

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

LAB CHRONICLE

OrderID:	Q3776	OrderDate:	12/4/2025 11:05:38 AM
Client:	Tetra Tech NUS, Inc.	Project:	CTO WA194808 Dahlgren VA - DOD VELAP
Contact:	Aaron Bernhardt	Location:	A11,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3776-01	IDW-RAD-20251203	WATER			12/03/25 12:45			12/04/25
			Corrosivity	9040C			12/08/25 11:25	
			Flash Point	1010B			12/09/25 14:30	



SAMPLE DATA

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	12/03/25 12:45
Project:	CTO WA194808 Dahlgren VA - DOD VELAP	Date Received:	12/04/25
Client Sample ID:	IDW-RAD-20251203	SDG No.:	Q3776
Lab Sample ID:	Q3776-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.72	H	1	0	0	0	pH		12/08/25 11:25	9040C
Flash Point	>212		1	0	0	0	o F		12/09/25 14:30	1010B

Comments: pH result reported at temperature 20.9 °C, Other method reference for flash point : Pensky-Martens Closed Cup Flash Point ASTM D 9

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

Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc.

SDG No.: Q3776

Project: CTO WA194808 Dahlgren VA - DOD VELAP

RunNo.: LB138146

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: Corrosivity	ICV	pH	7.01	7	100	90-110	12/08/2025
Sample ID: Corrosivity	CCV1	pH	2.02	2.00	101	90-110	12/08/2025
Sample ID: Corrosivity	CCV2	pH	12.02	12.00	100	90-110	12/08/2025

Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc.

SDG No.: Q3776

Project: CTO WA194808 Dahlgren VA - DOD VELAP

RunNo.: LB138163

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Flash Point	o F	82.1	81	101	78-84	12/09/2025

Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.	SDG No.: Q3776
Project: CTO WA194808 Dahlgren VA - DOD VELAP	Sample ID: Q3776-01
Client ID: IDW-RAD-20251203DUP	Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity	pH	+/-20	6.72		6.74		1	0.3		12/08/2025

Duplicate Sample Summary

Client:	Tetra Tech NUS, Inc.	SDG No.:	Q3776
Project:	CTO WA194808 Dahlgren VA - DOD VELAP	Sample ID:	Q3805-01
Client ID:	92925DUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Flash Point	o F	+/-2	>212.0		>212.0		1	0		12/09/2025



RAW DATA

Analytical Summary Report

Analysis Method: 9040C
Parameter: Corrosivity
Run Number: LB138146

Analyst By : jignesh
Supervisor Review By : Iwona
Slope : 98.6
pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3178
BUFFER PH 7.00 GREEN 1PINT PK6	W3093
PH 10.01 BUFFER, COLOR CD 475ML	W3191
buffer solution pH 7 yellow	W3217
Buffer Solution, PH2 (500ml)	W3161
pH 12.00 Buffer	W3200

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

True Value of CCV1 = 2.00 Control Limits[+/- 0.05].

True Value of CCV2 = 12.00 Control Limits[+/- 0.05].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	12/08/2025	11:11
2	CAL2	1	Water	NA	NA	20.2	7.00	12/08/2025	11:12
3	CAL3	1	Water	NA	NA	20.3	10.02	12/08/2025	11:13
4	ICV	1	Water	NA	NA	20.3	7.01	12/08/2025	11:15
5	CCV1	1	Water	NA	NA	20.2	2.02	12/08/2025	11:17
6	Q3776-01	1	Water	NA	NA	20.9	6.72	12/08/2025	11:25
7	Q3776-01DUP	1	Water	NA	NA	21.1	6.74	12/08/2025	11:27
8	CCV2	1	Water	NA	NA	20.2	12.02	12/08/2025	11:30

WORKLIST(Hardcopy Internal Chain)

JB 138146

WorkList Name : corrosivity q3776 w

WorkList ID : 193526

Department : Wet-Chemistry

Date : 12-08-2025 10:52:33

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3776-01	D	IDW-RAD-20251203	Water	Corrosivity	Cool 4 deg C	TETR06	A11	12/03/2025 9040C

Date/Time 12/08/25 11:10

Raw Sample Received by: JH wele

Raw Sample Relinquished by: JH wele

Date/Time 12/08/25 13:10

Raw Sample Received by: JH wele

Raw Sample Relinquished by: JH wele

Analytical Summary Report

Analysis Method: 1010B

Reviewed By: rubina

Parameter: Flash Point

Supervisor Review By: Iwona

Run Number: LB138163

Ambient Barometric Pressure (mmHg): 765.00

Thermometer ID: Flash Point

Barometric Scale ID: 0511064

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE, 0.025N, 4LITRE (ICV)	W3248

Seq	LabID	True Value °F	DL	Initial Sample °C	Celsius °C	Result °F	Final Result °F	Anal Date	Anal Time
1	ICV	81	1	9	28.00	82.4	82.1	12/09/2025	14:00
2	Q3776-01		1	14	100.00	>212.0	>212.0	12/09/2025	14:30
3	Q3791-01		1	12	100.00	>212.0	>212.0	12/09/2025	15:00
4	Q3792-01		1	14	100.00	>212.0	>212.0	12/09/2025	15:30
5	Q3805-01		1	15	100.00	>212.0	>212.0	12/09/2025	16:00
6	Q3805-01DUP		1	15	100.00	>212.0	>212.0	12/09/2025	16:30

Result = (Celsius * 1.8) + 32

Final Result = Result + (760 - Ambient Barometric Pressure) * 0.06

WORKLIST(Hardcopy Internal Chain)

6138163

WorkList Name : fp-12-8

WorkList ID : 193509

Department : Wet-Chemistry

Date : 12-08-2025 08:11:37

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3776-01	IDW-RAD-20251203	Water	Flash Point	Cool 4 deg C	TETR06	A11	12/03/2025	1010B
Q3791-01	T2	Water	Flash Point	Cool 4 deg C	PSEG03	D61	12/05/2025	1010B
Q3792-01	FRAC TANK#251193	Water	Flash Point	Cool 4 deg C	PSEG03	D32	12/05/2025	1010B
Q3805-01	92925	Water	Flash Point	Cool 4 deg C	PSEG03	A31	12/05/2025	1010B

Date/Time 12/19/2025 13:45
 Raw Sample Received by: R. H. W. G.
 Raw Sample Relinquished by: J. P. G. (1)

Date/Time 12/19/2025 17:10
 Raw Sample Received by: J. P. G. (1)
 Raw Sample Relinquished by: J. P. G. (1)

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB138146

Review By	jignesh	Review On	12/8/2025 12:16:26 PM
Supervise By	Iwona	Supervise On	12/8/2025 1:32:14 PM
SubDirectory	LB138146	Test	Corrosivity
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3178,W3093,W3191,W3217,W3161,W3200		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	12/08/25 11:11		jignesh	OK
2	CAL2	CAL2	CAL	12/08/25 11:12		jignesh	OK
3	CAL3	CAL3	CAL	12/08/25 11:13		jignesh	OK
4	ICV	ICV	ICV	12/08/25 11:15		jignesh	OK
5	CCV1	CCV1	CCV	12/08/25 11:17		jignesh	OK
6	Q3776-01	IDW-RAD-20251203	SAM	12/08/25 11:25		jignesh	OK
7	Q3776-01DUP	IDW-RAD-20251203D	DUP	12/08/25 11:27		jignesh	OK
8	CCV2	CCV2	CCV	12/08/25 11:30		jignesh	OK

Instrument ID: IGN-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB138163

Review By	rubina	Review On	12/9/2025 5:14:08 PM
Supervise By	Iwona	Supervise On	12/10/2025 9:21:31 AM
SubDirectory	LB138163	Test	Flash Point
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3248		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	ICV	ICV	ICV	12/09/25 14:00		rubina	OK
2	Q3776-01	IDW-RAD-20251203	SAM	12/09/25 14:30		rubina	OK
3	Q3791-01	T2	SAM	12/09/25 15:00		rubina	OK
4	Q3792-01	FRAC TANK#251193	SAM	12/09/25 15:30		rubina	OK
5	Q3805-01	92925	SAM	12/09/25 16:00		rubina	OK
6	Q3805-01DUP	92925DUP	DUP	12/09/25 16:30		rubina	OK

Prep Standard - Chemical Standard Summary

Order ID : Q3776

Test : Corrosivity,Flash Point

Prepbatch ID :

Sequence ID/Qc Batch ID: LB138146,LB138163,

Standard ID :

Chemical ID :

W3093,W3161,W3178,W3191,W3200,W3217,W3248,

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	566002 / BUFFER PH 7.00 GREEN 1PINT PK6	44001f99	12/31/2025	04/03/2024 / jignesh	04/02/2024 / jignesh	W3093

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL13850-1 / Buffer Solution, PH2 (500ml)	2411E26	10/31/2026	12/09/2024 / lwona	12/09/2024 / lwona	W3161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	2411A93	10/30/2026	04/01/2025 / JIGNESH	01/27/2025 / jignesh	W3178

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	2410F80	03/31/2026	04/01/2025 / JIGNESH	03/13/2025 / jignesh	W3191

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
RICCA CHEMICAL COMPANY	1615-16 / pH 12.00 Buffer	2504F20	09/30/2026	04/11/2025 / lwona	04/11/2025 / lwona	W3200

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14455-3 / buffer solution pH 7 yellow	2504D34	03/31/2027	07/02/2025 / jignesh	06/26/2025 / lwona	W3217

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LIT RE	250904J	02/28/2027	10/03/2025 / lwona	10/03/2025 / lwona	W3248

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Certificate of Analysis

W3093
094121
04/03/2024
16

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)**Lot Number:** 4401F99**Product Number:** 1551**Manufacture Date:** JAN 08, 2024**Expiration Date:** DEC 2025

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

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

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

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

Test	Specification	Result
Appearance	Yellow liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.004	0.02	186-I-g, 186-II-g, 191d

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

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

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

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



Paul Brandon (01/08/2024)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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



Certificate of Analysis

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C**Lot Number:** 2411E26**Product Number:** 1493**Manufacture Date:** NOV 11, 2024**Expiration Date:** OCT 2026

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

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	1.994	0.02	185i, 186-I-g, 186-II-g

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

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

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



Jose Pena (11/11/2024)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

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Certificate of Analysis

021758 58

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

Lot Number: 2411A93

Product Number: 1501

Manufacture Date: NOV 04, 2024

Expiration Date: OCT 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST Traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

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

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

Test	Specification	Result
Appearance	Red liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	4.008	0.02	185i, 186-I-g, 186-II-g

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

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1501-16	500 mL natural poly	24 months
1501-2.5	10 L Cubitainer®	24 months
1501-5	20 L Cubitainer®	24 months

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



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Certificate of Analysis

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

Lot Number: 2410F80

Product Number: 1601

Manufacture Date: OCT 09, 2024

Expiration Date: MAR 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

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

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

Test	Specification	Result
Appearance	Blue liquid	Passed

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	10.009	0.02	186-I-g, 186-II-g, 191d

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

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1601-1	4 L natural poly	18 months
1601-16	500 mL natural poly	18 months
1601-1CT	4 L Cubitainer®	18 months
1601-2.5	10 L Cubitainer®	18 months
1601-32	1 L natural poly	18 months
1601-5	20 L Cubitainer®	18 months

Version: 1.3

Lot Number: 2410F80

Product Number: 1601

Page 1 of 2



Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C**Lot Number:** 2504F20**Product Number:** 1615**Manufacture Date:** APR 08, 2025**Expiration Date:** SEP 2026

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	12.009	0.02	186-I-g, 186-II-g, 191d

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

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

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



Jose Pena (04/08/2025)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

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

Certificate of Analysis

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

Lot Number: 2504D34

Product Number: 1551

Manufacture Date: APR 03, 2025

Expiration Date: MAR 2027

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

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

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

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

Test	Specification	Result
Appearance	Yellow liquid	Passed *Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.003	0.02	186-I-g, 186-II-g, 191d

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

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

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

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



Jose Pena (04/03/2025)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

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Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 250904J

Product Number: 7900

Manufacture Date: SEP 03, 2025

Expiration Date: FEB 2027

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Organic Preservative	Proprietary	
Sodium Carbonate	497-19-8	ACS
Sodium Thiosulfate Pentahydrate	10102-17-7	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Iodate/Starch)	0.02499-0.02501 N at 20°C	0.02501 N at 20°C	136

Specification	Reference
Standard Sodium Thiosulfate Solution, 0.0250 N	APHA (4500-S2- F)
Standard Sodium Thiosulfate Titrant	APHA (4500-O D)
Standard Sodium Thiosulfate Titrant	APHA (4500-O E)
Standard Sodium Thiosulfate Titrant	APHA (4500-O F)
Standard Sodium Thiosulfate Titrant, 0.025 N	APHA (4500-CI B)
Standard Sodium Thiosulfate Titrant	APHA (4500-O C)
Standard Sodium Thiosulfate Titrant, 0.025 M	APHA (5530 C)
Standard Sodium Thiosulfate Solution (0.025 N)	EPA (SW-846) (9031)
Standard Sodium Thiosulfate solution (0.025 N)	EPA (SW-846) (9034)

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)
7900-1	4 L natural poly	18 months
7900-16	500 mL natural poly	18 months
7900-32	1 L natural poly	18 months

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



Jose Pena (09/03/2025)
Operations Manager

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SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Tetra Tech - Aaron Bernhardt

ADDRESS:

CITY: STATE: ZIP:

ATTENTION:

PHONE: (412) 523-0634 FAX:

PROJECT NAME: CTO WA194808 Danigren

PROJECT NO.: LOCATION: VA - DOD VELAP

PROJECT MANAGER: Aaron Bernhardt

e-mail: Aaron.Bernhardt@TetraTech.com

PHONE: (412) 523-0634 FAX:

BILL TO: PO#:

ADDRESS:

CITY: STATE: ZIP:

ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*

HARDCOPY (DATA PACKAGE): DAYS*

EDD: DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☒ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data) ☐ Other

☐ EDD FORMAT

1. Flam Point
2. SUOC-TCL BNA-10
3. Corrosivity
4. VOC-TCL VOA-10
5. Metals TCL-TAL
6. Metals TCL-TAL
7. Metals TCL-TAL
8. Metals TCL-TAL
9. Metals TCL-TAL

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	A	B					
1.	IDW-RAD-20251203	Water		X	12/31/25	1245	6	1	1	1	2	1					PH 1.0 513329
2.	TB-20251203	Water		X	12/31/25	0000	2				2						
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>2.3 °C</u>
1. <u>Aaron Bernhardt</u>	<u>12/31/25</u>	1. <u>[Signature]</u>	Comments:
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2. <u>[Signature]</u>	<u>12/4/25</u>	2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
3. <u>[Signature]</u>		3. <u>[Signature]</u>	

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete

☐ YES ☐ NO

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3776	TETR06	Order Date : 12/4/2025 11:05:38 AM	Project Mgr :
Client Name : Tetra Tech NUS, Inc.		Project Name : CTO WA194808 Dahlgren	Report Type : Level 2
Client Contact : Aaron Bernhardt		Receive DateTime : 12/4/2025 10:44:00 AM	EDD Type : ADAPT
Invoice Name : Tetra Tech NUS, Inc.		Purchase Order :	Hard Copy Date :
Invoice Contact : Aaron Bernhardt			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3776-01	IDW-RAD-20251203	Water	12/03/2025	12:45					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
Q3776-02	TB-20251203	Water	12/03/2025	00:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	

Relinquished By : CP

Date / Time : 12/4/25 11:45

Received By : [Signature]

Date / Time : 12/4/25 11:45

Storage Area : VOA Refridgerator Room