

DATA PACKAGE GENERAL CHEMISTRY

PROJECT NAME : RAYMARK SUPERFUND SITE

NOBIS GROUP

585 Middlesex Street

Lowell, MA - 01851

Phone No: 978-683-0891

ORDER ID : Q1984

ATTENTION : Adam Roy



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q1984

Project ID : Raymark Superfund Site

Client : Nobis Group

Lab Sample Number

Q1984-01
Q1984-02
Q1984-03
Q1984-04
Q1984-05
Q1984-06
Q1984-07
Q1984-08
Q1984-09
Q1984-10
Q1984-11
Q1984-12
Q1984-13
Q1984-14
Q1984-15
Q1984-16
Q1984-17

Client Sample Number

OU4-PCS-TC-33-050725
OU4-PCS-TC-33-050725
OU4-PCS-TC-34-050725
OU4-PCS-TC-34-050725
OU4-PCS-TC-35-050725
OU4-PCS-TC-35-050725
OU4-TS-24-050725
OU4-TS-24-050725
OU4-TS-25-050725
OU4-TS-25-050725
OU4-TS-26-050725
OU4-TS-26-050725
OU4-TS-27-050725
OU4-TS-27-050725
OU4-TS-28-050725
OU4-TS-28-050725
OU4-TB01-050725

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 5/15/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

CASE NARRATIVE

Nobis Group

Project Name: Raymark Superfund Site

Project # N/A

Order ID # Q1984

Test Name: Cyanide

A. Number of Samples and Date of Receipt:

16 Solid samples were received on 05/08/2025.

1 Water sample was received on 05/08/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Cyanide, Herbicide Group1, Mercury, Metals ICP-TAL, METALS-TAL, PCB, Pesticide-TCL, SPLP Extraction, SPLP Mercury, SPLP MetalGroup3, SVOCMS Group3, VOCMS Group1 and VOCMS Group3. This data package contains results for Cyanide.

C. Analytical Techniques:

The analysis of Cyanide was based on method 9012B.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

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

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q1984

MATRIX: Solid

METHOD: 9012B

	NA	NO	YES
1. Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
2. Matrix Spike Duplicate Recoveries Met Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
The Blank Spike met requirements for all samples.			
3. Sample Duplicate Analysis Met QC Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
4. Digestion Holding Time Met			✓
If not met, list number of days exceeded for each sample:			

ADDITIONAL COMMENTS:

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1984

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 05/15/2025

LAB CHRONICLE

OrderID:	Q1984	OrderDate:	5/8/2025 10:48:00 AM
Client:	Nobis Group	Project:	Raymark Superfund Site
Contact:	Adam Roy	Location:	L41,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1984-01	OU4-PCS-TC-33-0507 25	SOIL	Cyanide	9012B	05/07/25 09:50	05/13/25	05/13/25 17:48	05/08/25
Q1984-03	OU4-PCS-TC-34-0507 25	SOIL	Cyanide	9012B	05/07/25 10:00	05/13/25	05/13/25 17:48	05/08/25
Q1984-05	OU4-PCS-TC-35-0507 25	SOIL	Cyanide	9012B	05/07/25 10:15	05/13/25	05/13/25 17:48	05/08/25
Q1984-07	OU4-TS-24-050725	SOIL	Cyanide	9012B	05/07/25 11:30	05/13/25	05/13/25 17:55	05/08/25
Q1984-09	OU4-TS-25-050725	SOIL	Cyanide	9012B	05/07/25 11:35	05/13/25	05/13/25 17:55	05/08/25
Q1984-11	OU4-TS-26-050725	SOIL	Cyanide	9012B	05/07/25 11:40	05/13/25	05/13/25 17:55	05/08/25
Q1984-13	OU4-TS-27-050725	SOIL	Cyanide	9012B	05/07/25 11:45	05/13/25	05/13/25 17:55	05/08/25

LAB CHRONICLE

Q1984-15	OU4-TS-28-050725	SOIL			05/07/25 11:50			05/08/25
			Cyanide	9012B		05/13/25	05/13/25 17:41	



SAMPLE DATA

- 1
- 2
- 3
- 4
- 5
- 6
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- 8
- 9
- 10
- 11
- 12
- 13
- 14

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 09:50
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-PCS-TC-33-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-01	Matrix:	SOIL
		% Solid:	95.1

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.20	U	1	0.043	0.20	0.26	mg/Kg	05/13/25 08:00	05/13/25 17:48	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 10:00
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-PCS-TC-34-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-03	Matrix:	SOIL
		% Solid:	95.7

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.20	U	1	0.042	0.20	0.25	mg/Kg	05/13/25 08:00	05/13/25 17:48	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 10:15
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-PCS-TC-35-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-05	Matrix:	SOIL
		% Solid:	94.4

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.21	U	1	0.044	0.21	0.26	mg/Kg	05/13/25 08:00	05/13/25 17:48	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 11:30
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-TS-24-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-07	Matrix:	SOIL
		% Solid:	69.7

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.28	U	1	0.058	0.28	0.34	mg/Kg	05/13/25 08:00	05/13/25 17:55	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 11:35
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-TS-25-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-09	Matrix:	SOIL
		% Solid:	68

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.29	U	1	0.061	0.29	0.36	mg/Kg	05/13/25 08:00	05/13/25 17:55	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 11:40
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-TS-26-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-11	Matrix:	SOIL
		% Solid:	60.1

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.32	U	1	0.067	0.32	0.40	mg/Kg	05/13/25 08:00	05/13/25 17:55	9012B

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 11:45
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-TS-27-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-13	Matrix:	SOIL
		% Solid:	62.5

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.31	U	1	0.065	0.31	0.38	mg/Kg	05/13/25 08:00	05/13/25 17:55	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

Report of Analysis

Client:	Nobis Group	Date Collected:	05/07/25 11:50
Project:	Raymark Superfund Site	Date Received:	05/08/25
Client Sample ID:	OU4-TS-28-050725	SDG No.:	Q1984
Lab Sample ID:	Q1984-15	Matrix:	SOIL
		% Solid:	64.6

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Cyanide	0.30	U	1	0.064	0.30	0.38	mg/Kg	05/13/25 08:00	05/13/25 17:41	9012B

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
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

- 1
- 2
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Initial and Continuing Calibration Verification

Client: Nobis Group

SDG No.: Q1984

Project: Raymark Superfund Site

RunNo.: LB135758

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Cyanide	mg/L	0.094	0.099	95	90-110	05/13/2025
Sample ID: CCV1 Cyanide	mg/L	0.24	0.25	96	90-110	05/13/2025
Sample ID: CCV2 Cyanide	mg/L	0.25	0.25	100	90-110	05/13/2025
Sample ID: CCV3 Cyanide	mg/L	0.24	0.25	96	90-110	05/13/2025

Initial and Continuing Calibration Blank Summary

Client: Nobis Group

SDG No.: Q1984

Project: Raymark Superfund Site

RunNo.: LB135758

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	05/13/2025
Sample ID: CCB1 Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	05/13/2025
Sample ID: CCB2 Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	05/13/2025
Sample ID: CCB3 Cyanide	mg/L	0.00098	0.0025	J	0.00096	0.005	05/13/2025

Preparation Blank Summary

Client: Nobis Group

SDG No.: Q1984

Project: Raymark Superfund Site

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: Cyanide	PB167935BL mg/Kg	< 0.1250	0.1250	U	0.042	0.25	05/13/2025

Matrix Spike Summary

Client:	Nobis Group	SDG No.:	Q1984
Project:	Raymark Superfund Site	Sample ID:	Q1984-15
Client ID:	OU4-TS-28-050725MS	Percent Solids for Spike Sample:	64.6

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Cyanide	mg/Kg	75-125	2.40		0.064	U	3	1	80		05/13/2025

Matrix Spike Summary

Client:	Nobis Group	SDG No.:	Q1984
Project:	Raymark Superfund Site	Sample ID:	Q1984-15
Client ID:	OU4-TS-28-050725MSD	Percent Solids for Spike Sample:	64.6

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Cyanide	mg/Kg	75-125	2.50		0.064	U	3	1	83		05/13/2025

Duplicate Sample Summary

Client:	Nobis Group	SDG No.:	Q1984
Project:	Raymark Superfund Site	Sample ID:	Q1984-15
Client ID:	OU4-TS-28-050725DUP	Percent Solids for Spike Sample:	64.6

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Cyanide	mg/Kg	+/-20	0.064	U	0.064	U	1	0		05/13/2025

Duplicate Sample Summary

Client:	Nobis Group	SDG No.:	Q1984
Project:	Raymark Superfund Site	Sample ID:	Q1984-15
Client ID:	OU4-TS-28-050725MSD	Percent Solids for Spike Sample:	64.6

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Cyanide	mg/Kg	+/-20	2.40		2.50		1	4		05/13/2025

Laboratory Control Sample Summary

Client:	Nobis Group	SDG No.:	Q1984
Project:	Raymark Superfund Site	Run No.:	LB135758

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167935BS							
Cyanide	mg/Kg	5	4.80		96	1	85-115	05/13/2025



RAW DATA

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- 13
- 14

LB13575

Test results

Aquakem 7.2AQ1

Page: 1

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

5/14/2025 8:30

Reviewed by: RM

Instrument ID: Konelab

Test: Total CN

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	93.716	0.0	0.084	
ICB1	0.731	0.0	0.001	
CCV1	243.630	0.0	0.217	
CCB1	0.886	0.0	0.001	
PB167935BL	0.460	0.0	0.001	
PB167935BS	96.788	0.0	0.086	
LOWPB167935	9.953	0.0	0.009	99% (90-110)
HIGHPB167935	486.828	0.0	0.433	97% (90-110)
Q1984-15	0.576	0.0	0.001	
Q1984-15DUP	0.607	0.0	0.001	
Q1984-15MS	32.191	0.0	0.029	
Q1984-15MSD	32.657	0.0	0.029	
Q1984-01	0.692	0.0	0.001	
Q1984-03	0.696	0.0	0.001	
CCV2	245.644	0.0	0.219	
CCB2	0.929	0.0	0.001	
Q1984-05	0.520	0.0	0.001	
Q1984-07	0.595	0.0	0.001	
Q1984-09	0.468	0.0	0.001	
Q1984-11	0.307	0.0	0.000	
Q1984-13	0.796	0.0	0.001	
Q1534-01	0.737	0.0	0.001	
Q1534-07	0.523	0.0	0.001	
Q1534-13	1.352	0.0	0.001	
Q1534-19	1.582	0.0	0.002	
CCV3	243.115	0.0	0.216	
CCB3	0.981	0.0	0.001	
N	27			
Mean	55.480			
SD	116.5301			
CV%	210.04			

RM
05/14/2025

Aquakem v. 7.2AQ1

Results from time period:

Tue May 13 13:24:02 2025

Tue May 13 17:55:55 2025

Sample Id	Sam/Ctr/c#	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPBCN	A	Total CN	P	0.5146	µg/l	5/13/2025 16:52:31	
5.0PPBCN	A	Total CN	P	5.2099	µg/l	5/13/2025 16:52:32	
10PPBCN	A	Total CN	P	10.2016	µg/l	5/13/2025 16:52:33	
50PPBCN	A	Total CN	P	49.5066	µg/l	5/13/2025 16:52:34	
100PPBCN	A	Total CN	P	98.0481	µg/l	5/13/2025 16:52:35	
250PPBCN	A	Total CN	P	252.1712	µg/l	5/13/2025 16:52:36	
500PPBCN	A	Total CN	P	499.348	µg/l	5/13/2025 16:52:37	
ICV1	S	Total CN	P	93.7158	µg/l	5/13/2025 17:33:32	
ICB1	S	Total CN	P	0.7312	µg/l	5/13/2025 17:33:33	
CCV1	S	Total CN	P	243.6295	µg/l	5/13/2025 17:33:36	
CCB1	S	Total CN	P	0.8856	µg/l	5/13/2025 17:33:37	
PB167935BL	S	Total CN	P	0.46	µg/l	5/13/2025 17:33:40	
PB167935BS	S	Total CN	P	96.788	µg/l	5/13/2025 17:33:41	
LOWPB167935	S	Total CN	P	9.9529	µg/l	5/13/2025 17:41:08	
HIGHPB167935	S	Total CN	P	486.8285	µg/l	5/13/2025 17:41:12	
Q1984-15	S	Total CN	P	0.5759	µg/l	5/13/2025 17:41:14	
Q1984-15DUP	S	Total CN	P	0.6065	µg/l	5/13/2025 17:41:15	
Q1984-15MS	S	Total CN	P	32.1909	µg/l	5/13/2025 17:48:43	
Q1984-15MSD	S	Total CN	P	32.6573	µg/l	5/13/2025 17:48:44	
Q1984-01	S	Total CN	P	0.6922	µg/l	5/13/2025 17:48:45	
Q1984-03	S	Total CN	P	0.6959	µg/l	5/13/2025 17:48:46	
CCV2	S	Total CN	P	245.6444	µg/l	5/13/2025 17:48:47	
CCB2	S	Total CN	P	0.9289	µg/l	5/13/2025 17:48:48	
Q1984-05	S	Total CN	P	0.5204	µg/l	5/13/2025 17:48:49	
Q1984-07	S	Total CN	P	0.5947	µg/l	5/13/2025 17:55:46	
Q1984-09	S	Total CN	P	0.4685	µg/l	5/13/2025 17:55:47	
Q1984-11	S	Total CN	P	0.3071	µg/l	5/13/2025 17:55:48	
Q1984-13	S	Total CN	P	0.7956	µg/l	5/13/2025 17:55:49	
Q1534-01	S	Total CN	P	0.7372	µg/l	5/13/2025 17:55:50	
Q1534-07	S	Total CN	P	0.5232	µg/l	5/13/2025 17:55:51	
Q1534-13	S	Total CN	P	1.3516	µg/l	5/13/2025 17:55:52	
Q1534-19	S	Total CN	P	1.5818	µg/l	5/13/2025 17:55:53	
CCV3	S	Total CN	P	243.1146	µg/l	5/13/2025 17:55:54	
CCB3	S	Total CN	P	0.981	µg/l	5/13/2025 17:55:55	

Calibration results

Aquakem 7.2AQ1

Page: 1

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

Reviewed by : RM Instrument ID : Konelab

5/13/2025 16:53

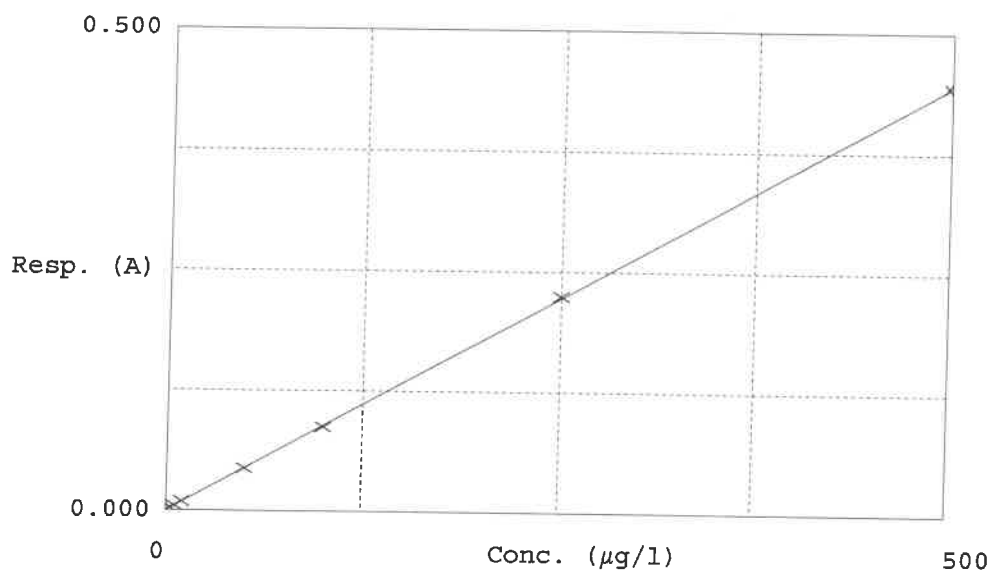
Test Total CN

Accepted 5/13/2025 16:53

Factor 1125
Bias 0

Coeff. of det. 0.999954

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN	0.001	0.5146	0.0000	-
2	5.0PPBCN	0.005	5.2099	5.0000	4.2
3	10PPBCN	0.009	10.2016	10.0000	2.0
4	50PPBCN	0.044	49.5066	50.0000	-1.0
5	100PPBCN	0.087	98.0481	100.0000	-2.0
6	250PPBCN	0.224	252.1712	250.0000	0.9
7	500PPBCN	0.444	499.3480	500.0000	-0.1

RM

05/13/2025

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

SDG No : N/A

Start Digest Date: 05/13/2025 Time : 08:00 Temp : 123 °C

Matrix : SOIL

End Digest Date: 05/13/2025 Time : 09:30 Temp : 126 °C

Pipette ID : WC

li berh 05/13/2025 10:00 124 °C
05/13/2025 11:30 126 °C

Balance ID : WC SC-7

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: *JP*

Weigh By : JP

pH Meter ID : N/A

Supervisor Signature: *12*

Standard Name	MLS USED	STD REF. # FROM LOG
LCSS	1.0ML	WP112995
MS/MSD SPIKE SOL.	0.40ML	WP111295
PBS003	50.0ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.25N NaOH	50.0ML	WP111294
50% v/v H2SO4	5.0ML	WP112826
51% w/v MgCL2	2.0ML	WP112827
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	Wt(g)/Vol(ml)	Comment
S0	S0	N/A	N/A
S5.0	S5.0	N/A	N/A
S10.0	S10.0	N/A	N/A
S100.0	S100.0	N/A	N/A
S250.0	S250.0	N/A	N/A
S500.0	S500.0	N/A	N/A
ICV	ICV	0.5ML	W3012
ICB	ICB	N/A	N/A
CCV	CCV	N/A	N/A
CCB	CCB	N/A	N/A
Midrange	Midrange	N/A	N/A
HIGHSTD	HIGHSTD	5.0ML	WP111295
LOWSTD	LOWSTD	0.1ML	WP111295

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
05/13/2025 11:45	<i>JP / WC</i>	RM
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167935BL	PBS935	1.00	50	N/A	N/A	N/A	N/A	N/A	N/A
PB167935BS	LCS935	1.00	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1534-01	OR-636-COMP-16	1.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1534-07	OR-636-COMP-17	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1534-13	OR-636-COMP-18	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1534-19	OR-636-COMP-19	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-01	OU4-PCS-TC-33-050725	1.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-03	OU4-PCS-TC-34-050725	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-05	OU4-PCS-TC-35-050725	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-07	OU4-TS-24-050725	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-09	OU4-TS-25-050725	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-11	OU4-TS-26-050725	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-13	OU4-TS-27-050725	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-15	OU4-TS-28-050725	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-15DUP	OU4-TS-28-050725DUP	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-15MS	OU4-TS-28-050725MS	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q1984-15MSD	OU4-TS-28-050725MSD	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : CN 1534

WorkList ID : 189489

Department : Distillation

Date : 05-12-2025 12:32:42

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1534-01	OR-636-COMP-16	Solid	Cyanide	Cool 4 deg C	PSEG03	H31	03/07/2025	9012B
Q1534-07	OR-636-COMP-17	Solid	Cyanide	Cool 4 deg C	PSEG03	H31	03/07/2025	9012B
Q1534-13	OR-636-COMP-18	Solid	Cyanide	Cool 4 deg C	PSEG03	H31	03/07/2025	9012B
Q1534-19	OR-636-COMP-19	Solid	Cyanide	Cool 4 deg C	PSEG03	H31	03/07/2025	9012B

Date/Time 05/13/2025 07.36
 Raw Sample Received by: AP (Sam)
 Raw Sample Relinquished by: AP (Sam)

Date/Time 05/13/2025 10.30
 Raw Sample Received by: AP (Sam)
 Raw Sample Relinquished by: AP (Sam)

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn-q1984

WorkList ID : 189419

Department : Distillation

Date : 05-09-2025 07:39:20

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1984-01	OU4-PCS-TC-33-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-03	OU4-PCS-TC-34-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-05	OU4-PCS-TC-35-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-07	OU4-TS-24-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-09	OU4-TS-25-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-11	OU4-TS-26-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-13	OU4-TS-27-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B
Q1984-15	OU4-TS-28-050725	Solid	Cyanide	Cool 4 deg C	NOBI03	L41	05/07/2025	9012B

Date/Time 05/13/2025 07.30
 Raw Sample Received by: SPG067
 Raw Sample Relinquished by: SP(Sm)

Date/Time 05/13/2025 10.30
 Raw Sample Received by: SP(An)
 Raw Sample Relinquished by: SP(An)

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135758

Review By	rubina	Review On	5/14/2025 2:34:29 PM
Supervise By	Iwona	Supervise On	5/14/2025 2:35:31 PM
SubDirectory	LB135758	Test	Cyanide
STD. NAME	STD REF.#		
ICAL Standard	WP113043,WP113044,WP113045,WP113046,WP113047,WP113048,WP113049		
ICV Standard	W3012		
CCV Standard	WP113044		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112995		
Chk Standard	WP112643,WP112900,WP113050		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	05/13/25 16:52		rubina	OK
2	5.0PPBCN	5.0PPBCN	CAL2	05/13/25 16:52		rubina	OK
3	10PPBCN	10PPBCN	CAL3	05/13/25 16:52		rubina	OK
4	50PPBCN	50PPBCN	CAL4	05/13/25 16:52		rubina	OK
5	100PPBCN	100PPBCN	CAL5	05/13/25 16:52		rubina	OK
6	250PPBCN	250PPBCN	CAL6	05/13/25 16:52		rubina	OK
7	500PPBCN	500PPBCN	CAL7	05/13/25 16:52		rubina	OK
8	ICV1	ICV1	ICV	05/13/25 17:33		rubina	OK
9	ICB1	ICB1	ICB	05/13/25 17:33		rubina	OK
10	CCV1	CCV1	CCV	05/13/25 17:33		rubina	OK
11	CCB1	CCB1	CCB	05/13/25 17:33		rubina	OK
12	PB167935BL	PB167935BL	MB	05/13/25 17:33		rubina	OK
13	PB167935BS	PB167935BS	LCS	05/13/25 17:33		rubina	OK
14	LOWPB167935	LOWPB167935	SAM	05/13/25 17:41		rubina	OK
15	HIGHPB167935	HIGHPB167935	SAM	05/13/25 17:41		rubina	OK
16	Q1984-15	OU4-TS-28-050725	SAM	05/13/25 17:41		rubina	OK
17	Q1984-15DUP	OU4-TS-28-050725D	DUP	05/13/25 17:41		rubina	OK
18	Q1984-15MS	OU4-TS-28-050725M	MS	05/13/25 17:48		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135758

Review By	rubina	Review On	5/14/2025 2:34:29 PM
Supervise By	Iwona	Supervise On	5/14/2025 2:35:31 PM
SubDirectory	LB135758	Test	Cyanide
STD. NAME	STD REF.#		
ICAL Standard	WP113043,WP113044,WP113045,WP113046,WP113047,WP113048,WP113049		
ICV Standard	W3012		
CCV Standard	WP113044		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112995		
Chk Standard	WP112643,WP112900,WP113050		

19	Q1984-15MSD	OU4-TS-28-050725M	MSD	05/13/25 17:48		rubina	OK
20	Q1984-01	OU4-PCS-TC-33-050	SAM	05/13/25 17:48		rubina	OK
21	Q1984-03	OU4-PCS-TC-34-050	SAM	05/13/25 17:48		rubina	OK
22	CCV2	CCV2	CCV	05/13/25 17:48		rubina	OK
23	CCB2	CCB2	CCB	05/13/25 17:48		rubina	OK
24	Q1984-05	OU4-PCS-TC-35-050	SAM	05/13/25 17:48		rubina	OK
25	Q1984-07	OU4-TS-24-050725	SAM	05/13/25 17:55		rubina	OK
26	Q1984-09	OU4-TS-25-050725	SAM	05/13/25 17:55		rubina	OK
27	Q1984-11	OU4-TS-26-050725	SAM	05/13/25 17:55		rubina	OK
28	Q1984-13	OU4-TS-27-050725	SAM	05/13/25 17:55		rubina	OK
29	Q1534-01	OR-636-COMP-16	SAM	05/13/25 17:55		rubina	OK
30	Q1534-07	OR-636-COMP-17	SAM	05/13/25 17:55		rubina	OK
31	Q1534-13	OR-636-COMP-18	SAM	05/13/25 17:55		rubina	OK
32	Q1534-19	OR-636-COMP-19	SAM	05/13/25 17:55		rubina	OK
33	CCV3	CCV3	CCV	05/13/25 17:55		rubina	OK
34	CCB3	CCB3	CCB	05/13/25 17:55		rubina	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1984
Test : Cyanide,Percent Solids
Prepbatch ID : PB167935,
Sequence ID/Qc Batch ID: LB135758,

Standard ID :
WP111294,WP111295,WP112643,WP112826,WP112827,WP112900,WP112995,WP113042,WP113043,WP113044,WP113045,WP113046,WP113047,WP113048,WP113049,WP113050,

Chemical ID :
M6041,M6151,W2668,W3012,W3019,W3112,W3113,W3139,W3152,W3154,W3173,W3203,

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>
11	Sodium hydroxide absorbing solution 0.25 N	WP111294	01/07/2025	07/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/07/2025
FROM 21.00000L of W3112 + 210.00000gram of W3113 = Final Quantity: 21.000 L								

<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>
3850	Cyanide MS-MSD spiking solution, 5PPM	WP111295	01/07/2025	07/07/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 01/07/2025
FROM 1.00000ml of W3154 + 199.00000ml of WP111294 = Final Quantity: 200.000 ml								

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>
539	CN BUFFER	WP112643	04/09/2025	10/09/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 04/09/2025
FROM 138.00000gram of W2668 + 862.00000ml of W3112 = 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>
1714	Sulfuric Acid, 50% (v/v)	WP112826	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych 04/25/2025
FROM 1000.00000ml of M6041 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml								

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>
3214	Magnesium Chloride For Cyanide 2.5M(51%W/V)	WP112827	04/25/2025	10/25/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 04/25/2025
FROM 500.00000ml of W3112 + 510.00000gram of W3152 = 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>
607	PYRIDINE-BARBITURIC ACID	WP112900	05/01/2025	08/18/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	Glass Pipette-A	Iwona Zarych 05/01/2025
FROM 145.00000ml of W3112 + 15.00000gram of W3203 + 15.00000ml of M6151 + 75.00000ml of W3019 = Final Quantity: 250.000 ml								

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>
3371	Cyanide LCS Spike Solution, 5PPM	WP112995	05/07/2025	07/07/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 05/07/2025
FROM 1.00000ml of W3173 + 199.00000ml of WP111294 = Final Quantity: 200.000 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>
3456	Cyanide Intermediate Working Std, 5PPM	WP113042	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 0.25000ml of W3154 + 49.75000ml of WP111294 = Final Quantity: 50.000 ml								

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>
4	Calibration standard 500 ppb	WP113043	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 45.00000ml of WP111294 + 5.00000ml of WP113042 = 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>
3761	Calibration-CCV CN Standard 250 ppb	WP113044	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 2.50000ml of WP113042 + 47.50000ml of WP111294 = Final Quantity: 50.000 ml								

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>
6	Calibration Standard 100 ppb	WP113045	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 1.00000ml of WP113042 + 49.00000ml of WP111294 = 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>
7	Calibration Standard 50 ppb	WP113046	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 0.50000ml of WP113042 + 49.50000ml of WP111294 = Final Quantity: 50.000 ml								

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>
8	Calibration Standard 10 ppb	WP113047	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 1.00000ml of WP113043 + 49.00000ml of WP111294 = 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>
9	Calibration Standard 5 ppb	WP113048	05/13/2025	05/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 05/14/2025
FROM 0.50000ml of WP113043 + 49.50000ml of WP111294 = Final Quantity: 50.000 ml								

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>
167	0 ppb CN calibration std	WP113049	05/13/2025	05/14/2025	Rubina Mughal	None	None	Iwona Zarych
05/14/2025								

FROM 50.00000ml of WP111294 = 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	WP113050	05/13/2025	05/14/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	Glass Pipette-A	Iwona Zarych
05/14/2025								

FROM 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

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)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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 #
EPA	/ ICV-CN	ICV6-400	12/31/2025	01/08/2025 / lwona	02/20/2020 / lwona	W3012

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	270970-1L / Pyridine 1L	SHBQ2113	04/03/2028	04/03/2023 / lwona	04/03/2023 / lwona	W3019

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

CHEMICAL RECEIPT LOG BOOK

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	23B1556310	12/31/2025	07/08/2024 / Iwona	07/08/2024 / Iwona	W3113

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	10239484	09/09/2029	09/09/2024 / Iwona	09/09/2024 / Iwona	W3139

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	01237-10KG / Magnesium Chloride Hexahydrate ACS 10KG	002126-2019-201	11/25/2029	11/25/2024 / Iwona	11/25/2024 / Iwona	W3152

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1411J58	05/31/2025	12/02/2024 / Iwona	12/02/2024 / Iwona	W3154

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	LC135457 / Cyanide Standard, 1000 PPM, Second Source	45010168	07/17/2025	01/24/2025 / Iwona	01/24/2025 / Iwona	W3173

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	WXBF3271V	05/16/2029	04/21/2025 / Iwona	04/21/2025 / Iwona	W3203

W3019
rec 4/3/23

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:

SHBQ2113

Brand:

SIAL

CAS Number:

110-86-1

MDL Number:

MFCD00011732

Formula:

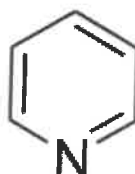
C₅H₅N

Formula Weight:

79.10 g/mol

Quality Release Date:

15 DEC 2022



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 %


Larry Coers, Director
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.



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

W2160, W2161, W2162,
W2163, W2164 Receive by
AP on 9/2/2016

(A) **SAMPLE DESCRIPTION**

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) **BREAKAGE OR MISSING ITEMS**

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) **ANALYSIS OF SAMPLES**

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.



Instructions for QATS Reference Material: *Inorganic ICV Solutions*

- ICV1-1014** For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.
- ICV5-0415** For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.
- ICV6-0400** For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS

ICV1-1014		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	Concentration (µg/L) (after 100-fold dilution)	Analyte	Concentration (µg/L) (after 100-fold dilution)
Hg	4.0	CN ⁻	99

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™



M 6041-4b
MS

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

 **avantorsm**

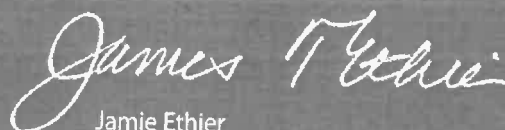


Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

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



Jamie Ethier
Vice President Global Quality

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

avantor™



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
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	1.3 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	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 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	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

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

 **avantorsm**



Material No.: 9530-33
Batch No.: 22G2862015

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	2.9 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	0.8 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	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

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

 **avantor™**

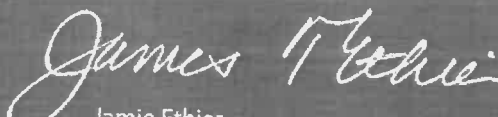


Material No.: 9530-33
Batch No.: 22G2862015

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

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	≤ 0.01 %	< 0.01
Chloride (Cl)	≤ 5 ppm	< 5
ACS – Sulfate (SO_4)	≤ 0.003 %	< 0.003
Calcium (Ca)	≤ 0.005 %	< 0.005
Potassium (K)	≤ 0.01 %	< 0.01
Heavy Metals (as Pb)	≤ 0.001 %	< 0.001
Trace Impurities – Iron (Fe)	≤ 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

Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

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

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	0.002 %	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 %	99.2 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 710

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: 23B1556310

Chemical Formula:	NaOH	Manufacture Date:	12/14/2022
Molecular Weight:	40	Expiration Date:	12/31/2025
CAS #:	1310-73-2		
Appearance:		Storage:	Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

Additional Information

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

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

Product meets analytical specifications of the grades listed.

W3139 Received on 9/9/24 by IZ

Product No.: A12044
Product: Chloramine-T trihydrate, 98%
Lot No.: 10239484

Appearance:	White powder
Melting Point:	166°C(dec)
Assay (Iodometric titration):	100.5%
Identification (FTIR):	Conforms

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Chem-Impex International, Inc.

Tel: (630) 766-2112

E-mail: sales@chemimpex.com

Shipping and Correspondence:

935 Dillon Drive

Wood Dale, IL 60191

Fax: (630) 766-2218

Web site: www.chemimpex.com

Manufacturing site:

825 Dillon Drive

Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number	01237
Lot Number	002126-2019-201
Product	Magnesium chloride hexahydrate

Magnesium chloride•6H₂O

CAS Number	7791-18-6
Molecular Formula	MgCl ₂ •6H ₂ O

Molecular Weight	203.3
-------------------------	-------

Appearance	White crystals
Solubility	167 g in 100 mL water
Melting Point	~ 115 °C
Heavy Metals	4.393 ppm
Anion	Nitrate (NO ₃) : < 0.001% Phosphate (PO ₄) : < 5 ppm Sulfate (SO ₄) : < 0.002%
Cation	Ammonium (NH ₄) : < 0.002% Barium (Ba) : 0.005% Calcium (Ca) : 0.01% Iron (Fe) : 4.5 ppm Manganese (Mn) : 0.624 ppm Potassium (K) : 0.004% Sodium (Na) : 0.000003% Strontium (Sr) : 0.005%
Insoluble material	0.0021%
Assay by titration	100.83%
Grade	ACS reagent
Storage	Store at RT

Certificate of Analysis

Catalog Number: 01237

Lot Number: 002126-2019-201

Remarks

See material safety data sheet for additional information
For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier



Bala Kumar
Quality Control Manager

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Certificate of Analysis

Cyanide Standard, 1000 ppm CN⁻

Lot Number: 1411J58**Product Number:** 2543**Manufacture Date:** NOV 22, 2024**Expiration Date:** MAY 2025

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.

Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN ⁻)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN ⁻)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN ⁻)	ASTM (D 4374)

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)
2543-16	500 mL amber poly	6 months
2543-32	1 L amber poly	6 months
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Certificate of Analysis

Cyanide Standard 1000 ppm (1ml = 1mg CN)

Product Code: **LC13545**

Manufacture Date: January 16, 2025

Lot Number: **45010168**

Expiration Date: July 17, 2025

Test	Specification	Result
Appearance (clarity)	clear solution	clear solution
Appearance (color)	colorless	colorless
Concentration (CN)	0.990 - 1.010mg/mL	1.000mg/mL
Concentration (CN)	990 - 1,010ppm	1,000ppm
Traceable to NIST SRM	Report	999b

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

Storage Information - Unless 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

The suffix of the product code may differ from what is on your product label. The suffix will designate the size and be associated with a numeric digit(s). Visit LabChem.com for more information

Suffix	1	2	3/3S/36/36S	4/4C	5	6	7	8	9	20	44	200	246	486
Size	500mL org	1L or 1kg	2.5L/2.5L Coated/6x2.5L/6x2.5L Coated	4L	20L	10L	125mL	25g	100g	20x20mL	4x4L	200L	24x6mL	48x6mL



Michael Monteleone
Chemistry Supervisor - Quality Control

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Q1984-GENCHEM

ISO9001:2015 Registration #0306-01

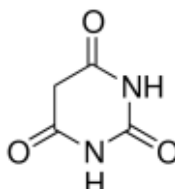
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Certificate of Analysis

Product Name:

Barbituric acid - ReagentPlus®, 99%

Product Number: 185698
Batch Number: WXBFB3271V
Brand: SIAL
CAS Number: 67-52-7
Formula: C₄H₄N₂O₃
Formula Weight: 128,09 g/mol
Quality Release Date: 16 MAY 2024



Test	Specification	Result
Appearance (Colour)	White to Off-White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms to Structure	Conforms
Purity (Titration by NaOH)	98.5 - 101.5 %	100.4 %
GC (area %)	≥ 98 %	100 %
VPCT		



Kang Chen
Quality Manager
Wuxi, China CN

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.



PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:20
In Date: 05/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1929-14	WC-A4-02-C	1	1.15	10.65	11.8	10.38	86.7	
Q1929-15	WC-A1-03-C	2	1.18	10.06	11.24	9.00	77.7	
Q1929-16	WC-A1-04-C	3	1.17	10.24	11.41	9.52	81.5	
Q1982-01	TP-1	4	1.15	10.33	11.48	9.51	80.9	
Q1982-02	TP-2B	5	1.18	10.20	11.38	9.85	85.0	
Q1982-03	TP-3	6	1.18	10.54	11.72	10.74	90.7	
Q1982-04	TP-4	7	1.19	10.07	11.26	9.99	87.4	
Q1982-05	TP-5	8	1.18	10.08	11.26	10.24	89.9	
Q1982-06	TP-6	9	1.16	10.74	11.9	10.42	86.2	
Q1982-07	TP-7	10	1.19	10.23	11.42	9.75	83.7	
Q1982-08	TP-8	11	1.16	10.42	11.58	9.63	81.3	
Q1983-01	OR-636-COMP-01	12	1.16	10.07	11.23	10.1	88.8	
Q1983-02	OR-636-VOC-01	13	1.18	10.23	11.41	9.74	83.7	
Q1983-03	OR-636-01	14	1.16	9.92	11.08	9.73	86.4	
Q1983-04	OR-636-02	15	1.19	10.30	11.49	10.15	87.0	
Q1983-05	OR-636-03	16	1.15	9.56	10.71	9.77	90.2	
Q1983-07	OR-636-COMP-02	17	1.17	10.61	11.78	10.6	88.9	
Q1983-08	OR-636-VOC-02	18	1.12	10.72	11.84	10.58	88.2	
Q1983-09	OR-636-04	19	1.17	10.05	11.22	9.89	86.8	
Q1983-10	OR-636-05	20	1.19	10.59	11.78	10.78	90.6	
Q1983-11	OR-636-06	21	1.18	10.14	11.32	10.02	87.2	
Q1983-13	OR-636-COMP-03	22	1.14	10.30	11.44	10.75	93.3	
Q1983-14	OR-636-VOC-03	23	1.15	10.36	11.51	10.61	91.3	
Q1983-15	OR-636-07	24	1.16	10.64	11.8	11.39	96.1	
Q1983-16	OR-636-08	25	1.14	10.73	11.87	10.89	90.9	
Q1983-17	OR-636-09	26	1.18	10.44	11.62	10.74	91.6	
Q1983-19	OR-636-COMP-04	27	1.18	10.81	11.99	11.05	91.3	
Q1983-20	OR-636-VOC-04	28	1.15	10.33	11.48	9.6	81.8	

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
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Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1983-21	OR-636-10	29	1.19	10.51	11.7	10.72	90.7	
Q1983-22	OR-636-11	30	1.19	10.59	11.78	10.5	87.9	
Q1983-23	OR-636-12	31	1.15	10.43	11.58	9.76	82.6	
Q1983-25	OR-636-COMP-05	32	1.17	9.97	11.14	9.07	79.2	
Q1983-26	OR-636-VOC-05	33	1.16	10.04	11.2	9.08	78.9	
Q1983-27	OR-636-13	34	1.14	10.53	11.67	11.04	94.0	
Q1983-28	OR-636-14	35	1.15	10.52	11.67	10.00	84.1	
Q1983-29	OR-636-15	36	1.16	10.35	11.51	9.74	82.9	
Q1983-31	OR-636-COMP-06	37	1.15	9.84	10.99	9.52	85.1	
Q1983-32	OR-636-VOC-06	38	1.17	10.61	11.78	10.78	90.6	
Q1983-33	OR-636-16	39	1.19	9.73	10.92	10.4	94.7	
Q1983-34	OR-636-17	40	1.13	10.55	11.68	10.37	87.6	
Q1983-35	OR-636-18	41	1.18	10.15	11.33	9.59	82.9	
Q1983-37	OR-636-COMP-07	42	1.18	10.44	11.62	10.35	87.8	
Q1983-38	OR-636-VOC-07	43	1.12	10.77	11.89	10.88	90.6	
Q1983-39	OR-636-19	44	1.15	9.66	10.81	9.34	84.8	
Q1983-40	OR-636-20	45	1.18	10.29	11.47	10.21	87.8	
Q1983-41	OR-636-21	46	1.14	10.58	11.72	10.5	88.5	
Q1983-43	OR-636-COMP-08	47	1.15	10.25	11.4	10.45	90.7	
Q1983-44	OR-636-VOC-08	48	1.16	9.97	11.13	10.78	96.5	
Q1983-45	OR-636-22	49	1.13	10.62	11.75	10.91	92.1	
Q1983-46	OR-636-23	50	1.19	9.96	11.15	10.05	89.0	
Q1983-47	OR-636-24	51	1.13	10.33	11.46	11.18	97.3	
Q1983-49	OR-636-COMP-09	52	1.13	10.36	11.49	10.31	88.6	
Q1983-50	OR-636-VOC-09	53	1.19	10.54	11.73	10.1	84.5	
Q1983-51	OR-636-25	54	1.16	10.09	11.25	9.61	83.7	
Q1983-52	OR-636-26	55	1.18	10.11	11.29	9.93	86.5	
Q1983-53	OR-636-27	56	1.16	9.66	10.82	10.34	95.0	

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:20
In Date: 05/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1984-01	OU4-PCS-TC-33-050725	57	1.15	9.96	11.11	10.62	95.1	
Q1984-03	OU4-PCS-TC-34-050725	58	1.16	10.82	11.98	11.51	95.7	
Q1984-05	OU4-PCS-TC-35-050725	59	1.19	9.50	10.69	10.16	94.4	
Q1984-07	OU4-TS-24-050725	60	1.15	10.00	11.15	8.12	69.7	
Q1984-09	OU4-TS-25-050725	61	1.17	10.51	11.68	8.32	68.0	
Q1984-11	OU4-TS-26-050725	62	1.17	10.18	11.35	7.29	60.1	
Q1984-13	OU4-TS-27-050725	63	1.16	9.67	10.83	7.2	62.5	
Q1984-15	OU4-TS-28-050725	64	1.16	9.98	11.14	7.61	64.6	
Q1986-01	COMP-8	65	1.18	10.04	11.22	10.5	92.8	
Q1986-03	COMP-9	66	1.18	10.05	11.23	10.44	92.1	
Q1986-05	COMP-10	67	1.16	9.77	10.93	9.84	88.8	
Q1986-07	COMP-11	68	1.19	10.33	11.52	10.55	90.6	
Q1986-09	COMP-218	69	1.16	10.18	11.34	10.45	91.3	
Q1987-01	GC1	70	1.14	9.89	11.03	9.7	86.6	
Q1990-01	43025-A	71	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1990-02	43025-B	72	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1991-01	1217	73	1.00	1.00	2.00	2.00	100.0	oil sample
Q1991-03	30425	74	1.00	1.00	2.00	2.00	100.0	oil sample

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

WORKLIST(Hardcopy Internal Chain)

JN 135865

WorkList Name : %1-050825

WorkList ID : 19376

Department : Wet-Chemistry

Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1929-14	WC-A4-02-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1929-15	WC-A1-03-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1929-16	WC-A1-04-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1982-01	TP-1	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-02	TP-2B	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-03	TP-3	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-04	TP-4	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-05	TP-5	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-06	TP-6	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-07	TP-7	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-08	TP-8	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1983-01	OR-636-COMP-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-02	OR-636-VOC-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-03	OR-636-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-04	OR-636-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-05	OR-636-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-07	OR-636-COMP-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-08	OR-636-VOC-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-09	OR-636-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-10	OR-636-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-11	OR-636-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO

Date/Time

05/08/25 15:00

Raw Sample Received by:

JN 135865

Raw Sample Relinquished by:

JN 135865

Date/Time

05/08/25

Raw Sample Received by:

JN 135865

Raw Sample Relinquished by:

JN 135865

WORKLIST(Hardcopy Internal Chain)

135405

WorkList Name : %1-050825

WorkList ID : 189376

Department : Wet-Chemistry

Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1983-13	OR-636-COMP-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-14	OR-636-VOC-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-15	OR-636-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-16	OR-636-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-17	OR-636-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-19	OR-636-COMP-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-20	OR-636-VOC-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-21	OR-636-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-22	OR-636-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-23	OR-636-12	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-25	OR-636-COMP-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-26	OR-636-VOC-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-27	OR-636-13	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-28	OR-636-14	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-29	OR-636-15	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-31	OR-636-COMP-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-32	OR-636-VOC-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-33	OR-636-16	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-34	OR-636-17	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-35	OR-636-18	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-37	OR-636-COMP-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO

Date/Time 05/08/25 15:00

Raw Sample Received by: JH WOC

Raw Sample Relinquished by: CR S

Date/Time 05/08/25 17:30

Raw Sample Received by: CR S

Raw Sample Relinquished by: JH WOC

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-050825

WorkList ID : 189376

Department : Wet-Chemistry

Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1983-38	OR-636-VOC-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-39	OR-636-19	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-40	OR-636-20	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-41	OR-636-21	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-43	OR-636-COMP-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-44	OR-636-VOC-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-45	OR-636-22	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-46	OR-636-23	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-47	OR-636-24	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-49	OR-636-COMP-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-50	OR-636-VOC-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-51	OR-636-25	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-52	OR-636-26	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-53	OR-636-27	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1984-01	OU4-PCS-TC-33-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-03	OU4-PCS-TC-34-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-05	OU4-PCS-TC-35-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-07	OU4-TS-24-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-09	OU4-TS-25-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-11	OU4-TS-26-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-13	OU4-TS-27-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO

Date/Time 05/08/25 15:00

Raw Sample Received by: SPWRaw Sample Relinquished by: SPW

Date/Time 05/08/25 17:30

Raw Sample Received by: SPWRaw Sample Relinquished by: SPW

WORKLIST(Hardcopy Internal Chain)

17735405

WorkList Name : %1-050825

WorkList ID : 189376

Department : Wet-Chemistry

Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1984-15	OU4-TS-28-050725	Solid	Percent Solids	Cool 4 deg C	NOBIO3	L41	05/07/2025	Chemtech -SO
Q1986-01	COMP-8	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-03	COMP-9	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-05	COMP-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-07	COMP-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-09	COMP-218	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1987-01	GC1	Solid	Percent Solids	Cool 4 deg C	GENV01	L41	05/07/2025	Chemtech -SO
Q1990-01	43025-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1990-02	43025-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1991-01	1217	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1991-03	30425	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO

Date/Time 05/08/25 15:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 05/08/25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]



SHIPPING DOCUMENTS

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- 14

Chemtech

Phone: (908) 789-8900

Fax: (908) 789-8922

284 Sheffield Street, Mountainside, NJ 07092

Company Name: Nobis Group
Address: 55 Technology Dr Suite 101, Lowell, MA 01851

Phone: 978-703-6014

Project Name: RaymarkProject Location: Stratford, CTProject Number: 95700Project Manager: Adam Roy

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By: C. Odell<http://www.contestlabs.com>

CHAIN OF CUSTODY

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 4_01/08/2020

Page 1 of 1

Requested Turnaround Time		Dissolved Metals Samples		ANALYSIS REQUESTED												Preservation Code						
5-Day ☐	10-Day ☒	☐ Field Filtered	☐ Lab to Filter	M/O	I	I	I	I	I	I	I	I	I	I	I	2						
PFAS 10-Day (std) ☐	Due Date:	☐ Field Filtered	☐ Lab to Filter																			
Push-Approval Required		Orthophosphate Samples														Total Number Of:						
1-Day ☐	3-Day ☐	☐ Field Filtered	☐ Lab to Filter													VIALS _____						
2-Day ☐	4-Day ☐	☐ Field Filtered	☐ Lab to Filter													GLASS _____						
Format: PDF ☒ EXCEL ☒		PCB ONLY														PLASTIC _____						
Other:		SOXHLET ☒														BACTERIA _____						
CLP Like Data Pkg Required: ☐ No		NON SOXHLET ☐														ENCORE _____						
Email To: <u>aroy@nobis-group.com</u>																Glassware in the fridge? Y / N						
Fax To #:																Glassware in freezer? Y / N						
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	RCP VOCs	% Solids	PAHs	Herbicides	Pesticides	PCBs	Metals ICP + Hg - 6010	Cyanide	SPLP RCP Metals - 6020	2	
	OU4-PCS-TC-33-050725	5/7/25	0950	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-PCS-TC-34-050725	5/7/25	1000	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-PCS-TC-35-050725	5/7/25	1015	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TS-24-050725	5/7/25	1130	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TS-25-050725	5/7/25	1135	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TS-26-050725	5/7/25	1140	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TS-27-050725	5/7/25	1145	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TS-28-050725	5/7/25	1150	G	S		3	2	1			X	X	X	X	X	X	X	X	X	X	
	OU4-TB01-050725 ↓	0800		—	—		3					X										
1 Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define) 2 Preservation Codes: I = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid B = Sodium Bisulfate X = Sodium Hydroxide T = Sodium Thiosulfate O = Other (please define)																						
Relinquished by: (signature)	Date/Time:	Client Comments:																				
Received by: (signature)	Date/Time:																					
Relinquished by: (signature)	Date/Time:																					
Received by: (signature)	Date/Time:																					
Relinquished by: (signature)	Date/Time:																					
Received by: (signature)	Date/Time:																					
Relinquished by: (signature)	Date/Time:																					
Received by: (signature)	Date/Time:																					
Lab Comments:		1.9-c Adjust Factor +1 IL (see #1)																				

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

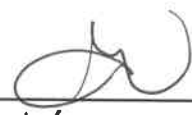
Order ID : Q1984	NOBI03	Order Date : 5/8/2025 10:48:00 AM	Project Mgr :
Client Name : Nobis Group		Project Name : Raymark Superfund Site	Report Type : Level 4
Client Contact : Adam Roy		Receive DateTime : 5/8/2025 9:50:00 AM	EDD Type : EQUIS
Invoice Name : Nobis Group		Purchase Order :	Hard Copy Date :
Invoice Contact : Adam Roy			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1984-01	OU4-PCS-TC-33-050725	Solid	05/07/2025	09:50					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-03	OU4-PCS-TC-34-050725	Solid	05/07/2025	10:00					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-05	OU4-PCS-TC-35-050725	Solid	05/07/2025	10:15					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-07	OU4-TS-24-050725	Solid	05/07/2025	11:30					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-09	OU4-TS-25-050725	Solid	05/07/2025	11:35					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-11	OU4-TS-26-050725	Solid	05/07/2025	11:40					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-13	OU4-TS-27-050725	Solid	05/07/2025	11:45					
					VOCMS Group3		8260D	10 Bus. Days	
Q1984-15	OU4-TS-28-050725	Solid	05/07/2025	11:50					

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1984	NOBI03	Order Date : 5/8/2025 10:48:00 AM	Project Mgr :
Client Name : Nobis Group		Project Name : Raymark Superfund Site	Report Type : Level 4
Client Contact : Adam Roy		Receive DateTime : 5/8/2025 9:50:00 AM	EDD Type : EQUIS
Invoice Name : Nobis Group		Purchase Order :	Hard Copy Date :
Invoice Contact : Adam Roy			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1984-17	OU4-TB01-050725	Water	05/07/2025	08:00	VOCMS Group3		8260D	10 Bus. Days	
					VOCMS Group1		8260-Low	10 Bus. Days	

Relinquished By : 

Date / Time : 5/8/25 1150

Received By : 

Date / Time : 5/8/25 1150

Storage Area : VOA Refridgerator Room