

DATA PACKAGE GENERAL CHEMISTRY

PROJECT NAME : RAYMARK SUPERFUND SITE

NOBIS GROUP

585 Middlesex Street

Lowell, MA - 01851

Phone No: 978-683-0891

ORDER ID: P5306

ATTENTION : Adam Roy



Laboratory Certification ID # 20012





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Client Sample Number

Cover Page

- Order ID : P5306
- **Project ID :** Raymark Superfund Site
 - Client : Nobis Group

Lab Sample Number

P5306-01	OU4-VSL-07-121224
P5306-02	OU4-VSL-07-121224
P5306-03	OU4-VSL-08-121224
P5306-04	OU4-VSL-08-121224
P5306-05	OU4-VSL-09-121224
P5306-06	OU4-VSL-09-121224
P5306-07	OU4-VSL-10-121224
P5306-08	OU4-VSL-10-121224
P5306-09	OU4-VSL-11-121224
P5306-10	OU4-VSL-11-121224
P5306-11	OU4-VSL-12-121224
P5306-12	OU4-VSL-12-121224
P5306-13	OU4-VSL-13-121224
P5306-14	OU4-VSL-13-121224
P5306-15	OU4-VSL-14-121224
P5306-16	OU4-VSL-14-121224
P5306-17	OU4-VSL-06R-121224
P5306-18	OU4-VSL-06R-121224

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 :

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 Chemtech Project # P5306 Test Name: Cyanide

A. Number of Samples and Date of Receipt:

18 Solid samples were received on 12/17/2024.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Cyanide, Herbicide Group1, Mercury, Metals Group6, Metals ICP-TAL, METALS-TAL, PCB, Pesticide-TCL, SPLP Extraction, SPLP Mercury, SPLP MetalGroup3, SPLP MetalGroup6, SVOCMS Group3 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
Ε	Indicates the reported value is estimated because of the presence of interference
Μ	Indicates Duplicate injection precision not met.
Ν	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"T"for Manual Spectrophotometric"T"for Titrimetric"NR"for analyte not required to be analyzedIndicates 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
Н	Sample Analysis Out Of Hold Time

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012: NEW YORK LAB ID#: 11376

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

СНЕМТ	ECH PROJECT NUMBER: P5306	MATRIX: Solid			
METHO	DD: 9012B				
1.	Blank Contamination - If yes, list compounds and concentration	is in each blank:	NA	NO ✔	YES
2.	Matrix Spike Duplicate Recoveries Met Criteria				\checkmark
	If not met, list those compounds and their recoveries which fall range.	outside the acceptable			
	The Blank Spike met requirements for all samples.				
3.	Sample Duplicate Analysis Met QC Criteria				\checkmark
	If not met, list those compounds and their recoveries which fall range.	outside the acceptable			

4. Digestion Holding Time Met

If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS:



QA REVIEW

 \checkmark



APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P5306

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 Castody 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: Mohar

Mohammad Ahmed

Date: 01-03-2025

Completed



LAB CHRONICLE

OrderID: Client: Contact:	P5306 Nobis Group Adam Roy			OrderDate: Project: Location:	12/17/2024 10: Raymark Supe L41,L61,VOA F	rfund Site		
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5306-01	OU4-VSL-07-121224	SOIL			12/12/24 10:00			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-03	OU4-VSL-08-121224	SOIL			12/12/24 10:10			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-05	OU4-VSL-09-121224	SOIL			12/12/24 10:20			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-07	OU4-VSL-10-121224	SOIL			12/12/24 10:30			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-09	OU4-VSL-11-121224	SOIL			12/12/24 10:40			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-11	OU4-VSL-12-121224	SOIL			12/12/24 10:50			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:51	
P5306-13	OU4-VSL-13-121224	SOIL			12/12/24 11:00			12/17/24
			Cyanide	9012B		12/18/24	12/19/24 13:59	



LAB CHRONICLE

P5306-15	OU4-VSL-14-121224	SOIL		12/12/24 11:10			12/17/24
			Cyanide	9012B	12/18/24	12/19/24 13:59	







Client:	Nobis	s Group				Date Collected:	12/12/24 1	0:00	
Project:	Raym	ark Supe	rfund Site				Date Received:	12/17/24	
Client Sample ID:	OU4-	OU4-VSL-07-121224 SDG No.: P5306							
Lab Sample ID:	P5306	P5306-01					Matrix:	SOIL	
							% Solid:	90.8	
Parameter	Conc. (Qua. I	OF MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.22	U 1	0.048	0.22	0.27	mg/Kg	12/18/24 14:00	12/19/24 13:51	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



Client:	Not	ois Grou	р				Date Collected:	12/12/24 1	0:10	
Project:	Ray	mark Su	ıperfi	and Site			Date Received:	12/17/24		
Client Sample ID:	OU	4-VSL-0	08-12	1224				SDG No.:	P5306	
Lab Sample ID:	P53	P5306-03						Matrix:	SOIL	
								% Solid:	90.8	
Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.21	U	1	0.047	0.21	0.26	mg/Kg	12/18/24 14:00	12/19/24 13:51	9012B

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Comments:

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Client:	Nobis G	roup					Date Collected:	12/12/24 1	0:20
Project:	Raymarl	k Superfi	and Site				Date Received:	12/17/24	
Client Sample ID:	OU4-VS	SL-09-12	1224				SDG No.:	P5306	
Lab Sample ID:	P5306-0	P5306-05					Matrix:	SOIL	
							% Solid:	90.1	
Parameter	Conc. Qu	a. DF	MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.22 U	1	0.048	0.22	0.27	mg/Kg	12/18/24 14:00	12/19/24 13:51	9012B

14

Comments:

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- OR = Over Range
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Client:	Nobis Group	р			Date Collected:	12/12/24 1	0:30	
Project:	Raymark Su	perfund Site			Date Received:	12/17/24		
Client Sample ID:	OU4-VSL-1	10-121224				SDG No.:	P5306	
Lab Sample ID:	P5306-07					Matrix:	SOIL	
						% Solid:	95	
Parameter	Conc. Qua.	DF MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.055 J	1 0.045	0.21	0.26	mg/Kg	12/18/24 14:00	12/19/24 13:51	9012B

Comments:

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- J = Estimated Value
- B = Analyte Found in Associated Method Blank
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- E = Indicates the reported value is estimated because of the presence of interference.
- OR = Over Range
- N =Spiked sample recovery not within control limits



Client:	Nobis C	Group				Date Collected:	12/12/24 10	0:40	
Project:	Raymar	rk Superfu	und Site				Date Received:	12/17/24	
Client Sample ID:	OU4-V	SL-11-12	1224				SDG No.:	P5306	
Lab Sample ID:	P5306-0	09					Matrix:	SOIL	
							% Solid:	93.6	
Parameter	Conc. Qu	ua. DF	MDL	LOD	LOQ / CRQL	Units(Dry Weig	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.20 U	J 1	0.045	0.20	0.25	mg/Kg	12/18/24 14:00	12/19/24 13:51	9012B

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- J = Estimated Value
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- E = Indicates the reported value is estimated because of the presence of interference.
- OR = Over Range
- N =Spiked sample recovery not within control limits



Client:	Nobi	s Group)				Date Collected:	12/12/24 1	0:50
Project:	Rayn	nark Sup	perfund Si	te			Date Received:	12/17/24	
Client Sample ID:	OU4-	VSL-12	2-121224				SDG No.:	P5306	
Lab Sample ID:	P530	6-11					Matrix:	SOIL	
							% Solid:	90.8	
Parameter	Conc.	Qua.	DF MD	L LOD	LOQ / CRQL	Units(Dry Weig	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.22	U	1 0.04	8 0.22	0.27	mg/Kg	12/18/24 14:00	12/19/24 13:51	9012B

14

Comments:

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- E = Indicates the reported value is estimated because of the presence of interference.
- OR = Over Range
- N =Spiked sample recovery not within control limits



Client:	Not	ois Grou	р					Date Collected:	12/12/24 1	1:00
Project:	Ray	mark Su	ıperfi	und Site				Date Received:	12/17/24	
Client Sample ID:	OU	4-VSL-	13-12	1224				SDG No.:	P5306	
Lab Sample ID:	P53	06-13						Matrix:	SOIL	
								% Solid:	90	
Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.22	U	1	0.049	0.22	0.28	mg/Kg	12/18/24 14:00	12/19/24 13:59	9012B

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- J = Estimated Value
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- * = 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



Client:	Nob	is Grou	р					Date Collected:	12/12/24 1	1:10
Project:	Ray	mark Sı	ıperfi	und Site				Date Received:	12/17/24	
Client Sample ID:	OU4	4-VSL-1	14-12	1224				SDG No.:	P5306	
Lab Sample ID:	P53	06-15						Matrix:	SOIL	
								% Solid:	95.9	
Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Wei	ght) Prep Date	Date Ana.	Ana Met.
Cyanide	0.20	U	1	0.045	0.20	0.26	mg/Kg	12/18/24 14:00	12/19/24 13:59	9012B

14

Comments:

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<u>QC RESULT</u> <u>SUMMARY</u>





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

Initial and Continuing Calibration Verification

Client:	Nobis Group					SDG No.: P5306	
Project:	Raymark Superfund	Site				RunNo.: LB1340)18
Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
Cyanide		mg/L	0.099	0.099	100	90-110	12/19/2024
Sample ID:	CCV1						
Cyanide		mg/L	0.25	0.25	100	90-110	12/19/2024
Sample ID:	CCV2						
Cyanide		mg/L	0.25	0.25	100	90-110	12/19/2024
Sample ID:	CCV3						
Cyanide		mg/L	0.26	0.25	104	90-110	12/19/2024



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

Client:	Nobis Group					SDG N	lo.: P5306	
Project:	Raymark Super	fund Site				RunNo	LB1340	18
Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00099	0.005	12/19/2024
Sample ID:	CCB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00099	0.005	12/19/2024
Sample ID:	CCB2							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00099	0.005	12/19/2024
Sample ID:	CCB3							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00099	0.005	12/19/2024

Initial and Continuing Calibration Blank Summary



Preparation Blank Summary

Client:	Nobis Group				SDG No.:	P5306	
Project:	Raymark Superfund Site						
			Acceptance	Conc			Analysis
Analyte	Units	Result	Limits	Qual	MDL	RDL	Date

P5306-GENCHEM



Matrix Spike Summary

nalyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Client ID:	OU4-VSL-14-121224N	4S		Percent Solids for Spike Sample:							
Project:	Raymark Superfund	Site			Sample	ID:	P5306-1	5			
Client:	Nobis Group				SDG No	.:	P5306				



Matrix Spike Summary

nalyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result		Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Client ID:	OU4-VSL-14-121224N	ISD		Percent Solids for Spike Sample:							
Project:	Raymark Superfund	Site			Sample	ID:	P5306-1	5			
Client:	Nobis Group				SDG No	.:	P5306				



Duplicate Sample Summary

alyte	Units	Acceptance Limit	Sample Result		Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysi Date
Client ID:	OU4-VSL-14-121224D	DUP		Percent Solids for Spike Sample					.9	
Project:	Raymark Superfund Sit	te			Sample ID:	Р	5306-15			
Client:	Nobis Group				SDG No.:	P53	306			



Duplicate Sample Summary

alyte	Units	Acceptance Limit	Sample Result	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysi Date
Client ID:	OU4-VSL-14-121224N	MSD		Percent Solids for Spike Samp			95	5.9	
Project:	Raymark Superfund Sit	te		Sample ID:	Р	5306-15			
Client:	Nobis Group			SDG No.:	P5.	306			



Laboratory Control Sample Summary

Client:	Nobis Group				SDG	No.:	P5306		
Project:	Raymark Superfund Site	fund Site Run No.				No.:	LB134018		
nalyte		Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
mple ID	PB165761BS								



RAW DATA

						Ĺ	Reviewed By: On:12/23/2024 10:25:47 AM	
Test results			1 7.2AQ1			Page:	LB :LB134018	
		CHEMTEC 284 She	H CONSULTI ffield Stre	NG GROUP eet, Moun	INC tainside,	NJ 0709	92	
12/19/2024 14:30)	Reviewe	d by : <u>N</u>	I:	nstrument	ID : Ko	onelab	
Test: Total CN								3
Sample Id	Result	Dil. 1	+ Respons	e Eri	ors			4
ICV1 ICB1 CCV1 CCB1 PB165761BL PB165761BS LOWPB165761 HIGHPB165761 P5306-01 P5306-05 P5306-05 P5306-07 P5306-09 P5306-11 CCV2 CCB2 P5306-13 P5306-15 P5306-15DUP P5306-15MS P5306-15MS P5306-15MSD CCV3 CCB3	99.220 0.549 248.140 0.166 0.008 99.808 9.774 489.842 0.647 0.746 0.156 1.070 0.775 0.123 245.139 0.050 0.456 0.172 0.510 41.649 42.026 255.871 0.104	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.070 0.002 0.173 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.002 0.0031 0.002	971, 971,	[90 -	110)	NF- 12-19-2024	5 6 7 8 9 10 11 12 13 14
N Mean SD CV%	23 66.826 125.7299 188.14							

Aquakem v. 7.2AQ1

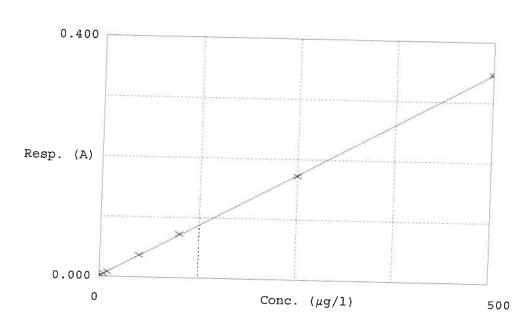
Results from time period:

Thu Dec 19 11:09:52 2024

Thu Dec 19 14:26:05 2024

Sample Id	Sam	/Ctr/c/ Test short r Test typ	oe Result Result :	unit Result date and time Stat
ICV1	S	Total CN P	99.2204 µg/l	
ICB1	S	Total CN P	0.5494 μg/l	12/19/2024 13:44:18
CCV1	S	Total CN P	248.1405 μg/l	12/19/2024 13:44:20
CCB1	S	Total CN P	0.1658 μg/l	12/19/2024 13:44:22
PB165761BL	S	Total CN P	0.0079 µg/l	12/19/2024 13:44:23
PB165761BS	S	Total CN P	99.8078 μg/l	12/19/2024 13:44:25
LOWPB165761	S	Total CN P	9.7737 μg/l	12/19/2024 13:51:49
HIGHPB165761	S	Total CN P	489.8416 μg/l	12/19/2024 13:51:50
P5306-01	S	Total CN P	0.6474 μg/l	12/19/2024 13:51:52
P5306-03	S	Total CN P	0.7457 μg/l	12/19/2024 13:51:54
P5306-05	S	Total CN P	0.1561 μg/l	12/19/2024 13:51:55
P5306-07	S	Total CN P	1.0705 μg/l	12/19/2024 13:51:56
P5306-09	S	Total CN P	0.7745 μg/l	12/19/2024 13:51:57
P5306-11	S	Total CN P	0.1228 μg/l	12/19/2024 13:51:58
CCV2	S	Total CN P	245.139 µg/l	12/19/2024 13:51:59
CCB2	S	Total CN P	0.0497 μg/l	12/19/2024 13:59:24
P5306-13	S	Total CN P	0.4558 μg/l	12/19/2024 13:59:25
P5306-15	S	Total CN P	0.1717 μg/l	12/19/2024 13:59:26
P5306-15DUP	S	Total CN P	0.5096 μg/l	12/19/2024 13:59:27
P5306-15MS	S	Total CN P	41.6488 μg/l	12/19/2024 13:59:28
P5306-15MSD	S	Total CN P	42.0264 μg/l	12/19/2024 14:26:00
CCV3	S	Total CN P	42.0204 μg/ι 255.8711 μg/ι	12/19/2024 14:26:01
CCB3	S	Total CN P		12/19/2024 14:26:04
			0.104 µg/l	12/19/2024 14:26:05

			=========			On:12/23/2024 10:25:47 AM _Inst Id :Konelab 2	20
Calibration results	s /	Quakem 7.2AQ	21		Page:	LB_:LB134018	Ĩ.
	2	HEMTECH CONS 84 Sheffield	ULTING G	ROUP INC Mountainside,	NJ 07092		
12/19/2024 11:28	R	eviewed by :	NF	Instrument	ID : Kone	elab	1 2
Test Total CN							3
Accepted	12/19/202	4 11:28					4 5
Factor Bias	1453 0.002						6 7
Coeff. of det.	0 999926						8
Errors	0.000020						9 10
							11 12
	0.400)					12
						×	14



	Calibrator	Response	Calc. con.	Conc.	Errors	
1 2 3 4 5 6 7	0.0PPBCN 5.0PPBCN 50PPBCN 100PPBCN 250PPBCN 500PPBCN	0.001 0.005 0.008 0.037 0.072 0.172 0.346	-0.6831 4.7232 9.3738 50.6342 102.7678 247.5715 500.6126	0.0000 5.0000 10.0000 50.0000 100.0000 250.0000 500.0000	-5.5 -6.3 1.3 2.8 -1.0 0.1	NF 12.19-2024

Reviewed By:lwona



Soil/Sludge Cyanide Preparation Sheet

PB165761

SOP ID :	M9012B-T	otal, Amenable and	Reactive Cya	nide-20					
SDG No :	N/A			Start D	igest Date:	12/18/2024 Time: 14:00 Temp: 123			
Matrix :	SOIL					12/18/2024 Time: 15:30 Temp: 126			
Pippete ID :	WC				-				
Balance ID :	WC SC-7								
Hood ID :	HOOD#1	 Dige	stion tube I	D: M5595	95 Block Thermometer ID : WC CYANID				
Block ID :	MC-1, MC-		lter paper I		 P	Prep Techniclan Signature:			
Weigh By :	JP		pH Meter I	D: N/A		Supervisor Signature: 12			
Standared	Name		MLS USED)	STD REI	F. # FROM LOG			
LCSS 1ML					WP10954	19			
PBS003 50.0ML					W3112				
MS/MSD SPIKE SOL. 0.40ML					WP11089	9			
N/A			N/A	N/A					
N/A N/A				N/A					
Chemical Used				ML/SAMPLE USED		Lot Number			
0.25N NaOH				50ML					
50% v/v H2S	04					WP108640			
51% w/v Mg0				5ML		WP110391			
N/A				2ML N/A		WP110390			
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		nt			
50		50		V/A	N/A				
55.0		CE 0							

			Comment
S0	S0	N/A	N/A
55.0	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	W3011
ICB	ICB	N/A	N/A
CCV	ссу	N/A	N/A
ССВ	ССВ	N/A	N/A
Midrange	Midrange	N/A	N/A
HIGHSTD	HIGHSTD	5.0ML	WP110899
LOWSTD	LOWSTD	0.1ML	WP110899

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12:18.2024, 15:45	5P/cell	NFCWCA
	Preparation Group	Analysis Group



Lab Sampie ID	Client Sample ID	Initial Weight (9)	Final Vol (ml)	рН	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
P5306-01	OU4-VSL-07-121224	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
P5306-03	OU4-VSL-08-121224	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
P5306-05	OU4-VSL-09-121224	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
P5306-07	OU4-VSL-10-121224	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
P5306-09	OU4-VSL-11-121224	1.05	50	N/A	N/A	N/A	N/A	N/A	N/A
25306-11	OU4-VSL-12-121224	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
25306-13	OU4-VSL-13-121224	1.00	50	N/A	N/A	N/A	N/A	N/A	N/A
5306-15	OU4-VSL-14-121224	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
5306-15MS	OU4-VSL-14-121224MS	1.01	50	N/A	N/A	N/A	N/A	N/A	N/A
5306-15MSD	OU4-VSL-14-121224MSD	1.02	50	N/A	N/A	N/A	N/A	N/A	N/A
5306-15DUP	OU4-VSL-14-121224DUP	1.04	50	N/A	N/A	N/A	N/A	N/A	N/A
3165761BL	PBS761	1.00	50	N/A	N/A	N/A	N/A	N/A	N/A
3165761BS	LCS761	1.00	50	N/A	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name :	CN P5306	WorkList	WorkList ID: 186410	Department -			
Slames					UISUIIATION	ä	Date: 12-17-2024 14:45:35
Cample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage	Collect Date Method
P5306-01	0U4-VSL-07-121224					Location	
		DIIOS	Cyanide	Cool 4 den C	MODIO		
r3306-03	OU4-VSL-08-121224	Solid	Gvanida		NUBI03	L61	12/12/2024 9012B
P5306-05	0114-VS1 00 124201		odaiina	Cool 4 deg C	NOBI03	161	10/10/0000
	12121-03-10-20	Solid	Cyanide				12/12/24 9012B
P5306-07	OU4-VSL-10-121224	Pilos Volis		coul 4 deg C	NOBI03	L61	12/12/2024 9012R
DE200 00		Diloo	cyanide	Cool 4 deg C	NOBIOS	-	
60-00cc-	0U4-VSL-11-121224	Solid	Gvanido	5	COIDON	L61	12/12/2024 9012B
P5306-11	0U4-VSI -12-121224		odalilue	Cool 4 deg C	NOBI03	L61	12/12/2024 00105
	+7717171 74	Solid	Cyanide	Conl 4 dea C			171 171 775 A0 178
P5306-13	OU4-VSL-13-121224	Solid	- Firmo		NOBI03	L61	12/12/2024 9012B
DE206 1E			cyanide	Cool 4 deg C	NORIDS	-	
CI -0000 -	0U4-VSL-14-121224	Solid	Cvanida		COLOCK	L01	12/12/2024 9012B
			- Anna	Cool 4 deg C	NOBI03	L61	acton NC/2/2/21
							171 171 AN 17D

Date/Time 12:18:2024, 13:00

John - Ba-(Co) 4 Raw Sample Relinquished by: Raw Sample Received by: 9 10 11 12 13 14

Page 1 of 1

15:30

P5306-GENCHEM



Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134018

Review By	Nił	ha Review On		12/23/2024 10:20:17 AM		
Supervise By	lwo	ona	Supervise On	12/23/2024 10:25:47 AM		
SubDirectory	LB	134018	Test	Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP111150,WP111151,V	VP111152,WP111153,WP111154,WP	111155,WP111156		
ICV Standard		W3011				
CCV Standard		WP111151	WP11151			
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP109549				
Chk Standard		WP111035,WP110103,	WP111158			

Sr#	Sampleld	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	12/19/24 11:28		Niha	ОК
2	5.0PPBCN	5.0PPBCN	CAL2	12/19/24 11:28		Niha	ОК
3	10PPBCN	10PPBCN	CAL3	12/19/24 11:28		Niha	ОК
4	50PPBCN	50PPBCN	CAL4	12/19/24 11:28		Niha	ОК
5	100PPBCN	100PPBCN	CAL5	12/19/24 11:28		Niha	ОК
6	250PPBCN	250PPBCN	CAL6	12/19/24 11:28		Niha	ОК
7	500PPBCN	500PPBCN	CAL7	12/19/24 11:28		Niha	ОК
8	ICV1	ICV1	ICV	12/19/24 13:44		Niha	ОК
9	ICB1	ICB1	ICB	12/19/24 13:44		Niha	ОК
10	CCV1	CCV1	CCV	12/19/24 13:44		Niha	ОК
11	CCB1	CCB1	ССВ	12/19/24 13:44		Niha	ОК
12	PB165761BL	PB165761BL	MB	12/19/24 13:44		Niha	ОК
13	PB165761BS	PB165761BS	LCS	12/19/24 13:51		Niha	ОК
14	LOWPB165761	LOWPB165761	SAM	12/19/24 13:51		Niha	ОК
15	HIGHPB165761	HIGHPB165761	SAM	12/19/24 13:51		Niha	ОК
16	P5306-01	OU4-VSL-07-121224	SAM	12/19/24 13:51		Niha	ОК
17	P5306-03	OU4-VSL-08-121224	SAM	12/19/24 13:51		Niha	ОК
18	P5306-05	OU4-VSL-09-121224	SAM	12/19/24 13:51		Niha	ОК



Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134018

Revie	w By	Niha	Review O	n	12/23/2024 10:2	20:17 AM		
Super	rvise By	Iwona	Supervise	e On	12/23/2024 10:2	12/23/2024 10:25:47 AM		
SubD	irectory	LB1340	18 Test	Test Cyanide				
STD. I	NAME	STI	D REF.#					
CAL Sta CV Sta CCV Sta CSA Sta CRI Sta _CS Sta Chk Sta	indard andard andard ndard indard	W30 WP1 N/A N/A WP ⁻	11150,WP111151,WP111152,WP11 11 11151 109549 11035,WP110103,WP111158	1153,WP11115	4,WP111155,WP111156			
19	P5306-07		OU4-VSL-10-121224	SAM	12/19/24 13:51		Niha	ОК
20	P5306-09		OU4-VSL-11-121224	SAM	12/19/24 13:51		Niha	ОК
21	P5306-11 OU4-\		OU4-VSL-12-121224	SAM	12/19/24 13:51		Niha	ОК
22	CCV2		CCV2	CCV	12/19/24 13:59		Niha	ок
23	CCB2		CCB2	ССВ	12/19/24 13:59		Niha	ОК
24	P5306-13		OU4-VSL-13-121224	SAM	12/19/24 13:59		Niha	ок

21	P5306-11	OU4-VSL-12-121224	SAM	12/19/24 13:51	Niha	ОК
22	CCV2	CCV2	CCV	12/19/24 13:59	Niha	ОК
23	CCB2	CCB2	ССВ	12/19/24 13:59	Niha	ОК
24	P5306-13	OU4-VSL-13-121224	SAM	12/19/24 13:59	Niha	ОК
25	P5306-15	OU4-VSL-14-121224	SAM	12/19/24 13:59	Niha	ОК
26	P5306-15DUP	OU4-VSL-14-121224[DUP	12/19/24 13:59	Niha	ОК
27	P5306-15MS	OU4-VSL-14-121224N	MS	12/19/24 14:26	Niha	ОК
28	P5306-15MSD	OU4-VSL-14-121224	MSD	12/19/24 14:26	Niha	ОК
29	CCV3	CCV3	CCV	12/19/24 14:26	Niha	ОК
30	ССВЗ	ССВЗ	ССВ	12/19/24 14:26	Niha	ОК



Prep Standard - Chemical Standard Summary

Order ID : P5306

Test : Cyanide, Percent Solids

Prepbatch ID : PB165761,

Sequence ID/Qc Batch ID: LB134018,

Standard ID :

WP108640,WP109549,WP110103,WP110390,WP110391,WP110899,WP111035,WP111149,WP111150,WP111151,WP1 11152,WP111154,WP111155,WP111156,WP111158,

Chemical ID :

E3657,M5673,M6121,W2668,W2882,W3001,W3011,W3019,W3112,W3138,W3139,W3154,



<u>Recipe</u> <u>ID</u> 11	NAME Sodium hydroxide absorbing solution 0.25 N	<u>NO.</u> WP108640	Prep Date 07/05/2024		Prepared By Rubina Mughal	CALE_4 (WC	<u>PipetteID</u> None	Supervised By Iwona Zarych 07/08/2024
<u>FROM</u>	21.00000L of W3112 + 210.00000gra	am of E3657	′ = Final Qua	ntity: 21.000 L		SC-4)		
<u>Recipe</u> <u>ID</u>	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	PipettelD	Supervised By

Recipe				Expiration	Prepared			Supervised By
ID	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipetteID	Iwona Zarych
3371	Cyanide LCS Spike Solution, 5PPM	<u>WP109549</u>	09/06/2024	01/05/2025	Niha Farheen Shaik	None	WETCHEM_P IPETTE_3	09/06/2024
<u>FROM</u>	1.00000ml of W3138 + 199.00000ml	of WP1086	40 = Final Qu	antity: 200.000) ml		(WC)	



Recipe ID 539 FROM	NAME CN BUFFER 138.00000gram of W2668 + 862.000	<u>NO.</u> WP110103 00ml of W3			Prepared By Rubina Mughal	ScaleID WETCHEM_S CALE_5 (WC SC=5)	PipettelD None	Supervised By Iwona Zarych 10/08/2024
Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	PipettelD	Supervised By
3214		<u>WP110390</u>	10/24/2024	04/24/2025	Niha Farheen Shaik	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 10/24/2024

FROM 500.00000ml of W3112 + 510.00000gram of W3001 = Final Quantity: 1000.000 ml



Recipe ID 1714	<mark>NAME</mark> Sulfuric Acid, 50% (v/v)	<u>NO.</u> WP110391	Prep Date 10/24/2024	Expiration Date 04/24/2025	<u>Prepared</u> <u>By</u> Niha Farheen Shaik	<u>ScaleID</u> None	PipetteID None	Supervised By Iwona Zarych 10/24/2024
FROM	1000.00000ml of M5673 + 1000.000	00ml of W31	12 = Final Q	uantity: 2000.0	00 ml			
<u>Recipe</u> ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By
3850	Cyanide MS-MSD spiking	WP110899	12/02/2024	01/05/2025	Iwona Zarych	None	WETCHEM_F	Jignesh Parikh

FROM 1.00000ml of W3154 + 199.00000ml of WP108640 = Final Quantity: 200.000 ml



<u>Recipe</u> <u>ID</u> 607	NAME PYRIDINE-BARBITURIC ACID	<u>NO.</u> WP111035	Prep Date 12/09/2024	Expiration Date 04/30/2025	<u>Prepared</u> <u>By</u> Niha Farheen Shaik	ScaleID WETCHEM_S CALE_5 (WC	PipetteID Glass Pipette-A	Supervised By Iwona Zarych 12/10/2024
<u>FROM</u>	145.00000ml of W3112 + 15.00000g ml	ram of W288	32 + 15.00000)ml of M6121 +	75.00000ml of	SC-5) W3019 <i>=</i> Final	Quantity: 250.	000
Recipe				Expiration	Prepared			Supervised By

Recipe				Expiration	Prepared			Supervised By	
<u>ID</u>	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipettelD	Iwona Zarych	
3456	Cyanide Intermediate Working Std, 5PPM	<u>WP111149</u>	12/19/2024	12/20/2024	Niha Farheen Shaik	None	WETCHEM_F IPETTE_3		
FROM	0.25000ml of W3154 + 49.75000ml c	of WP108640) = Final Qua	antity: 50.000 r	nl		(WC)		



<u>Recipe</u> <u>ID</u> 4	NAME Calibation standard 500 ppb	<u>NO.</u> WP111150	Prep Date 12/19/2024	Expiration Date 12/20/2024	<u>Prepared</u> <u>By</u> Niha Farheen Shaik	<u>ScaleID</u> None	PipettelD Glass Pipette-A	Supervised By Iwona Zarych 12/20/2024	2 3 4
<u>FROM</u>	45.00000ml of WP108640 + 5.00000	ml of WP11	1149 = Final (Quantity: 50.00	0 ml				5 6
									7
									8
									9
									1 1
									1
									1
									1
Recipe	NAME	NO	Pron Date	Expiration	Prepared By	ScaleID	PipettelD	Supervised By	

Recipe				Expiration	Prepared			Supervised By
ID	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipetteID	Iwona Zarych
3761	Calibration-CCV CN Standard 250 ppb	<u>WP111151</u>	12/19/2024	12/20/2024	Niha Farheen Shaik	None	Glass Pipette-A	12/20/2024
FROM	2.50000ml of WP111149 + 47.50000	ml of WP108	3640 = Final	Quantity: 50.00	00 ml			



<u>Recipe</u> <u>ID</u> 6	NAME Calibration Standard 100 ppb	<u>NO.</u> WP111152	<u>Prep Date</u> 12/19/2024	Expiration Date 12/20/2024	Prepared By Niha Farheen Shaik	<u>ScaleID</u> None	<mark>PipetteID</mark> Glass Pipette-A	Supervised By Iwona Zarych 12/20/2024
<u>FROM</u>	1.00000ml of WP111149 + 49.00000	ml of WP108	3640 = Final (Quantity: 50.00	0 ml			
<u>Recipe</u> ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipettelD</u>	Supervised By

Recipe				Expiration	Prepared			Supervised By
<u>ID</u>	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipetteID	Iwona Zarych
7	Calibration Standard 50 ppb	<u>WP111153</u>	12/19/2024	12/20/2024	Niha Farheen	None	WETCHEM_P	
					Shaik		IPETTE_3	12/20/2024
FROM	0.50000ml of WP111149 + 49.50000	ml of WP108	3640 = Final (Quantity: 50.00	0 ml		(WC)	



Recipe ID 8	NAME	<u>NO.</u> WP111154	Prep Date 12/19/2024		<u>Prepared</u> <u>By</u> Niha Farheen Shaik	<u>ScaleID</u> None	PipettelD WETCHEM_P IPETTE_3	Supervised By Iwona Zarych 12/20/2024	2 3 4
<u>FROM</u>	1.00000ml of WP111150 + 49.00000r	ml of WP108	3640 = Final (Quantity: 50.00)0 ml				5 6 7
									8 9
									1 1 1
Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By	

Recipe				Expiration	Prepared			Supervised By
ID	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipetteID	Iwona Zarych
9	Calibration Standard 5 ppb	<u>WP111155</u>	12/19/2024	12/20/2024	Niha Farheen	None	WETCHEM_P	-
					Shaik		IPETTE_3	12/20/2024
FROM	0.50000ml of WP111150 + 49.50000	ml of WP108	3640 = Final (Quantity: 50.00	0 ml		(WC)	



<u>Recipe</u> <u>ID</u> 167	NAME 0 ppb CN calibration std	<u>NO.</u> WP111156	<u>Prep Date</u> 12/19/2024	Expiration Date 12/20/2024	<u>Prepared</u> <u>By</u> Niha Farheen Shaik	<u>ScaleID</u> None	PipetteID None	Supervised By Iwona Zarych 12/20/2024
<u>FROM</u>	50.00000ml of WP108640 = Final Q	uantity: 50.0	00 ml					

<u>Recipe</u> <u>ID</u>	NAME	<u>NO.</u>	Prep Date	<u>Expiration</u> <u>Date</u>	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u> Iwona Zarych
1582	Chloramine T solution, 0.014M	<u>WP111158</u>	12/19/2024	12/20/2024	Niha Farheen Shaik	WETCHEM_S CALE_5 (WC	None	12/20/2024
<u>FROM</u>	0.08000gram of W3139 + 20.00000n	nl of W3112	= Final Quan	ntity: 20.000 ml		SC-5)		



CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4	23B1556310	12/31/2025	12/04/2023 / Rajesh	12/01/2023 / Rajesh	E3657
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	09/21/2023 / mohan	09/05/2023 / mohan	M5673
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)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121
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, CRYS, 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.	EM-BX0035-3 / Barbituric Acid, 100 gms	1.00132.0100	04/30/2025	12/07/2021 / apatel	11/30/2021 / apatel	W2882
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	01237-10KG / Megnasium Chloride Hexahydrate ACS 10KG	002251-03319	06/06/2027	01/23/2023 / Iwona	06/06/2022 / Iwona	W3001



CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	/ ICV-CN	ICV6-400	12/31/2024	01/03/2024 / Iwona	02/20/2020 / Iwona	W3011
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 / Iwona	04/03/2023 / Iwona	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 / Iwona	07/03/2024 / Iwona	W3112
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	44080060	01/30/2025	09/06/2024 / Iwona	08/28/2024 / Iwona	W3138
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.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1411J58	05/31/2025	12/02/2024 / Iwona	12/02/2024 / Iwona	W3154

P5306-GENCHEM

W2918 1e. 06/06/22 W3001 exp. 06/06/27 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
Product	Magnesium chloride hexahydrate
Lot Number	002251-03319
	Magnesium chloride•6H2O
CAS Number	7791-18-6
Molecular Formula	MgCl ₂ •6H ₂ O
Molecular Weight	203.3
Appearance	Colorless crystals, very deliquescent
Heavy Metals	< 5 ppm
Anion	Nitrate : < 0.001% Phosphate : < 5 ppm Sulfate : < 0.002%
Cation	Ammonium : < 0.002% Barium : < 0.005% Calcium : 0.0006% Iron : < 5 ppm Manganese : 1.8 ppm Potassium : 0.0006% Sodium : 0.0008% Strontium : 0.0015%
Insoluble material	0.0025%
Assay by titration	100.29%
Grade	ACS reagent
Storage	Store at RT
Country of Origin	India

Certificate of Analysis

Catalog Number: 01237

Lot Number: 002251-03319

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

likumer

Bala Kumar Quality Control Manager

Sigma-Aldrich

W3019 Rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA Website: www.sigmaaldrich.com Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

Product Name: Pyridine - anhydrous, 99.8%

Dreduct Number

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

Certificate of Analysis

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	<u><</u> 0.0005 %	< 0.002 %	

Z

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.



Version Number: 1 P5306-GENCHEM



Certificate of Analysis

Sodium Hydroxide (Pellets)

Material:	0583
Grade:	ACS
Batch Number:	23B1

ACS GRADE 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

Additional Information

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

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

We certify that this batch conforms to the specifications listed.

Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA Product meets analytical specifications of the grades listed.

VWR International LLC, Radnor Corporate Center, Suite 200, 100 Matsonford Road, Radnor, PA 19087, USA

Date Printed: 02/15/2023 Page 1 of 2 Sulfuric Acid BAKER INSTRA-ANALYZED® Reagent For Trace Metal Analysis

Low Selenium

MS693-





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 (H2SO4)	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 SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH4)	≤ l ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (AI)	≤ 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

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>>> Continued on page 2 >>>



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.

<u>CAUTION</u>: 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 $\mu g/L$ (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.

RMs ICV 1, 5, 6 SFAM.docx

Page 1 of 2

QATS Form 20-007F188R00, 04-19-2021





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

APTIM	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.

	ICV1-1014					
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)				
AI	2500	500				
Sb	1000	200				
As	1000	200				
Ba	520	100				
Be	510	100				
Cd	510	100				
Ca	10000	2000				
Cr	520	100				
Со	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				
TI	1000	210				
V	500	100				
Zn	1000	200				

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

IC	CV5-0415	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





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



55 of 70

Jamie Ethier Vice President Global Quality

P5306-GENCHEM

8 84 1 1 1 6 1

Hydrochloric Acid, 36.5–38.0% BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis





R->10/13/24

Metdis

M6121

Material No.: 9530-33 Batch No.: 0000275677 Manufactured Date: 2020/12/16 Retest Date: 2025/12/15 Revision No: 1

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
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	۲ د د د د د
ACS – Free Chlorine (as Cl2)	<= 0.5 ppm	< 0.5
Phosphate (PO4)	<= 0.05 ppm	< 0.03
Sulfate (SO4)	<= 0.5 ppm	< 0.3
Sulfite (SO3)	<= 0.8 ppm	0.3
Ammonium (NH₄)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<pre>dqq 0.1 =></pre>	
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.4
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.3
Trace Impurities – Gallium (Ga)	<= 1.0 ppb <= 1.0 ppb	< 0.1
	<= 1.0 hhp	< 0.2

Certificate of Analysis

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 4

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> 13 14

Material No.: 9530-33 Batch No.: 0000275677

> 11 12

> > 13

Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<]
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.3 < 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	
Trace Impurities - Selenium (Se), For Information Only	ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	1.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 10.0
Trace Impurities – Sodium (Na)	<= 100,0 ppb	< 0.3
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 5.0
Trace Impurities - Tantalum (Ta)		< 0.2
Trace Impurities - Thallium (TI)	<= 1.0 ppb	< 0.9
Frace Impurities - Tin (Sn)	<= 5.0 ppb	< 2.0
Frace Impurities - Titanium (Ti)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	0.2
race Impurities – Zinc (Zn)	<= 1.0 ppb	< 0.2
race Impurities – Zinc (Zi) Trace Impurities – Zirconium (Zr)	<= 5.0 ppb	0.3
race imparities - zircomuni (zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use Product Information (not specifications): Appearance (clear, fuming liquid) Meets ACS Specifications

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

James Techie 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

1.00132.0000 Barbituric acid for analysis EMSURE® Batch N020065932

	Spec. Values	6	Batch Values	
				6 /
Assay (acidimetric)	≥ 99	%	99.6	%
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) 17.04.2020 Minimum shelf life (DD.MM.YYYY) 30.04.2025

Ioannis Chartomatsidis

Responsible laboratory manager quality control

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

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 (NaH2PO4 · H2O)	98.0 - 102.0 %	99.5
oH of 5% Solution at 25°C	4.1 – 4.5	4.3
nsoluble Matter	<= 0.01 %	< 0.01
Chloride (Cl)	<= 5 ppm	< 5
ACS – Sulfate (SO4)	<= 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

ames Techie

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



Part of TCP Analytical Group

Jackson's Pointe Commerce Park- Building 1000 1010 Jackson's Pointe Court, Zelienople, PA 16063

Certificate of Analysis

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

Product Code:	LC13545		Manufacture Date:	August 01, 2024
Lot Number:	44080060		Expiration Date:	January 30, 2025
Test		Specification	Result	
Appearance (cla	arity)	clear solution	clear solu	Ition
Appearance (co	lor)	colorless	colorless	
Concentration (CN)	0.990 - 1.010mg/mL	1.008mg/	/mL
Concentration (CN)	990 - 1,010ppm	1,008ppn	n
Traceable to NIS	ST 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 standards.

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

Suff	fix	1	2	3/35/36/365	4/4C	5	6	7	8	9	20	44	200	246	486
Size	•	500mL or g	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

Michael Monteleone Chemistry Supervisor - Quality Control



W3139 Received on 9/9/24 by IZ

Product No.:

A12044

Product: Chloramine-T trihydrate, 98%

Lot No.: 10239484

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

Order our products online thermofisher.com/chemicals

This document has been electronically generated and does not require a signature.

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

W3154 Rec. on 12/2/24 by IZ

Certificate of Analysis

RICCA CHEMICAL COMPANY®

Cyanide Standard, 1000 ppm CN

Lot Number: 1411J58 Pr

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)

Version: 1.3

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Luis Briceno (11/22/2024) Operations Supervisor

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OVENTEMP IN Celsius(°C): 107

Weight Check 1.0g: 1.00

Weight Check 10g: 10.00

Time IN: 17:00

In Date: 12/17/2024

OvenID: M OVEN#1

PERCENT SOLID

Supervisor: Iwona Analyst: jignesh Date: 12/18/2024

OVENTEMP OUT Celsius(°C): 103 Time OUT: 08:12 Out Date: 12/18/2024 Weight Check 1.0g: 1.00 Weight Check 10g: 10.00 BalanceID: M SC-4 Thermometer ID: % SOLID- OVEN

QC:LB133976

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
P5245-03	72-12016	1	1.15	8.37	9.52	8.99	93.7	
P5299-01	SB-01	2	1.15	8.40	9.55	7.74	78.5	
P5299-02	SB-02	3	1.16	8.70	9.86	7.73	75.5	
P5299-03	SB-01	33	1.13	8.61	9.74	7.05	68.8	
P5299-04	SB-02	4	1.15	8.75	9.9	8.08	79.2	
P5306-01	OU4-VSL-07-121224	5	1.16	8.52	9.68	8.9	90.8	
P5306-03	OU4-VSL-08-121224	6	1.17	8.73	9.9	9.1	90.8	
P5306-05	OU4-VSL-09-121224	7	1.19	8.45	9.64	8.8	90.1	
P5306-07	OU4-VSL-10-121224	8	1.15	8.65	9.8	9.37	95.0	
P5306-09	OU4-VSL-11-121224	9	1.11	8.77	9.88	9.32	93.6	
P5306-11	OU4-VSL-12-121224	10	1.12	8.65	9.77	8.97	90.8	
P5306-13	OU4-VSL-13-121224	11	1.13	8.72	9.85	8.98	90.0	
P5306-15	OU4-VSL-14-121224	12	1.18	8.46	9.64	9.29	95.9	
P5306-17	OU4-VSL-06R-121224	13	1.15	8.80	9.95	9.22	91.7	
P5307-01	1A-1B-1C-ROOF-2	14	1.00	1.00	2.00	2.00	100.0	caluk
P5307-02	2A-2B-2C-ROOF-2	15	1.00	1.00	2.00	2.00	100.0	caluk
P5307-03	3A-3B-3C-1907	16	1.00	1.00	2.00	2.00	100.0	caluk
P5307-04	4A-4B-4C-1907	17	1.00	1.00	2.00	2.00	100.0	caluk
P5307-05	5A-5B-5C-1907	18	1.00	1.00	2.00	2.00	100.0	caluk
P5307-06	6A-6B-6C-1952	19	1.00	1.00	2.00	2.00	100.0	caluk
P5307-07	1907-BLDG-GRAY	20	1.00	1.00	2.00	2.00	100.0	caluk
P5307-08	1952-BLDG	21	1.00	1.00	2.00	2.00	100.0	caluk
P5307-09	9A-9B-9C-1907	22	1.00	1.00	2.00	2.00	100.0	caluk
P5307-10	1907-BLDG-OFF-WHITE	23	1.00	1.00	2.00	2.00	100.0	caluk
P5307-11	11A-11B-11C-1952-BLDG	24	1.00	1.00	2.00	2.00	100.0	caluk
P5307-12	12A-12B-12C-1952	25	1.00	1.00	2.00	2.00	100.0	caluk
P5307-13	13A-13B-13C-1952	26	1.00	1.00	2.00	2.00	100.0	caluk
P5307-14	14A-14B-14C-1907	27	1.00	1.00	2.00	2.00	100.0	caluk
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I P5306-GENCHEM



		Supervisor:	Iwona
		Analyst:	jignesh
		Date:	12/18/2024
OVENTEMP	OUT	Celsius(°C):	103
		Time OUT:	08:12
		Out Date:	12/18/2024

BalanceID: M SC-4 Thermometer ID: % SOLID- OVEN

Weight Check 1.0g: 1.00

Weight Check 10g: 10.00

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13 14

OVENTEMP IN Celsius(°C): 107 Time IN: 17:00 In Date: 12/17/2024 Weight Check 1.0g: 1.00 Weight Check 10g: 10.00 OvenID: M OVEN#1

QC:LB133976

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Sample	Dish+Dry Sample Wt(g)(C)	% Solid	Comments
P5307-15	15A-15B-15C-ROOF-7	28	1.00	1.00	2.00	2.00	100.0	caluk
P5312-01	SOIL-VNJ-222	29	1.15	8.43	9.58	8.55	87.8	
P5312-02	SOIL-VNJ-222	30	1.12	8.66	9.78	9.35	95.0	
P5312-03	CONCRETE-VNJ-222	31	1.00	1.00	2.00	2.00	100.0	CONCRETE sample
P5312-04	CONCRETE-VNJ-222	32	1.00	1.00	2.00	2.00	100.0	CONCRETE sample

	$ \text{Solid} = \frac{(C-A) * 100}{(B-A)} $	
P5306-GENCHEM		65 of 70



<u>SHIPPING</u> DOCUMENTS

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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



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

LOGIN REPORT/SAMPLE TRANSFER

Clien Clien Invo	Order ID: P5306 NC ent Name: Nobis Group t Contact: Adam Roy ice Name: Nobis Group e Contact: Adam Roy	OBIO3	Pro Receive	ject Name :	12/17/2024 10:24:00 AM Raymark Superfund Site 12/17/2024 9:50:00 AM	Ha	Project Mgr : Report Type : EDD Type : I rd Copy Date : Date Signoff :			
LAB IÐ	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD		FAX DATE	DUE DATES
P5306-01	OU4-VSL-07-121224	Solid	12/12/2024	10:00						
P5306-03	OU4-VSL-08-121224	Solid	12/12/2024	10:10	VOCMS Group3		8260D	10 Bus. Days		
					VOCMS Group3		8260D	10 Bus. Days		
P5306-05	OU4-VSL-09-121224	Solid	12/12/2024	10:20						
P5306-07	OU4-VSL-10-121224	Solid	12/12/2024	10:30	VOCMS Group3		8260D	10 Bus. Days		
P5306-09	OU4-VSL-11-121224	Solid	12/12/2024	10:40	VOCMS Group3		8260D	10 Bus. Days		
					VOCMS Group3		8260D	10 Bus. Days		
P5306-11	OU4-VSL-12-121224	Solid	12/12/2024	10:50	VOCMS Group3		8260D	10 Bus. Days		
P5306-13	OU4-VSL-13-121224	Solid	12/12/2024	11:00						
P5306-15	OU4-VSL-14-121224	Solid	12/12/2024	<u>-11:15</u> 11:10	VOCMS Group3		8260D	10 Bus. Days		
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284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Client	ent Name : Nobis Group t Contact : Adam Roy ice Name : Nobis Group	NOBI03	Pr Receive	oject Name :	12/17/2024 10:24:00 AM Raymark Superfund Site 12/17/2024 9:50:00 AM	Ha	Project Mgr : Report Type : L EDD Type : E ard 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
					VOCMS Group3		8260D	10 Bus. Days		

Relinguished By : Date / Time : 12-17-24 1230

Received By : 12.17.24 11:30 Date / Time :

Storage Area : VOA Refridgerator Room

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