INITIAL DEMONSTRATION OF CAPABILITY
Unknown Analysis - Data Summary

Method	EPA 353.2 R 2.0 ATP EPA-126-A Rev. 5	Analyte	Nitrate
SOP Number/Revision	353_2AQ2ATP R1.0	Date Completed	09/15/11

Instrument Name and Model Number	Seal Discrete Analyzer AQ2 S/N 090756
Instrument Software (version)	Revision 4.3.2
Reason for Study	Initial Demonstration of Capability
Source of Calibration Standards (Name/Lot #)	NO3 - W867 prepared from W511 NO2 - W840 prepared from W519
Quality Control Sample (Name/Lot #)	NO3 - W776 / NO2 – W620 prepared from W533
Source of Unknown (Name/Lot#)	ERA QTA 081911B
Date Unknown was Made	Vendor prepared ready for analysis
Date Sample and Quality Control was Digested	N/A
Date of Analysis	09/15/11

Replicate	Results	True Value	Percent Recovery	Acceptance Limits
Unknown	9.09	8.96	101.5%	8.06 – 9.86 (Proficiency Water Study)

Quality Control Recovery (% REC) = C_s / TV * 100

Where,

C_s = Result from quality control sample.

TV = Known value of analyte concentration.

I the undersigned, Certify that:

1) The analyst identified below, using the cited test method (s), which is in use at the facility for the analysis of samples , have met the Initial Demonstration of Capability.
2) The analyst identified on this certification performed the test method (s).
3) A copy of the test method (s) and the laboratory specific Standard Operating Procedures (SOP) are available for all personnel on site.
4) The data associated with the Demonstration of Capability are true, accurate, and complete and self-explanatory. All raw data necessary to reconstruct and validate these analyses have been retained at the facility, and that the associated information is well-organized and available for review by authorized assessors. This includes all Certificates of Analysis associated with the Demonstration of Capability.

Gregory W Young 10-21-11

Analyst

HHR Program Manager – Environmental Chemistry

11-1-11

HHR Program Manager – Quality Control Coordinator

AQ2 Tray Report

Serial Number:	090756
Software Version:	4.3.2
Report Requested By:	Gregory Young GY
Date & Time:	09/15/2011 15:31:27
Tray Number:	1
Tray Name:	11.09.14 (16-45)

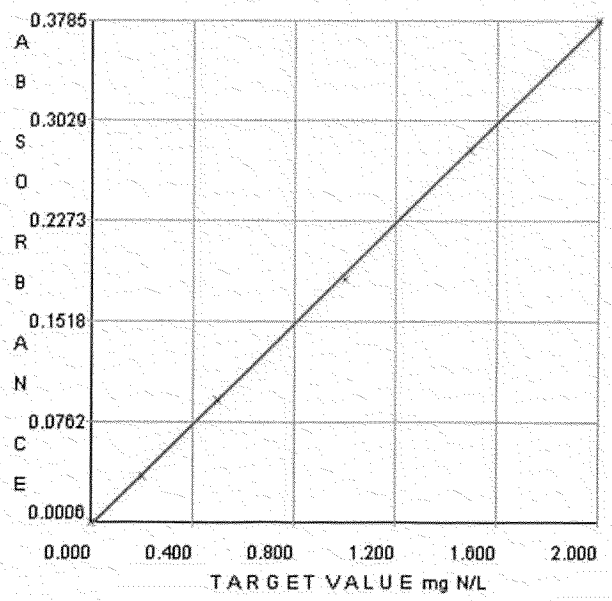
COMBINED NOx

Calibration Chart

Type	Observed	Calculated	Target	% Error
S1	0.0006	0.0132	0.0000	
S90	0.0353	0.1969	0.2000	-1.5555
S91	0.0927	0.5006	0.5000	0.1116
S92	0.1834	0.9805	1.0000	-1.9493
S93	0.2807	1.4955	1.5000	-0.2981
S94	0.3785	2.0133	2.0000	0.6636
S0	0.0027	0.0244	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover:	0.6
Date & Time:	09/15/2011 14:44:42

Calibration Graph



Reagents

Name	Batch	Prepared By	Expiry Date
NOx BUFFER	W834	Mandie Simpson	02/03/2012 21:00:00
NOx NEDD	W861	Gregory Young	10/08/2011 22:00:00

Test Results

	Cup	Type	ID	Result	Units	Raw Data	Test Dil.	Cup Dil.	User	Time/Date
		S1	STANDARD 1	0.0006		0.000587			GWY	09/15/2011 14:28:12
		S90	STANDARD 90	0.0353		0.035289			GWY	09/15/2011 14:31:00
		S91	STANDARD 91	0.0927		0.092672			GWY	09/15/2011 14:33:44
		S92	STANDARD 92	0.1834		0.183365			GWY	09/15/2011 14:36:29
		S93	STANDARD 93	0.2807		0.280687			GWY	09/15/2011 14:39:13
		S94	STANDARD 94	0.3785		0.378522			GWY	09/15/2011 14:41:58
		S0	STANDARD 0	0.0027		0.002703			GWY	09/15/2011 14:44:42
99.7%Re	3	ICV	ICV	1.4961	mg N/L	0.280795			GWY	09/15/2011 14:47:26
	4	ICB	ICB	0.0208	mg N/L	0.002018			GWY	09/15/2011 14:50:11
99.9%Re	5	U1	1 mgL NO2	0.9958	mg N/L	0.186259			GWY	09/15/2011 14:52:55
	6	U2	1 mgL NO3	0.9969	mg N/L	0.186462			GWY	09/15/2011 14:55:42
100.8%Re	7	U3	LFB	1.5125	mg N/L	0.283892			GWY	09/15/2011 14:58:26
	8	U4	LRB	0.0194	mg N/L	0.001753			GWY	09/15/2011 15:01:13
96.3%Re	9	U5	MRL	0.3853	mg N/L	0.070886			GWY	09/15/2011 15:04:00
	10	U6	W620 QCS NO2	1.6047	mg N/L	0.301323			GWY	09/15/2011 15:06:44
97.8%Re	11	U7	W776 QCS NO3	4.9710ALT	mg N/L	0.185954	x5.0000		GWY	09/15/2011 15:09:27
	12	U8	W11001322	8.8155ELH	mg N/L	1.663903	off Scale		GWY	09/15/2011 15:12:11
	13	U9	W11001322	9.0949ALT	mg N/L	0.341809	x5.0000		GWY	09/15/2011 15:14:55
4.6%RPD	14	U10	W11001322 DUP NO3	8.6831ALT	mg N/L	0.326244	x5.0000		GWY	09/15/2011 15:17:39
81.9%Re	15	U11	W11001322 SPK NO3	17.2889ALT	mg N/L	0.324783		x10.0000	GWY	09/15/2011 15:19:05
	16	U12	W11001322 SPK NO2	9.0433ELH	mg N/L	1.706956			GWY	09/15/2011 15:20:45
	17	U14	W11001322 SPKDUP NO	8.7339ELH	mg N/L	1.648483			GWY	09/15/2011 15:22:25
96%Re	18	CCV	CCV	1.4402	mg N/L	0.270240			GWY	09/15/2011 15:24:05
	19	CCB	CCB	0.0136	mg N/L	0.000653			GWY	09/15/2011 15:25:45

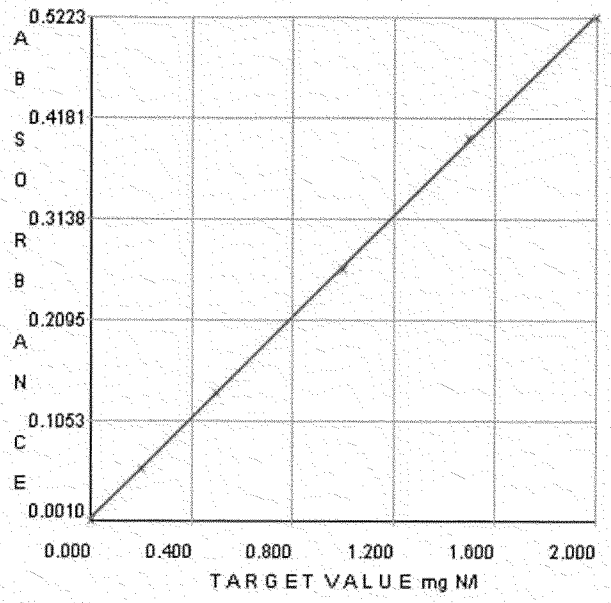
Nitrite

Calibration Chart

Type	Observed	Calculated	Target	% Error
S1	0.0010	-0.0078	0.0000	
S90	0.0562	0.2037	0.2000	1.8396
S91	0.1351	0.5063	0.5000	1.2673
S92	0.2618	0.9921	1.0000	-0.7919
S93	0.3981	1.5148	1.5000	0.9891
S94	0.5223	1.9909	2.0000	-0.4560
S0	0.0019	-0.0042	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover:	0.2
Date & Time:	09/15/2011 13:54:09

Calibration Graph



Reagents

Name	Batch	Prepared By	Expiry Date
NO2 NEDD	W862	Gregory Young	10/08/2011 22:00:00
NO2 BUFFER	W791	Gregory Young	12/02/2011 21:00:00

Test Results

	Cup Type	ID	Result	Units	Raw Data	Test Dil.	Cup Dil.	User	Time/Date
	S1	STANDARD 1	0.0010		0.000994			GWY	09/15/2011 13:46:39
	S90	STANDARD 90	0.0562		0.056158			GWY	09/15/2011 13:47:54
	S91	STANDARD 91	0.1351		0.135100			GWY	09/15/2011 13:49:09
	S92	STANDARD 92	0.2618		0.261797			GWY	09/15/2011 13:50:24
	S93	STANDARD 93	0.3981		0.398148			GWY	09/15/2011 13:51:39
	S94	STANDARD 94	0.5223		0.522315			GWY	09/15/2011 13:52:54
	S0	STANDARD 0	0.0019		0.001923			GWY	09/15/2011 13:54:09
99.4%Rec 3	ICV	ICV	0.4968	mg N/l	0.132604			GWY	09/15/2011 13:55:24
4	ICB	ICB	-0.0022	mg N/l	0.002465			GWY	09/15/2011 13:56:39
5	U1	1 mgL NO2	0.9759	mg N/l	0.257585			GWY	09/15/2011 13:57:54
6	U2	1 mgL NO3	0.0063	mg N/l	0.004667			GWY	09/15/2011 13:59:09
95.1%Rec 7	U3	LFB	0.4754	mg N/l	0.127020			GWY	09/15/2011 14:00:25

8	U4	LRB	-0.0040	mg N/l	0.001999			GWY	09/15/2011 14:01:40
95.9%Rec 9	U5	MRL	0.1918	mg N/l	0.053070			GWY	09/15/2011 14:02:55
94.8%Rec 10	U6	W620 QCS NO2	1.5737	mg N/l	0.413503			GWY	09/15/2011 14:04:11
11	U7	W776 QCS NO3	-0.0011	mg N/l	0.002741			GWY	09/15/2011 14:05:26
12	U8	W11001322	-0.0031	mg N/l	0.002218 <0.2			GWY	09/15/2011 14:06:42
13	U9	W11001322	-0.0076	mg N/l	0.001060			GWY	09/15/2011 14:07:35
14	U10	W11001322 DUP NO3	-0.0105ELL	mg N/l	0.000303			GWY	09/15/2011 14:08:28
15	U11	W11001322 SPK NO3	-0.0166	mg N/l	0.002598		x10.0000	GWY	09/15/2011 14:11:01
16	U12	W11001322 SPK NO2	1.0231	mg N/l	0.269888			GWY	09/15/2011 14:13:48
2.9%RSD 17	U14	W11001322 SPKDUP NO2	0.9937	mg N/l	0.262212			GWY	09/15/2011 14:16:36
1.00.4%Rec 18	CCV	CCV	0.5021	mg N/l	0.134005			GWY	09/15/2011 14:19:24
19	CCB	CCB	-0.0001	mg N/l	0.003017			GWY	09/15/2011 14:22:12

Nitrate

Reagents

Name	Batch	Prepared By	Expiry Date
Hellmanex II		Gregory Young	04/28/2013 22:00:00

Test Results

	Cup	Type	ID	Result	Units	Raw Data	Test Dil.	Cup Dil.	User	Time/Date
99.9%Rec	3	ICV	ICV	0.9993	mg N/L	0.000000			GWY	09/15/2011 14:47:26
	3	ICV	ICV			0.000000			GWY	09/15/2011 14:47:26
	4	ICB	ICB	0.0230	mg N/L	0.000000			GWY	09/15/2011 14:50:11
	4	ICB	ICB			0.000000			GWY	09/15/2011 14:50:11
	5	U1	1 mgL NO2	0.0199	mg N/L	0.000000			GWY	09/15/2011 14:52:55
	5	U1	1 mgL NO2			0.000000			GWY	09/15/2011 14:52:55
	6	U2	1 mgL NO3	0.9906	mg N/L	0.000000			GWY	09/15/2011 14:55:42
	6	U2	1 mgL NO3			0.000000			GWY	09/15/2011 14:55:42
103.7%Rec	7	U3	LFB	1.0371	mg N/L	0.000000			GWY	09/15/2011 14:58:26
	7	U3	LFB			0.000000			GWY	09/15/2011 14:58:26
	8	U4	LRB	0.0234	mg N/L	0.000000			GWY	09/15/2011 15:01:13
	8	U4	LRB			0.000000			GWY	09/15/2011 15:01:13
96.7%Rec	9	U5	MRL	0.1934	mg N/L	0.000000			GWY	09/15/2011 15:04:00
	9	U5	MRL			0.000000			GWY	09/15/2011 15:04:00
	10	U6	W620 QCS NO2	0.0310	mg N/L	0.000000			GWY	09/15/2011 15:06:44
	10	U6	W620 QCS NO2			0.000000			GWY	09/15/2011 15:06:44
	11	U7	W776 QCS NO3	4.9722ALT	mg N/L	0.000000 = 4.9710			GWY	09/15/2011 15:09:27
	11	U7	W776 QCS NO3	NO2 Neg Result		0.000000			GWY	09/15/2011 15:09:27
	12	U8	W11001322	8.8186ALT	mg N/L	0.000000 = off Scale			GWY	09/15/2011 15:12:11
	12	U8	W11001322	NO2 Neg Result		0.000000			GWY	09/15/2011 15:12:11
	13	U9	W11001322	9.1025ALT	mg N/L	0.000000 = 9.0949			GWY	09/15/2011 15:14:55
	13	U9	W11001322	NO2 Neg Results		0.000000			GWY	09/15/2011 15:14:55
4.6% RPD	14	U10	W11001322 DUP NO3	8.6935ALT	mg N/L	0.000000 = 8.6831			GWY	09/15/2011 15:17:39
	14	U10	W11001322 DUP NO3	NO2 Neg Result		0.000000			GWY	09/15/2011 15:17:39
81.9% Rec	15	U11	W11001322 SPK NO3	17.3055ALT	mg N/L	0.000000 = 17.2889		x10.0000	GWY	09/15/2011 15:19:05
	15	U11	W11001322 SPK NO3	NO2 Neg Result		0.000000		x10.0000	GWY	09/15/2011 15:19:05
	16	U12	W11001322 SPK NO2	8.0202ALT	mg N/L	0.000000			GWY	09/15/2011 15:20:45
	16	U12	W11001322 SPK NO2			0.000000			GWY	09/15/2011 15:20:45
	17	U14	W11001322 SPKDUP NO	7.7402ALT	mg N/L	0.000000			GWY	09/15/2011 15:22:25
	17	U14	W11001322 SPKDUP NO			0.000000			GWY	09/15/2011 15:22:25
93.8%Rec	18	CCV	CCV	0.9381	mg N/L	0.000000			GWY	09/15/2011 15:24:05
	18	CCV	CCV			0.000000			GWY	09/15/2011 15:24:05
	19	CCB	CCB	0.0137	mg N/L	0.000000			GWY	09/15/2011 15:25:45
	19	CCB	CCB			0.000000			GWY	09/15/2011 15:25:45

J.T.Baker

Potassium Nitrate, Crystal

`BAKER ANALYZED´® A.C.S. Reagent

Product No. 3190
Lot No. G06145
Release Date 04/02/2008

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Exceeds A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay (KNO_3)	99.0 % min.	99.4 %
Insoluble Matter	0.005 % max.	< 0.001 %
pH of 5% Solution at 25°C	4.5 - 8.5	5.5
Chloride (Cl)	0.002 % max.	< 0.001 %
Nitrite (NO_2)	0.001 % max.	< 0.001 %
Sulfate (SO_4)	0.003 % max.	< 0.002 %
Calcium (Ca)	0.005 % max.	< 0.0005 %
Magnesium (Mg)	0.002 % max.	< 0.0002 %
Sodium (Na)	0.005 % max.	0.002 %
Trace Impurities (in ppm):		
Iodate (IO_3)	5 max.	< 1
Phosphate (PO_4)	3 max.	< 2
Heavy Metals (as Pb)	5 max.	< 3
Iron (Fe)	2 max.	< 1

For Laboratory, Research or Manufacturing Use

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2000 & 14001:1996
Paris, KY 9001:2000
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2000 & 14001:1996
Selangor, Malaysia 9001:2000

Marcy M. Matlosz
Director of Lab & Regulatory Affairs

For questions on this Certificate of Analysis please contact Technical Services at 1-800-582-2537 or 908-859-2151
Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

In -House Lot #: W511
CoA/MSDS Filed: Yes/Yes
Date Received: 2-8-2010
Date Opened: ——
Expiration Date: None given

Freedom_0006055_0007

J.T.Baker

Potassium Nitrite, Crystal

`BAKER ANALYZED®' A.C.S. Reagent

Product No. 3202
Lot No. H43593
Release Date 11/05/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Exceeds A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay (KNO_2) (by $KMnO_4$ titrn)	96.0 % min.	98.5 %
Insoluble Matter	0.01 % max.	< 0.001 %
pH of 5% Solution at 25°C	7.0 - 10.0	8.1
Chloride (Cl)	0.02 % max.	< 0.02 %
Sulfate (SO_4)	0.01 % max.	< 0.005 %
Calcium (Ca)	0.005 % max.	0.0006 %
Heavy Metals (as Pb)	0.001 % max.	< 0.001 %
Iron (Fe)	0.001 % max.	< 0.0005 %
Sodium (Na)	0.5 % max.	0.4 %
Magnesium (Mg)	0.002 % max.	0.0002 %
For Laboratory, Research or Manufacturing Use		

Country of Origin: JAPAN

ISO
Phillipsburg, NJ 9001:2008 & 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2008 & 14001:2004
Selangor, Malaysia 9001:2000

Mary M. Matloz
Mary M. Matloz
Director of QA & Regulatory Affairs

For questions on this Certificate of Analysis please contact Technical Services at 1-800-582-2537 or 908-859-2151
Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

In -House Lot #: W 519
CoA/MSDS Filed: Yes / Yes
Date Received: 2-24-10
Date Opened: —
Expiration Date: NONE GIVEN

ERA

A Waters Company

In-House Lot #: W776
CoA/MSDS Filed: Yes/Yes
Date Received: 5/17/11
Date Opened: —
Expiration Date: 3/2014

Certificate of Analysis

Lot No. S173-698

PotableWatR™ Inorganics

Catalog No. 698
Issue Date: February 18, 2011
Revision Date: Original

Certification

Parameter	Certified Value [1] (mg/l)	Uncertainty [2]	QC PALs™ [3] (mg/l)	PT PALs™ [4] (mg/l)
alkalinity as $CaCO_3$	108	3.0%	99.7 - 116	97.2 - 119
chloride	20.1	5.2%	17.8 - 22.4	17.5 - 22.9
conductivity at 25°C (µmhos/cm)	427	1.0%	397 - 457	384 - 470
fluoride	4.50	3.0%	3.93 - 5.07	4.05 - 4.95
nitrate + nitrite as N	5.08	3.0%	4.59 - 5.57	4.53 - 5.59
nitrate as N	5.08	3.0%	4.49 - 5.67	4.57 - 5.59
potassium	23.4	2.4%	20.1 - 26.7	20.2 - 26.9
sodium	80.0	1.8%	69.4 - 90.6	71.6 87.6
sulfate	42.4	3.0%	36.4 - 48.4	36.4 - 47.9
total dissolved solids at 180°C	364	1.0%	318 - 410	235 - 493

Analytical Verification

Parameter	Round Robin Data [5] Mean (mg/l)	Round Robin Data [5] Recovery (%)	n	NIST Traceability SRM Number	NIST Traceability Recovery (%)
alkalinity as $CaCO_3$	107	99.5%	6	SRM 187e	100%
chloride	19.5	96.9%	12	SRM 3182	95.6%
conductivity at 25°C (umhos/cm)	421	98.6%	9	SRM 999b	98.9%
fluoride	4.32	95.9%	8	SRM 3183	104%
nitrate + nitrite as N	5.00	98.4%	8	SRM 3185	101%
nitrate as N	5.04	99.2%	13	SRM 3185	101%
potassium	24.3	104%	5	SRM 3141a	96.7%
sodium	81.3	102%	5	SRM 3152a	98.5%
sulfate	41.8	98.7%	6	SRM 3181	97.0%
total dissolved solids at 180°C	364	100%	5	SRM 999b	99.7%

Please see footnotes on back

6000 West 54th Ave., Arvada, CO 80002 800-372-0122 fax: 303-421-0159 www.eraqc.com

ERA

A Waters Company

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The **Certified Value** for Total Dissolved Solids (TDS) is the mean reported concentration for this analyte from ERA's proficiency testing study.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the Student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The **QC PALs™** reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the **QC PALs™** to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the **PT PALs™** when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **Analytical Verification** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed.

Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. This standard **expires 3/2014.** The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com.

Certifying Officer: Tom Widera

ERA

A Waters Company

In -House Lot #: W533
CoA/MSDS Filed: Yes/Yes
Date Received: 2-10-10
Date Opened:
Expiration Date: 12/2012

Certificate of Analysis

Lot No. 191209

PotableWatR™ Nitrite

Catalog No. 695
Issue Date: December 31, 2009
Revision Date: Original

Certification

Parameter	Certified Value [1] (mg/l)	Uncertainty [2]	QC PALs™ [3] (mg/l)	PT PALs™ [4] (mg/l)
nitrite as N	1.66	3.0%	1.46 - 1.86	1.41 - 1.91

Analytical Verification

Parameter	Round Robin Data [5] Mean (mg/l)	Recovery (%)	n	NIST Traceability SRM Number	Recovery (%)
nitrite as N	1.63	98.0%	5	SRM not available	-

Please see footnotes on back

6000 West 54th Ave., Arvada, CO 80002 800-372-0122 fax: 303-421-0159 www.eraqc.com

ERA

A Waters Company

1. The **Certified Value** is the actual "made-to" concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the Student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The **QC PALs™** reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the **QC PALs™** to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the **PT PALs™** when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **Analytical Verification** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed.

Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. This standard **expires 12/2012.** The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com.

Certifying Officer: Tom Widera

081911B 2009 TNI Evaluation Final Complete Report

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NELAC Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
WS Inorganics (cat# 698) Study Dates: 08/19/11 - 09/16/11												
1505	Alkalinity as CaCO3	mg/L		101	90.9 - 111	Not Reported				98.4	3.44	
1575	Chloride	mg/L		17.8	15.4 - 20.4	Not Reported				17.7	1.05	
1610	Conductivity at 25°C	µmhos/cm		467	420 - 514	Not Reported				464	11.3	
1730	Fluoride	mg/L	2.96	3.05	2.74 - 3.36	Acceptable	SM4500F- C 18th ED 1992	9/12/2011	-0.687	3.04	0.122	
1820	Nitrate + Nitrite as N	mg/L	9.10	8.96	8.06 - 9.86	Acceptable	EPA-126-A Revision 5	9/15/2011	0.841	8.86	0.286	
1810	Nitrate as N	mg/L	9.09	8.96	8.06 - 9.86	Acceptable	EPA-126-A Revision 5	9/15/2011	0.540	8.88	0.395	
1125	Potassium	mg/L		31.3	27.0 - 35.4	Not Reported				30.9	1.75	
2000	Sulfate	mg/L		55.8	48.4 - 62.7	Not Reported				55.5	2.15	
1955	Total Dissolved Solids at 180°C	mg/L		386	248 - 524	Not Reported				386	16.6	
WS Nitrite (cat# 695) Study Dates: 08/19/11 - 09/16/11												
1840	Nitrite as N	mg/L	1.24	1.23	1.04 - 1.41	Acceptable	2-013-1-H	9/12/2011	0.223	1.23	0.0543	

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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