12/2022

Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C (Color Coded Red)

Lot Number: 2206A61

Product Number: 1501

Manufacture Date: JUN 08, 2022

Expiration Date: MAY 2024

Certified value for this product is confirmed in independent testing by a second qualified chemist.

NIST Traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	45	50
pH	4.00	4.00	4.00	4.00	4.00	4.00	4.01	4.02	4.03	4.04	4.06

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Acid Phthalate	877-24-7	Buffer
Preservative	Proprietary	Commercial
Red Dye	Proprietary	Purified

Test	Specification	Result	NIST SRM#
Appearance	Red liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	3.990-4.010	4.010	185i, 186-I-g,
pH at 25°C (Method: SQCP027, SQCP033)	0.02	0.02	186-II-g
Uncertainty			

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Water B	ASTM (D 5464)
Water B	ASTM (D 5128)

Measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1501-1	4 L natural poly	24 months
1501-1CT	4 L Cubitainer®	24 months
1501-32	1 L natural poly	24 months
1501-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

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Certificate of Analysis

W2481
DATE: 12/12/2022
JP

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)**Lot Number:** 4203B62**Product Number:** 1551**Manufacture Date:** MAR 04, 2022**Expiration Date:** FEB 2024

The certified value for this product is confirmed in independent testing by a second qualified chemist.

NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

	0	5	10	15	20	25	30	35	40	45	50
pH	7.12	7.09	7.06	7.04	7.02	7.00	6.99	6.98	6.98	6.97	6.97

Component	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Phosphate Dibasic	7558-79-4	ACS
Potassium Dihydrogen Phosphate	7778-77-0	ACS
Preservative	Proprietary	
Yellow Dye	Proprietary	
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result	NIST SRM#
Appearance	Yellow liquid	Passed	
pH at 25°C (Method: SQCP027, SQCP033)	6.990-7.010	7.000	186-I-g, 186-II-g, 191d
pH at 25°C (Method: SQCP027, SQCP033)	0.02	0.02	
Uncertainty			

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Water A	ASTM (D 5464)
Water A	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution.

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1551-1CT	4 L Cubitainer®	24 months
1551-2.5	10 L Cubitainer®	24 months
1551-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
O1229-01	OK-02-011923	1	1.12	8.72	9.84	8.73	87.3	
O1229-02	OK-02-011923-EPH-2	2	1.12	8.72	9.84	8.73	87.3	
O1230-01	BBC	3	1.15	8.45	9.6	9.47	98.5	
O1231-01	BBC	4	1.19	8.53	9.72	9.57	98.2	
O1232-01	B-P-17A	18	1.15	8.78	9.93	9.00	89.4	
O1232-02	B-P-17B	19	1.15	8.41	9.56	8.46	86.9	
O1232-03	WC-17	20	1.13	8.64	9.77	9.03	91.4	
O1232-04	B-P-18A	21	1.13	8.57	9.7	8.63	87.5	
O1232-05	B-P-18B	22	1.15	8.83	9.98	9.22	91.4	
O1232-06	B-P-19A	23	1.12	8.57	9.69	8.68	88.2	
O1232-07	B-P-19B	24	1.18	8.35	9.53	8.53	88.0	
O1232-08	B-P-35A	25	1.13	8.62	9.75	9.00	91.3	
O1232-09	B-P-35B	26	1.17	8.53	9.7	9.13	93.3	
O1232-10	DUP01	27	1.15	8.80	9.95	9.08	90.1	
O1233-02	B-P34A	28	1.13	8.76	9.89	8.6	85.3	
O1233-03	B-P34B	29	1.13	8.71	9.84	9.03	90.7	
O1233-04	B-P36A	30	1.16	8.75	9.91	9.00	89.6	
O1233-05	B-P36B	31	1.13	8.84	9.97	9.12	90.4	
O1233-06	B-P37A	32	1.18	8.60	9.78	8.74	87.9	
O1233-07	B-P37B	33	1.18	8.38	9.56	8.18	83.5	
O1233-08	B-P38A	34	1.12	8.66	9.78	8.85	89.3	
O1233-09	B-P38B	35	1.15	8.81	9.96	8.26	80.7	
O1233-10	WC-38	36	1.18	8.59	9.77	8.47	84.9	
O1233-11	B-P38C	37	1.15	8.82	9.97	8.73	85.9	
O1234-01	EO-02-11923	5	1.14	8.82	9.96	8.72	85.9	
O1234-02	EO-02-11923	6	1.12	8.54	9.66	8.48	86.2	
O1235-04	12X52	7	1.12	7.08	8.2	6.57	77.0	
O1235-05	12X53	8	1.16	5.17	6.33	5.91	91.9	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
O1235-06	12X54	9	1.11	8.50	9.61	5.73	54.4	
O1235-07	12X55	10	1.13	8.43	9.56	7.14	71.3	
O1237-01	COMP-1-2-3A	11	1.18	8.72	9.9	9.24	92.4	
O1237-02	3A	12	1.13	8.44	9.57	9.33	97.2	
O1238-01	RBRB22281-OILY-DEBRIS	13	1.00	1.00	2.00	2.00	100.0	OILY DEBRIS
O1239-01	BORING-3	14	1.17	8.73	9.9	8.29	81.6	
O1239-03	BORING-3-EPH-2	15	1.13	8.64	9.77	8.31	83.1	
O1240-01	TR-05-011923	16	1.18	8.50	9.68	8.38	84.7	
O1240-02	TR-05-011923-EPH-2	17	1.17	8.67	9.84	8.73	87.2	
O1241-01	34326-FRONT	38	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-02	34326-BACK	39	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-03	34327-FRONT	40	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-04	34327-BACK	41	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-05	34328-FRONT	42	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-06	34328BACK	43	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-07	343269-FRONT	44	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-08	34329-BACK	45	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1243-01	TJRC-11823-B4-0-10	60	1.12	8.65	9.77	8.54	85.8	
O1243-02	TJRC-11823-B4-0-10	61	1.14	8.45	9.59	8.02	81.4	
O1243-03	TJRC-11823-B4-10-20	62	1.15	8.81	9.96	8.85	87.4	
O1243-04	TJRC-11823-B4-10-20	63	1.17	8.57	9.74	8.16	81.6	
O1243-05	TJRC-11923-B4-20-30	64	1.15	8.75	9.9	8.28	81.5	
O1243-06	TJRC-11923-B4-20-30	65	1.13	8.70	9.83	8.43	83.9	
O1243-07	TJRC-11923-B4-30-40	66	1.16	8.77	9.93	8.29	81.3	
O1243-08	TJRC-11923-B4-30-40	67	1.14	8.83	9.97	8.47	83.0	
O1244-01	VNJ-223	46	1.12	8.62	9.74	8.59	86.7	
O1244-02	VNJ-223	47	1.16	8.80	9.96	8.62	84.8	
O1248-05	SVOC-GPC-BLANK	50	1.00	1.00	2.00	2.00	100.0	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
O1248-06	PEST-GPC-BLANK	51	1.00	1.00	2.00	2.00	100.0	
O1248-07	PEST-GPC-BLANK-SPIKE	52	1.00	1.00	2.00	2.00	100.0	
O1248-08	PCB-GPC-BLANK	53	1.00	1.00	2.00	2.00	100.0	
O1248-09	PCB-GPC-BLANK-SPIKE	54	1.00	1.00	2.00	2.00	100.0	
O1248-10	SVOC-GPC2-BLANK	55	1.00	1.00	2.00	2.00	100.0	
O1248-11	PEST-GPC2-BLANK	56	1.00	1.00	2.00	2.00	100.0	
O1248-12	PEST-GPC2-BLANK-SPIKE	57	1.00	1.00	2.00	2.00	100.0	
O1248-13	PCB-GCP2-BLANK	58	1.00	1.00	2.00	2.00	100.0	
O1248-14	PCB-GCP2-BLANK-SPIKE	59	1.00	1.00	2.00	2.00	100.0	
O1251-01	COMP-1	68	1.13	8.43	9.56	8.44	86.7	
O1251-03	EPH-1	69	1.11	8.51	9.62	8.47	86.5	
O1251-05	TOT-VOC-1	70	1.00	1.00	2.00	2.00	100.0	no jar
O1251-06	TOT-VOC-2	71	1.00	1.00	2.00	2.00	100.0	no jar
O1251-07	COMP-2	72	1.12	8.74	9.86	8.75	87.3	
O1251-09	EPH-2	73	1.14	8.80	9.94	8.8	87.0	
O1251-11	TOT-VOC-3	74	1.00	1.00	2.00	2.00	100.0	no jar
O1251-12	TOT-VOC-4	75	1.00	1.00	2.00	2.00	100.0	no jar
O1252-01	MH-9	48	1.14	8.84	9.98	9.47	94.2	
O1252-02	MH-9-EPH	49	1.12	8.46	9.58	8.67	89.2	
O1253-01	SU-04-012023	79	1.12	8.47	9.59	8.99	92.9	
O1253-02	SU-04-012023-EPH-2	80	1.18	8.69	9.87	9.17	91.9	
O1254-01	HR-04-012023	81	1.13	8.66	9.79	9.09	91.9	
O1254-02	HR-04-012023-EPH-2	82	1.16	8.69	9.85	8.95	89.6	
O1255-01	BORING-1	76	1.18	8.61	9.79	8.32	82.9	
O1255-03	BORING-1-EPH-2	77	1.11	8.78	9.89	8.35	82.5	
O1256-01	OR-02-012023	83	1.15	8.81	9.96	9.09	90.1	
O1256-02	OR-02-012023-EPH-2	84	1.1	8.87	9.97	8.66	85.2	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
O1258-01	WASTE-VOA-2	78	1.12	8.58	9.7	8.62	87.4	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

123747

WorkList Name : %1-012023

WorkList ID : 166715

Department : Wet-Chemistry

Date : 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/24/2023	Solid	O1229-01	Percent Solids	Cool 4 deg C	PSEG05	N11	OK-02-011923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1229-02	Percent Solids	Cool 4 deg C	PSEG05	N11	OK-02-011923-EPH-2	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1230-01	Percent Solids	Cool 4 deg C	EART12	N11	BBC	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1231-01	Percent Solids	Cool 4 deg C	EART12	N11	BBC	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1232-01	Percent Solids	Cool 4 deg C	loui01	N11	B-P-17A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-02	Percent Solids	Cool 4 deg C	loui01	N11	B-P-17B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-03	Percent Solids	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-04	Percent Solids	Cool 4 deg C	loui01	N11	B-P-18A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-05	Percent Solids	Cool 4 deg C	loui01	N11	B-P-18B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-06	Percent Solids	Cool 4 deg C	loui01	N11	B-P-19A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-07	Percent Solids	Cool 4 deg C	loui01	N11	B-P-19B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-08	Percent Solids	Cool 4 deg C	loui01	N11	B-P-35A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-09	Percent Solids	Cool 4 deg C	loui01	N11	B-P-35B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-10	Percent Solids	Cool 4 deg C	loui01	N11	DUP01	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-02	Percent Solids	Cool 4 deg C	loui01	N11	B-P-34A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-03	Percent Solids	Cool 4 deg C	loui01	N11	B-P-34B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-04	Percent Solids	Cool 4 deg C	loui01	N11	B-P-36A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-05	Percent Solids	Cool 4 deg C	loui01	N11	B-P-36B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-06	Percent Solids	Cool 4 deg C	loui01	N11	B-P-37A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-07	Percent Solids	Cool 4 deg C	loui01	N11	B-P-37B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-08	Percent Solids	Cool 4 deg C	loui01	N11	B-P-38A	01/18/2023	Chemtech -SO

Date/Time 01-20-23 15:45

Date/Time 01-20-23

17:25

Raw Sample Received by: 70 (w2c)

Raw Sample Received by:

JD CSM

Raw Sample Relinquished by:

JD CSM

Raw Sample Relinquished by:

Page 1 of 4

18 CWC

123747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-012023 WorkList ID : 166715 Department : Wet-Chemistry Date : 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/26/2023	Solid	O1233-09	Percent Solids	Cool 4 deg C	loui01	N11	B-P38B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-10	Percent Solids	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-11	Percent Solids	Cool 4 deg C	loui01	N11	B-P38C	01/18/2023	Chemtech -SO
01/24/2023	Solid	O1234-01	Percent Solids	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1234-02	Percent Solids	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	Chemtech -SO
01/28/2023	Solid	O1235-04	Percent Solids	Cool 4 deg C	ATCE02	N11	12X52	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-05	Percent Solids	Cool 4 deg C	ATCE02	N11	12X53	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-06	Percent Solids	Cool 4 deg C	ATCE02	N11	12X54	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-07	Percent Solids	Cool 4 deg C	ATCE02	N11	12X55	01/18/2023	Chemtech -SO
01/24/2023	Solid	O1237-01	Percent Solids	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1237-02	Percent Solids	Cool 4 deg C	PSEG03	N12	3A	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1238-01	Percent Solids	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1239-01	Percent Solids	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1239-03	Percent Solids	Cool 4 deg C	PSEG03	N12	BORING-3-EPH-2	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1240-01	Percent Solids	Cool 4 deg C	PSEG05	N12	TR-05-011923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1240-02	Percent Solids	Cool 4 deg C	PSEG05	N12	TR-05-011923-EPH-2	01/19/2023	Chemtech -SO
01/27/2023	Solid	O1241-01	Percent Solids	Cool 4 deg C	PSEG03	N11	34326-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-02	Percent Solids	Cool 4 deg C	PSEG03	N11	34326-BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-03	Percent Solids	Cool 4 deg C	PSEG03	N11	34327-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-04	Percent Solids	Cool 4 deg C	PSEG03	N11	34327-BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-05	Percent Solids	Cool 4 deg C	PSEG03	N11	34328-FRONT	01/20/2023	Chemtech -SO

Date/Time 01-20-23 15:45
 Raw Sample Received by: JO (WCC)
 Raw Sample Relinquished by: JO CSM

Date/Time 01-20-23 17:25
 Raw Sample Received by: JDCSM
 Raw Sample Relinquished by: JO (WCC)

123747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-01/2023 WorkList ID : 166715 Department : Wet-Chemistry Date : 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/27/2023	Solid	O1241-06	Percent Solids	Cool 4 deg C	PSEG03	N11	34328BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-07	Percent Solids	Cool 4 deg C	PSEG03	N11	343269-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-08	Percent Solids	Cool 4 deg C	PSEG03	N11	34329-BACK	01/20/2023	Chemtech -SO
01/28/2023	Solid	O1243-01	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-0-10	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-02	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-0-10	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-03	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-10-20	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-04	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-10-20	01/18/2023	Chemtech -SO
01/29/2023	Solid	O1243-05	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-20-30	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-06	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-20-30	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-07	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-30-40	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-08	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-30-40	01/19/2023	Chemtech -SO
01/27/2023	Solid	O1244-01	Percent Solids	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1244-02	Percent Solids	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	Chemtech -SO
01/23/2023	Solid	O1248-05	Percent Solids	Cool 4 deg C	CHEM02	N11	SVOC-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-06	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-07	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-08	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-09	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GPC-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-10	Percent Solids	Cool 4 deg C	CHEM02	N11	SVOC-GPC2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-11	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-12	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC2-BLANK-SPIKE	01/13/2023	Chemtech -SO

Date/Time 01/20/23 15:45
 Raw Sample Received by: JP (WC)
 Raw Sample Relinquished by: JDCSM2

Date/Time 01/20/23 17:25
 Raw Sample Received by: JDCSM2
 Raw Sample Relinquished by: JP (WC)

2523747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-012023 WorkList ID : 166715 Department : Wet-Chemistry Date : 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/23/2023	Solid	O1248-13	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GCP2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-14	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GCP2-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/25/2023	Solid	O1251-01	Percent Solids	Cool 4 deg C	SOUN03	N11	COMP-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-03	Percent Solids	Cool 4 deg C	SOUN03	N11	EPH-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-05	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-06	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-07	Percent Solids	Cool 4 deg C	SOUN03	N11	COMP-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-09	Percent Solids	Cool 4 deg C	SOUN03	N11	EPH-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-11	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-3	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-12	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-4	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1252-01	Percent Solids	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1252-02	Percent Solids	Cool 4 deg C	PSEG03	N11	MH-9-EPH	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1253-01	Percent Solids	Cool 4 deg C	PSEG05	N13	SU-04-012023	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1253-02	Percent Solids	Cool 4 deg C	PSEG05	N13	SU-04-012023-EPH-2	01/20/2023	Chemtech -SO
01/26/2023	Solid	O1254-01	Percent Solids	Cool 4 deg C	PSEG05	N11	HR-04-012023	01/20/2023	Chemtech -SO
01/26/2023	Solid	O1254-02	Percent Solids	Cool 4 deg C	PSEG05	N11	HR-04-012023-EPH-2	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1255-01	Percent Solids	Cool 4 deg C	PSEG03	N11	BORING-1	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1255-03	Percent Solids	Cool 4 deg C	PSEG03	N11	BORING-1-EPH-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1256-01	Percent Solids	Cool 4 deg C	PSEG05	N11	OR-02-012023	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1256-02	Percent Solids	Cool 4 deg C	PSEG05	N11	OR-02-012023-EPH-2	01/20/2023	Chemtech -SO
01/23/2023	Solid	O1258-01	Percent Solids	Cool 4 deg C	RMJE02	N11	WASTE-VOA-2	01/20/2023	Chemtech -SO

Date/Time 01-20-23 15:43
Raw Sample Received by: JP (wc)
Raw Sample Relinquished by: JDCSM

Date/Time 01-20-23 17:25
Raw Sample Received by: JDCSM
Raw Sample Relinquished by: JP (wc)

SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092

(908) 789-8900 Fax: (908) 78-8922

www.chemtech.net

Chemtech Project Number:

01232/33

COC Number:

CLIENT INFORMATION

COMPANY: Louis Berger dba WSP USA Inc.

ADDRESS: 350 Mt. Kemble Ave

CITY: Morristown STATE: NJ ZIP: 07962

ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com)

PHONE: 212-612-7995

FAX:

PROJECT INFORMATION

PROJECT NAME: HWR1140A PCSMP Ph II SCI

PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island

PROJECT MANAGER: Jon Ganz

E-MAIL: Jon.Ganz@wsp.com

PHONE: 212-612-7995

FAX:

BILLING INFORMATION

BILL TO: Louis Berger

PO# 31202661.297 Task 02

ADDRESS: 350 Mt. Kemble Ave

CITY: Morristown

STATE: NJ ZIP: 07962

ATTENTION: Jon Ganz

PHONE: 212-612-7995

DATA TURNAROUND INFORMATION

HARD COPY: _____ DAYS*
EDD See Contract Rates below _____ DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days

TCL SVOC - 5 days

PAH - 5 days

TPH GRO/DRO - 3 days

TAL Metals - 5 Days

PCBs and Pesticides - 5 Day

TCLP RCRA Metals - 5 Day

RCRA Characteristics and Paint Filter - 3 Days

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____

Level 2

☐ EDD Format

ANALYSIS

TCL VOC (8260C)	TCL SVOC (8270C/625)	TCL Pest (8081A/608)	PCB (3550B, 8082/608)	TAL Metals (7471A and 6010B)	PCBs (8082), PAHs (8270)	TCLP Metals (RCRA 8) EPA 1311/ 6010B	RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B	TPH-DRO/GRO (8015B)	Paint Filter Test (EPA 9095B)
1	2	3	4	5	6	7	8	9	

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles	Preservatives									Comments ← Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	B-P17A	507		X	1/18/23	0950	1	X	X	X	X	X					
2.	B-P17B	508		X	1/18/23	1005	1	X	X	X	X	X					
3.	WCL7	509	X		1/18/23	1010	1						X	X	X	X	
4.	B-P18A			X	1/18/23	1025		X	X	X	X	X					
5.	B-P18B			X	1/18/23	1045		X	X	X	X	X					
6.	B-P19A			X	1/18/23	1125		X	X	X	X	X					
7.	B-P19B			X	1/18/23	1135		X	X	X	X	X					
8.	B-P35A			X	1/18/23	1225		X	X	X	X	X					
9.	B-P35B			X	1/18/23	1245		X	X	X	X	X					
10.	DUPO1			X				X	X	X	X	X					

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp <u>3.0</u>
1. <i>[Signature]</i>	1/19/23	<i>[Signature]</i> 1333	MeOH extraction requires an additional 4oz. Jar for percent solid
RELINQUISHED BY	DATE/TIME	RECEIVED BY	Comments:
2. <i>[Signature]</i>	1-19-23	2. <i>[Signature]</i>	
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	
3. <i>[Signature]</i>	1-19-23	3. <i>[Signature]</i>	

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ OvernightShipment Complete
☐ YES ☐ NO

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT

YELLOW - CHEMTECH COPY

PINK - SAMPLER COPY

CHEMTECH CHAIN OF CUSTODY RECORD		284 Sheffield Street, Mountainside, NJ 07092 (908) 789-8900 Fax: (908) 78-8922 www.chemtech.net		Chemtech Project Number: <u>01232/33</u>																																																																																																																																												
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COMPANY: Louis Berger dba WSP USA Inc. ADDRESS: 350 Mt. Kemble Ave CITY: Morristown STATE: NJ ZIP: 07962 ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com) PHONE: 212-612-7995 FAX:		PROJECT NAME: HWR1140A PCSMP Ph II SCI PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island PROJECT MANAGER: Jon Ganz E-MAIL: Jon.Ganz@wsp.com PHONE: 212-612-7995 FAX:		BILL TO: Louis Berger PO# 31202661.297 Task 02 ADDRESS: 350 Mt. Kemble Ave CITY: Morristown STATE: NJ ZIP: 07962 ATTENTION: Jon Ganz PHONE: 212-612-7995																																																																																																																																												
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1.	FB01	Field Blank		1/18/23 1205	2	X	X	X	X	X							HCl Preservative																																																																																																																															
2.	B-P34A	soil	X	1/18/23 2115	1	X	X	X	X	X							Ice Preservative																																																																																																																															
3.	B-P34B	soil	X	1/18/23 2140	1	X	X	X	X	X																																																																																																																																						
4.	B-P36A		X	2210	1	X	X	X	X	X																																																																																																																																						
5.	B-P36B		X	2225	1	X	X	X	X	X																																																																																																																																						
6.	B-P37A		X	2300	1	X	X	X	X	X																																																																																																																																						
7.	B-P37B		X	2315	1	X	X	X	X	X																																																																																																																																						
8.	B-38A		X	2345	1	X	X	X	X	X																																																																																																																																						
9.	B-P38B		X	2355	1	X	X	X	X	X																																																																																																																																						
10.	WC38		X	2355	1						X	X	X	X																																																																																																																																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	DATE/TIME	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp <u>3.0</u> MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: _____ Comments:
1. <i>[Signature]</i>	1/19/23	<i>[Signature]</i>	1-19-23	
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	
2. <i>[Signature]</i>	1-19-23			
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	DATE/TIME	
3. <i>[Signature]</i>	1-19-23			

Page 2 of 3

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
 CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete
☐ YES ☐ NO

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH CHAIN OF CUSTODY RECORD		284 Sheffield Street, Mountainside, NJ 07092 (908) 789-8900 Fax: (908) 78-8922 www.chemtech.net		Chemtech Project Number: <u>01232/33</u>																				
CLIENT INFORMATION		PROJECT INFORMATION		BILLING INFORMATION																				
COMPANY: Louis Berger dba WSP USA Inc. ADDRESS: 350 Mt. Kemble Ave CITY: Morristown STATE: NJ ZIP: 07962 ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com) PHONE: 212-612-7995 FAX:		PROJECT NAME: HWR1140A PCSMP Ph II SCI PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island PROJECT MANAGER: Jon Ganz E-MAIL: Jon.Ganz@wsp.com PHONE: 212-612-7995 FAX:		BILL TO: Louis Berger PO# 31202661.297 Task 02 ADDRESS: 350 Mt. Kemble Ave CITY: Morristown STATE: NJ ZIP: 07962 ATTENTION: Jon Ganz PHONE: 212-612-7995																				
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CHEMTECH SAMPLE ID		PROJECT SAMPLE IDENTIFICATION		SAMPLE MATRIX																				
				<table border="1" style="width:100%; border-collapse: collapse; font-size: 0.8em;"> <tr> <th colspan="2" style="text-align: center;">SAMPLE TYPE</th> <th colspan="2" style="text-align: center;">SAMPLE COLLECTION</th> <th rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);"># of Bottles</th> </tr> <tr> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">COMP</th> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">GRAB</th> <th style="text-align: center;">DATE</th> <th style="text-align: center;">TIME</th> </tr> </table>		SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles	COMP	GRAB	DATE	TIME										
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RELINQUISHED BY 2. <u>[Signature]</u>		DATE/TIME 1-19-23		RECEIVED BY <u>[Signature]</u>																				
RELINQUISHED BY 3. <u>[Signature]</u>		DATE/TIME 1-19-23		RECEIVED FOR LAB BY <u>[Signature]</u>																				
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				Shipment Complete ☐ YES ☐ NO																				
Page <u>3</u> of <u>3</u>																								
WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY																								



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

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255422
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-22-15



LOGIN REPORT/SAMPLE TRANSFER

Order ID : O1232 loui01
Client Name : Louis Berger U.S., Inc., A V
Client Contact : Jonathan Ganz
Invoice Name : Louis Berger U.S., Inc., A V
Invoice Contact : Jonathan Ganz

Order Date : 1/19/2023 1:44:00 PM
Project Name : NYCDDC Phase II SCI Artl
Receive DateTime : 1/19/2023 12:00:00 AM
Purchase Order : 18:05

Project Mgr :
Report Type : Level 1
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
O1232-01	B-P-17A	Solid	01/18/2023	09:50	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-02	B-P-17B	Solid	01/18/2023	10:05	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-04	B-P-18A	Solid	01/18/2023	10:25	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-05	B-P-18B	Solid	01/18/2023	10:45	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-06	B-P-19A	Solid	01/18/2023	11:25	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-07	B-P-19B	Solid	01/18/2023	11:35	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-08	B-P-35A	Solid	01/18/2023	12:25	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-09	B-P-35B	Solid	01/18/2023	12:45	VOC-TCLVOA-10		8260D	2 Bus. Days	
O1232-10	DUP01	Solid	01/18/2023	00:00					

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O1232	loui01	Order Date : 1/19/2023 1:44:00 PM	Project Mgr :
Client Name : Louis Berger U.S., Inc., A V		Project Name : NYCDDC Phase II SCI Artl	Report Type : Level 1
Client Contact : Jonathan Ganz		Receive DateTime : 1/19/2023 12:00:00 AM	EDD Type : Excel NY
Invoice Name : Louis Berger U.S., Inc., A V		Purchase Order : 18:05	Hard Copy Date :
Invoice Contact : Jonathan Ganz			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
					VOC-TCLVOA-10		8260D	2 Bus. Days	

JAN
samples

stored in roa
#22 #02

Relinquished By : cl
Date / Time : 1/20/23 9:20

Received By : mmTadu
Date / Time : 1/20/23 9:20

Storage Area : VOA Refridgerator Room