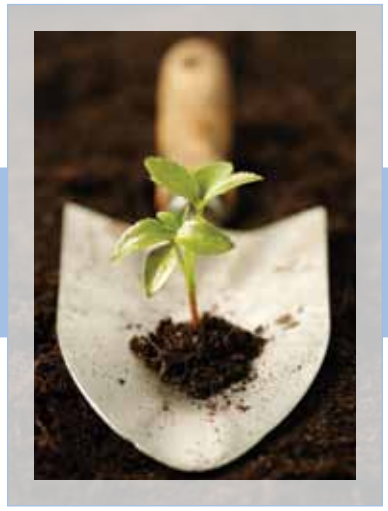
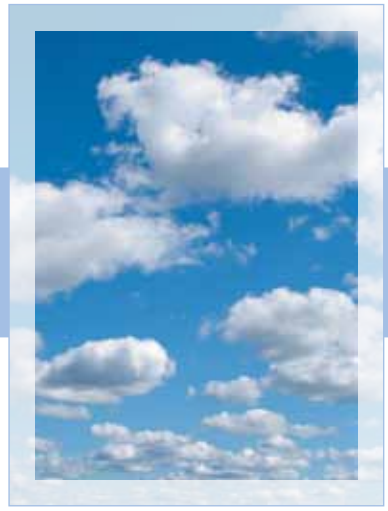
Environmental Proficiency Testing and Reference Materials

2013

Online Product Catalog





CONFIDENCE

ERA

A Waters Company

Carl Craig, Ph.D., President, ERA

So what do you do for a living?

When asked the same question, many ERA employees reply with an abbreviated version of, "I work for a company that manufactures reference standards to help laboratories improve the accuracy of their analytical data."

Actually, they do so much more—as do you. Because what we do at ERA and what you do in your laboratory plays a significant role in the health and well-being of people in our communities.

Each person on the ERA team is part of a collective effort to ensure that we—our families, our friends, our neighbors—are confident that the water we drink is clean, the air we breathe is clean, and the soil in which our crops are grown and on which our homes are built...is clean.

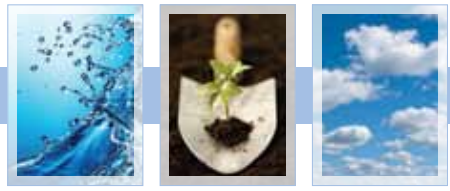
I understand the quality of ERA products is vital to supporting a healthy environment. After all, our products have helped prevent unintentional contamination of our water supplies and the release of pollutants to the environment. This is the reason why product quality is of utmost importance to us.

"Because what we do at ERA and what you do in your laboratory plays a significant role in the health and well-being of people in our communities."

Let's continue working together to ensure cleaner water, cleaner air, and cleaner soil. And then next time someone asks you what you do, please tell them what you *really* do. And do so with confidence.

Regards,

Carl Craig



[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

HOW TO USE THIS CATALOG

This example is intended as a general guide for catalog use. If you have questions, please contact ERA customer service for assistance.

CRM
Known Sample
To order a certified reference material for Nitrite, the catalog number would be 770.

PT
Blind Sample
To order a Nitrite sample for proficiency testing requirements, the catalog number would be 888.

Frequency
All ERA PT programs are available monthly or quarterly unless otherwise noted.
- M Opens Monthly
- Q Opens Quarterly

QR
Blind Sample
In the unfortunate event you should receive an "unacceptable result" for your Nitrite evaluation, you can order a QuiK™Response make-up test. That sample would be 770QR in this example. Call for QR pricing.

Nitrite

CRM	PT M	QR
Cat. #770	Cat. #888	Cat. #770QR

One 15 mL screw-top vial yields up to 2 liters after dilution.

Nitrite as N ..... 0.4-4 mg/L

Additional Levels

AL

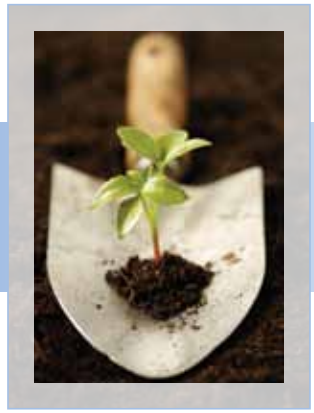
Additional Level PTs allow you to meet specific regulatory or internal quality assurance requirements. If you need 2, 3, 4 or more levels of any PT sample in a study, please call ERA customer service at 800-372-0122.

Additional levels (AL) are available quarterly for most products.

BUILDING CONFIDENCE IN YOUR PROFICIENCY TESTING

The success of your proficiency testing program is dependent upon the accuracy of your data. And the accuracy of your data is largely reliant upon the quality of your testing standards. You know the saying, garbage in, garbage out. At ERA, our focus is quality in, quality out.

An emphasis on quality—both in our products and the data that support them—is the reason ERA has grown to become the largest provider of proficiency testing, reference materials, and quality control standards for analytical laboratories.


Confidence in what you do begins with ERA. And confidence in our water, air, and soil begins with accurate, reliable, and defensible testing results. ERA offers you the products, people, services, and tools to ensure that is exactly what you get.

1 **TECHNICAL TROUBLE SHOOTERS**
Experienced trouble shooters for your most perplexing analysis problems.

2 **EASY ONLINE ORDERING**
An easy and fast online shopping experience. Plus, all the information you need is available with a click of your mouse.

3 **PARTNERS FOR YOUR PT SUCCESS**
Knowledgeable representatives to help you plan, organize, and order exactly what you need.

4 **COMPREHENSIVE ONLINE DATA REPORTING**
Enter your study data in an easy online process on ERA's eDATA™.

5 **MANAGE YOUR LABORATORY'S HEALTH**
Dive deep into the performance of your lab with ERA's Health of Your Lab to understand what's working and identify areas for improvement.

1 WHO YOU GONNA CALL?

From left to right:

Christian Milek,
Inorganic Chemist

Tom Widera,
Inorganics Product
Line Manager

Laura Stone,
Inorganic Chemist

Amanda Bruggeman,
Inorganic Chemist

If you're not getting the analytical results you expect, ERA's team of chemists can help you troubleshoot your analytical processes. Our chemists have been in your shoes. They have years of laboratory experience and will help you solve your prep and analytical issues. Their knowledge of organic and inorganic chemistry, microbiology, analytical instrumentation, and methods can help you identify the root cause for your corrective action investigation.

- Method interpretations
- Prep and analytical questions
- Instrumentation trouble shooting
- Quality control questions
- Calibration issues

When you have a question, talk to the experts at ERA. They are here to take your call.
Call 800-372-0122 or 303-431-8454.

From left to right:

Matt Graves,
Organic Chemist

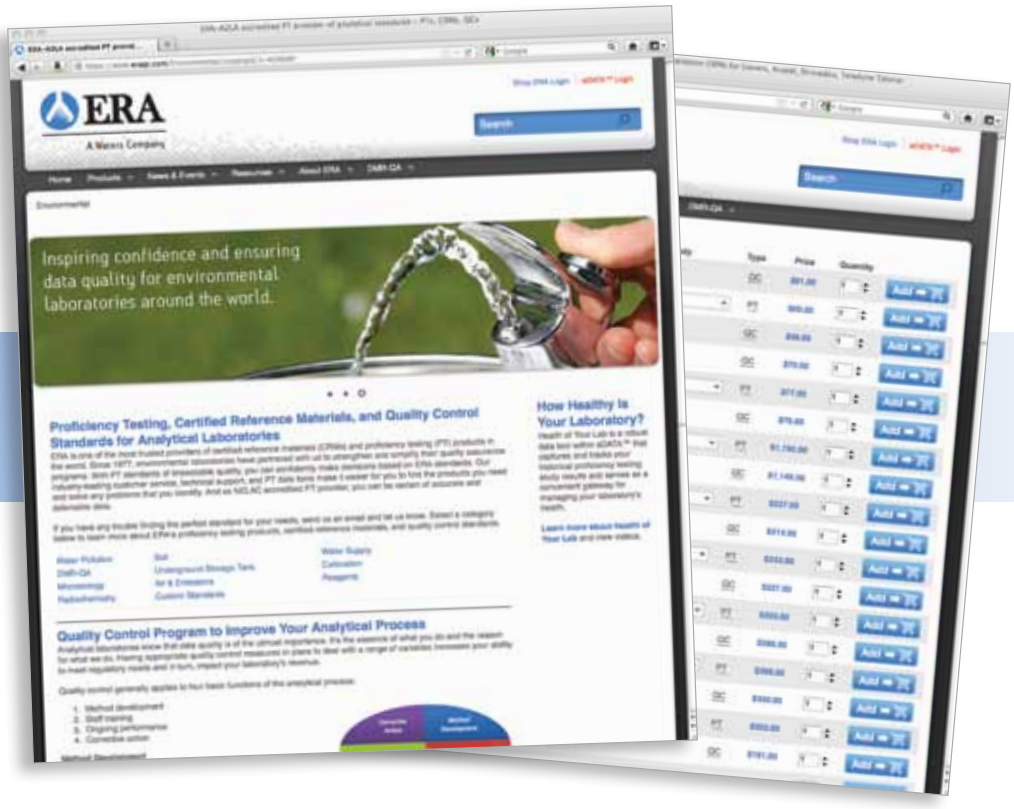
Mike Blades,
Organics Product
Line Manager

Marshall Tilbury,
Organic Chemist

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

2 ORDERING PT STANDARDS IS JUST A CLICK AWAY

Shopping online for your PT products got a whole lot easier and faster with ERA's redesigned website. Go to www.eraqc.com to find out how easy it is.



The ERA website also gives you access to a wealth of valuable information and resources. Go to **www.eraqc.com** and click on the **resources** tab:

- PT instructions
- MSDS
- TNI FoPT tables
- Links to accrediting bodies and federal and state agencies

www.eraqc.com

3 BRINGING CLARITY TO THE CONFUSION OF PT TESTING

"What sample do I need to run?"

"What do I need to do in order to meet accreditation requirements?"

"We failed a test, now what do we do?"

It can be difficult for you to stay on top of the requirements of various accrediting bodies—so many questions that can create a mountain of confusion if you're not entrenched in the details. The good news is—we are.

ERA's Customer Service Representatives live this stuff 5 days a week, 52 weeks a year. Each representative has addressed hundreds of questions from customers just like you.

ERA's Customer Service team is knowledgeable, thorough, and efficient, and will take the time to answer your questions, provide the guidance you need, and help to clear up any confusion you may have. And they're available 12 hours a day, Monday through Thursday and 11 hours on Friday.

From left to right:

Heidi Senft,
Customer Service Representative

Debby Updyke,
Customer Service Representative

Jason Furness,
Customer Service Manager

Darren Sauer,
Customer Service Representative

Sylvia Lowe, International Customer Service Representative

Jennifer Watson,
Customer Service Representative

Want to know a little more about the person on the other end of your call to ERA? Visit www.eraqc.com/csr

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

4 REPORTING STUDY DATA SHOULDN'T REQUIRE A COMPUTER EXPERT

You know the details involved with reporting your PT study data. You also know that one misstep can be costly, which is why you need a reporting tool that is easy, intuitive, and comprehensive. *eDATA*™ is that tool. With *eDATA*™, you can enter your study data in just a few steps.

However, if you encounter a problem or are unsure of method codes or state requirements, call ERA and speak with a Proficiency Testing specialist in our Customer Service group.

Our PT specialists will guide you to ensure your data is reported correctly and on time. They know their proficiency testing... data reporting... accreditation stuff.

From left to right:

Brian Stringer,
PT/Customer Service Representative

GG Galarneau,
Director of Operations

Audrey Cornell,
PT/Customer Service Representative

Pat Maloney,
PT/Customer Service Representative

Ellen LaRiviere,
PT/Customer Service Representative

Did you know there's an alternative to manually entering your study data? Save time with the *eDATA*™ CSV upload functionality. Download a copy of the user manual to learn more. The manual contains how-to information for *eDATA*™ and CSV upload. Go to www.eraqc.com/edata

5 HOW HEALTHY IS YOUR LAB?

You know the importance of staying healthy and strong. If you neglect the important numbers and indicators, at some point, you could be in for a surprise.

Your laboratory is the same. How do you know if changes you've made in your analytical processes or changes with laboratory personnel had a positive affect? The easiest way to stay on top of your lab's health is to monitor your performance through ERA's Health of Your Lab.

Health of Your Lab is a robust data tool within *eDATA*™ that captures and tracks your historical PT study results. With ERA's Health of Your Lab you can:

- Review and compare your performance over time
- Ensure compliance to accreditation rules of TNI and state agencies
- Identify analytical problems
- Monitor the effectiveness of your corrective actions

From left to right:

Melissa Wright, Sales Representative

Heidi White, Corporate Account Executive

Melissa McNamara, Director of Sales

Rick Persichitte, Sales Representative

Tanya Rahn, Sales Representative

To learn more about using Health of Your Lab, visit www.eraqc.com/HealthofYourLab. If you'd like a demonstration of Health of Your Lab, we'll be happy to walk you through the tool. Simply send your request to info@eraqc.com or speak with an ERA Sales Representative by calling ERA at 800-372-0122 or 303-431-8454.

WATER POLLUTION

2013 Water Pollution PT Study Schedule

Study #	Opens	Closes
WP 216	Jan 14	Feb 28
WP 217	Feb 18	Apr 4
WP 218	Mar 11	Apr 25
WP 219	Apr 15	May 30
WP 220	May 13	Jun 27
WP 221	Jun 17	Aug 1
WP 222	Jul 15	Aug 29
WP 223	Aug 12	Sep 26
WP 224	Sep 16	Oct 31
WP 225	Oct 18	Dec 2
WP 226	Nov 12	Dec 27
WP 227	Dec 16	Jan 30, 2014

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Acidity	915	885 Q	915QR	16
Acids	712	834 M	712QR	19
Boron	919	886 Q	919QR	16
Base/Neutrals	711	833 M	711QR	19
Bromide	769	887 Q	769QR	16
BTEX & MTBE	760	643 Q	760QR	18
Carbamate Pesticides	908	899 Q	908QR	20
Chlordane	716	837 M	716QR	20
Chlorinated Acid Herbicides	718	829 M	718QR	18
Color	070	882 Q	070QR	15
Complex Nutrients	525	579 M	525QR	12
Cyanide & Phenol	502	588 M	502QR	15
Demand	516	578 M	516QR	13
Diesel Range Organics (DRO)	764	641 Q	764QR	19
Gasoline Range Organics (GRO)	762	640 Q	762QR	18
Glycols in Water	401	271 Q	401QR	19
Hardness	507	580 M	507QR	12
HEM/SGT-HEM	519	489 Q	519QR	13
Hexavalent Chromium	984	898 M	984QR	14
Lithium	4992	4990 *	4992QR	14
Low-Level Mercury	931	896 Q	931QR	14
Low-Level Nitroaromatics & Nitramines	677	932 Q	677QR	19
Low-Level PAHs	715	836 Q	715QR	19
Low-Level TRC	917	881 M	917QR	16
Mercury	514	574 M	514QR	14
Minerals	506	581 M	506QR	12
Nitrite	770	888 M	770QR	12
Nitrogen Pesticides	674	487 Q	674QR	20

Description	CRM	PT	QR	Page
Oil & Grease	see page 13 for options			
Organochlorine Pesticides	713	831 M	713QR	20
Organophosphorous Pesticides	665	934 Q	665QR	20
PAHs-GC/GCMS	4882	4880 Q	4882QR	19
PCBs in Oil	729S	835S M	729SQR	18
PCBs in Water	734S	832S M	734SQR	18
pH	977	577 M	977QR	12
QC Plus	see pages 21-22 for options			
Ready-to-Use Wastewater	see page 17 for options			
Settleable Solids	911	883 M	911QR	12
Silica	775	890 Q	775QR	15
Simple Nutrients	505	584 M	505QR	12
Solids	499	241 M	499QR	12
Solids Concentrate	4032	4030 M	4032QR	12
Surfactants-MBAS	776	892 Q	776QR	15
Sulfide	071	891 M	071QR	15
Sulfite	534	244 *	534QR	15
Tin & Titanium	517	573 M	517QR	14
Total Organic Halides (TOX)	670	895 Q	670QR	15
Total Phenolics (4-AAP)	515	589 M	515QR	15
Total Residual Chlorine (TRC)	501	587 M	501QR	16
Toxaphene	717	838 M	717QR	20
TPH in Water	600/601	642 Q	602QR	13
Trace Metals	500	586 M	500QR	14
Turbidity	777	893 M	777QR	15
Uranium	4402	4400 M	4402QR	14
Volatile Aromatics	4452	4450 Q	4452QR	18
Volatiles	710	830 M	710QR	18
Volatile Solids	913	884 M	913QR	12

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.
* WP Lithium PTs open in February and August. WP Sulfite PTs open in January and July.

Quarterly months are January, April, July and October.

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

MINERALS/SOLIDS

Minerals

CRM	PT M	QR
Cat. #506	Cat. #581	Cat. #506QR

One 500 mL whole-volume bottle is ready to analyze.

- Total alkalinity as $CaCO_3$ ..... 10-120 mg/L
- Chloride ..... 35-275 mg/L
- Fluoride ..... 0.3-4 mg/L
- Potassium ..... 4-40 mg/L
- Sodium ..... 6-100 mg/L
- Specific conductance at 25 °C ..... 200-930 µmhos/cm
- Sulfate ..... 5-125 mg/L
- Total dissolved solids at 180 °C ..... 140-650 mg/L
- Total solids at 105 °C ..... 140-675 mg/L

Hardness

CRM	PT M	QR
Cat. #507	Cat. #580	Cat. #507QR

One 500 mL whole-volume bottle is ready to analyze.

- Calcium ..... 3.5-110 mg/L
- Calcium hardness as $CaCO_3$ ..... 8.7-275 mg/L
- Total hardness as $CaCO_3$ ..... 17-440 mg/L
- Magnesium ..... 2-40 mg/L
- Non-filterable residue (TSS) ..... 23-100 mg/L

pH

CRM	PT M	QR
Cat. #977	Cat. #577	Cat. #977QR

One 250 mL whole-volume bottle is ready to analyze.

- pH ..... 5-10 units

Settleable Solids

CRM	PT M	QR
Cat. #911	Cat. #883	Cat. #911QR

One 60 mL poly bottle with a solid yields 1 liter after dilution. Use with Standard Methods 2540F and EPA method 160.5.

- Settleable solids ..... 5-50 mL/L

Volatile Solids

CRM	PT M	QR
Cat. #913	Cat. #884	Cat. #913QR

One 12 mL screw-cap vial with a solid yields 1 liter after dilution. Use with EPA method 160.4 and Standard Methods 2540E.

- Total volatile solids ..... 100-500 mg/L

Solids Concentrate

CRM	PT M	QR
Cat. #4032	Cat. #4030	Cat. #4032QR

One 23 mL screw-cap vial with a powder yields 1 liter of solution.

- Total solids at 105 °C ..... 140-675 mg/L
- Total dissolved solids at 180 °C ..... 140-650 mg/L
- Non-filterable residue (TSS) ..... 23-100 mg/L

Solids

CRM	PT M	QR
Cat. #499	Cat. #241	Cat. #499QR

One 500 mL whole-volume bottle is ready to analyze.

- Total solids at 105 °C ..... 140-675 mg/L
- Total dissolved solids at 180 °C ..... 140-650 mg/L
- Non-filterable residue (TSS) ..... 23-100 mg/L

NUTRIENTS

Simple Nutrients

CRM	PT M	QR
Cat. #505	Cat. #584	Cat. #505QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Ammonia as N ..... 0.65-19 mg/L
- Nitrate as N ..... 0.25-40 mg/L
- Nitrate plus nitrite as N ..... 0.25-40 mg/L
- ortho-Phosphate as P ..... 0.5-5.5 mg/L

Complex Nutrients

CRM	PT M	QR
Cat. #525	Cat. #579	Cat. #525QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Total Kjeldahl-nitrogen as N ..... 1.5-35 mg/L
- Total phosphorus as P ..... 0.5-10 mg/L

Nitrite

CRM	PT M	QR
Cat. #770	Cat. #888	Cat. #770QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Nitrite as N ..... 0.4-4 mg/L

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

OIL & GREASE/TPH

When ordering Oil and Grease or TPH PTs, please specify if you need a sample compatible with SPE.

Oil & Grease

CRM
Cat. #504

One 250 mL whole-volume bottle is ready to analyze.

Oil & Grease ..... 20-200 mg/bottle

Oil & Grease Concentrate

CRM	PT M	QR
Cat. #4122	Cat. #4120	Cat. #4122QR

One 23 mL screw-cap vial yields up to 2 liters after dilution. Use with EPA method 1664. Gravimetric analysis only.

Oil & Grease ..... 20-200 mg/L

1 liter Oil & Grease

CRM	PT M	QR
Cat. #518	Cat. #582	Cat. #518QR

One liter whole-volume glass bottle with a 33-430 thread is ready to analyze. For gravimetric and IR analyses.

Oil & Grease ..... 20-200 mg/L

1 liter Boston Round Oil & Grease

CRM	PT M	QR
Cat. #818	Cat. #582	Cat. #818QR

One liter whole-volume glass bottle with a 33-400 thread is ready to analyze. For gravimetric and IR analyses.

Oil & Grease ..... 20-200 mg/L

HEM/SGT-HEM

CRM	PT Q	QR
Cat. #519	Cat. #489	Cat. #519QR

One 5 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA method 1664 to measure hexane extractable material (HEM) and silica gel treated-HEM. Contains both hexadecane and stearic acid. Note: If a NELAC compliant PT is required, use Cat. #582 or Cat. #4120.

HEM ..... 5-100 mg/L
SGT-HEM ..... 5-100 mg/L

Total Petroleum Hydrocarbons (TPH) in Water

CRM	PT Q	QR
Cat. #600	Cat. #642	Cat. #602QR

One liter whole-volume bottle is ready to analyze for TPH without interfering fatty acids. Use with EPA methods 418.1, 1664 and 5520.

Total Petroleum Hydrocarbons ..... 20-200 mg/L

Total Petroleum Hydrocarbons (TPH) in Water

CRM	PT Q	QR
Cat. #601	Cat. #642	Cat. #602QR

One liter whole-volume bottle is ready to analyze for TPH in the presence of interfering fatty acids. Use with EPA methods 418.1, 1664 and 5520.

Total Petroleum Hydrocarbons ..... 20-200 mg/L

DEMAND

Demand

CRM	PT M	QR
Cat. #516	Cat. #578	Cat. #516QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

5-day BOD ..... 15-250 mg/L
Carbonaceous BOD ..... 15-250 mg/L
COD ..... 30-250 mg/L
TOC ..... 6-100 mg/L

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

METALS

Trace Metals

CRM	PT M	QR
Cat. #500	Cat. #586	Cat. #500QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Use with AA, ICP-OES or ICP-MS and selected colorimetric methods.

Aluminum	200-4,000 µg/L
Antimony	95-900 µg/L
Arsenic	70-900 µg/L
Barium	100-2,500 µg/L
Beryllium	8-900 µg/L
Boron	800-2,000 µg/L
Cadmium	8-750 µg/L
Chromium	17-1,000 µg/L
Cobalt	28-1,000 µg/L
Copper	40-900 µg/L
Iron	200-4,000 µg/L
Lead	70-3,000 µg/L
Manganese	70-4,000 µg/L
Molybdenum	60-600 µg/L
Nickel	80-3,000 µg/L
Selenium	90-2,000 µg/L
Silver	26-600 µg/L
Strontium	30-300 µg/L
Thallium	60-900 µg/L
Vanadium	55-2,000 µg/L
Zinc	100-2,000 µg/L

Mercury

CRM	PT M	QR
Cat. #514	Cat. #574	Cat. #514QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Analyze for total mercury.

Mercury, total	2-30 µg/L

Low-Level Mercury

CRM	PT Q	QR
Cat. #931	Cat. #896	Cat. #931QR

One 5 mL flame-sealed ampule yields up to 4 liters after dilution. Use with EPA 1631 or other sensitive CVAA methods.

Mercury, total	20-100 ng/L

ERA Low-Level Mercury is also available during February and March WP studies.

Hexavalent Chromium

CRM	PT M	QR
Cat. #984	Cat. #898	Cat. #984QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Use with IC or colorimetric methods.

Hexavalent chromium	45-880 µg/L

Tin and Titanium

CRM	PT M	QR
Cat. #517	Cat. #573	Cat. #517QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Use with AA, ICP-OES or ICP-MS methods.

Tin	1,000-5,000 µg/L
Titanium	80-300 µg/L

Uranium

CRM	PT M	QR
Cat. #4402	Cat. #4400	Cat. #4402QR

One 15 mL screw-cap vial yields up to 1 liter after dilution.

Uranium	25-200 µg/L

Lithium

CRM	PT *	QR
Cat. #4992	Cat. #4990	Cat. #4992QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Designed for the Ohio VAP program.

Lithium	50-500 µg/L

* ERA WP Lithium PTs open in February and August.

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

PHYSICAL PROPERTY

Color

CRM	PT Q	QR
Cat. #070	Cat. #882	Cat. #070QR

One 125 mL whole-volume bottle is ready to analyze. Use with EPA methods 110.1, 110.2 and 110.3 and Standard Methods 2120B, 2120C and 2120E.

Color ..... 10-75 PC units

Turbidity

CRM	PT M	QR
Cat. #777	Cat. #893	Cat. #777QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Use with nephelometric methods.

Turbidity ..... 2-30 NTU

MISCELLANEOUS CHEMISTRY

Cyanide & Phenol

CRM	PT M	QR
Cat. #502	Cat. #588	Cat. #502QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. The CRM is also certified for Total Phenolics at 0.06-5 mg/L. For a Total Phenolics PT, order Cat. #589.

Total Cyanide ..... 0.1-1.0 mg/L
Amenable Cyanide ..... 0.05-1.0 mg/L

Total Organic Halides (TOX)

CRM	PT Q	QR
Cat. #670	Cat. #895	Cat. #670QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Analyze for total organic halides with adsorption pyrolysis titrimetric methods.

TOX ..... 300-1,500 µg/L

Total Phenolics (4-AAP)

CRM	PT M	QR
Cat. #515	Cat. #589	Cat. #515QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Analyze for total phenolic compounds by 4-AAP methods.

Total phenolics by 4-AAP ..... 0.06-5 mg/L

Silica

CRM	PT Q	QR
Cat. #775	Cat. #890	Cat. #775QR

One 60 mL poly bottle yields up to 1 liter after dilution. Analyze for silica as SiO_2 with colorimetric or ICP methods.

Silica as SiO_2 ..... 50-250 mg/L

Sulfide

CRM	PT M	QR
Cat. #071	Cat. #891	Cat. #071QR

One 10 mL flame-sealed ampule yields up to 1 liter after dilution. Preserved sample is guaranteed stable. Analyze for sulfide by titrimetric or colorimetric methods or ISE.

Sulfide ..... 1-10 mg/L

Sulfite

CRM	PT *	QR
Cat. #534	Cat. #244	Cat. #534QR

One 10 mL concentrate yields up to 2 liters after dilution.

Sulfite ..... 10-250 mg/L

* ERA WP Sulfite PTs open in January and July.

Surfactants-MBAS

CRM	PT Q	QR
Cat. #776	Cat. #892	Cat. #776QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Analyze for Surfactants-MBAS with EPA method 425.1.

Surfactants-MBAS ..... 0.2-1 mg/L

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

MISCELLANEOUS CHEMISTRY

Acidity

CRM	PT Q	QR
Cat. #915	Cat. #885	Cat. #915QR

One 250 mL whole-volume bottle is ready to analyze. Designed for use with titrimetric methods to a pH endpoint of 8.3.

Acidity as $CaCO_3$ ..... 650-1,800 mg/L

Boron

CRM	PT Q	QR
Cat. #919	Cat. #886	Cat. #919QR

One unpreserved 60 mL poly bottle yields in excess of 2 liters after dilution. Designed for colorimetric methods.

Boron ..... 800-2000 µg/L

Bromide

CRM	PT Q	QR
Cat. #769	Cat. #887	Cat. #769QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Use with ion chromatography or colorimetric methods..

Bromide ..... 1-10 mg/L

Total Residual Chlorine

CRM	PT M	QR
Cat. #501	Cat. #587	Cat. #501QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with titrimetric or colorimetric methods.

Total Residual Chlorine ..... 0.5-3 mg/L

Low-Level Total Residual Chlorine

CRM	PT M	QR
Cat. #917	Cat. #881	Cat. #917QR

Designed for testing at low µg/L levels. One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with sensitive titrimetric or colorimetric methods.

Total Residual Chlorine ..... 75-250 µg/L

From left to right:

Eric Leonard, Chemistry Technician; **Brian Miller**, Radiochemist; **Eric Schmidt**, Production Coordinator; **Stephen Sanchez**, Production Technician; **Kemi Alexander**, Chemistry Technician

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

READY-TO-USE CRMS

The following whole-volume standards are ready to use as provided and require no dilution before analysis. These standards are guaranteed stable for a minimum of one month after receipt at your facility.

Minerals

CRM
Cat. #506

One 500 mL whole-volume bottle is ready to analyze.

Total alkalinity as $CaCO_3$	10-120 mg/L
Chloride	35-275 mg/L
Fluoride	0.3-4 mg/L
Potassium	4-40 mg/L
Sodium	6-100 mg/L
Specific conductance at 25 °C	200-930 µmhos/cm
Sulfate	5-125 mg/L
Total dissolved solids at 180 °C	140-650 mg/L
Total solids at 105 °C	140-675 mg/L

Hardness

CRM
Cat. #507

One 500 mL whole-volume bottle is ready to analyze.

Calcium	3.5-110 mg/L
Calcium hardness as $CaCO_3$	8.7-275 mg/L
Total hardness as $CaCO_3$	17-440 mg/L
Magnesium	2-40 mg/L
Non-filterable residue (TSS)	23-100 mg/L

pH

CRM
Cat. #977

One 250 mL whole-volume bottle is ready to analyze. Use with electrometric methods

pH	5-10 units

Oil & Grease

CRM
Cat. #504

One 250 mL whole-volume bottle is ready to analyze. Use with EPA hexane extraction method 1664. Certified values are provided for IR and gravimetric methods. For additional Oil & Grease CRMs see page 13.

Oil & Grease	20-200 mg/bottle

Solids

CRM
Cat. #499

One 500 mL whole-volume bottle is ready to analyze.

Total solids at 105 °C	140-675 mg/L
Total dissolved solids at 180 °C	140-650 mg/L
Non-filterable residue (TSS)	23-100 mg/L
pH	5-10 units

Trace Metals

CRM
Cat. #740

One 500 mL whole-volume bottle is ready to analyze. Use with AA, ICP-OES or ICP-MS methods.

Aluminum	200-4,000 µg/L
Antimony	95-900 µg/L
Arsenic	70-900 µg/L
Barium	100-2,500 µg/L
Beryllium	8-900 µg/L
Boron	800-2,000 µg/L
Cadmium	8-750 µg/L
Chromium	17-1,000 µg/L
Cobalt	28-1,000 µg/L
Copper	40-900 µg/L
Iron	200-4,000 µg/L
Lead	70-3,000 µg/L
Manganese	70-4,000 µg/L
Molybdenum	60-600 µg/L
Nickel	80-3,000 µg/L
Selenium	90-2,000 µg/L
Silver	26-600 µg/L
Strontium	30-300 µg/L
Thallium	60-900 µg/L
Vanadium	55-2,000 µg/L
Zinc	100-2,000 µg/L

Demand

CRM
Cat. #743

One 500 mL whole-volume bottle is ready to analyze.

5-day BOD	15-250 mg/L
Carbonaceous BOD	15-250 mg/L
COD	30-250 mg/L
TOC	6-100 mg/L

Simple Nutrients

CRM
Cat. #739

One 500 mL whole-volume bottle is ready to analyze.

Ammonia as N	0.65-19 mg/L
Nitrate as N	0.25-40 mg/L
Nitrate plus nitrite as N	0.25-40 mg/L
ortho-Phosphate as P	0.5-5.5 mg/L

Complex Nutrients

CRM
Cat. #741

One 500 mL whole-volume bottle is ready to analyze.

Total Kjeldahl-nitrogen as N	1.5-35 mg/L
Total phosphorus as P	0.5-10 mg/L

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

VOLATILES

Volatiles

CRM	PT M	QR
Cat. #710	Cat. #830	Cat. #710QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 601, 602, 8021, 624 and 8260. Contains a subset of the analytes listed below at 5-300 µg/L.

- Acetone
- Acetonitrile
- Acrylonitrile
- Acrolein
- Benzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethyl vinyl ether
- Chloroform
- Chloromethane
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethene
- trans-1,2-Dichloroethene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene
- Ethylbenzene
- Hexachlorobutadiene
- 2-Hexanone
- Methylene chloride
- Methyl tert-butyl ether (MTBE)
- 4-Methyl-2-pentanone (MIBK)
- Naphthalene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethene
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- Vinyl acetate
- Vinyl chloride
- Xylenes, total

Volatile Aromatics

CRM	PT Q	QR
Cat. #4452	Cat. #4450	Cat. #4452QR

One 2mL flame sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 602 and 8021. Each standard contains all listed analytes at 7-300 µg/L after dilution.

- Benzene
- Chlorobenzene
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Ethylbenzene
- Naphthalene
- Toluene
- 1,2,4-Trichlorobenzene
- Total Xylenes

BTEX & MTBE in Water

CRM	PT Q	QR
Cat. #760	Cat. #643	Cat. #760QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 602 and 8021. Includes all BTEX compounds and MTBE at 7-300 µg/L after dilution.

Gasoline Range Organics (GRO) in Water

CRM	PT Q	QR
Cat. #762	Cat. #640	Cat. #762QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with both purge & trap and modified EPA 8015 GC/FID methods to test for GRO at 400-4,000 µg/L. Also use to test for BTEX in gasoline.

HERBICIDES

Chlorinated Acid Herbicides

CRM	PT M	QR
Cat. #718	Cat. #829	Cat. #718QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 615 and 8151. Contains a subset of the analytes listed below at 2-10 µg/L (except MCPA and MCPP at 10-100 µg/L).

Note: 4-nitrophenol and pentachlorophenol are not within the EPA/NELAC range. Use the Acids standard (pg. 19) for these compounds in the EPA/NELAC range.

- Acifluorfen
- Bentazon
- Chloramben
- 2,4-D
- 2,4-DB
- Dacthal diacid (DCPA)
- Dalapon
- Dicamba
- 3,5-Dichlorobenzoic acid
- Dichlorprop
- Dinoseb
- MCPA
- MCPP
- 4-Nitrophenol
- Pentachlorophenol
- Picloram
- 2,4,5-T
- 2,4,5-TP (Silvex)

PCBS

PCBs in Water

CRM	PT M	QR
Cat. #734S	Cat. #832S	Cat. #734SQR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 608 and 8082. Contains a different Aroclor, randomly selected from the list below at 1-15 µg/L.

- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

PCBs in Oil

CRM	PT M	QR
Cat. #729S	Cat. #835S	Cat. #729SQR

One 10 mL flame-sealed ampule is ready to analyze. Use with EPA method 8082. Contains a different Aroclor, randomly selected from the list below at 12-50 mg/kg.

- Aroclor 1016
- Aroclor 1242
- Aroclor 1254
- Aroclor 1260

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

Base/Neutrals

CRM	PT M	QR
Cat. #711	Cat. #833	Cat. #711QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 625 and 8270. Contains a subset of the analytes listed below at 10-225 µg/L (except Benzidine at 200-1,000 µg/L).

- Acenaphthene
- Acenaphthylene
- 2-Amino-1-methybenzene
- (o-Toluidine)
- Aniline
- Anthracene
- Benzidine
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Benzyl alcohol
- 4-Bromophenyl-phenylether
- Butylbenzylphthalate
- Carbazole
- 4-Chloroaniline
- bis(2-Chloroethoxy)methane
- bis(2-Chloroethyl)ether
- bis(2-Chloroisopropyl)ether
- 1-Chloronaphthalene
- 2-Chloronaphthalene
- 4-Chlorophenyl-phenylether
- Chrysene
- Dibenz(a,h)anthracene
- Dibenzofuran
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 3,3'-Dichlorobenzidine
- Diethyl phthalate
- Dimethyl phthalate
- Di-n-butylphthalate
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- Di-n-octylphthalate
- bis(2-Ethylhexyl)phthalate
- Fluoranthene
- Fluorene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachlorocyclopentadiene
- Hexachloroethane
- Indeno(1,2,3-cd)pyrene
- Isophorone
- 2-Methylnaphthalene
- Naphthalene
- 2-Nitroaniline
- 3-Nitroaniline
- 4-Nitroaniline
- Nitrobenzene
- N-Nitrosodiethylamine
- N-Nitrosodimethylamine
- N-Nitroso-di-n-propylamine
- N-Nitrosodiphenylamine
- Pentachlorobenzene
- Phenanthrene
- Pyrene
- Pyridine
- 1,2,4,5-Tetrachlorobenzene
- 1,2,4-Trichlorobenzene

Acids

CRM	PT M	QR
Cat. #712	Cat. #834	Cat. #712QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 604, 625, 8041 and 8270. Contains a subset of the analytes listed below at 30-200 µg/L.

- Benzoic Acid
- 4-Chloro-3-methylphenol
- 2-Chlorophenol
- 2,4-Dichlorophenol
- 2,6-Dichlorophenol
- 2,4-Dimethylphenol
- 2,4-Dinitrophenol
- 2-Methyl-4,6-dinitrophenol
- 2-Methylphenol
- 3 & 4-Methlyphenol
- 2-Nitrophenol
- 4-Nitrophenol
- Pentachlorophenol
- Phenol
- 2,3,4,6-Tetrachlorophenol
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol

Diesel Range Organics (DRO) in Water

CRM	PT Q	QR
Cat. #764	Cat. #641	Cat. #764QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with modified EPA 8015 GC/FID methods. Includes #2 Diesel at 800-6,000 µg/L.

Glycols in Water

QC	PT Q	QR
Cat. #401	Cat. #271	Cat. #401QR

One 2 mL flame sealed ampule yields up to 2 L after dilution. Use with EPA methods 8015B, 8430 and 1671.

- Diethylene glycol
- Ethylene glycol
- Propylene glycol
- Tetraethylene glycol
- Triethylene glycol

Low-Level Nitroaromatics & Nitramines

CRM	PT Q	QR
Cat. #677	Cat. #932	Cat. #677QR

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution. Use with EPA methods 8330 and 8091 for explosive and explosive residue analytes. Contains at least 80% of the analytes, randomly selected from the list below at 1-20 µg/L.

- 4-Amino-2,6-dinitrotoluene
- 2-Amino-4,6-dinitrotoluene
- 1,3-Dinitrobenzene
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- HMX
- Nitrobenzene
- 2-Nitrotoluene
- 3-Nitrotoluene
- 4-Nitrotoluene
- RDX
- Tetryl
- 1,3,5-Trinitrobenzene
- 2,4,6-Trinitrotoluene

Low-Level PAHs

CRM	PT Q	QR
Cat. #715	Cat. #836	Cat. #715QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA HPLC methods 610 and 8310 and GC/MS method 8270 SIM. Contains a subset of the analytes listed below at 0.5-20 µg/L.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

PAHs – GC/GCMS

CRM	PT Q	QR
Cat. #4882	Cat. #4880	Cat. #4882QR

One 2mL flame sealed ampule yields up to 2 liters after dilution. Use with EPA methods 625, 8100 and 8270. Each standard contains a subset of the analytes listed below at 10-200 µg/L.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

PESTICIDES

Organochlorine Pesticides

CRM	PT M	QR
Cat. #713	Cat. #831	Cat. #713QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 608 and 8081. Contains contains a subset of the analytes listed below at 0.5-20 µg/L.

- Aldrin
- alpha-BHC
- beta-BHC
- delta-BHC
- gamma-BHC (Lindane)
- alpha-Chlordane
- gamma-Chlordane
- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- Dieldrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- Heptachlor
- Heptachlor epoxide (beta)
- Methoxychlor

Chlordane

CRM	PT M	QR
Cat. #716	Cat. #837	Cat. #716QR

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution. Use with EPA methods 608 and 8081. Contains technical chlordane at 3-25 µg/L.

Toxaphene

CRM	PT M	QR
Cat. #717	Cat. #838	Cat. #717QR

One 2 mL flame-sealed ampule yields up to 2 liters of sample after dilution. Use with EPA methods 608 and 8081. Contains toxaphene at 20-100 µg/L.

Carbamate Pesticides

CRM	PT Q	QR
Cat. #908	Cat. #899	Cat. #908QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA method 632. Contains a subset of the analytes listed below at 5-200 µg/L.

- Aldicarb
- Aldicarb sulfone
- Aldicarb sulfoxide
- Baygon
- Carbaryl
- Carbofuran
- Diuron
- 3-Hydroxycarbofuran
- Methiocarb
- Methomyl
- Oxamyl (vydate)
- Propham

Nitrogen Pesticides

CRM	PT Q	QR
Cat. #674	Cat. #487	Cat. #674QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 619, 633, 8141 and 8270. Contains a subset of the analytes listed below at 2-20 µg/L.

- Alachlor
- Ametryn
- Anilazine
- Atraton
- Atrazine
- Bromacil
- Butachlor
- Butylate
- Cyanazine
- Deethyl atrazine
- Deisopropyl atrazine
- Diaminoatrazine
- EPTC (Eptam)
- Hexazinone
- Metolachlor
- Metribuzin
- Napropamide
- Prometon
- Prometryn
- Pronamide
- Propachlor
- Propazine
- Simazine
- Terbacil
- Trifluralin

Organophosphorus Pesticides (OPP)

CRM	PT Q	QR
Cat. #665	Cat. #934	Cat. #665QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 614, 622 and 8141. Contains a subset of the analytes listed below at 2-20 µg/L.

- Azinphos-methyl (Guthion)
- Carbophenothion
- Chlorpyrifos
- Demeton O & S
- Diazinon
- Dichlorvos (DDVP)
- Dimethoate
- Dioxathion
- Disulfoton
- Ethion
- Ethoprop
- Ethyl Parathion (Parathion)
- Famphur
- Fonofos
- Malathion
- Methyl parathion
- Phorate
- Phosmet
- Ronnel
- Stirophos (tetrachlorovinphos)
- Terbufos

All ERA WP PTs open monthly (M) or quarterly (Q) unless otherwise noted.

QC PLUS

ERA's QC Plus program includes environmental analytes at concentrations that reflect realistic levels of pollutants in industrial settings.

Each sample level is designed for wastewater and industrial analysis. These QC samples are an asset to any quality assurance program because they enable you to test your internal systems to ensure that your equipment, methods, and analysts are producing quality data.

QC Plus – Demand

QC
Cat. #4013

One screw-cap vial yields up to 1 liter after dilution.

BOD	100-300 mg/L
Carbonaceous BOD	87.0-256 mg/L
COD	150-500 mg/L
TOC	50.0-200 mg/L

QC Plus – Hexavalent Chromium

QC
Cat. #4183

One screw-top vial yields up to 2 liters after dilution.

Chromium, Hexavalent	100-1000 µg/L

QC Plus – Minerals

QC
Cat. #4053

Two screw-cap vials to be diluted together to yield up to 2 liters of sample.

Alkalinity as $CaCO_3$	10.0-300 mg/L
Calcium	5.00-150 mg/L
Calcium Hardness as $CaCO_3$	12.5-375 mg/L
Chloride	10.0-700 mg/L
Conductivity	100-4000 µmhos/cm
Magnesium	1.00-50.0 mg/L
Potassium	1.00-300 mg/L
Sodium	10.0-300 mg/L
Sulfate	10.0-300 mg/L
Total Dissolved Solids at 180 °C	20.0-2400 mg/L
Total Hardness as $CaCO_3$	15.0-600 mg/L

QC Plus – Nutrients

QC
Cat. #4023

Two screw-cap vials yield up to 2 liters each after dilution.

Ammonia Nitrogen as N	0.250-10.0 mg/L
Nitrate Nitrogen as N	0.250-10.0 mg/L
Orthophosphate as P	0.0500-10.0 mg/L
Total Kjeldahl Nitrogen	0.250-10.0 mg/L
Total Phosphorus as P	0.100-10.0 mg/L

QC Plus – Oil & Grease

QC
Cat. #4123

One screw-cap vial yields up to 2 liters after dilution.

Oil & Grease	10.0-100 mg/L

QC Plus – pH

QC
Cat. #4063

One 250 mL whole-volume bottle is ready to analyze.

pH	2.00-12.0 Units

QC Plus – Fluoride

QC
Cat. #4423

One screw-cap vial yields up to 2 liters after dilution.

Fluoride	5-20 mg/L

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

QC PLUS

QC Plus – Solids

CRM
Cat. #4033

One screw-cap vial with a powder yields 1 liter after dilution.

Total Dissolved Solids at 180 °C	500-2000 mg/L
Total Solids	600-2500 mg/L
Total Suspended Solids	100-500 mg/L

QC Plus – Total Cyanide

CRM
Cat. #4093

One screw-cap vial yields up to 2 liters after dilution.

Total Cyanide	1.00-5.00 mg/L

QC Plus – Total Phenolics

CRM
Cat. #4083

One screw-cap vial yields up to 2 liters after dilution.

Total Phenolics (4-AAP)	0.0500-0.500 mg/L

QC Plus – Total Residual Chlorine

CRM
Cat. #4103

One screw-cap vial yields up to 2 liters of solution after dilution.

Total Residual Chlorine	0.100-1.00 mg/L

QC Plus – Trace Metals

CRM
Cat. #4073

Two screw-cap vials to be diluted together to yield up to 2 liters of sample.

Aluminum	50.0-200 µg/L
Antimony	10.0-300 µg/L
Arsenic	10.0-250 µg/L
Barium	50.0-500 µg/L
Beryllium	5.00-100 µg/L
Boron	50.0-250 µg/L
Cadmium	5.00-100 µg/L
Chromium	15.0-500 µg/L
Cobalt	25.0-500 µg/L
Copper	15.0-500 µg/L
Iron	25.0-500 µg/L
Lead	50.0-500 µg/L
Manganese	50.0-500 µg/L
Mercury	0.500-5.00 µg/L
Molybdenum	20.0-500 µg/L
Nickel	50.0-500 µg/L
Selenium	10.0-100 µg/L
Silver	10.0-100 µg/L
Strontium	50.0-500 µg/L
Thallium	10.0-250 µg/L
Tin	200-1000 µg/L
Titanium	10.0-100 µg/L
Vanadium	50.0-250 µg/L
Zinc	25.0-250 µg/L

From left to right:
David Kilhefner, Director of Manufacturing; **Kristina Sanchez**, Quality Manager; **Mitch Fonda**, Director of Business Development; **Lisa Berry**, Director of Production Planning; **Jay McBurney**; Quality Program Manager

NEW PRODUCTS

Glycols in Water

The new Glycols in Water PT standard and QC standard are packaged in 2 mL flame-sealed ampules and yield up to 2 L after dilution—**Page 19**

Glycols in Soil

The new Glycols in Soil PT standard and QC standard each include two flame-sealed ampules. Each ampule contains 30 g of soil and is ready to use—**Page 56**

ANALYTE ADDITIONS

Amenable cyanide has been added to cyanide standards.

Cyanide & Phenol

Amenable cyanide has been added to our Cyanide & Phenol PT and CRM—**Page 15**

Cyanide in Soil

Our Cyanide in Soil standard, for all distillation/colorimetric methods, now includes amenable cyanide—**Page 53**

WHEN ROUTINE JUST DOESN'T CUT IT

For times when you need more with your ERA standard.

1 ▶▶▶ QuiK™Response PTs

When time isn't on your side.

Do you need to demonstrate corrective action? Need to expand your scope of accreditation? QuiK™Response PTs can be completed in as little as 2 business days of placing an order. Call ERA to order your QuiK™Response (QR) PTs.

2 Custom Standards

What you need, when you need it.

There is no standard too odd, too little, or too large. When you need something out of the ordinary, our Customs chemists can help. And we turn most custom orders in as fast as 5 days. Start with the order form on page 90 or visit www.eraqc.com/customs.

3 AL Additional Levels

Need to add a little something?

If you need to meet specific regulatory or internal quality assurance requirements, we can add 2, 3, or 4 additional levels of a PT sample in a study. Call and speak with a Customer Service Representative.

DMR-QA

2013 DMR-QA Study Schedule

Study #	Opens	Closes
DMR-QA 33	**Mar 18**	**TBD**
WP 216	Jan 14	Feb 28
WP 217	Feb 18	Apr 4
WP 218	Mar 11	Apr 25
WP 219	Apr 15	May 30
WP 220	May 13	Jun 27

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
DMR-QA Sets	see page 28 for options			
Complex Nutrients	525	579	525QR	27
Demand	516	578	516QR	26
Hardness	507	580	507QR	26
Hexavalent Chromium	984	898	984QR	26
Low-Level Mercury	931	896	931QR	26
Low-Level TRC	917	881	917QR	27
Mercury	514	574	514QR	26
Minerals	506	581	506QR	26
Nitrite	770	888	770QR	27
Oil & Grease	see page 27 for options			
pH	977	577	977QR	26

Description	CRM	PT	QR	Page
Settleable Solids	911	883	911QR	28
Simple Nutrients	505	584	505QR	27
Solids	499	241	499QR	26
Solids Concentrate	4032	4030	4032QR	26
Total Cyanide	502	588	502QR	27
Total Phenolics (4-AAP)	515	589	515QR	28
Total Residual Chlorine	501	587	501QR	27
Trace Metals	500	586	500QR	26
Turbidity	777	893	777QR	28
Waste Water Coliform Microbe	083	576	786QR	28
Whole Effluent Toxicity (WET)	see page 29 for options			

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

Trace Metals

CRM	PT	QR
Cat. #500	Cat. #586	Cat. #500QR

One 15 mL screw-cap vial yields up to 1 liter after dilution.

Aluminum	200-4,000 µg/L
Antimony	95-900 µg/L
Arsenic	70-900 µg/L
Barium	100-2,500 µg/L
Beryllium	8-900 µg/L
Boron	800-2,000 µg/L
Cadmium	8-750 µg/L
Chromium	17-1,000 µg/L
Cobalt	28-1,000 µg/L
Copper	40-900 µg/L
Iron	200-4,000 µg/L
Lead	70-3,000 µg/L
Manganese	70-4,000 µg/L
Molybdenum	60-600 µg/L
Nickel	80-3,000 µg/L
Selenium	90-2,000 µg/L
Silver	26-600 µg/L
Strontium	30-300 µg/L
Thallium	60-900 µg/L
Vanadium	55-2,000 µg/L
Zinc	100-2,000 µg/L

Hexavalent Chromium

CRM	PT	QR
Cat. #984	Cat. #898	Cat. #984QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Hexavalent chromium	45-880 µg/L

Mercury

CRM	PT	QR
Cat. #514	Cat. #574	Cat. #514QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Analyze for total mercury.

Mercury, total	2-30 µg/L

Low-Level Mercury

CRM	PT	QR
Cat. #931	Cat. #896	Cat. #931QR

One 5 mL flame-sealed ampule yields up to 4 liters after dilution. Use with EPA1631 or other sensitive CVAA methods.

Mercury, total	20-100 ng/L

Demand

CRM	PT	QR
Cat. #516	Cat. #578	Cat. #516QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

5-day BOD	15-250 mg/L
Carbonaceous BOD	15-250 mg/L
COD	30-250 mg/L
TOC	6-100 mg/L

Solids Concentrate

CRM	PT	QR
Cat. #4032	Cat. #4030	Cat. #4032QR

One 23 mL glass screw-cap vial with a powder yields 1 liter after dilution.

Total solids at 105 °C	140-675 mg/L
Total dissolved solids at 180 °C	140-650 mg/L
Non-filterable residue (TSS)	23-100 mg/L

Solids

CRM	PT	QR
Cat. #499	Cat. #241	Cat. #499QR

One 500 mL whole-volume bottle is ready to analyze.

Total solids at 105 °C	140-675 mg/L
Total dissolved solids at 180 °C	140-650 mg/L
Non-filterable residue (TSS)	23-100 mg/L

pH

CRM	PT	QR
Cat. #977	Cat. #577	Cat. #977QR

One 250 mL whole-volume bottle is ready to analyze.

pH	5-10 units

Minerals

CRM	PT	QR
Cat. #506	Cat. #581	Cat. #506QR

One 500 mL whole-volume bottle is ready to analyze.

Total alkalinity as $CaCO_3$	10-120 mg/L
Chloride	35-275 mg/L
Fluoride	0.3-4 mg/L
Potassium	4-40 mg/L
Sodium	6-100 mg/L
Specific conductance at 25 °C	200-930 µmhos/cm
Sulfate	5-125 mg/L
Total dissolved solids at 180 °C	140-650 mg/L
Total solids at 105 °C	140-675 mg/L

Hardness/TSS

CRM	PT	QR
Cat. #507	Cat. #580	Cat. #507QR

One 500 mL whole-volume bottle is ready to analyze.

Calcium	3.5-110 mg/L
Calcium hardness as $CaCO_3$	8.7-275 mg/L
Total hardness as $CaCO_3$	17-440 mg/L
Magnesium	2-40 mg/L
Non-filterable residue (TSS)	23-100 mg/L

Simple Nutrients

CRM	PT	QR
Cat. #505	Cat. #584	Cat. #505QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Ammonia as N ..... 0.65-19 mg/L
- Nitrate as N ..... 0.25-40 mg/L
- Nitrate plus nitrite as N ..... 0.25-40 mg/L
- ortho-Phosphate as P ..... 0.5-5.5 mg/L

Complex Nutrients

CRM	PT	QR
Cat. #525	Cat. #579	Cat. #525QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Total Kjeldahl-nitrogen as N ..... 1.5-35 mg/L
- Total phosphorus as P ..... 0.5-10 mg/L

Nitrite

CRM	PT	QR
Cat. #770	Cat. #888	Cat. #770QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

- Nitrite as N ..... 0.4-4 mg/L

1 Liter Oil & Grease

CRM	PT	QR
Cat. #518	Cat. #582	Cat. #518QR

One liter whole-volume glass bottle with a 33-430 thread is ready to analyze.

For SPE compatible QC (33-400 thread), use Cat #818 1 liter Boston Round Oil & Grease. Please specify if for SPE compatible PT.

- Oil & Grease ..... 20-200 mg/L

Oil & Grease Concentrate

CRM	PT	QR
Cat. #4122	Cat. #4120	Cat. #4122QR

One 23 mL screw-cap vial yields up to 2 liters after dilution. Use with EPA method 1664.

- Oil & Grease ..... 20-200 mg/L

Total Cyanide

CRM	PT	QR
Cat. #502	Cat. #588	Cat. #502QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Analyze for total cyanide using distillation followed by colorimetric, titrimetric or ISE methods. The CRM is also certified for Total Phenolics at 0.06-5 mg/L. For a Total Phenolics PT, order Cat. #589.

- Total Cyanide ..... 0.1-1 mg/L

Total Residual Chlorine

CRM	PT	QR
Cat. #501	Cat. #587	Cat. #501QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with titrimetric or colorimetric methods.

- Total Residual Chlorine ..... 0.5-3 mg/L

Low-Level Total Residual Chlorine

CRM	PT	QR
Cat. #917	Cat. #881	Cat. #917QR

Designed for testing at low µg/L levels. One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with sensitive titrimetric or colorimetric methods.

- Total Residual Chlorine ..... 75-250 µg/L

From left to right:
Gabe King, Production Technician; **Jeff Chory**, Chemistry Technician; **Katherine Balkun**, Research Chemist; **Sean Skrip**, Chemistry Technician; **Leiph Roope**, Chemist

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

Total Phenolics (4-AAP)

CRM	PT	QR
Cat. #515	Cat. #589	Cat. #515QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Analyze for total phenolic compounds by 4-AAP methods.

Total phenolics by 4-AAP ..... 0.06-5 mg/L

Settleable Solids

CRM	PT	QR
Cat. #911	Cat. #883	Cat. #911QR

One 60 mL poly bottle with a solid yields 1 liter after dilution. Use with Standard Methods 2540F and EPA method 160.5.

Settleable solids ..... 5-50 mL/L

Turbidity

CRM	PT	QR
Cat. #777	Cat. #893	Cat. #777QR

One 15 mL screw-top vial yields up to 1 liter after dilution. Use with nephelometric methods.

Turbidity ..... 2-30 NTU

Waste Water Coliform MicrobE™

CRM	PT	QR
Cat. #083	Cat. #576	Cat. #786QR

Includes one lyophilized quantitative standard for use with all Clean Water Act quantitative methods, including MF and MPN. Total Coliforms, Fecal Coliforms and E. coli, are present in the range of 20-2,400 CFU/100 mL or MPN/100 mL.

The CRM standard contains two samples, one quantitative positive and one negative.

DMR-QA SETS

Mini Set #1

Hardness/TSS, pH & TRC

CRM	PT
Cat. #102	Cat. #186

Mini Set #2

Demand, Hardness/TSS & pH

CRM	PT
Cat. #103	Cat. #187

Mini Set #3

Demand, Hardness/TSS, pH & TRC

CRM	PT
Cat. #104	Cat. #188

Mini Set #4

Demand, Hardness/TSS, Simple Nutrients, pH & TRC

CRM	PT
Cat. #106	Cat. #189

Mini Set #5

Solids Concentrate, pH & TRC

CRM	PT
Cat. #6151	Cat. #6150

Mini Set #6

Demand, Solids Concentrate & pH

CRM	PT
Cat. #6161	Cat. #6160

Mini Set #7

Demand, Solids Concentrate, TRC & pH

CRM	PT
Cat. #6171	Cat. #6170

Mini Set #8

Demand, Simple Nutrients, Solids Concentrate, pH & TRC

CRM	PT
Cat. #6181	Cat. #6180

Complete Set

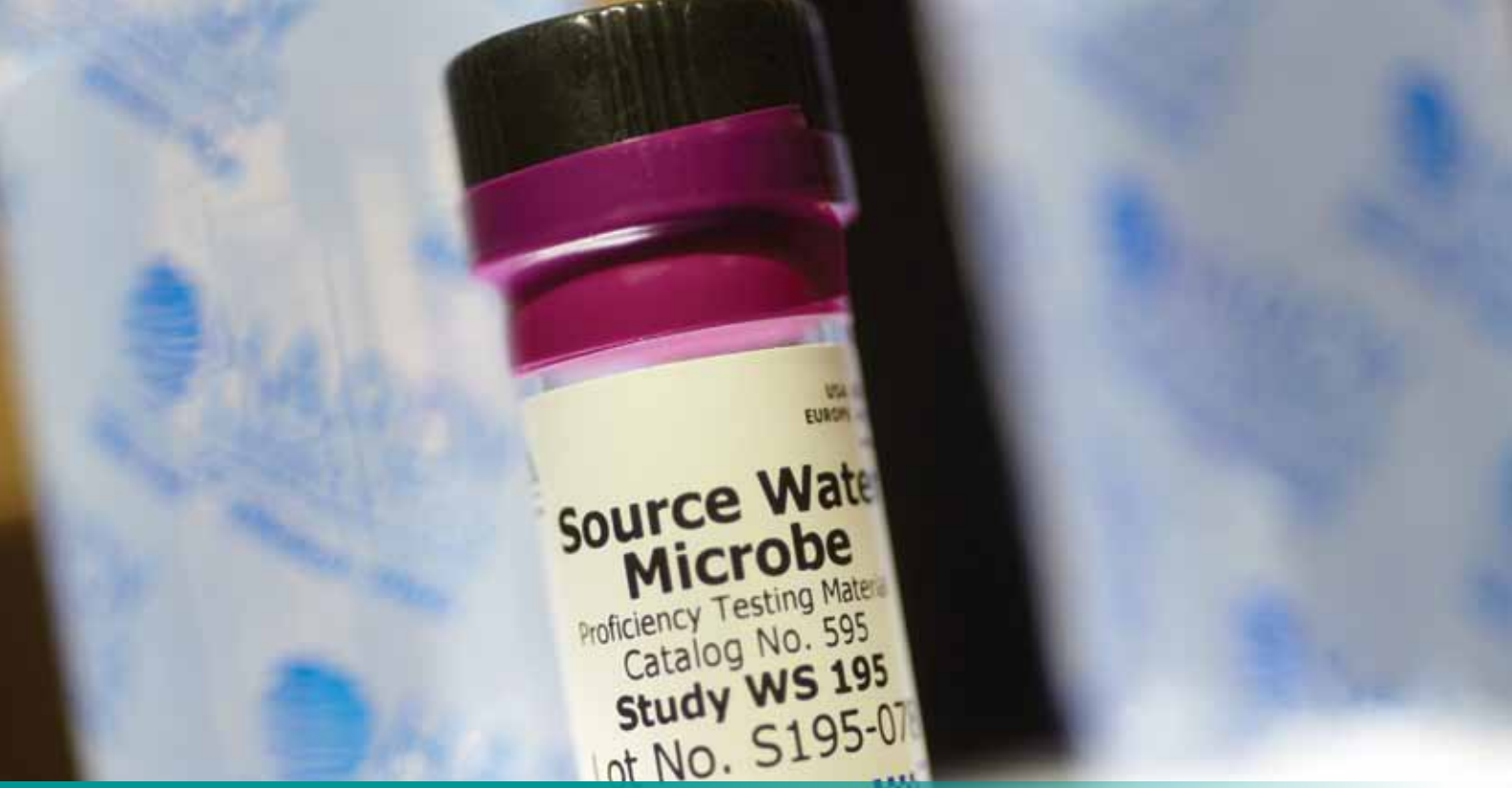
Hardness/TSS, pH, Oil & Grease, Trace Metals, Mercury, Demand, Simple Nutrients, Complex Nutrients, Total Cyanide, Total Phenolics, Total Residual Chlorine, Minerals, Settleable Solids, Nitrite, Turbidity & Hexavalent Chromium

CRM	PT
Cat. #108	Cat. #174

WHOLE EFFLUENT TOXICITY

Description	USEPA Test Code	USEPA Method Code	CRM	PT	QR
Fathead minnow (Pimephales promelas)					
48-hour acute, non-renewal, 25 °C, MHSF.	13	2000	AQC002	WET002	AQC002QR
48-hour acute, non-renewal, 25 °C, 20% DMW.	14	2000	AQC003	WET003	AQC003QR
7-day short-term chronic, daily renewal, 25 °C, MHSF.	15	1000	AQC004	WET004	AQC004QR
7-day short-term chronic, daily renewal, 25 °C, 20% DMW.	16	1000	AQC005	WET005	AQC005QR
Ceriodaphnia dubia					
48-hour acute, daily renewal, 25 °C, MHSF.	19	2002	AQC008	WET008	AQC008QR
48-hour acute, daily renewal, 25 °C, 20% DMW.	20	2002	AQC009	WET009	AQC009QR
7-day short-term chronic, daily renewal, 25° C, MHSF.	21	1002	AQC010	WET010	AQC010QR
7-day short-term chronic, daily renewal, 25 °C, 20% DMW.	22	1002	AQC011	WET011	AQC011QR
Daphnia magna					
48-hour acute, non-renewal, 25 °C, MHSF.	32	2021	AQC012	WET012	AQC012QR
Daphnia pulex					
48-hour acute, non-renewal, 25 °C, MHSF.	38	2021	AQC015	WET015	AQC015QR
Mysid (Mysidopsis bahia)					
48-hour acute, non-renewal, 25 °C, 40 fathoms seawater.	42	2007	AQC016	WET016	AQC016QR
7-day short-term chronic, daily renewal, 25 °C, 40 fathoms seawater.	43	1007	AQC017	WET017	AQC017QR
Inland silverside (Menidia beryllina)					
48-hour acute, non-renewal, 25 °C, 40 fathoms seawater.	44	2006	AQC018	WET018	AQC018QR
7-day short-term chronic daily renewal, 25 °C, 40 fathoms seawater.	45	1006	AQC013	WET013	AQC013QR
Sheepshead minnow (Cyprinodon variegatus)					
48-hour acute, non-renewal, 25 °C, 40 fathoms seawater.	46	2004	AQC019	WET019	AQC019QR
7-day short-term chronic, daily renewal, 25 °C, 40 fathoms seawater.	47	1004	AQC020	WET020	AQC020QR

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM



MICROBIOLOGY

2013 Water Pollution PT Study Schedule		
Study #	**Opens**	**Closes**
WP 216	Jan 14	Feb 28
WP 217	Feb 18	Apr 4
WP 218	Mar 11	Apr 25
WP 219	Apr 15	May 30
WP 220	May 13	Jun 27
WP 221	Jun 17	Aug 1
WP 222	Jul 15	Aug 29
WP 223	Aug 12	Sep 26
WP 224	Sep 16	Oct 31
WP 225	Oct 18	Dec 2
WP 226	Nov 12	Dec 27
WP 227	Dec 16	Jan 30, 2014

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Enterococci	081	880 Q	787QR	32
Massachusetts Ground Water Enterococci	081	077 ✪	—	32
Waste Water Coliforms	083	576 M	786QR	32

2013 Water Supply PT Study Schedule

Study #	Opens	Closes
WS 198	Jan 7	Feb 21
WS 199	Feb 11	Mar 28
WS 200	Mar 4	Apr 18
WS 201	Apr 8	May 23
WS 202	May 6	Jun 20
WS 203	Jun 10	Jul 25
WS 204	Jul 8	Aug 22
WS 205	Aug 5	Sep 19
WS 206	Sep 9	Oct 24
WS 207	Oct 7	Nov 21
WS 208	Nov 5	Dec 20
WS 209	Dec 9	Jan 23, 2014

Description	CRM	PT	QR	Page
Heterotrophic Plate Count	084	079 M	084QR	33
Potable Water Coliform MicrobE™	694	080 M	085QR	33
Source Water Microbe	078	595 Q	078QR	33

2013 Potable Water Coliform MicrobE PT Study Schedule

WS Mini	Opens	Closes
WS 542	Jan 14	Jan 25
WS 543	Mar 11	Mar 22
WS 544	May 13	May 24
WS 545	Jul 15	Jul 26
WS 546	Sep 16	Sep 27
WS 547	Nov 15	Nov 26

The Potable Water Coliform MicrobE PT standard is available in all monthly WS studies as well as the six mini-micro studies.

Description	CRM	PT	QR	Page
Potable Water Coliform MicrobE™	694	080 M	085QR	33

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

All ERA Microbiology PTs open monthly (M) or quarterly (Q) unless otherwise noted.
* Massachusetts Ground Water Enterococci PTs are available at any time.

Quarterly months are January, April, July and October.

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

WP MICROBIOLOGY

Waste Water Coliform MicrobE™

CRM	PT M	QR
Cat. #083	Cat. #576	Cat. #786QR

Each PT sample is one lyophilized quantitative standard for use with all Clean Water Act quantitative methods, including MF and MPN.

CRM also includes one negative sample. Each standard can be used for Total Coliform, Fecal Coliform and E. coli which are present in the range 20-2,400 CFU/100 mL or MPN/100 mL.

Enterococci

CRM	PT Q	QR
Cat. #081	Cat. #880	Cat. #787QR

Each PT sample is one lyophilized standard, which can be analyzed for Enterococci and/or Fecal Streptococci, MF or MPN in the range 20-1,000 CFU/100 mL or MPN/100 mL.

CRM also includes one negative sample. Use with EPA methods 1106.1 and 1600, ASTM methods D5259-92, D6503-99 and Standard Methods 9230B and 9230C and Enterolert Quantitray.

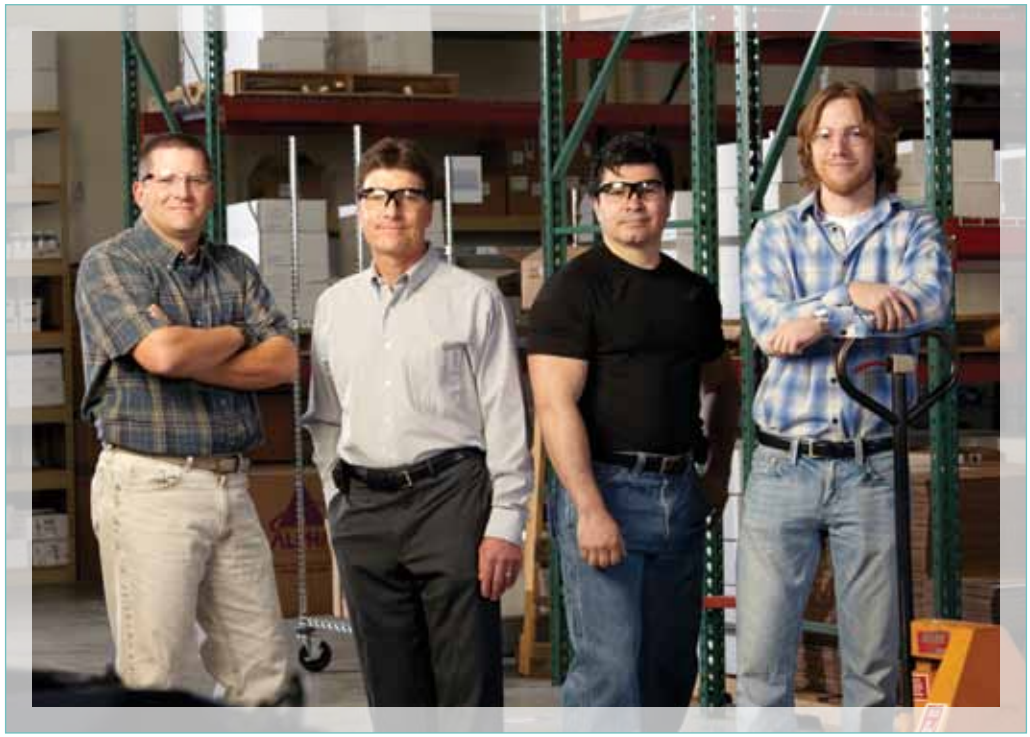
STATE-SPECIFIC MICROBIOLOGY

Massachusetts Ground Water Enterococci

CRM	PT *
Cat. #081	Cat. #077

Each PT sample set is composed of 10 lyophillized samples to be analyzed for presence or absence of Enterococci. This sample is specifically designed for the State of Massachusetts certification for compliance with the federal Ground Water Rule. Each CRM sample set is composed of 2 lyophillized samples- one quantitative positive and one negative.

* Massachusetts Ground Water Enterococci PT is available any time.



From left to right:
Dale Shallenberger, Procurement & Inventory Control; **Stanley Dunlavy**, Product Line Manager; **Mike Mendoza**, Materials Handler; **Vincent LaJudice**, Materials Handler

All ERA Microbiology PTs open monthly (M) or quarterly (Q) unless otherwise noted.

Potable Water Coliform MicrobE™

CRM	PT M	QR
Cat. #694	Cat. #080	Cat. #085QR

Each sample set consists of lyophilized standards for the presence or absence analysis of total, fecal and E. coli coliforms. The standards are applicable to all SDWA promulgated methods-MF, MPN, presence/absence and ONPG-MUG. The Potable Water Coliform MicrobE™ PT standard is available in all 12 monthly WS studies as well as the six mini-micro 11-day studies.

Heterotrophic Plate Count

CRM	PT M	QR
Cat. #084	Cat. #079	Cat. #084QR

Each sample is one lyophilized standard containing a Heterotrophic bacteria present in the range 5-500 CFU/mL or MPN/mL. Use with the Standard Methods 9215B – Pour Plate Method, and Most Probable Number (MPN) Method (simplate).

Source Water Microbe

CRM	PT Q	QR
Cat. #078	Cat. #595	Cat. #078QR

Each sample is one lyophilized quantitative standard containing E. coli in the range 20-200 CFU/100mL or MPN/100mL. Use with all SDWA quantitative methods. Each standard can be used for Total Coliform, Fecal Coliform and E. coli.

All ERA Microbiology PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

WATER SUPPLY

2013 Water Supply PT Study Schedule

Study #	Opens	Closes
WS 198	Jan 7	Feb 21
WS 199	Feb 11	Mar 28
WS 200	Mar 4	Apr 18
WS 201	Apr 8	May 23
WS 202	May 6	Jun 20
WS 203	Jun 10	Jul 25
WS 204	Jul 8	Aug 22
WS 205	Aug 5	Sep 19
WS 206	Sep 9	Oct 24
WS 207	Oct 7	Nov 21
WS 208	Nov 5	Dec 20
WS 209	Dec 9	Jan 23, 2014

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Carbamates/ Carbamoxyloxime Pesticides	707	846 M	707QR	40
Chloral Hydrate	676	853 *	676QR	39
Chlordane	705	845 M	705QR	40
Chlorinated Acid Herbicides	704	851 M	704QR	41
Color	661	859 *	661QR	38
Corrosivity	980	900 Q	980QR	38
Cyanide	983	556 M	983QR	38
Dioxin	663	857 Q	663QR	41
EDB/DBCP/TCP	706	847 M	706QR	40
Gasoline Additives	909	905 Q	909QR	39
Hardness	693	555 M	693QR	36
Haloacetic Acids (HAA)	684	852 M	684QR	39
Halomethanes (THMs)	702	842 M	702QR	39
Hexavalent Chromium	658	854 Q	658QR	36
Inorganics	698	591 M	698QR	36
Inorganic Disinfection #1	5272	5270 M	5272QR	37
Inorganic Disinfection #2	5262	5260 M	5262QR	37
Mercury	666	551 M	666QR	36
Metals	697	590 M	697QR	36
Nitrite	695	594 M	695QR	37
Organic Carbon	669	557 M	669QR	38
o-Phosphate Nutrients	667	558 M	667QR	37
PCBs as Decachlorobiphenyl	708	839 Q	708QR	41
Perchlorate	910	903 Q	910QR	38
Pesticides	709	850 M	709QR	40
pH	779	552 M	779QR	36
Regulated Volatiles	703	840 M	703QR	39
Residual Chlorine	696	593 M	696QR	38
Semivolatiles #1	690	848 M	690QR	41
Semivolatiles #2 Herbicides	691	849 M	691QR	41
Silica	785	902 Q	785QR	38
Solids Concentrate	5152	5150 M	5152QR	36
Surfactants – MBAS	784	901 Q	784QR	38
Toxaphene	700	844 M	700QR	40
Turbidity	699	592 M	699QR	38
UCMR 2 Organics	see page 42 for options			
UCMR 3 Inorganics/ Organics	see page 43 for options			
Unregulated Volatiles	683	841 M	683QR	39
Uranium	930	858 Q	930QR	36
UV 254 Absorbance	662	904 Q	662QR	38
Vanadium	660	856 Q	660QR	36

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.
* ERA Chloral Hydrate and Color PTs open in January and July.

Quarterly months are January, April, July and October.

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

MINERALS/SOLIDS

Hardness

CRM	PT M	QR
Cat. #693	Cat. #555	Cat. #693QR

One 250 mL whole-volume bottle is ready to analyze.

Calcium	30-90 mg/L
Calcium hardness as $CaCO_3$	75-225 mg/L
Total hardness as $CaCO_3$	83-307 mg/L
Magnesium	2-20 mg/L
Sodium	12-50 mg/L

Inorganics

CRM	PT M	QR
Cat. #698	Cat. #591	Cat. #698QR

One 500 mL whole-volume bottle is ready to analyze. The CRM is also certified for Sodium. For a Sodium PT, order Hardness, Cat. #555.

Alkalinity as $CaCO_3$	25-200 mg/L
Chloride	20-160 mg/L
Fluoride	1-8 mg/L
Nitrate as N	3-10 mg/L
Nitrate plus Nitrite as N	3-10 mg/L
Potassium	10-40 mg/L
Specific Conductance at 25 °C	130-1,300 µmhos/cm
Sulfate	25-250 mg/L
Total filterable residue (TDS) at 180 °C	100-1,000 mg/L

pH

CRM	PT M	QR
Cat. #779	Cat. #552	Cat. #779QR

One 250 mL whole-volume bottle is ready to analyze.

pH	5-10 units

Solids Concentrate

CRM	PT M	QR
Cat. #5152	Cat. #5150	Cat. #5152QR

One 23 mL screw-cap vial with a powder yields 1 liter after dilution.

Total filterable residue (TDS) at 180 °C	200-450 mg/L
Total solids (TS)	223-550 mg/L
Non filterable residue (TSS)	23-100 mg/L

TRACE METALS

Metals

CRM	PT M	QR
Cat. #697	Cat. #590	Cat. #697QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Use with ICP-OES, ICP-MS and AA methods.

Aluminum	130-1,000 µg/L
Antimony	6-50 µg/L
Arsenic	5-50 µg/L
Barium	500-3,000 µg/L
Beryllium	2-20 µg/L
Boron	800-2,000 µg/L
Cadmium	2-50 µg/L
Chromium	10-200 µg/L
Copper	50-2,000 µg/L
Iron	100-1,800 µg/L
Lead	5-100 µg/L
Manganese	40-900 µg/L
Molybdenum	15-130 µg/L
Nickel	10-500 µg/L
Selenium	10-100 µg/L
Silver	20-300 µg/L
Thallium	2-10 µg/L
Vanadium	50-1,000 µg/L
Zinc	200-2,000 µg/L

Mercury

CRM	PT M	QR
Cat. #666	Cat. #551	Cat. #666QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Use with CVAA, ICP-MS or CVAFS methods.

Mercury, total	0.5-10 µg/L

Hexavalent Chromium

CRM	PT Q	QR
Cat. #658	Cat. #854	Cat. #658QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Hexavalent chromium	5-50 µg/L

Uranium

CRM	PT Q	QR
Cat. #930	Cat. #858	Cat. #930QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Use with ICP-MS methods.

Uranium	3-104 µg/L

Vanadium

CRM	PT Q	QR
Cat. #660	Cat. #856	Cat. #660QR

One 15 mL screw-cap vial yields up to 2 liters after dilution. Designed to meet California ELAP requirements.

Vanadium	5-50 µg/L

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

DISINFECTION BY-PRODUCTS

Inorganic Disinfection #1

CRM	PT M	QR
Cat. #5272	Cat. #5270	Cat. #5272QR

One 23 mL screw-cap vial yields up to 4 liters after dilution.

Chlorate ..... 60-180 µg/L
Chlorite ..... 100-1,000 µg/L

Inorganic Disinfection #2

CRM	PT M	QR
Cat. #5262	Cat. #5260	Cat. #5262QR

One 23 mL screw-cap vial yields up to 4 liters after dilution.

Bromate ..... 7-50 µg/L
Bromide ..... 50-300 µg/L

NUTRIENTS

Nitrite

CRM	PT M	QR
Cat. #695	Cat. #594	Cat. #695QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Nitrite as N ..... 0.4-2 mg/L

o-Phosphate Nutrients

CRM	PT M	QR
Cat. #667	Cat. #558	Cat. #667QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

ortho-Phosphate as P ..... 0.5-5.5 mg/L

From left to right:
Maya Chain, Senior Accountant; **Kristi Medley**, Director of Finance; **Ellen Giesbrecht**, Accounts Payable; **Isabelle De Leon**, Receptionist/Accounting Assistant; **June Marx**, Accounting/Human Resources Administrator; **Cybil Sandusky**, Executive Administrative Assistant; **Kathleen De La Cruz**, Accounts Receivable

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

MISCELLANEOUS INORGANIC

Residual Chlorine

CRM	PT M	QR
Cat. #696	Cat. #593	Cat. #696QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution.

Total Residual Chlorine ..... 0.5-3 mg/L
Free Residual Chlorine ..... 0.5-3 mg/L

Cyanide

CRM	PT M	QR
Cat. #983	Cat. #556	Cat. #983QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Free Cyanide ..... 0.1-0.5 mg/L

Organic Carbon

CRM	PT M	QR
Cat. #669	Cat. #557	Cat. #669QR

One 15 mL screw-cap vial yields up to 1 liter after dilution.

Total Organic Carbon ..... 1.3-13 mg/L
Dissolved Organic Carbon ..... 1.3-13 mg/L

Perchlorate

CRM	PT Q	QR
Cat. #910	Cat. #903	Cat. #910QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Perchlorate ..... 4-20 µg/L

Silica

CRM	PT Q	QR
Cat. #785	Cat. #902	Cat. #785QR

One 60 mL poly bottle yields 1 liter after dilution.

Silica as SiO_2 ..... 5-75 mg/L

Surfactants-MBAS

CRM	PT Q	QR
Cat. #784	Cat. #901	Cat. #784QR

One 15 mL screw-cap vial yields up to 2 liters after dilution.

Surfactants – MBAS ..... 0.1-1 mg/L

PHYSICAL PROPERTY

Color

CRM	PT *	QR
Cat. #661	Cat. #859	Cat. #661QR

One 125 mL whole-volume bottle is ready to analyze.

Color ..... 10-75 PC units

* ERA Color PTs open in January and July.

Corrosivity

CRM	PT Q	QR
Cat. #980	Cat. #900	Cat. #980QR

One 500 mL whole-volume bottle is ready to analyze for corrosivity, calcium carbonate saturation and Langelier saturation index.

Corrosivity ..... -4 to +4 SI units

Turbidity

CRM	PT M	QR
Cat. #699	Cat. #592	Cat. #699QR

One 15 mL screw-cap vial yields up to 1 liter after dilution. Use with nephelometric methods.

Turbidity ..... 0.5-8 NTU

UV 254 Absorbance

CRM	PT Q	QR
Cat. #662	Cat. #904	Cat. #662QR

One 15 mL screw-cap vial yields up to 1 liter after dilution.

UV 254 Absorbance ..... 0.05-0.7 cm^{-1}

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

DISINFECTION BY-PRODUCTS

Chloral Hydrate

CRM	PT ✱	QR
Cat. #676	Cat. #853	Cat. #676QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA method 551. Includes chloral hydrate at 4-30 µg/L.

✱ ERA WS Chloral Hydrate PTs open in January and July.

Haloacetic Acids (HAA)

CRM	PT M	QR
Cat. #684	Cat. #852	Cat. #684QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA method 552. Includes all the analytes below at 5-50 µg/L.

- Bromochloroacetic Acid
- Dibromoacetic Acid
- Dichloroacetic Acid
- Monobromoacetic Acid
- Monochloroacetic Acid
- Trichloroacetic Acid

VOLATILE ORGANICS

Gasoline Additives

CRM	PT Q	QR
Cat. #909	Cat. #905	Cat. #909QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA method 524.2 for gasoline additives/oxygenates. Contains all of the analytes below at 5-50 µg/L.

- tert-Amylmethylether (TAME)
- tert-Butyl Alcohol
- Di-isopropylether (DIPE)
- Ethyl tert-butyl ether (ETBE)
- Methyl tert-butyl ether (MTBE)
- Trichlorofluoromethane (Freon® 11)
- Trichlorotrifluoroethane (Freon® 113)

Halomethanes (THMs)

CRM	PT M	QR
Cat. #702	Cat. #842	Cat. #702QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 502.2, 524.2 and 551. Contains all of the analytes below at 5-50 µg/L.

- Bromodichloromethane
- Bromoform
- Chlorodibromomethane
- Chloroform

Regulated Volatiles

CRM	PT M	QR
Cat. #703	Cat. #840	Cat. #703QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 502.2 and 524.2. Contains all of the analytes below at 2-50 µg/L.

- Benzene
- Carbon tetrachloride
- Chlorobenzene
- 1,2-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- Ethylbenzene
- Methylene chloride
- Styrene
- Tetrachloroethylene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethylene
- Vinyl chloride
- Xylenes, total

Unregulated Volatiles

CRM	PT M	QR
Cat. #683	Cat. #841	Cat. #683QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 502.2 and 524.2. Contains at least 60% of the analytes randomly selected from the list below at 2-50 µg/L.

- Bromobenzene
- Bromochloromethane
- Bromomethane
- n-Butylbenzene
- sec-Butylbenzene
- tert-Butylbenzene
- Chloroethane
- Chloromethane
- 2-Chlorotoluene
- 4-Chlorotoluene
- Dibromomethane
- 1,3-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,3-Dichloropropane
- 2,2-Dichloropropane
- 1,1-Dichloropropene
- cis-1,3-Dichloropropene
- trans-1,3 Dichloropropene
- Fluorotrichloromethane
- Hexachlorobutadiene
- Isopropylbenzene
- 4-Isopropyltoluene
- Methyl tert-butyl ether (MTBE)
- Naphthalene
- n-Propylbenzene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- 1,2,3-Trichlorobenzene
- 1,2,3-Trichloropropane
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

PESTICIDES

Pesticides

CRM	PT M	QR
Cat. #709	Cat. #850	Cat. #709QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 505, 507, 508 and 525 for organochlorine, nitrogen and organophosphorus pesticides. Each standard contains at least 14 analytes randomly selected from the list below at 0.2-20 µg/L.

- Alachlor
- Aldrin
- Atrazine
- Bromacil
- Butachlor
- Diazinon
- Dieldrin
- Endrin
- Heptachlor
- Heptachlor epoxide (beta)
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lindane (gamma-BHC)
- Methoxychlor
- Metolachlor
- Metribuzin
- Molinate (Ordram)
- Prometon
- Propachlor
- Simazine
- Thiobencarb
- Trifluralin

Carbamate/Carbamoxyloxime Pesticides

CRM	PT M	QR
Cat. #707	Cat. #846	Cat. #707QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 531.1, 531.2 and 632. Each standard contains at least 8 of the analytes below at 15-150 ug/L

- Aldicarb
- Aldicarb sulfone
- Aldicarb sulfoxide
- Baygon
- Carbaryl
- Carbofuran
- 3-Hydroxycarbofuran
- Methiocarb
- Methomyl
- Oxamyl (Vydate)

Chlordane

CRM	PT M	QR
Cat. #705	Cat. #845	Cat. #705QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 505, 508 and 525. Each standard contains technical chlordane at 2-20 µg/L.

Toxaphene

CRM	PT M	QR
Cat. #700	Cat. #844	Cat. #700QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 505, 508 and 525. Each standard contains toxapheneat 2-20 µg/L.

EDB/DBCP/TCP

CRM	PT M	QR
Cat. #706	Cat. #847	Cat. #706QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 504 and 551. Each lot contains all analytes below at 0.05-2 µg/L.

- 1,2-Dibromo-3-Chloropropane (DBCP)
- Ethylene dibromide (EDB)
- 1,2,3-Trichloropropane (1,2,3-TCP)

From left to right:

Harlan Mott, Application Engineer; **Anthony Chiesi**, Application Engineer; **Darwin Baxter**, Application Engineer; **Paul Fabrizio**, Systems Engineer; **Patrick Scribner**, Director of Information Services

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

SEMIVOLATILE ORGANICS

Dioxin

CRM	PT Q	QR
Cat. #663	Cat. #857	Cat. #663QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 613, 1613, 8280 and 8290. Each standard contains 2,3,7,8-TCDD at 20-100 pg/L.

PCBs as Decachlorobiphenyl

CRM	PT Q	QR
Cat. #708	Cat. #839	Cat. #708QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA quantitative method 508A. This standard can also be used for Aroclor identification and quantification using EPA methods 505, 508, and 508.1. Includes an Aroclor randomly selected from the list below at 0.5-5 µg/L as decachlorobiphenyl.

- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

Semivolatiles #1

CRM	PT M	QR
Cat. #690	Cat. #848	Cat. #690QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 506, 525 and 550 for PAHs, phthalates and adipates. Each standard contains Benzo(a)pyrene, Bis(2-ethylhexyl)adipate, and Bis(2-ethylhexyl)phthalate plus at least 13 additional analytes, selected from the list below, at 0.2-50 µg/L.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Butylbenzylphthalate
- Chyrsene
- Dibenz(a,h)anthracene
- Di-n-butylphthalate
- Diethylphthalate
- Dimethylphthalate
- Di-n-octylphthalate
- bis(2-Ethylhexyl)adipate
- bis(2-Ethylhexyl)phthalate
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Naphthalene is not within the EPA/NELAC range. Use the Unregulated Volatiles standard (pg. 39) for this compound in the EPA/NELAC range.

HERBICIDES

Chlorinated Acid Herbicides

CRM	PT M	QR
Cat. #704	Cat. #851	Cat. #704QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 515.1, 515.2, 515.3, 515.4 and 555. All lots include at least 10 analytes from the list below at 1-120 µg/L.

- Acifluorfen
- Bentazon
- Chloramben
- 2,4-D
- 2,4-DB
- Dacthal diacid (DCPA)
- Dalapon
- Dicamba
- 3,5-Dichlorobenzoic acid
- Dichlorprop
- Dinoseb
- 4-Nitrophenol
- Pentachlorophenol
- Picloram
- 2,4,5-T
- 2,4,5-TP (Silvex)

Semivolatiles #2 Herbicides

CRM	PT M	QR
Cat. #691	Cat. #849	Cat. #691QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA methods 547, 548, and 549. Each standard contains all the analytes below at 8-800 µg/L.

- Diquat
- Endothall
- Glyphosate
- Paraquat

All ERA WS PTs open monthly (M) or quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

UCMR 2 ORGANICS

UCMR 2 Pesticides and Flame Retardants in Water

QC
Cat. #151

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution. Use with EPA method 527. Each standard contains all analytes below at 0.5-10 µg/L after dilution.

- Dimethoate
- 2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)
- 2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)
- 2,2',4,4',5,5'-Hexabromobiphenyl (245-HBB)
- 2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)
- Terbufos sulfone
- 2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)

UCMR 2 Nitrosamines in Water

QC
Cat. #153

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution. Use with EPA method 521. Each standard contains all analytes below at 5-100 ng/L after dilution.

- N-Nitrosodiethylamine (NDEA)
- N-Nitrosodimethylamine (NDMA)
- N-Nitrosodi-n-butylamine (NDBA)
- N-Nitrosodi-n-propylamine (NDPA)
- N-Nitrosomethylethylamine (NMEA)
- N-Nitrosopyrollidine (NPYR)

UCMR 2 Explosives in Water

QC
Cat. #152

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution. Use with EPA method 529. Each standard contains all analytes below at 1-15 µg/L after dilution.

- 1,3-Dinitrobenzene
- Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
- 2,4,6-Trinitrotoluene (TNT)

UCMR 2 Chlorinated Pesticides in Water

QC
Cat. #154

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution. Use with EPA method 525.2. Each standard contains all analytes below at 1-20 µg/L after dilution.

- Acetochlor
- Alachlor
- Metolachlor

UCMR 2 Herbicide Degradates in Water

QC
Cat. #155

One 2 mL flame-sealed ampule yields in excess of 2 liters after dilution. Use with EPA method 535. Each standard contains all analytes below at 1-20 µg/L after dilution.

- Acetochlor ethane sulfonic acid (ESA)
- Acetochlor oxanilic acid (OA)
- Alachlor ethane sulfonic acid (ESA)
- Alachlor oxanilic acid (OA)
- Metolachlor ethane sulfonic acid (ESA)
- Metolachlor oxanilic acid (OA)

UCMR 3 INORGANICS

UCMR 3 Metals

QC
Cat. #148

One 15 mL screw-cap vial yields up to 2 liters after dilution. The diluted standard will contain the analytes listed below at 0.2 to 20 µg/L.

- Chromium
- Cobalt
- Molybdenum
- Strontium
- Vanadium

UCMR 3 Hexavalent Chromium

QC
Cat. #149

One 15 mL screw-cap vial yields up to 2 liters after dilution. The diluted standard will contain hexavalent chromium at 0.1 to 2 µg/L.

UCMR 3 Chlorate

QC
Cat. # 5272

One 23 mL screw-cap vial yields up to 4 liters after dilution. The diluted standard will contain chlorate at 60 to 180 µg/L.

UCMR 3 ORGANICS

UCMR 3 Volatiles

QC
Cat. #156

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA method 524.3. The diluted standard will contain the analytes listed below at 0.1 to 10 µg/L.

- Bromochloromethane (Halon 1011)
- Bromomethane
- 1,3-Butadiene
- sec-Butylbenzene
- Chlorodifluoromethane (HCFC-22)
- Chloromethane
- 1,1-Dichloroethane
- n-Propylbenzene
- 1,2,3-Trichloropropane

UCMR 3 1,4-Dioxane

QC
Cat. #157

One 2 mL flame-sealed ampule yields in excess of 1 L after dilution. Use with EPA method 522. The diluted standard will contain 1,4-dioxane at 0.1 to 10 µg/L.

UCMR 3 Perfluorinated Compounds

QC
Cat. # 158

One 2 mL flame-sealed ampule yields in excess of 2 L after dilution. Use with EPA method 537. The diluted standard will contain the analytes listed below at 50 to 500 ng/L.

- Perfluorobutanesulfonic Acid (PFBS)
- Perfluoroheptanoic Acid (PFHpA)
- Perfluorohexanesulfonic Acid (PFHxS)
- Perfluorononanoic Acid (PFNA)
- Perfluorooctanesulfonic Acid (PFOS)
- Perfluorooctanoic Acid (PFOA)

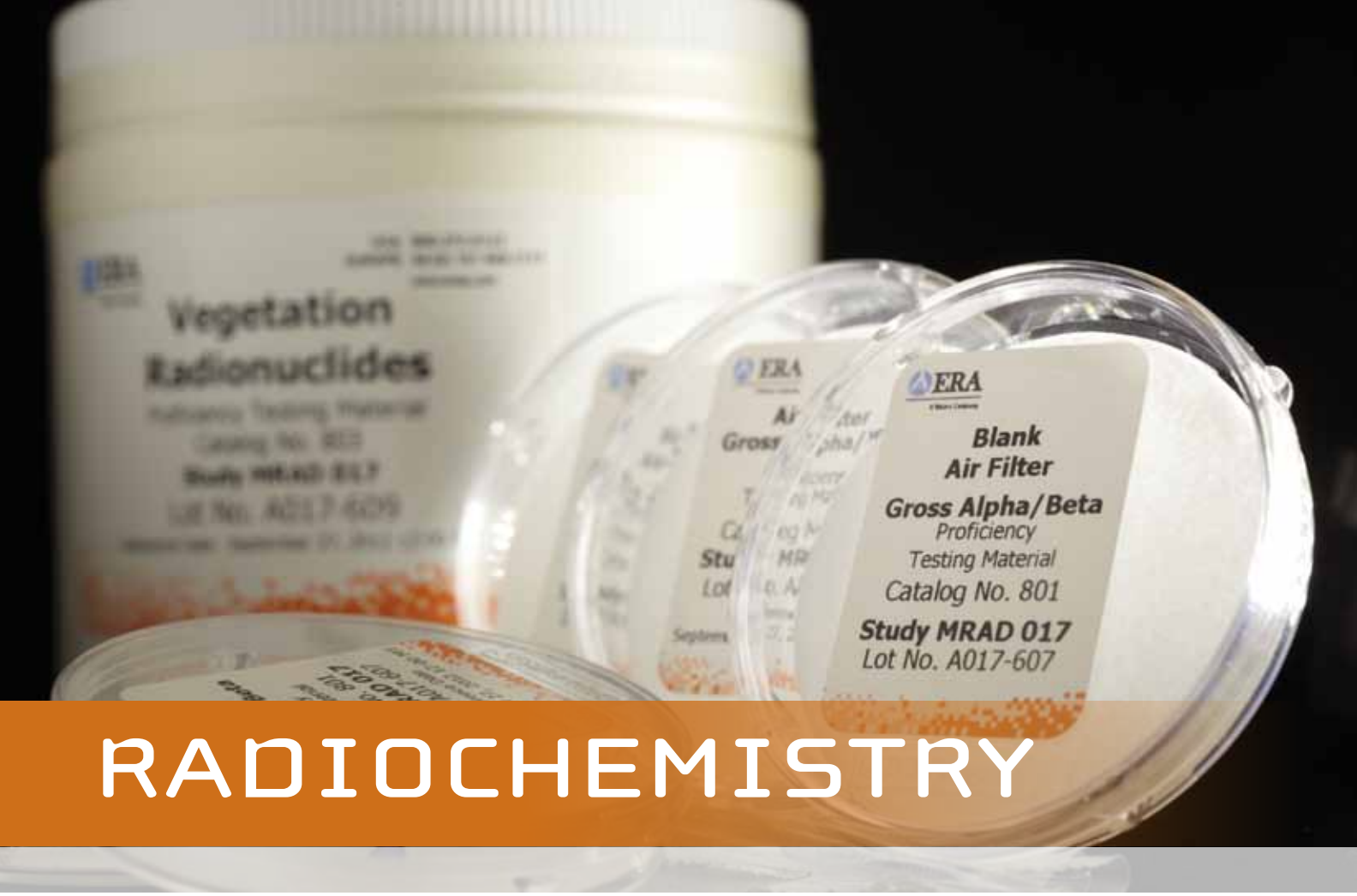
UCMR 3 Hormones

QC
Cat. #159

One 2 mL flame-sealed ampule yields in excess of 2 L after dilution. Use with EPA method 539. The diluted standard will contain the analytes listed below at 0.5 to 50 ng/L.

- 4-Androstene-3,17-dione
- Equilin
- 17β-Estradiol
- Estriol
- Estrone
- 17α-Ethynylestradiol
- Testosterone

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM



RADIOCHEMISTRY

2013 Radiochemistry PT Study Schedule

Study #	Opens	Closes
RAD 92	Jan 7	Feb 21
RAD 93	Apr 8	May 23
RAD 94	Jul 8	Aug 22
RAD 95	Oct 7	Nov 21

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Gamma Emitters	758	808 Q	758QR	46
Gross Alpha/Beta	759	809 Q	759QR	46
Iodine-131	750	810 Q	750QR	46
Naturals	751	811 Q	751QR	46
Strontium-89/90	757	807 Q	757QR	46
Tritium	752	812 Q	752QR	46

2013 MRaD PT Study Schedule

Study #	Opens	Closes
MRAD 018	Mar 18	May 17
MRAD 019	Sep 27	Nov 26

2 studies per year – open for 60 days
Schedule subject to change – see ERA's website at www.eraqc.com.

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

Q All ERA WS Radchem PTs open quarterly.

✱ All ERA MRaD PTs open in March and September.

Description	CRM	PT	QR	Page
Air Filter Gross Alpha/Beta	607	801 ✱	607QR	48
Air Filter Radionuclides	606	800 ✱	606QR	48
Soil Radionuclides	608	802 ✱	608QR	48
Vegetation Radionuclides	609	803 ✱	609QR	48
Water Gross Alpha/Beta	615	805 ✱	615QR	49
Water Radionuclides	617	804 ✱	617QR	49
Water Tritium	616	806 ✱	616QR	49

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

WS RADCHEM

All Radchem standards are provided as convenient, easy-to-prepare concentrates except for Tritium, which is provided as a whole-volume sample.

Gamma Emitters

CRM	PT Q	QR
Cat. #758	Cat. #808	Cat. #758QR

One 12 mL screw-top vial yields up to 2 liters after dilution.

- Barium-133 ..... 10-100 pCi/L
- Cesium-134 ..... 10-100 pCi/L
- Cesium-137 ..... 20-240 pCi/L
- Cobalt-60 ..... 10-120 pCi/L
- Zinc-65 ..... 30-360 pCi/L

Gross Alpha/Beta

CRM	PT Q	QR
Cat. #759	Cat. #809	Cat. #759QR

One 12 mL screw-top vial yields up to 1 liter after dilution.

- Gross Alpha as Thorium-230 ..... 7-75 pCi/L
- Gross Beta as Cesium-137 ..... 8-75 pCi/L

Naturals

CRM	PT Q	QR
Cat. #751	Cat. #811	Cat. #751QR

One 12 mL screw-top vial yields up to 8 liters after dilution.

- Radium-226 ..... 1-20 pCi/L
- Radium-228 ..... 2-20 pCi/L
- Uranium (Nat) ..... 2-70 pCi/L
- Uranium (Nat) mass ..... 3-104 µg/L

Tritium

CRM	PT Q	QR
Cat. #752	Cat. #812	Cat. #752QR

One 250 mL whole-volume bottle is ready to analyze as received. Includes Tritium at 1,000-24,000 pCi/L.

Iodine-131

CRM	PT Q	QR
Cat. #750	Cat. #810	Cat. #750QR

One 12 mL screw-top vial yields up to 2 liters after dilution. Contains Iodine-131 within the range 3-30 pCi/L. Due to short half-life, CRMs, PTs and QRs are available only during January, April, July and October.

Strontium-89/90

CRM	PT Q	QR
Cat. #757	Cat. #807	Cat. #757QR

One 12 mL screw-top vial yields up to 2 liters after dilution.

- Strontium-89 ..... 10-70 pCi/L
- Strontium-90 ..... 3-45 pCi/L

All ERA WS RadChem PTs open quarterly (Q) unless otherwise noted.

RADCHEM LAB CONTROL & MATRIX SPIKING (LCS/MS)

ERA's radiochemistry LCS/MS standards are prepared according to your specifications at activity levels that enable you to directly fortify your batch laboratory control and matrix spike QC samples. These single-use spiking standards are verified, conveniently packaged in 2-20 mL glass vials, and very economical.

The direct benefits:

- Easy-to-use—ERA LCS/MS spiking standards are ready to use—no dilutions are required.
- Reliable and consistent—eliminate the possibility of errors from the contamination or repeated multiple dilutions of your primary stock standards.
- Independently verified—ERA LCS/MS standards are analytically verified and traced to NIST SRMs where available.
- Save money—You no longer need to pay for microcuries of activity when you only need picocuries. You also eliminate the cost of activity loss for short-lived isotopes.
- Reduce analytical cost—You no longer need to spend valuable instrument time re-verifying standard stability. Order what you expect to use on a quarterly or annual basis—we'll do the verification.

It Couldn't be Easier:

1. Select from any of the following carrier-free, single radionuclide standards.
2. Choose an activity up to the maximum listed in the table below.
3. Choose a convenient volume: 2 to 20 mL glass vials available.
4. For labs that analyze samples with more elevated activities, call for standard availablity and pricing.
5. We will prepare the standards to your specifications and ship within 72 hours.

Single Radionuclide Spiking Standards

Cat. #	Radionuclide	Maximum Activity
AM241	Americium-241	40 pCi
BA133	Barium-133	400 pCi
CS134	Cesium-134	200 pCi
CS137	Cesium-137	400 pCi
CO60	Cobalt-60	200 pCi
GAB	Gross Alpha/Beta	30/40 pCi
GA	Gross Alpha (Th-230)	30 pCi
GB	Gross Beta (Cs-137)	40 pCi
PU238	Plutonium-238	40 pCi
PU239	Plutonium-239	40 pCi
RA226	Radium-226	20 pCi
RA228	Radium-228	40 pCi
SR89	Strontium-89	200 pCi
SR90	Strontium-90	40 pCi
H3	Tritium	2000 pCi
UNAT	Uranium, Natural	40 pCi
ZN65	Zinc-65	600 pCi

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

MRAD SOLIDS

Soil Radionuclides

CRM	PT *	QR
Cat. #608	Cat. #802	Cat. #608QR

One 500 cc standard includes the alpha, beta and gamma emitting radionuclides listed below.

Actinium-228	500-5,000 pCi/kg
Americium-241	50-2,000 pCi/kg
Bismuth-212	500-5,000 pCi/kg
Bismuth-214	500-5,000 pCi/kg
Cesium-134	1,000-10,000 pCi/kg
Cesium-137	1,000-10,000 pCi/kg
Cobalt-60	1,000-10,000 pCi/kg
Lead-212	500-5,000 pCi/kg
Lead-214	500-5,000 pCi/kg
Manganese-54	1,000-10,000 pCi/kg
Plutonium-238	50-2,000 pCi/kg
Plutonium-239	50-2,000 pCi/kg
Potassium-40	5,000-50,000 pCi/kg
Strontium-90	500-10,000 pCi/kg
Thorium-234	500-5,000 pCi/kg
Uranium-234	500-5,000 pCi/kg
Uranium-238	500-5,000 pCi/kg
Uranium (Nat)	1,000-10,000 pCi/kg
Uranium (Nat) mass	1,500-15,000 µg/kg
Zinc-65	1,000-10,000 pCi/kg

Vegetation Radionuclides

CRM	PT *	QR
Cat. #609	Cat. #803	Cat. #609QR

One 500 cc standard includes the alpha, beta and gamma emitting radionuclides listed below.

Americium-241	50-5,000 pCi/kg
Cesium-134	300-3,000 pCi/kg
Cesium-137	300-3,000 pCi/kg
Cobalt-60	300-3,000 pCi/kg
Curium-244	50-5,000 pCi/kg
Manganese-54	300-3,000 pCi/kg
Plutonium-238	50-5,000 pCi/kg
Plutonium-239	50-5,000 pCi/kg
Potassium-40	5,000-50,000 pCi/kg
Strontium-90	500-10,000 pCi/kg
Uranium-234	50-5,000 pCi/kg
Uranium-238	50-5,000 pCi/kg
Uranium (Nat)	100-10,000 pCi/kg
Uranium (Nat) mass	150-15,000 µg/kg
Zinc-65	300-3,000 pCi/kg

MRAD AIR FILTER

Air Filter Radionuclides

CRM	PT *	QR
Cat. #606	Cat. #800	Cat. #606QR

One 47 mm diameter glass fiber filter contains the alpha, beta and gamma emitting radionuclides listed below.

Americium-241	2-80 pCi/filter
Cesium-134	50-1,500 pCi/filter
Cesium-137	50-1,500 pCi/filter
Cobalt-60	50-1,500 pCi/filter
Iron-55	50-1,500 pCi/filter
Manganese-54	50-1,500 pCi/filter
Plutonium-238	2-80 pCi/filter
Plutonium-239	2-80 pCi/filter
Strontium-90	5-200 pCi/filter
Uranium-234	2-80 pCi/filter
Uranium-238	2-80 pCi/filter
Uranium (Nat)	4-160 pCi/filter
Uranium (Nat) mass	6-240 µg/filter
Zinc-65	50-1,500 pCi/filter

Air Filter Gross Alpha/Beta

CRM	PT *	QR
Cat. #607	Cat. #801	Cat. #607QR

One acrylic treated 47 mm diameter glass fiber filter contains the radionuclides listed below.

Gross Alpha as Thorium-230	5-100 pCi/filter
Gross Beta as Cesium-137	5-100 pCi/filter

* All ERA MRaD PTs open in March and September.

Water Radionuclides

CRM	PT ✱	QR
Cat. #617	Cat. #804	Cat. #617QR

One 12 mL screw-top vial yields up to 2 liters after dilution. Includes the alpha, beta and gamma emitting radionuclides listed below.

Americium-241	10-200 pCi/L
Cesium-134	100-3,000 pCi/L
Cesium-137	100-3,000 pCi/L
Cobalt-60	100-3,000 pCi/L
Iron-55	100-3,000 pCi/L
Manganese-54	100-3,000 pCi/L
Plutonium-238	10-200 pCi/L
Plutonium-239	10-200 pCi/L
Strontium-90	50-1,000 pCi/L
Uranium-234	10-200 pCi/L
Uranium-238	10-200 pCi/L
Uranium (Nat)	20-400 pCi/L
Uranium (Nat) mass	30-600 µg/L
Zinc-65	100-3,000 pCi/L

Water Gross Alpha/Beta

CRM	PT ✱	QR
Cat. #615	Cat. #805	Cat. #615QR

One 12 mL screw-top vial yields up to 2 liters after dilution. Includes the radionuclides below.

Gross Alpha as Thorium-230	10-200 pCi/L
Gross Beta as Cesium-137	10-200 pCi/L

Water Tritium

CRM	PT ✱	QR
Cat. #616	Cat. #806	Cat. #616QR

One 125 mL whole volume bottle ready to analyze as received.

Tritium	3,000-30,000 pCi/L

From left to right:
Amber Bolger, Production Technician; **Cherie Sanchez**, Production Technician; **Catherine Fuentes**, Production Technician

✱ All ERA MRaD PTs open in March and September.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

SOIL

2013 Soil PT Study Schedule		
Study #	**Opens**	**Closes**
SOIL 81	Jan 21	Mar 7
SOIL 82	Apr 22	Jun 6
SOIL 83	Jul 22	Sep 5
SOIL 84	Oct 25	Dec 9

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Anions in Soil	543	873 Q	543QR	53
Base/Neutrals & Acids in Soil	727	467 Q	727QR	56
BTEX & MTBE in Soil	761	633 Q	761QR	54
Carbamate Pesticides in Soil	926	879 Q	926QR	57
Chlordane in Soil	725	628 Q	725QR	57
Chlorinated Acid Herbicides in Soil	723	626 Q	723QR	56
Corrosivity/pH in Soil	914	875 Q	914QR	53
Cyanide in Soil	541	621 Q	541QR	53
Diesel Range Organics (DRO)	765	631 Q	765QR	56
Gasoline Range Organics (GRO)	763	630 Q	763QR	54
Glycols in Soil	928	463 Q	928QR	56
Hexavalent Chromium in Soil	921	876 Q	921QR	52
Ignitability/Flash Point	979	874 Q	979QR	53
Low-Level PAHs in Soil	722	625 Q	722QR	56
Metals & Cyanide Blank Sand	058	—	—	59
Metals & Cyanide Blank Soil	057	—	—	59
Metals in Sewage Sludge	160	619 Q	160QR	52
Metals in Soil	540	620 Q	540QR	52
Nitroaromatics & Nitramines	920	871 Q	920QR	56
Nutrients in Sludge	545	—	—	53
Nutrients in Soil	542	869 Q	542QR	53
Oil & Grease in Soil	549	867 Q	549QR	53
Organochlorine Pesticides in Soil	728	468 Q	728QR	57
Organophosphorus Pesticides (OPP)	925	878 Q	925QR	57
PCBs in Soil	726	624 Q	726QR	56
PCBs in Oil	see page 58 for options			
PCBs in Soil	see page 58 for options			
PCBs in Water	see page 58 for options			
Perchlorate in Soil	546	—	546QR	53
Ready-to-use VOAs in Soil	924	870 Q	924QR	54
Semivolatile Blank Soil	056	—	—	59
TCLP Metals in Soil	544	629 Q	544QR	52
TCLP Organochlorine Pesticides	732	—	732QR	55
TCLP Semivolatiles	737	—	737QR	55
TCLP Volatiles	730	—	730QR	55
Toxaphene in Soil	724	627 Q	724QR	57
TPH in Soil	570/571	632 Q	572QR	55
Volatiles Blank Sand	055	—	—	59
Volatiles Blank Soil	054	—	—	59
Volatiles in Soil	721	623 Q	721QR	54

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

METALS

Metals in Soil

CRM	PT Q	QR
Cat. #540	Cat. #620	Cat. #540QR

One 40 g soil sample in a screw-cap bottle for all ICP & AA, RCRA and Superfund methods including EPA digestion methods 3050 hot plate and 3051 microwave. Includes all metals shown below.

Aluminum	1,000-25,000 mg/kg
Antimony	80-300 mg/kg
Arsenic	40-400 mg/kg
Barium	100-1,000 mg/kg
Beryllium	40-400 mg/kg
Boron	80-800 mg/kg
Cadmium	40-400 mg/kg
Calcium	1,500-25,000 mg/kg
Chromium	40-400 mg/kg
Cobalt	40-400 mg/kg
Copper	40-400 mg/kg
Iron	1,000-50,000 mg/kg
Lead	40-400 mg/kg
Magnesium	1,200-25,000 mg/kg
Manganese	100-2,000 mg/kg
Mercury	1-35 mg/kg
Molybdenum	30-300 mg/kg
Nickel	40-500 mg/kg
Potassium	1,400-25,000 mg/kg
Selenium	40-400 mg/kg
Silver	20-100 mg/kg
Sodium	150-15,000 mg/kg
Strontium	40-400 mg/kg
Thallium	40-400 mg/kg
Tin	75-250 mg/kg
Titanium	10-2,000 mg/kg
Vanadium	40-400 mg/kg
Zinc	100-1,000 mg/kg

Hexavalent Chromium in Soil

CRM	PT Q	QR
Cat. #921	Cat. #876	Cat. #921QR

One 40 g standard in a screw-cap bottle for use with all promulgated hexavalent chromium methods

Hexavalent chromium	40-300 mg/kg

TCLP Metals in Soil

CRM	PT Q	QR
Cat. #544	Cat. #629	Cat. #544QR

One 105 g soil standard in a screw-cap bottle designed specifically to meet all state requirements for TCLP extraction and analysis for the metals listed below.

Antimony	Cadmium	Nickel
Arsenic	Chromium	Selenium
Barium	Lead	Silver
Beryllium	Mercury	Zinc

Metals in Sewage Sludge

CRM	PT Q	QR
Cat. #160	Cat. #619	Cat. #160QR

One 40 g sludge standard in a screw-cap bottle to be analyzed for the metals listed below.

Aluminum	1,000-50,000 mg/kg
Antimony	80-300 mg/kg
Arsenic	50-400 mg/kg
Barium	250-2,000 mg/kg
Beryllium	30-200 mg/kg
Cadmium	40-300 mg/kg
Calcium	5,000-70,000 mg/kg
Chromium	40-300 mg/kg
Cobalt	5-50 mg/kg
Copper	40-1,000 mg/kg
Iron	1,000-50,000 mg/kg
Lead	50-250 mg/kg
Magnesium	1,200-25,000 mg/kg
Manganese	100-2,000 mg/kg
Mercury	1-50 mg/kg
Molybdenum	5-250 mg/kg
Nickel	40-250 mg/kg
Potassium	1,400-25,000 mg/kg
Selenium	50-250 mg/kg
Silver	50-250 mg/kg
Sodium	150-15,000 mg/kg
Strontium	200-2,000 mg/kg
Thallium	50-250 mg/kg
Vanadium	5-250 mg/kg
Zinc	70-1,500 mg/kg

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

PHYSICAL PARAMETERS

Corrosivity/pH in Soil

CRM	PT Q	QR
Cat. #914	Cat. #875	Cat. #914QR

One 100 g soil standard in a screw-cap bottle. Use to measure corrosivity.

Corrosivity/pH ..... 2-12 S.U.

Ignitability/Flash Point

CRM	PT Q	QR
Cat. #979	Cat. #874	Cat. #979QR

One standard packaged in three 30 mL bottles. Use to measure ignitability.

Ignitability/Flashpoint ..... 100-200°F

Nutrients in Sludge

CRM
Cat. #545

One 40 g sludge standard in a screw-cap bottle is ready for analysis.

Ammonia as N ..... 0.1-5% (w/w)
Total Kjeldahl-nitrogen as N ..... 2-10% (w/w)
Total organic carbon (TOC) ..... 20-50% (w/w)
Total phosphorus as P ..... 0.5-10% (w/w)

Perchlorate in Soil

CRM	QR
Cat. #546	Cat. #546QR

One 40 g soil standard in a screw-cap bottle designed for perchlorate analysis.

INORGANICS

Anions in Soil

CRM	PT Q	QR
Cat. #543	Cat. #873	Cat. #543QR

One 40 g soil standard in a screw-cap bottle designed for a DI water extraction procedure for all the anions listed below.

Bromide ..... 10-100 mg/kg
Chloride ..... 200-1,000 mg/kg
Fluoride ..... 25-500 mg/kg
Nitrate as N ..... 25-500 mg/kg
Phosphate as P ..... 25-500 mg/kg
Sulfate ..... 25-2,000 mg/kg

Cyanide in Soil

CRM	PT Q	QR
Cat. #541	Cat. #621	Cat. #541QR

One 40 g soil standard in a screw-cap bottle for all distillation/colorimetric methods. This standard can be used to satisfy all PT requirements for total and reactive cyanide.

Total cyanide ..... 20-200 mg/kg
Amenable Cyanide ..... 10–100 mg/kg

Nutrients in Soil

CRM	PT Q	QR
Cat. #542	Cat. #869	Cat. #542QR

One 40 g soil standard in a screw-cap bottle. Use to analyze for all the nutrients listed below.

Ammonia as N ..... 300-3,000 mg/kg
Total Kjeldahl-nitrogen as N ..... 400-4,000 mg/kg
Total organic carbon (TOC) ..... 1,000-20,000 mg/kg
Total phosphorus as P ..... 300-3,000 mg/kg

OIL & GREASE

Oil & Grease in Soil

CRM	PT Q	QR
Cat. #549	Cat. #867	Cat. #549QR

One screw-cap bottle containing 50 g of soil ready to analyze. Use with gravimetric method 9071B or infrared spectrometric analysis.

n-Hexane Extractable Material (O&G) (Gravimetric) ..... 300-3,000 mg/kg
n-Hexane Extractable Material (O&G) (IR) ..... 300-3,000 mg/kg

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

VOLATILES

Volatiles in Soil

CRM	PT Q	QR
Cat. #721	Cat. #623	Cat. #721QR

One 2 mL flame-sealed ampule in methanol requires spiking onto the provided ten grams of solid matrix before analysis. Use with EPA methods 8021 and 8260. Includes a subset of the analytes listed below at 20-200 µg/kg (40-400 µg/kg for total xylenes, 80-1000 for selected ketones, and 200-1,000 µg/kg for acetonitrile).

- Acetone
- Acetonitrile
- Acrolein
- Benzene
- Bromobenzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethylvinylether
- Chloroform
- Chloromethane
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropylene
- trans-1,3-Dichloropropylene
- Ethylbenzene
- 2-Hexanone
- Isopropylbenzene
- Methylene chloride
- Methyl tert-butyl ether (MTBE)
- 4-Methyl-2-pentanone (MIBK)
- Naphthalene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethene
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- Vinyl acetate
- Vinyl chloride
- Xylenes, total

Ready-to-Use VOAs in Soil

CRM	PT Q	QR
Cat. #924	Cat. #870	Cat. #924QR

One 20 mL flame-sealed ampule containing 10 g of soil and 10 mL of methanol is ready to analyze. Use with methods 8021 and 8260. Includes a subset of the analytes listed below at 1,000-20,000 µg/kg.

- Acetone
- Acetonitrile
- Acrolein
- Benzene
- Bromobenzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethylvinylether
- Chloroform
- Chloromethane
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropylene
- trans-1,3-Dichloropropylene
- Ethylbenzene
- 2-Hexanone
- Hexachlorobutadiene
- Hexachloroethane
- Isopropylbenzene
- Methylene chloride
- Methyl tert-butyl ether (MTBE)
- 4-Methyl-2-pentanone (MIBK)
- Naphthalene
- Nitrobenzene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethene
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- Vinyl acetate
- Vinyl chloride
- Xylenes, total

Gasoline Range Organics (GRO) in Soil

CRM	PT Q	QR
Cat. #763	Cat. #630	Cat. #763QR

One flame-sealed ampule with 20 g of soil spiked with unleaded regular gasoline in the range 100-2,000 mg/kg. Use with purge and trap and modified EPA 8015 GC/FID methods. Also use to test for BTEX in gasoline.

BTEX & MTBE in Soil

CRM	PT Q	QR
Cat. #761	Cat. #633	Cat. #761QR

One 2 mL flame-sealed ampule requires spiking onto the ten grams of provided certified clean soil. Includes the anlaytes below at 20-200 µg/kg (40-400 µg/kg for Total Xylenes). Use with EPA method 8021.

- Benzene
- Ethylbenzene
- Methyl tert-butyl ether (MTBE)
- Toluene
- Xylenes, total

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

TOTAL PETROLEUM HYDROCARBONS

Total Petroleum Hydrocarbons (TPH) in Soil #1

CRM	PT Q	QR
Cat. #570	Cat. #632	Cat. #572QR

One screw-top bottle with 50 g of soil to be analyzed for TPH. Use with EPA IR or gravimetric methods 8440 and 9071B.

Non-polar Extractable Material (TPH) (Gravimetric).....300-3,000 mg/kg
Non-polar Extractable Material (TPH) (IR).....300-3,000 mg/kg

Total Petroleum Hydrocarbons (TPH) in Soil #2

CRM	PT Q	QR
Cat. #571	Cat. #632	Cat. #572QR

One screw-top bottle with 50 g of soil to be analyzed for TPH in the presence of interfering fatty acids. Use with EPA IR or gravimetric methods 8440 and 9071B.

Non-polar Extractable Material (TPH) (Gravimetric).....300-3,000 mg/kg
Non-polar Extractable Material (TPH) (IR).....300-3,000 mg/kg

TCLP

TCLP Volatiles

CRM	QR
Cat. #730	Cat. #730QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 0.05-2.0 mg/L.

Benzene	Chloroform	Tetrachloroethylene
2-Butanone (MEK)	1,4-Dichlorobenzene	Trichloroethylene
Carbon tetrachloride	1,2-Dichloroethane	Vinyl chloride
Chlorobenzene	1,1-Dicloroethylene	

TCLP Semivolatiles

CRM	QR
Cat. #737	Cat. #737QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 1-2.0 mg/L after dilution. All unspiked analytes are certified at <1 mg/L.

1,4-dichlorobenzene	Hexachloroethane	Pentachlorophenol
2,4-Dinitrotoluene	2-Methylphenol	Pyridine
Hexachlorobenzene	3 & 4-Methylphenol	2,4,5-Trichlorophenol
Hexachlorobutadiene	Nitrobenzene	2,4,6-Trichlorophenol

TCLP Organochlorine Pesticides

CRM	QR
Cat. #732	Cat. #732QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 0.01-0.2 mg/L after dilution. All unspiked analytes are certified at <0.01 mg/L.

Endrin	Heptachlor epoxide	Methoxychlor
Heptachlor	gamma-BHC (Lindane)	

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

SEMIVOLATILES

Nitroaromatics & Nitramines in Soil

CRM	PT Q	QR
Cat. #920	Cat. #871	Cat. #920QR

Two flame-sealed ampules each containing 30 g of soil are ready to analyze. Use for EPA methods 8330 and 8091. Includes a subset of the analytes listed below at 1,500-15,000 µg/kg.

- 4-Amino-2,6-dinitrotoluene
- 2-Amino-4,6-dinitrotoluene
- 1,3-Dinitrobenzene
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- HMX
- Nitrobenzene
- 2-Nitrotoluene
- 3-Nitrotoluene
- 4-Nitrotoluene
- RDX
- Tetryl
- 1,3,5-Trinitrobenzene
- 2,4,6-Trinitrotoluene

Low-Level PAHs in Soil

CRM	PT Q	QR
Cat. #722	Cat. #625	Cat. #722QR

Two flame-sealed ampules each containing 30 g are ready to analyze. Use for EPA HPLC method 8310 and 8270 SIM. Includes a subset of the analytes listed below at 50-1,000 µg/kg.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Diesel Range Organics (DRO) in Soil

CRM	PT Q	QR
Cat. #765	Cat. #631	Cat. #765QR

One flame-sealed ampule with 20 g of soil spiked with #2 Diesel fuel in the range 300-3,000 mg/kg. Use with modified EPA 8015 GC/FID methods.

HERBICIDES

Chlorinated Acid Herbicides in Soil

CRM	PT Q	QR
Cat. #723	Cat. #626	Cat. #723QR

Two flame-sealed ampules, each containing 30 g of soil are ready to use. Use with EPA method 8151. Includes a subset of the analytes listed below at 100-1,000 µg/kg (MCPA & MCPP 1,000-10,000 µg/kg).

- Acifluorfen
- Bentazon
- Chloramben
- 2,4-D
- 2,4-DB
- Dacthal diacid (DCPA)
- Dalapon
- Dicamba
- 3,5-Dichlorobenzoic acid
- Dichlorprop
- Dinoseb
- MCPA
- MCPP
- 4-Nitrophenol
- Pentachlorophenol
- Picloram
- 2,4,5-T
- 2,4,5-TP (Silvex)

This standard is not compliant with the NELAC concentration for 4-Nitrophenol and Pentachlorophenol. If a NELAC compliant sample is required for these analytes, use Base/Neutrals and Acids in Soil.

Glycols in Soil

QC	PT Q	QR
Cat. #928	Cat. #463	Cat. #928QR

Two flame sealed ampules each containing 30 g of soil are ready to use. Use with EPA methods 8015B, 8430 and 1671.

- Diethylene glycol
- Ethylene glycol
- Propylene glycol
- Tetraethylene glycol
- Triethylene glycol

Base/Neutrals & Acids in Soil

CRM	PT Q	QR
Cat. #727	Cat. #467	Cat. #727QR

Two flame-sealed ampules each containing 30 g of soil are ready to use. Use with EPA method 8270. Includes a subset of the analytes listed below at 1,000-15,000 µg/kg.

- Acenaphthene
- Acenaphthylene
- 2-Amino-1-methylbezene
- (o-Toluidine)
- Aniline
- Anthracene
- Benzidine
- Benzoic acid
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Benzyl alcohol
- 4-Bromophenyl phenylether
- Butylbenzylphthalate
- Carbazole
- 4-Chloroaniline
- bis(2-Chloroethyl)ether
- bis(2-Chloroethoxy)methane
- bis(2-Chloroisopropyl)ether
- 4-Chloro-3-methylphenol
- 1-Chloronaphthalene
- 2-Chloronaphthalene
- 2-Chlorophenol
- 4-Chlorophenyl-phenylether
- Chrysene
- Dibenz(a,h)anthracene
- Dibenzofuran
- Di-n-butylphthalate
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 3,3'-Dichlorobenzidine
- 2,4-Dichlorophenol
- 2,6-Dichlorophenol
- Diethylphthalate
- 2,4-Dimethylphenol
- Dimethylphthalate
- 2,4-Dinitrophenol
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- Di-n-octylphthalate
- bis(2-Ethylhexyl)phthalate
- Fluoranthene
- Fluorene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachlorocyclopentadiene
- Hexachloroethane
- Indeno(1,2,3-cd)pyrene
- Isophorone
- 2-Methyl-4,6-dinitrophenol
- 2-Methylnaphthalene
- 2-Methylphenol
- 3 & 4-Methylphenol
- Naphthalene
- 2-Nitroaniline
- 3-Nitroaniline
- 4-Nitroaniline
- Nitrobenzene
- 2-Nitrophenol
- 4-Nitrophenol
- N-Nitrosodiethylamine
- N-Nitrosodimethylamine
- N-Nitrosodiphenylamine
- N-Nitroso-di-n-propylamine
- Pentachlorobenzene
- Pentachlorophenol
- Phenanthrene
- Phenol
- Pyrene
- Pyridine
- 1,2,4,5-Tetrachlorobenzene
- 2,3,4,6-Tetrachlorophenol
- 1,2,4-Trichlorobenzene
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol

PCBS

PCBs in Soil

CRM	PT Q	QR
Cat. #726	Cat. #624	Cat. #726QR

One screw-top bottle containing 50 grams of standard is ready to analyze. Use with EPA method 8082. Each standard includes a different Aroclor randomly selected from the list below at 1-50 mg/kg.

- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

Organochlorine Pesticides in Soil

CRM	PT Q	QR
Cat. #728	Cat. #468	Cat. #728QR

Two flame-sealed ampules each containing 30 g of soil are ready to use. Use with EPA method 8081. Includes a subset of the analytes listed below at 50-500 µg/kg.

- Aldrin
- alpha-BHC
- beta-BHC
- delta-BHC
- gamma-BHC (Lindane)
- alpha-Chlordane
- gamma-Chlordane
- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- Dieldrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- Heptachlor
- Heptachlor epoxide
- Methoxychlor

Chlordane in Soil

CRM	PT Q	QR
Cat. #725	Cat. #628	Cat. #725QR

One screw-top bottle containing 50 g of soil is ready to analyze. Use with EPA method 8081. The standard contains technical chlordane at 200-1,000 µg/kg.

Toxaphene in Soil

CRM	PT Q	QR
Cat. #724	Cat. #627	Cat. #724QR

One screw-top bottle containing 50 g of soil is ready to analyze. Use with method 8081. The standard contains toxaphene at 200-2,000 µg/kg.

Carbamate Pesticides in Soil

CRM	PT Q	QR
Cat. #926	Cat. #879	Cat. #926QR

Two flame-sealed ampules, each containing 30 g of soil are ready to analyze. Use with EPA methods 8318 and 8321. Each standard contains a subset of the analytes listed below at 250-2,500 µg/kg.

- Aldicarb
- Aldicarb sulfone
- Aldicarb sulfoxide
- Carbaryl
- Carbofuran
- Dioxacarb
- Diuron
- 3-Hydroxycarbofuran
- Methiocarb
- Methomyl
- Oxamyl
- Promecarb
- Propham
- Propoxur

Organophosphorus Pesticides (OPP) in Soil

CRM	PT Q	QR
Cat. #925	Cat. #878	Cat. #925QR

Two flame-sealed ampules, each containing 30 g of soil are ready to analyze. Use with EPA method 8141. Each standard contains a subset of the analytes listed below at 100-1,000 µg/kg.

- Azinophos-methyl (Guthion)
- Chlorpyrifos
- Demeton O & S
- Diazinon
- Dichlorvos (DDVP)
- Disulfoton
- Ethyl Parathion (Parathion)
- Malathion
- Methyl Parathion
- Phorate
- Ronnel
- Stirophos (tetrachlorovinphos)
- Terbufos

From left to right:
Paul Battle, Chemist; **Veronica Starkey**, Chemist; **Kit Beikmann**, Chemistry Technician; **Leo Munoz**, Production Technician

All ERA Soil PTs open quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

SOIL

PCBs in Soil

PCBs in soil standards are sold individually in screw-top bottles containing 50 g of soil. Use with EPA methods 8082 and 4020. LOW LEVEL standards contain an Aroclor in the range 0.5-50 ppm. HIGH LEVEL standards contain an Aroclor in the range 51-500 ppm.

Cat. #	Concentration	Aroclor	Range
490	LOW	1242	0.5-50 ppm
491	HIGH	1242	51-500 ppm
496	LOW	1248	0.5-50 ppm
497	HIGH	1248	51-500 ppm
492	LOW	1254	0.5-50 ppm
493	HIGH	1254	51-500 ppm
494	LOW	1260	0.5-50 ppm
495	HIGH	1260	51-500 ppm

OIL

PCBs in Oil

PCBs in oil standards are sold individually in ready-to-use flame-sealed ampules with 5 g of oil. Use with EPA methods 8082 and EPA-600/4-81-045, Sept. 1982. LOW LEVEL standards contain an Aroclor in the range 10-50 ppm. HIGH LEVEL standards contain an Aroclor in the range 51-500 ppm.

Cat. #	Concentration	Aroclor	Range
820	LOW	1242	10-50 ppm
821	HIGH	1242	51-500 ppm
826	LOW	1248	10-50 ppm
827	HIGH	1248	51-500 ppm
822	LOW	1254	10-50 ppm
823	HIGH	1254	51-500 ppm
824	LOW	1260	10-50 ppm
825	HIGH	1260	51-500 ppm

WATER

PCBs in Water

PCBs in water standards are sold individually in 2 mL flame-sealed ampules that yield 1 liter after dilution. Use with EPA methods 608 and 8082. Each standard contains an Aroclor at 1-15 µg/L after dilution.

Cat. #	Aroclor	Range
860	1016	1-15 µg/L
861	1221	1-15 µg/L
862	1232	1-15 µg/L
863	1242	1-15 µg/L
864	1248	1-15 µg/L
865	1254	1-15 µg/L
866	1260	1-15 µg/L

BLANK SOIL

Volatile Blank Sand

QC
Cat. #055

One 40 g clean sand sample in a VOA vial. The certified concentrations of all analytes are <20 µg/kg.

Volatile Blank Soil

QC
Cat. #054

One 40 g clean soil sample in a VOA vial. The certified concentrations of all analytes are <20 µg/kg, except Acetone, 2-Hexanone, MEK, and MIBK which are <50 µg/kg.

Semivolatile Blank Soil

QC
Cat. #056

One 60 g certified-clean soil sample in a screw-cap bottle. The certified concentrations are <1000 µg/kg for BNAs and PCBs, <200 µg/kg for chlordane and toxaphene, <50 µg/kg for pesticides, and <100 µg/kg for herbicides (except MCPA and MCPP which are <2000 µg/kg). The concentration of total petroleum hydrocarbons (TPH) and diesel range organics (DRO) are certified to be <300 mg/kg. Additionally, the gasoline range organics (GRO) are certified to be <100 mg/kg.

Metals & Cyanide Blank Sand

CRM
Cat. #058

One 40 g sand sample in a screw-cap bottle. The concentrations of all EPA/NELAC including the Priority Pollutant metal and cyanide analytes are below the CLP Required Detection Limits (CRDLs) except iron, which is <250 mg/kg.

Metals & Cyanide Blank Soil

CRM
Cat. #057

One 40 g soil sample in a screw-cap bottle. The concentrations of all of the following analytes are below the CLP CRDL's: antimony, arsenic, beryllium, cadmium, cobalt, mercury, nickel, selenium, silver, sodium, thallium and cyanide. The concentrations of the following analytes are below 10X the CLP CRDL's: barium, chromium, copper, lead, magnesium, potassium and vanadium. The concentrations of manganese and zinc are <750 mg/kg. The concentration range for aluminum, calcium and iron is 3,000-25,000 mg/kg.

UNDERGROUND STORAGE TANK

2013 UST in Water PT Study Schedule		
Study #	**Opens**	**Closes**
WP 216	Jan 14	Feb 28
WP 219	Apr 15	May 30
WP 222	Jul 15	Aug 29
WP 225	Oct 18	Dec 2

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Alaska BTEX in Water	646	474 *	—	63
Alaska DRO in Water	647	475 *	—	63
Alaska GRO in Water	645	473 *	—	63
BTEX & MTBE in Water	760	643 Q	760QR	62
Diesel Range Organics in Water	764	641 Q	764QR	62
Gasoline Range Organics in Water	762	640 Q	762QR	62
Massachusetts EPH in Water	567	482 Q	567QR	65
Massachusetts VPH in Water	566	481 Q	566QR	65
Texas High-Level Fuels in Water	795	477 Q	795QR	64
Texas Low-Level Fuels in Water	794	476 Q	794QR	64
TPH in Water	600/601	642 Q	602QR	62
Washington HEM/SGT-HEM	519	489 Q	519QR	64
Wisconsin DRO	772	648 Q	772QR	64
Wisconsin GRO/PVOC	773	649 Q	773QR	64

2013 UST in Soil PT Study Schedule

Study #	Opens	Closes
SOIL 81	Jan 21	Mar 7
SOIL 82	Apr 22	Jun 6
SOIL 83	Jul 22	Sep 5
SOIL 84	Oct 25	Dec 9

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

All ERA UST PTs open quarterly (Q) unless otherwise noted.
✱ ERA Alaska PTs are available at any time. ERA New Jersey EPH in Soil PT studies open in April and October.

Description	CRM	PT	QR	Page
Alaska BTEX in Soil	636	470 ✱	—	63
Alaska DRO in Soil	637	471 ✱	—	63
Alaska GRO in Soil	635	469 ✱	—	63
Alaska RRO in Soil	638	472 ✱	—	63
Arizona TPH in Soil	798	488 Q	798QR	63
BTEX & MTBE in Soil	761	633 Q	761QR	62
Diesel Range Organics in Soil	765	631 Q	765QR	62
Gasoline Range Organics in Soil	763	630 Q	763QR	62
Massachusetts EPH in Soil	569	484 Q	569QR	65
Massachusetts VPH in Soil	568	483 Q	568QR	65
New Jersey EPH in Soil	564	464 ✱	564QR	65
Texas High-Level Fuels in Soil	797	479 Q	797QR	64
Texas Low-Level Fuels in Soil	796	478 Q	796QR	64
TPH in Soil	570/571	632 Q	572QR	62

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

UST IN SOIL

BTEX & MTBE in Soil

CRM	PT Q	QR
Cat. #761	Cat. #633	Cat. #761QR

One 2 mL flame-sealed ampule requires spiking onto the ten grams of provided certified clean soil. Includes all the BTEX compounds and MTBE at 20-200 µg/kg (40-400 µg/kg for Total Xylenes). Use with EPA method 8021.

Gasoline Range Organics (GRO) in Soil

CRM	PT Q	QR
Cat. #763	Cat. #630	Cat. #763QR

One flame-sealed ampule with 20 g of soil spiked with unleaded regular gasoline in the range 100-2,000 mg/kg. Use with purge and trap and modified EPA 8015 GC/FID methods. Also use to test for BTEX in gasoline.

Diesel Range Organics (DRO) in Soil

CRM	PT Q	QR
Cat. #765	Cat. #631	Cat. #765QR

One flame-sealed ampule with 20 g of soil spiked with #2 Diesel fuel in the range 300-3,000 mg/kg. Use with modified EPA 8015 GC/FID methods.

Total Petroleum Hydrocarbons (TPH) in Soil

CRM	PT Q	QR
Cat. #570	Cat. #632	Cat. #572QR

One screw-top bottle with 50 g of soil to be analyzed for total petroleum hydrocarbons (TPH). Use with EPA IR or gravimetric methods 8440 and 9071B.

Non-polar Extractable Material (TPH) (Gravimetric) ..... 300-3,000 mg/kg
Non-polar Extractable Material (TPH) (IR) ..... 300-3,000 mg/kg

Total Petroleum Hydrocarbons (TPH) in Soil

CRM	PT Q	QR
Cat. #571	Cat. #632	Cat. #572QR

One screw-top bottle contains 50 g of soil with TPH in the presence of interfering fatty acids. Use with EPA methods 8440 and 9071B.

Non-polar Extractable Material (TPH) (Gravimetric) ..... 300-3,000 mg/kg
Non-polar Extractable Material (TPH) (IR) ..... 300-3,000 mg/kg

UST IN WATER

BTEX & MTBE in Water

CRM	PT Q	QR
Cat. #760	Cat. #643	Cat. #760QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Use with EPA methods 602 and 8021. Includes all BTEX compounds and MTBE at 7-300 µg/L after dilution.

Gasoline Range Organics (GRO) in Water

CRM	PT Q	QR
Cat. #762	Cat. #640	Cat. #762QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with both purge & trap and modified EPA 8015 GC/FID methods to test for GRO at 400-4,000 µg/L. Also use to test for BTEX in gasoline.

Diesel Range Organics (DRO) in Water

CRM	PT Q	QR
Cat. #764	Cat. #641	Cat. #764QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Use with modified EPA 8015 GC/FID methods. Includes #2 Diesel at 800-6,000 µg/L.

Total Petroleum Hydrocarbons (TPH) in Water

CRM	PT Q	QR
Cat. #600	Cat. #642	Cat. #602QR

One liter whole-volume bottle is ready to analyze for total petroleum hydrocarbons (TPH) without interferring fatty acids. Use with EPA methods 418.1, 1664 and 5520.

Total Petroleum Hydrocarbons ..... 20-200 mg/L

Total Petroleum Hydrocarbons (TPH) in Water

CRM	PT Q	QR
Cat. #601	Cat. #642	Cat. #602QR

One liter whole-volume bottle is ready to analyze for TPH in water in the presence of interfering fatty acids. Use with EPA methods 418.1, 1664, 5520 and 8440.

Total Petroleum Hydrocarbons ..... 20-200 mg/L

All ERA UST PTs open quarterly (Q) unless otherwise noted.

ALASKA UST IN WATER

Alaska GRO in Water

CRM	PT ✱
Cat. #645	Cat. #473

One 2 mL flame-sealed ampule. Use with method AK101 for unleaded regular gasoline at 100-500 µg/L after dilution.

Alaska DRO in Water

CRM	PT ✱
Cat. #647	Cat. #475

One 2 mL flame-sealed ampule. Use with method AK102 for No. 2 Diesel at 800-2,300 µg/L after dilution.

Alaska BTEX in Water

CRM	PT ✱
Cat. #646	Cat. #474

One 2 mL flame-sealed ampule. Use with method AK101 for all BTEX analytes at 5-30 µg/L after dilution.

✱ ERA Alaska UST PTs are available at any time.

From left to right:

Lara Jarusewic, Chemist; **Tami Buchner**, Lead Chemist/Production Coordinator; **Jesse Turner**, Chemistry Technician

ALASKA UST IN SOIL

Alaska GRO in Soil

CRM	PT ✱
Cat. #635	Cat. #469

One 20 mL flame-sealed ampule with 10 g of soil and 10 mL of methanol with unleaded regular gasoline at 30-1,500 mg/kg. Use with method AK101.

Alaska DRO in Soil

CRM	PT ✱
Cat. #637	Cat. #471

One flame-sealed ampule with 20 g of soil spiked with No. 2 Diesel fuel at 30-1,500 mg/kg. Use with method AK102.

Alaska RRO in Soil

CRM	PT ✱
Cat. #638	Cat. #472

One flame-sealed ampule with 20 g of soil with Residual Range Organic fuels at 150-2,000 mg/kg. Use with method AK103.

Alaska BTEX in Soil

CRM	PT ✱
Cat. #636	Cat. #470

One 2 mL flame-sealed ampule along with clean soil matrix for spiking. Use with method AK101 for all BTEX analytes at 5-100 mg/kg after spiking. .

ARIZONA UST IN SOIL

Arizona TPH in Soil

CRM	PT Q	QR
Cat. #798	Cat. #488	Cat. #798QR

One ready-to-use flame-sealed ampule with 30g of soil with Oil Range Organics and No. 2 Diesel fuel. Use with method 8015AZ for TPH in the range 300-400 mg/kg. Also includes two carbon ranges.

All ERA UST PTs open quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

TEXAS TPH IN WATER

All Texas TPH PT standards are designed for use with TNRCC 1005 method. The standards meet the requirements of all states that accredit for these methods including Texas, Louisiana and Oklahoma.

Texas Low-Level Fuels (TPH) in Water

CRM	PT Q	QR
Cat. #794	Cat. #476	Cat. #794QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Contains unleaded regular gasoline and No. 2 Diesel Fuel resulting in TPH in the range 5-10 mg/L.

Texas High-Level Fuels (TPH) in Water

CRM	PT Q	QR
Cat. #795	Cat. #477	Cat. #795QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Contains unleaded regular gasoline and No. 2 Diesel Fuel resulting in TPH in the range 20-100 mg/L.

TEXAS TPH IN SOIL

Texas Low-Level Fuels (TPH) in Soil

CRM	PT Q	QR
Cat. #796	Cat. #478	Cat. #796QR

One ready-to-use flame-sealed ampule with 20g of soil with unleaded gasoline and No. 2 Diesel Fuel for TPH in the range 50-100 mg/kg.

Texas High-Level Fuels (TPH) in Soil

CRM	PT Q	QR
Cat. #797	Cat. #479	Cat. #797QR

One ready-to-use flame-sealed ampule with 20g of soil with unleaded gasoline and No. 2 Diesel Fuel for TPH in the range 1,000-20,000 mg/kg.

WISCONSIN GRO/PVOC/DRO METHOD UST

All Wisconsin UST PT standards are designed for use with Wisconsin GRO/PVOC or DRO methods. The standards meet the requirements of all states that accredit for these methods including Wisconsin and Minnesota.

Wisconsin Gasoline Range Organics (GRO/PVOC) in Water

CRM	PT Q	QR
Cat. #773	Cat. #649	Cat. #773QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Includes ten gasoline range synthetic organic compounds as defined by Wisconsin. Use with Wisconsin GRO/PVOC method.

Wisconsin Diesel Range Organics (DRO) in Water

CRM	PT Q	QR
Cat. #772	Cat. #648	Cat. #772QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Includes ten Diesel range synthetic organic compounds in the range 200-600 µg/L. Use with the Wisconsin DRO method.

WASHINGTON HEM/SGT-HEM METHOD UST

The Washington UST PT standard is designed for use with EPA Method 1664 for HEM/SGT-HEM.

HEM/SGT-HEM

CRM	PT Q	QR
Cat. #519	Cat. #489	Cat. #519QR

One 5 mL flame-sealed ampule yields up to 2 liters after dilution. Use with EPA method 1664 to measure HEM/SGT-HEM at 5-100 mg/L.

All ERA UST PTs open quarterly (Q) unless otherwise noted.

NEW JERSEY EPH

The New Jersey EPH in Soil standard is designed for use with the NJ Extractable Petroleum Hydrocarbons method.

New Jersey EPH in Soil

CRM	PT ✱	QR
Cat. #564	Cat. #464	Cat. #564QR

One flame-sealed ampule with 20g soil containing EPH in the range of 300-3000 mg/kg.

✱ The NJ EPH in Soil PT studies open in April and October.

MASSACHUSETTS HYDROCARBONS IN WATER

All Massachusetts UST PT standards are designed for use with Massachusetts Volatile Petroleum Hydrocarbon or Extractable Petroleum Hydrocarbon methods. The standards meet the requirements of all states that accredit for these methods including Massachusetts, North Carolina and Washington when reporting the Massachusetts carbon ranges.

Massachusetts VPH in Water

CRM	PT Q	QR
Cat. #566	Cat. #481	Cat. #566QR

One 2 mL flame-sealed ampule yields in excess of 200 mL after dilution. Contains volatile petroleum hydrocarbon fuels (VPH) in the range 400-4,000 µg/L. Use with the Massachusetts Volatile Petroleum Hydrocarbon method for multiple carbon ranges, BTEX compounds and MTBE.

Massachusetts EPH in Water

CRM	PT Q	QR
Cat. #567	Cat. #482	Cat. #567QR

One 2 mL flame-sealed ampule yields up to 2 liters after dilution. Contains extractable petroleum hydrocarbon fuels (EPH) in the range 800-6,000 µg/L. Use with the Massachusetts Extractable Petroleum Hydrocarbon method for multiple carbon ranges and PAH compounds.

MASSACHUSETTS HYDROCARBONS IN SOIL

Massachusetts VPH in Soil

CRM	PT Q	QR
Cat. #568	Cat. #483	Cat. #568QR

One flame-sealed ampule with 20 g soil with VPH fuels. Contains volatile petroleum hydrocarbon fuels (VPH) in the range 100-2,000 mg/kg. Use with the Massachusetts Volatile Petroleum Hydrocarbon method for multiple carbon ranges, BTEX compounds and MTBE.

Massachusetts EPH in Soil

CRM	PT Q	QR
Cat. #569	Cat. #484	Cat. #569QR

One flame-sealed ampule with 20 g soil with EPH fuels. Contains extractable petroleum hydrocarbon fuels (EPH) in the range 300-3,000 mg/kg. Use with the Massachusetts Extractable Petroleum Hydrocarbon method for multiple carbon ranges and PAH compounds.

All ERA UST PTs open quarterly (Q) unless otherwise noted.

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

AIR & EMISSIONS

2013 Air & Emissions PT Study Schedule

Study #	Opens	Closes
AE 23	Jan 28	Mar 14
AE 24	Apr 29	Jun 13
AE 25	Jul 29	Sep 12
AE 26	Nov 1	Dec 16

Schedule subject to change – see ERA's website at www.eraqc.com.

Description	CRM	PT	QR	Page
Aldehydes and Ketones on Sorbent	1114	1014 Q	1114QR	69
Ammonia in Impinger Solution	1145	1045 Q	1145QR	71
Chromium on Filter Paper	1131	1031 Q	1131QR	70
Fluoride in Impinger Solution	1141	1041 Q	1141QR	71
Hexavalent Chromium in Impinger Solution	1132	1032 Q	1132QR	70
Hydrogen Halides and Halogens in Impinger Solution	1140	1040 Q	1140QR	71
Lead in Impinger Solution	1130	1030 Q	1130QR	70
Lead on Filter Paper	1129	1029 Q	1129QR	70
Mercury in Impinger Solution	1128	1028 Q	1128QR	70
Mercury on Filter Paper	1127	1027 Q	1127QR	70
Metals in Impinger Solution	1126	1026 Q	1126QR	70
Metals on Filter Paper	1125	1025 Q	1125QR	70
Nitrogen Oxide in Impinger Solution	1142	1042 Q	1142QR	71
Organochlorine Pesticides on PUF	1111	1011 Q	1111QR	69
PAHs on PUF	1113	1013 Q	1113QR	69
Particulate Matter in Impinger Solution	1151	1051 Q	1151QR	71
Particulate Matter on Filter Paper	1150	1050 Q	1150QR	71
PCBs on PUF	1112	1012 Q	1112QR	69
Semivolatiles on PUF	1110	1010 Q	1110QR	69
Sulfur Dioxide in Impinger Solution	1143	1043 Q	1143QR	71
Sulfuric Acid and Sulfur Dioxide in Impinger Solution	1144	1044 Q	1144QR	71
Volatiles in Gas Cylinder	1100	1000 Q	1100QR	68
Volatiles on Sorbent	1101	1001 Q	1101QR	68

CRM – Certified Reference Material
PT – Proficiency Testing
QR – QuiK™Response

Q All ERA Air & Emissions PTs open quarterly.

QuiK™Response PT

Need to demonstrate corrective action by turning a PT fast? Complete the PT process in as little as two days of ordering with a QuiK™Response (QR) PT. Call ERA Customer Service at 800-372-0122 or 303-431-8454 to order.

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

VOLATILES

Volatiles in Gas Cylinder

CRM	PT Q	QR
Cat. #1100	Cat. #1000	Cat. #1100QR

One pressurized gas cylinder for use with EPA methods TO-14 and TO-15. Contains at least 10 analytes, randomly selected from the list below, at 1–30 ppbv (2-60 ppbv for Total Xylenes).

- Benzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- tert-Butyl methyl ether (MTBE)
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- Chloroform
- Chloromethane
- Cyclohexane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane (Freon 12)
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropylene
- trans-1,3-Dichloropropylene
- 1,2-Dichlorotetrafluoroethane (Freon 114)
- Ethylbenzene
- p-Ethyltoluene
- n-Heptane
- Hexachlorobutadiene
- n-Hexane
- 2-Hexanone
- 4-Methyl-2-pentanone (MIBK)
- Propylene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethylene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichlorofluoromethane (Freon 11)
- Trichlorotrifluoromethane (Freon 113)
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Vinyl bromide
- Vinyl chloride
- Xylenes, total

Volatiles on Sorbent

CRM	PT Q	QR
Cat. #1101	Cat. #1001	Cat. #1101QR

One 2 mL flame-sealed ampule for spiking client-specific sorbent. Use with EPA methods TO-17, 0030 and 0031. Contains at least 24 analytes, randomly selected from the list below, at 50–2,000 ng/sample (200–3,000 ng/sample for Total Xylenes) after preparation.

- Acetone
- Acetonitrile
- Acrolein
- Acrylonitrile
- Benzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- tert-Butyl methyl ether (MTBE)
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethylvinylether
- Chloroform
- Chloromethane
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane (Freon 12)
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethene
- trans-1,2-Dichloroethene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene
- Ethylbenzene
- Hexachlorobutadiene
- 2-Hexanone
- Methylene chloride
- 4-Methyl-2-pentanone (MIBK)
- Naphthalene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethlyene
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- Vinyl acetate
- Vinyl chloride
- Xylenes, total

All ERA Air & Emissions PTs open quarterly (Q).

Semivolatiles on PUF

CRM	PT Q	QR
Cat. #1110	Cat. #1010	Cat. #1110QR

Two 2 mL flame-sealed ampules plus one polyurethane foam (PUF). Use with EPA method 0010. Contains at least 42 analytes, randomly selected from the list below, at 10–225 µg/sample (200–1,000 µg/sample for Benzidine) after preparation.

- Acenaphthene
- Acenaphthylene
- Aniline
- Anthracene
- Benzidine
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Benzyl alcohol
- 4-Bromophenylphenylether
- Butylbenzylphthalate
- Carbazole
- 4-Chloroaniline
- Bis(2-chloroethoxy)methane
- Bis(2-chloroethyl)ether
- Bis(2-chloroisopropyl)ether
- Bis(2-ethylhexyl)phthalate
- 1-Chloronaphthalene
- 2-Chloronaphthalene
- 4-Chlorophenylphenylether
- Chrysene
- Dibenz(a,h)anthracene
- Dibenzofuran
- Di-n-butylphthalate
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 3,3'-Dichlorobenzidine
- Diethyl phthalate
- Dimethyl phthalate
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- Di-n-octylphthalate
- Fluoranthene
- Fluorene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachlorocyclopentadiene
- Hexachloroethane
- Indeno(1,2,3-cd)pyrene
- Isophorone
- 2-Methylnaphthalene
- Naphthalene
- 2-Nitroaniline
- 3-Nitroaniline
- 4-Nitroaniline
- Nitrobenzene
- N-Nitrosodiethylamine
- N-Nitrosodimethylamine (NDMA)
- N-Nitrosodiphenylamine
- N-Nitroso-di-n-propylamine
- Pentachlorobenzene
- Phenanthrene
- Pyrene
- Pyridine
- o-Toluidine
- 1,2,4,5-Tetrachlorobenzene
- 1,2,4-Trichlorobenzene
- Benzoic Acid
- 4-Chloro-3-methylphenol
- 2-Chlorophenol
- 2,4-Dichlorophenol
- 2,6-Dichlorophenol
- 2,4-Dimethylphenol
- 2,4-Dinitrophenol
- 2-Methyl-4,6-dinitrophenol
- 2-Methylphenol (o-Cresol)
- 4-Methylphenol (p-Cresol)
- 2-Nitrophenol
- 4-Nitrophenol
- Pentachlorophenol
- Phenol
- 2,3,4,6-Tetrachlorophenol
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol

Organochlorine Pesticides on PUF

CRM	PT Q	QR
Cat. #1111	Cat. #1011	Cat. #1111QR

One 2 mL flame-sealed ampule plus one polyurethane foam (PUF). Use with EPA methods TO-04A and TO-10A. Contains at least 16 analytes, randomly selected from the list below, at 0.5–20 µg/sample after preparation.

- Aldrin
- alpha-BHC
- beta-BHC
- delta-BHC
- gamma-BHC (Lindane)
- alpha-Chlordane
- gamma-Chlordane
- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- Dieldrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- Heptachlor
- Heptachlor epoxide (beta)
- Methoxychlor

PCBs on PUF

CRM	PT Q	QR
Cat. #1112	Cat. #1012	Cat. #1112QR

One 2 mL flame-sealed ampule plus one polyurethane foam (PUF). Use with EPA methods TO-04A and TO-10A. Contains one Aroclor, randomly selected from the list below, at 1–15 µg/sample after preparation.

- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

PAHs on PUF

CRM	PT Q	QR
Cat. #1113	Cat. #1013	Cat. #1113QR

One 2 mL flame-sealed ampule plus one polyurethane foam (PUF). Use with EPA method TO-13A. Contains at least 13 analytes, randomly selected from the list below, at 10–200 µg/sample after preparation.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Aldehydes & Ketones on Sorbent

CRM	PT Q	QR
Cat. #1114	Cat. #1014	Cat. #1114QR

One 2 mL flame-sealed ampule to be spiked onto Sorbent. Use with EPA method TO-11A. Contains at least 4 analytes, randomly selected from the list below, at 0.5–10 µg/sample after preparation.

- Acetaldehyde
- Acetone
- Benzaldehyde
- 2-Butanone (MEK)
- Butyraldehyde (butanal)
- Crotonaldehyde
- 2,5-Dimethylbenzaldehyde
- Formaldehyde
- Hexaldehyde (hexanal)
- Isovaleraldehyde
- Propionaldehyde (propanal)
- o-Tolualdehyde
- m-Tolualdehyde
- p-Tolualdehyde
- Valeraldehyde (pentanal)

[W] WWW.ERAQC.COM
[T] 800-372-0122 (OR) 303-431-8454
[E] INFO@ERAQC.COM

METALS

Metals on Filter Paper

CRM	PT Q	QR
Cat. #1125	Cat. #1025	Cat. #1125QR

One filter paper sample ready for use with EPA method 29.

Antimony	25-250 µg/filter
Arsenic	20-250 µg/filter
Barium	20-250 µg/filter
Beryllium	10-250 µg/filter
Cadmium	10-250 µg/filter
Chromium	15-250 µg/filter
Cobalt	10-250 µg/filter
Copper	10-250 µg/filter
Lead	20-350 µg/filter
Manganese	10-250 µg/filter
Nickel	20-250 µg/filter
Phosphorus	10-250 µg/filter
Selenium	20-250 µg/filter
Silver	30-250 µg/filter
Thallium	30-250 µg/filter
Zinc	20-250 µg/filter

Metals in Impinger Solution

CRM	PT Q	QR
Cat. #1126	Cat. #1026	Cat. #1126QR

One impinger solution sample for use with EPA method 29.

Antimony	0.25-20 µg/mL
Arsenic	0.2-20 µg/mL
Barium	0.15-25 µg/mL
Beryllium	0.05-20 µg/mL
Cadmium	0.1-20 µg/mL
Chromium	0.2-20 µg/mL
Cobalt	0.1-25 µg/mL
Copper	0.2-20 µg/mL
Lead	0.2-20 µg/mL
Manganese	0.1-20 µg/mL
Nickel	0.15-30 µg/mL
Phosphorus	0.15-25 µg/mL
Selenium	0.15-25 µg/mL
Silver	0.5-20 µg/mL
Thallium	0.15-25 µg/mL
Zinc	0.15-25 µg/mL

Mercury on Filter Paper

CRM	PT Q	QR
Cat. #1127	Cat. #1027	Cat. #1127QR

One filter paper sample ready for use with EPA method 29.

Mercury	1-75 µg/filter

Mercury in Impinger Solution

CRM	PT Q	QR
Cat. #1128	Cat. #1028	Cat. #1128QR

One impinger solution sample for use with EPA methods 29 and 101a.

Mercury	0.9-200 ng/mL

Lead on Filter Paper

CRM	PT Q	QR
Cat. #1129	Cat. #1029	Cat. #1129QR

One filter paper sample ready for use with EPA method 12.

Lead	20-350 µg/filter

Lead in Impinger Solution

CRM	PT Q	QR
Cat. #1130	Cat. #1030	Cat. #1130QR

One impinger solution sample for use with EPA method 12.

Lead	0.2-120 µg/mL

Chromium on Filter Paper

CRM	PT Q	QR
Cat. #1131	Cat. #1031	Cat. #1131QR

One filter paper sample for use with CARB method 425.

Total chromium	1-20 µg/filter
Hexavalent chromium	1-20 µg/filter

Hexavalent Chromium in Impinger Solution

CRM	PT Q	QR
Cat. #1132	Cat. #1032	Cat. #1132QR

One impinger solution sample for use with EPA method 0061/7199.

Hexavalent chromium	45-880 µg/L

All ERA Air & Emissions PTs open quarterly (Q).

Hydrogen Halides & Halogens in Impinger Solution

CRM	PT Q	QR
Cat. #1140	Cat. #1040	Cat. #1140QR

Two impinger solution samples for use with EPA methods 26 and 26a.

Total halides	15-1500 mg/L
Total halogens	10-200 mg/L
Hydrogen chloride	5-500 mg/L
Hydrogen fluoride	5-500 mg/L
Hydrogen bromide	5-500 mg/L
Bromine	5-100 mg/L
Chlorine	5-100 mg/L

Fluoride in Impinger Solution

CRM	PT Q	QR
Cat. #1141	Cat. #1041	Cat. #1141QR

One impinger solution sample for use with EPA methods 13a, 13b and 14.

Fluoride	1-50 mg/dscm

Nitrogen Oxide in Impinger Solution

CRM	PT Q	QR
Cat. #1142	Cat. #1042	Cat. #1142QR

One impinger solution sample for use with EPA method 7.

Oxides of nitrogen	100-2000 mg/dscm

Sulfur Dioxide in Impinger Solution

CRM	PT Q	QR
Cat. #1143	Cat. #1043	Cat. #1143QR

One impinger solution sample for use with EPA method 6.

Sulfur dioxide	50-2000 mg/dscm

Sulfuric Acid & Sulfur Dioxide in Impinger Solution

CRM	PT Q	QR
Cat. #1144	Cat. #1044	Cat. #1144QR

One impinger solution sample for use with EPA method 8.

Sulfuric acid	5-150 mg/dscm

Ammonia in Impinger Solution

CRM	PT Q	QR
Cat. #1145	Cat. #1045	Cat. #1145QR

One impinger solution sample for use with EPA CTM 027.

Ammonium	0.1-10 mg/L

Particulate Matter on Filter Paper

CRM	PT Q	QR
Cat. #1150	Cat. #1050	Cat. #1150QR

One filter paper sample ready for use with EPA methods 5, 5A, 5B, 5D and 5F.

Particulate matter	50-600 mg/filter

Particulate Matter in Impinger Solution

CRM	PT Q	QR
Cat. #1151	Cat. #1051	Cat. #1151QR

One impinger solution sample ready for use with EPA methods 5, 5A, 5B, 5D and 5F.

Particulate matter	140-675 mg/L

From left to right:
Minesh Taylor, Production Technician; **Nick Hughes**, Junior Production Technician; **Caroline Ball**, Senior Production Technician

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

CUSTOM STANDARDS

EXPERIENCE. SPEED. RELIABILITY.

Calibration standards, stock solutions, LCS, matrix spikes prepared in drinking water, wastewater, sea water, soil, sludge, cement, fish. If a standard can be made, we will prepare it for you. ERA custom standards can be made as concentrates or as ready-to-use whole-volume solutions, and each standard is supplied with a comprehensive Certificate of Analysis.

THE ORDERING PROCESS IS SIMPLE:

The ordering process is very simple because we do most of the work. Examine your requirements and give us a call. You can reference the order form on page 90. We'll discuss your objectives, the technical aspects of the project such as analytes, matrix, and concentration levels, all the way through the type of bottles and labels you require. We'll take it from there and combine your specific needs with our repertoire of past projects to achieve the most technical, time and cost-effective solution. We'll quickly get back to you with a firm quote.

Our fast five-day turnaround and world-class quality will give you what you need, when you need it.

FROM SIMPLE TO COMPLEX AND EVERYTHING IN BETWEEN:

- Every CWA, SDWA, RCRA and Superfund CLP analyte
- Every SCC, CALA and Ont MOE SDWA analyte
- Chemical, microbiological and radiochemical analytes
- Speciated metal standards
- Organometallic standards
- Water, waste, brine, food, soil, sludge, biological tissues, plant materials, petroleum, air filters, concrete, etc.
- Project/site-specific and client as well as ERA-supplied matrices
- Ultra trace to percent levels
- Historical ERA acceptance limits or sample/project-specific limits
- One standard or hundreds of standards
- Managed methodology studies

ARE CUSTOM STANDARDS EXPENSIVE?

While the cost of custom standards certainly depends on the complexity of your requirements, the costs for most simple standards is not much more that the price of similar standard products. The final cost is dependent on many factors, including the materials used, time required, complexity of the standards and extent of analytical validation required. In every case, you will receive a fixed price quotation based upon your project-specific requirements and you can count on ERA to deliver what you need, when you need it.

From left to right:
John Laferty, Life Sciences & Customs Product Line Manager; **Chad Lane**, Chemist; **Tony Ciacco**, Chemist

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

DOUBLE BLIND EVALUATIONS

Get a realistic assessment of your lab's data

Many site investigations involve analyses for just a few specific targets, not the entire list of analytes. Wouldn't your project gain more benefit from custom CRM or PT standards prepared with only the analytes of interest at just the right levels in your matrix of concern? With custom standards prepared to match your project-specific needs, you and your client will gain a level of confidence with tangible evidence that your laboratory is meeting all quality objectives.

Here's how it works:

ERA will work with you to design a double-blind project that meets your needs. The key to evaluating the real performance of your laboratory is in finding the proper blend of realistic sample designs and accurate, stable analyte concentrations. We will work with you every step of the way to ensure that your quality and cost objectives are met. Call our customs group today to begin the process of understanding the real performance of your laboratory.

1. Tell us which analytes at what concentrations in which matrices you want in your blind PE standards.
2. Select one of our stock standards. Or, at a modestly higher cost, we will design and prepare custom PE standards.
3. You send us your empty sample bottles, labels, chain-of-custody forms and sample coolers.
4. We prepare, dilute (if necessary) and preserve the standards, fill your sample bottles and ship them back to you via overnight delivery service.
5. ERA's Certified Values and Performance Acceptance Limits, PALs™, are sent to you under separate sealed cover.
6. You integrate the standards into your sampling event or introduce them into your lab's routine sample load.
7. Your lab analyzes the blind PE standards along with routine samples.
8. You compare your lab's results to ERA's Certified Values and PALs.

TOTAL LAB EVALUATIONS

Get an evaluation of your entire lab operation

ERA's TotaLaB™ Evaluation Service allows you to see all the important aspects of your lab operation as experienced by your customers.

Our service evaluates your lab from how you answer the phone and respond to customer inquiries, to the appearance of your bottles and coolers, to the quality of your data and reports. We identify excellence in your operation that will help sell your services and pinpoint problems that may be affecting your business.

Join Fortune 500 manufacturing companies, major engineering firms, and laboratory networks that have benefited from the invaluable insights gained from this ERA service.

Here's how it works:

1. Tell us the lab(s) you want evaluated. Our 'consulting firm' will contact the lab(s) concerning an upcoming project. We evaluate your customer service staff's ability to help work out the details of the project and provide an appropriate quotation. You will gain insight into how your staff routinely deals with customers.

2. Our 'consulting firm' initiates the project and asks your lab to ship bottles, coolers and paperwork to their site which are immediately forwarded onto ERA. We evaluate the quality and consistency of your sampling materials and clarity of your instructions.

3. ERA prepares the blind whole-volume PE standards, fills your lab's bottles and ships them through our 'consulting firm' to the lab(s). We evaluate your lab's technical assistance and the quality of the report and data.

4. While our confidential report includes an evaluation of your data quality, what really is unique about ERA's Total Lab Service is our evaluation of the non-technical aspects of your operation. As often as not, these aspects of your service are just as important to your customers in forming an opinion about the quality of your laboratory.

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

CALIBRATION

ERA CAL 1000 MG/L STANDARDS

ERA 1000 mg/L standards can be used for primary calibration or to prepare second source calibration check standards. They are traceable to NIST Standard Reference Materials, where available, and are guaranteed stable for one year. The certification documentation includes manufacturing uncertainties, traceability summaries and densities to aid in performing quantitative dilutions. The documentation for metal standards includes impurities.

INORGANICS — 1000 MG/L

Chemical Oxygen Demand (COD)

500 mL bottle	125 mL bottle
Cat. #974	Cat. #042

One 1,000 mg/L standard preserved with H_2SO_4 in an amber glass bottle.

Total Kjeldahl-Nitrogen (TKN)

500 mL bottle	125 mL bottle
Cat. #996	Cat. #043

One 1,000 mg/L standard preserved with HCl in a poly bottle.

MBAS/LAS Surfactants

Cat. #975

One 15 mL screw-cap vial with LAS at 1,000 mg/L preserved with H_2SO_4.

Total Organic Carbon (TOC)

Cat. #978

One 500 mL amber glass bottles with TOC at 1,000 mg/L perserved with H_2SO_4.

Total Organic Halides (TOX)

Cat. #976

One 2 mL flame-sealed ampule with TOX at 1,000 mg/L in Methanol.

Phenol

Cat. #982

One 500 mL amber glass bottle with Phenol at 1,000 mg/L preserved with H_2SO_4.

Sulfide

Cat. #999

One 10 mL flame-sealed ampule containing 1,000 mg/L sulfide preserved with NaOH and zinc acetate.

IONS — 1000 MG/L

Parameter	Matrix	500 mL Bottle	125 mL Bottle
Acetate	H_2O	—	Cat. #78202
Ammonia as NH_3	H_2O	Cat. #986	Cat. #044
Ammonia as N	H_2O	Cat. #985	Cat. #045
Bromate	H_2O	—	Cat. #065
Bromide	H_2O	Cat. #987	Cat. #046
Chlorate	H_2O	—	Cat. #066
Chloride	H_2O	Cat. #988	Cat. #047
Chlorite	H_2O	—	Cat. #067
Complex cyanide	NaOH	Cat. #998	Cat. #049
Cyanide (free)	NaOH	Cat. #997	Cat. #048
Fluoride	H_2O	Cat. #989	Cat. #050
Iodide	H_2O	—	Cat. #78212
Nitrate as NO_3	H_2O	Cat. #992	Cat. #051
Nitrate as N	H_2O	Cat. #991	Cat. #052
Nitrite as N	H_2O	Cat. #990	Cat. #053
Nitrite as NO_2	H_2O	Cat. #952	Cat. #K15
Perchlorate	H_2O	—	Cat. #068
Phosphate as PO_4	H_2O	Cat. #994	Cat. #060
Phosphate as P	H_2O	Cat. #993	Cat. #061
Sulfate	H_2O	Cat. #995	Cat. #062

CATIONS BY ION CHROMATOGRAPHY — 100 MG/L

Parameter	Matrix	125 mL Bottle
Lithium	H_2O	Cat. #78110
Ammonium as NH_4	H_2O	Cat. #78102
Ammonium as N	H_2O	Cat. #78104

CATIONS BY ION CHROMATOGRAPHY — 1000 MG/L

Parameter	Matrix	125 mL Bottle
Calcium	H_2O	Cat. #K10
Magnesium	H_2O	Cat. #K11
Potassium	H_2O	Cat. #K12
Sodium	H_2O	Cat. #K13

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

METALS — 1000 MG/L

Parameter	Matrix	125 mL Bottle
Aluminum	HNO_3	Cat. #011
Antimony	HNO_3	Cat. #012
Arsenic	HNO_3	Cat. #013
Barium	HNO_3	Cat. #014
Beryllium	HNO_3	Cat. #015
Bismuth	HNO_3	Cat. #K01
Boron	HNO_3	Cat. #016
Cadmium	HNO_3	Cat. #017
Calcium	HNO_3	Cat. #018
Chromium	HNO_3	Cat. #020
Chromium VI	H_2O	Cat. #019
Cobalt	HNO_3	Cat. #021
Copper	HNO_3	Cat. #022
Iron	HNO_3	Cat. #023
Lead	HNO_3	Cat. #024
Lithium	HNO_3	Cat. #K04
Magnesium	HNO_3	Cat. #025
Manganese	HNO_3	Cat. #026

Parameter	Matrix	125 mL Bottle
Mercury	HNO_3	Cat. #027
Molybdenum	HNO_3	Cat. #028
Nickel	HNO_3	Cat. #029
Phosphorus	HNO_3	Cat. #063
Potassium	HNO_3	Cat. #030
Selenium	HNO_3	Cat. #031
Silica	H_2O	Cat. #064
Silicon	HNO_3	Cat. #032
Silver	HNO_3	Cat. #033
Sodium	HNO_3	Cat. #034
Strontium	HNO_3	Cat. #035
Thallium	HNO_3	Cat. #036
Tin	HCl	Cat. #037
Titanium	HCl	Cat. #038
Vanadium	HNO_3	Cat. #039
Yttrium	HNO_3	Cat. #K08
Zinc	HNO_3	Cat. #040

Other metals, concentrations and volumes are also available. Call ERA customer service for more information.

ICP-MS METALS

These standards come with a Certificate of Traceability and Uncertainty. Use for initial as well as continuing calibration and tuning verification. Provided as convenient concentrates with densities allowing you to easily perform gravimetric dilutions.

ICP-MS Trace Metals

CRM
Cat. #TMS001

One 125 mL screw-cap poly bottle preserved with HNO_3 and tartaric acid.

Aluminum	10.0 mg/L	Manganese	10.0 mg/L
Antimony	10.0 mg/L	Molybdenum	10.0 mg/L
Arsenic	10.0 mg/L	Nickel	10.0 mg/L
Barium	10.0 mg/L	Selenium	10.0 mg/L
Beryllium	10.0 mg/L	Silver	10.0 mg/L
Cadmium	10.0 mg/L	Thallium	10.0 mg/L
Chromium	10.0 mg/L	Thorium	10.0 mg/L
Cobalt	10.0 mg/L	Uranium	10.0 mg/L
Copper	10.0 mg/L	Vanadium	10.0 mg/L
Iron	10.0 mg/L	Zinc	10.0 mg/L
Lead	10.0 mg/L		

ICP-MS Major Cations

CRM
Cat. #TMS002

One 125 mL screw-cap poly bottle preserved with HNO_3.

Calcium	50.0 mg/L	Potassium	50.0 mg/L
Magnesium	50.0 mg/L	Sodium	50.0 mg/L

ICP-MS Tuning Standard

CRM
Cat. #TMS004

One 125 mL screw-cap poly bottle preserved with HNO_3 and HCl

Barium	10.0 mg/L	Lithium	10.0 mg/L
Beryllium	10.0 mg/L	Magnesium	10.0 mg/L
Cerium	10.0 mg/L	Rhodium	10.0 mg/L
Cobalt	10.0 mg/L	Thallium	10.0 mg/L
Indium	10.0 mg/L	Uranium	10.0 mg/L
Lead	10.0 mg/L	Yttrium	10.0 mg/L

ANIONS

Ion Chromatography

CRM
Cat. #981

One 15 mL screw-cap vial yields up to 200 mL after dilution. Designed to calibrate or verify IC calibrations.

Call for anion standards at lower levels.

Bromide	0.2-20 mg/L	Nitrate as N	0.2-20 mg/L
Chloride	0.2-20 mg/L	Phosphate as P	0.5-30 mg/L
Fluoride	0.1-10 mg/L	Sulfate	0.5-30 mg/L

AA/ICP METALS

All metals standards come with a Certificate of Traceability. The ICP Trace Metals standard also includes uncertainties. Use as initial as well as continuing calibration verification.

Flame AA Trace Metals

CRM
Cat. #508

One 24 mL screw-cap vial, preserved with HNO_3, yields up to 500 mL after dilution. Designed for flame AA. Includes aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, silver, strontium, thallium, vanadium and zinc. Provided with a certificate of NIST traceability.

Flame AA Cations

CRM
Cat. #530

One 15 mL screw-cap vial, unpreserved, yields up to 250 mL after dilution.
Use with ICP, IC and AA methods.

Calcium	10-200 mg/L
Magnesium	10-200 mg/L
Potassium	5-100 mg/L
Sodium	10-250 mg/L

ICP Trace Metals

CRM
Cat. #524

One 500 mL whole-volume standard, preserved with HNO_3 and HCl, is ready to use.

Aluminum	10.0 mg/L
Antimony	1.0 mg/L
Arsenic	1.0 mg/L
Barium	1.0 mg/L
Beryllium	1.0 mg/L
Bismuth	1.0 mg/L
Boron	1.0 mg/L
Cadmium	1.0 mg/L
Calcium	10.0 mg/L
Chromium	1.0 mg/L
Cobalt	1.0 mg/L
Copper	1.0 mg/L
Iron	10.0 mg/L
Lanthanum	1.0 mg/L
Lead	10.0 mg/L
Magnesium	10.0 mg/L
Manganese	1.0 mg/L
Molybdenum	1.0 mg/L
Nickel	1.0 mg/L
Phosphorus	1.0 mg/L
Potassium	10.0 mg/L
Selenium	10.0 mg/L
Sodium	10.0 mg/L
Strontium	1.0 mg/L
Tin	1.0 mg/L
Vanadium	1.0 mg/L
Zinc	1.0 mg/L

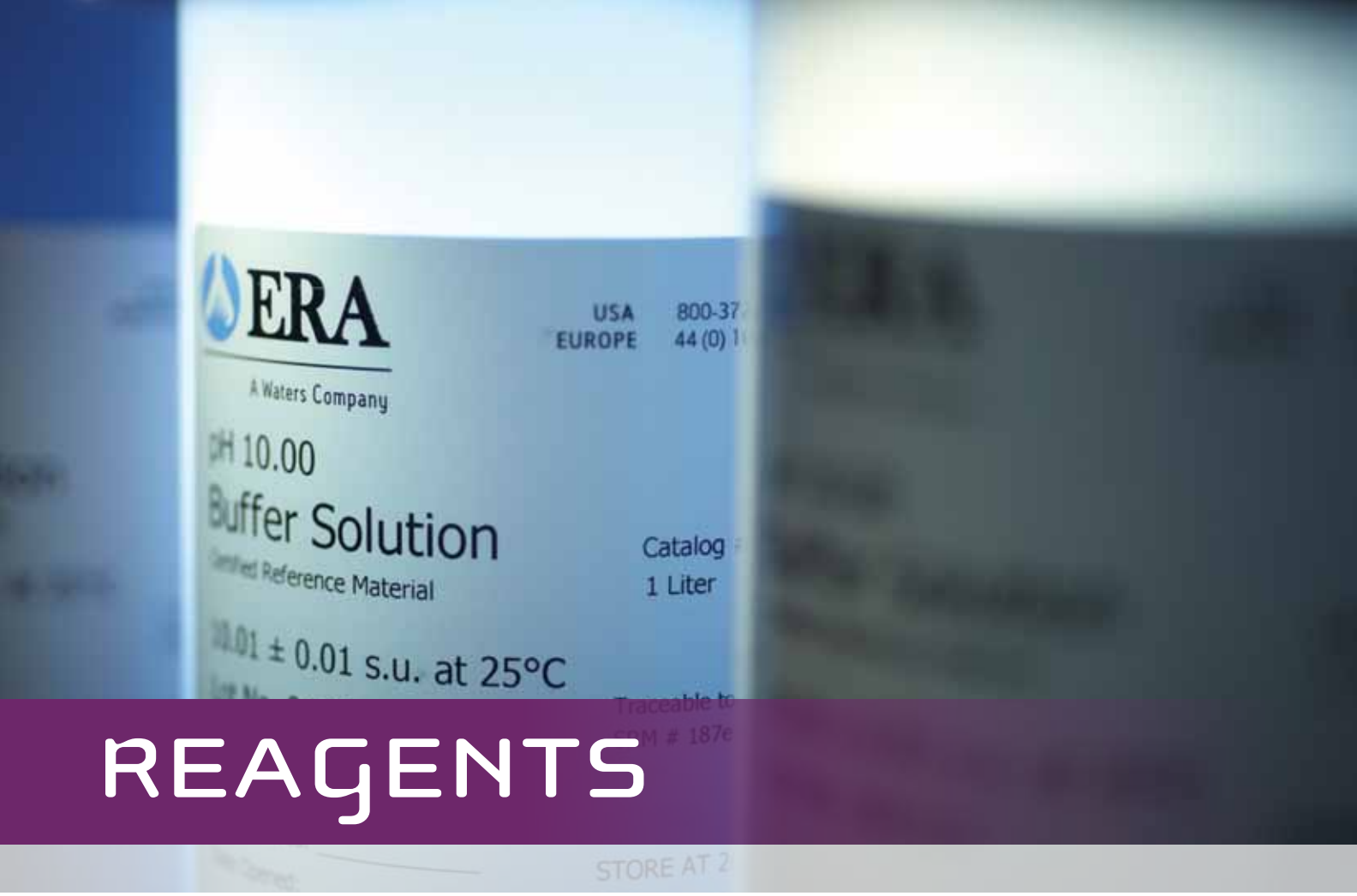
From left to right:
Will McHale, Senior Market Manager, Life Sciences; **Scott Lynn**, National Accounts Manager

pH BUFFERS

ERA Cal pH Buffers are directly traceable to NIST SRMs, mercury free, guaranteed stable for at least one year after your receipt, and are supplied with a full certificate of analysis. Choose single bottles or convenient 6-bottle cases.

Value	Volume	Single Bottle	Case of 6 Bottles
pH 4.00	1 pint	Cat. #127	Cat. #128
pH 7.00	1 pint	Cat. #131	Cat. #132
pH 10.00	1 pint	Cat. #135	Cat. #136
Case of 2 ea.	Pints		Cat. #141

[W] WWW.ERAQC.COM
[T] 800-372-0122 (or) 303-431-8454
[E] INFO@ERAQC.COM



REAGENTS

REAGENTS

ERA manufactures industrial reagents with tolerances of +/- 0.5%, and will hold the certified value lot to lot within 0.5%. Our reagents are shipped with a certificate of analysis and are homegeneous at a 95% confidence interval. If you have been looking for a company to manufacture high quality, stable, consistent reagents for your specialized industrial needs, please contact our reagents group today for a quote: customs@eraqc.com or 1-800-372-0122.

EDTA

0.01 M, 1 Gallon	Cat. #183160
0.02 M, 1 Gallon	Cat. #183212
0.1 M, 1 Liter	Cat. #183118
0.1 M, 1 Gallon	Cat. #183120
0.1 M, 5 Gallon	Cat. #187525

Iodine

0.0473N, 1 Gallon	Cat. #183134
0.0473N, 4 x 1 Gallon Case	Cat. #182001
0.1N, 1 Liter	Cat. #183136
0.1N, 1 Gallon	Cat. #183138

HCl

0.01 N, 1 Liter	Cat. #183026
0.01 N, 1 Gallon	Cat. #183028
0.01 N, 5 Gallon	Cat. #187503
0.1 N, 1 Liter	Cat. #183030
In IPA, 0.1 N, 1 Liter	Cat. #184001
0.1 N, 2.5 Liter	Cat. #183010
0.1 N, 1 Gallon	Cat. #183032
0.1 N, 5 Gallon	Cat. #187506
0.25 N, 1 Liter	Cat. #183034
0.25 N, 1 Gallon	Cat. #183036
0.25 N, 5 Gallon	Cat. #187507
0.5 N, 1 Liter	Cat. #183038
0.5 N, 1 Gallon	Cat. #183040
0.5 N, 5 Gallon	Cat. #187508
0.645 N, 5 Gallon	Cat. #183016
1.0 N, 1 Liter	Cat. #183042
1.0 N, 1 Gallon	Cat. #183044
1.0 N, 5 Gallon	Cat. #187510

pH

pH 2 Buffer, No Color (1 Pint)	Cat. #183004
pH 2 Buffer, No Color (1 Liter)	Cat. #183184
pH 2 Buffer, No Color (1 Gallon)	Cat. #187027
pH 2 Buffer, No Color (5 Gallon)	Cat. #183186
pH 4 Buffer, No Color (1 Pint)	Cat. #183005
pH 4 Buffer, No Color (1 Liter)	Cat. #183180
pH 4 Buffer, No Color (1 Gallon)	Cat. #183181
pH 4 Buffer, No Color (5 Gallon)	Cat. #183182
pH 6 Concentrated Buffer, No Color (2.5 Liter)	Cat. #183012
pH 7 Buffer, No Color (1 Pint)	Cat. #183006
pH 7 Buffer, No Color (1 Liter)	Cat. #183187
pH 7 Concentrated Buffer, No Color (2.5 Liter)	Cat. #183013
pH 7 Buffer, No Color (1 Gallon)	Cat. #183188
pH 7 Buffer, No Color (5 Gallon)	Cat. #183189
pH 10 Buffer, No Color (1 Pint)	Cat. #183007
pH 10 Buffer, No Color (1 Liter)	Cat. #183190
pH 10 Buffer, No Color (1 Gallon)	Cat. #183191
pH 10 Buffer, No Color (5 Gallon)	Cat. #183192
pH 4 Buffer, Red (1 Gallon)	Cat. #187026
pH 4 Buffer, Red (5 Gallon)	Cat. #183217
pH 7 Buffer, Yellow (1 Gallon)	Cat. #187028
pH 7 Buffer, Yellow (5 Gallon)	Cat. #183218
pH 10 Buffer, Blue (1 Gallon)	Cat. #187029
pH 10 Buffer, Blue (5 Gallon)	Cat. #183219

Potassium Hydroxide

0.01 N, 1 Liter	Cat. #183090
0.01 N, 1 Gallon	Cat. #183092
0.01 N, 5 Gallon	Cat. #187521
0.1 N, 1 Liter	Cat. #183094
In IPA, 0.1 N, 1 Gallon	Cat. #183211
0.1 N, 1 Gallon	Cat. #183096
0.1 N, 5 Gallon	Cat. #187522
0.25 N, 1 Liter	Cat. #183098
0.25 N, 1 Gallon	Cat. #183100
0.25 N, 5 Gallon	Cat. #187523
0.5 N, 1 Liter	Cat. #183102
0.5 N, 1 Gallon	Cat. #183104
0.5 N, 5 Gallon	Cat. #187524

Silver Nitrate

0.1 N, 1 Liter	Cat. #183110
0.1 N, 1 Gallon	Cat. #183112
0.25 N, 1 Liter	Cat. #183114
0.25 N, 1 Gallon	Cat. #183116

From left to right:

Shawn Kassner, Senior Product Specialist; **Amy Whittier**, Global Director of Marketing; **Curtis Wood**, Senior Market Manager, Environmental; **Barbara Perzanowski**, Marketing Communications Specialist

Sodium Hydroxide

0.01 N, 1 Liter	Cat. #183070
0.01 N, 1 Gallon	Cat. #183072
0.01 N, 5 Gallon	Cat. #187516
0.1 N, 1 Liter	Cat. #183074
0.1 N, 1 Gallon	Cat. #183076
0.1 N, 5 Gallon	Cat. #187517
0.25 N, 1 Liter	Cat. #183078
0.25 N, 1 Gallon	Cat. #183080
0.25 N, 5 Gallon	Cat. #187518
0.5 N, 1 Gallon	Cat. #183082
0.5 N, 5 Gallon	Cat. #187519
1.0 N, 1 Liter	Cat. #183086
1.0 N, 1 Gallon	Cat. #183088
1.0 N, 5 Gallon	Cat. #183156

Sodium Thiosulfate

0.0394 N, 1 Gallon	Cat. #182002
0.0394 N, 5 Gallon	Cat. #182003
0.1 N, 1 Liter	Cat. #183126
0.1 N, 1 Gallon	Cat. #183128
0.25 N, 1 Liter	Cat. #183130
0.25 N, 1 Gallon	Cat. #183132

Sulfuric Acid

0.01 N, 1 Liter	Cat. #183048
0.01 N, 1 Gallon	Cat. #183049
0.02 N, 1 Liter	Cat. #183050
0.02 N, 1 Gallon	Cat. #183052
0.02 N, 5 Gallon	Cat. #187511
0.05 N, 1 Liter	Cat. #183003
0.1 N, 1 Liter	Cat. #183054
0.1 N, 1 Gallon	Cat. #183056
0.1 N, 5 Gallon	Cat. #187512
0.2 N, 1 Liter	Cat. #183058
0.2 N, 1 Gallon	Cat. #183060
0.2 N, 5 Gallon	Cat. #187514
0.5 N, 1 Liter	Cat. #183062
0.5 N, 1 Gallon	Cat. #183064
1.0 N, 1 Liter	Cat. #183066
1.0 N, 1 Gallon	Cat. #183068
1.0 N, 5 Gallon	Cat. #187515

Miscellaneous

KOH 5 M, KCN 1 M, 5 Gallon	Cat. #183213
Manganese Standard, 40 g/L, 1 Liter	Cat. #183008
Manganese Standard, 55 g/L, 1 Liter	Cat. #183009
TISAB, Fluoride Buffer, 1 Gallon	Cat. #183162
Barium Perchlorate, 0.1 N, 1 Liter	Cat. #183017
Potassium Dichromate, 0.1 N, 1 Liter	Cat. #183221
Potassium Permanganate, 0.1 N, 2.5 liter	Cat. #183001
Ferrous Ammonium Sulfate, 0.25 N, 1 Gallon	Cat. #183011
Phenolphthalein, 0.5%, 1 Pint	Cat. #183168
Sodium Carbonate, 1.0 N, 1 Liter	Cat. #183172
Sodium Carbonate, 25 g/L, 10 Liter	Cat. #183002

[W] WWW.ERAQC.COM
[T] 800-372-0122 [OR] 303-431-8454
[E] INFO@ERAQC.COM

INDEX

[W] WWW.ERAQC.COM
[T] 800-372-0122 (or) 303-431-8454
[E] INFO@ERAQC.COM

2013 PROFICIENCY TESTING STUDY SCHEDULE

ERA
A Waters Company

www.eraqc.com

Water Supply

Study #	Opens	Closes
WS 198	Jan 7	Feb 21
WS 199	Feb 11	Mar 28
WS 200	Mar 4	Apr 18
WS 201	Apr 8	May 23
WS 202	May 6	Jun 20
WS 203	Jun 10	Jul 25
WS 204	Jul 8	Aug 22
WS 205	Aug 5	Sep 19
WS 206	Sep 9	Oct 24
WS 207	Oct 7	Nov 21
WS 208	Nov 5	Dec 20
WS 209	Dec 9	Jan 23, 2014

Water Supply 11-Day Coliform

WS Mini	Opens	Closes
WS 542	Jan 14	Jan 25
WS 543	Mar 11	Mar 22
WS 544	May 13	May 24
WS 545	Jul 15	Jul 26
WS 546	Sep 16	Sep 27
WS 547	Nov 15	Nov 26

Clean Water

Study #	Opens	Closes
CW 08	Mar 6	Apr 5
CW 09	Jun 12	Jul 12
CW 10	Sep 11	Oct 11
CW 11	Nov 6	Dec 6

Water Pollution

Study #	Opens	Closes
WP 216	Jan 14	Feb 28
WP 217	Feb 18	Apr 4
WP 218	Mar 11	Apr 25
WP 219	Apr 15	May 30
WP 220	May 13	Jun 27
WP 221	Jun 17	Aug 1
WP 222	Jul 15	Aug 29
WP 223	Aug 12	Sep 26
WP 224	Sep 16	Oct 31
WP 225	Oct 18	Dec 2
WP 226	Nov 12	Dec 27
WP 227	Dec 16	Jan 30, 2014

Effluent

Study #	Opens	Closes
EF 08	Mar 6	Apr 5
EF 09	Jun 12	Jul 12
EF 10	Sep 11	Oct 11
EF 11	Nov 6	Dec 6

Soil

Study #	Opens	Closes
SOIL 81	Jan 21	Mar 7
SOIL 82	Apr 22	Jun 6
SOIL 83	Jul 22	Sep 5
SOIL 84	Oct 25	Dec 9

Radiochemistry

Study #	Opens	Closes
RAD 92	Jan 7	Feb 21
RAD 93	Apr 8	May 23
RAD 94	Jul 8	Aug 22
RAD 95	Oct 7	Nov 21

MRaD

Study #	Opens	Closes
MRAD 018	Mar 18	May 17
MRAD 019	Sep 27	Nov 26

2 studies per year – open for 60 days

Air & Emissions

Study #	Opens	Closes
AE 23	Jan 28	Mar 14
AE 24	Apr 29	Jun 13
AE 25	Jul 29	Sep 12
AE 26	Nov 1	Dec 16

If you need PT results right away, take advantage of ERA's QuiK™Response PT program and complete the PT process in as little as 2 business days.

Call ERA's Customer Service to order QuiK™Response: 800-372-0122 or 303-431-8454.

Schedule subject to change – see ERA's website at www.eraqc.com.

DMR-QA 33 ORDER FORM

ERA
A Waters Company

www.eraqc.com

ERA Customer #:

☐ (shipping address is the same as billing address)

Bill to:

Ship to:

Phone:

Attention:

Fax:

Email Address:

Fill in Order Section:

	DMR-QA 33 PT Standards				CRM Standards			
Description	**Cat. #**	**Price**	**Qty.**	**Extended Price**	**Cat. #**	**Price**	**Qty.**	**Extended Price**
WasteWatR Coliform MicrobE™: Total & Fecal Coliforms	576				083			
Trace Metals: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn	586				500			
Hexavalent Chromium	898				984			
Mercury	574				514			
Low-Level Mercury	896				931			
Demand: BOD, CBOD, COD, TOC	578				516			
Minerals: Alkalinity total ($CaCO_3$), Chloride, Fluoride, Specific conductance (25 °C), Sulfate, Total Dissolved Solids	581				506			
Hardness: Non-Filterable Residue (TSS), Hardness total ($CaCO_3$)	580				507			
Solids	241				499			
Solids Concentrate	4030				4032			
Simple Nutrients: Ortho-PO_4, NO_3 as N, NH_3 as N	584				505			
Complex Nutrients: Total P, TKN	579				525			
Nitrite as N	888				770			
Oil & Grease	582				518			
Oil & Grease Concentrate	4120				4122			
pH	577				977			
Total Cyanide	588				502			
Total Phenolics (4-AAP)	589				515			
Total Residual Chlorine	587				501			
Low-Level Total Residual Chlorine	881				917			
Settleable Solids	883				911			
Turbidity	893				777			
DMR-QA Set: 16 Standards (see page 28)	174				108			
DMR-QA Mini Set #1 (see page 28)	186				102			
DMR-QA Mini Set #2 (see page 28)	187				103			
DMR-QA Mini Set #3 (see page 28)	188				104			
DMR-QA Mini Set #4 (see page 28)	189				106			
DMR-QA Mini Set #5 (see page 28)	6150				6151			
DMR-QA Mini Set #6 (see page 28)	6160				6161			
DMR-QA Mini Set #7 (see page 28)	6170				6171			
DMR-QA Mini Set #8 (see page 28)	6180				6181			

Note: that shipping charges and a $10 handling fee are prepaid and added to each invoice.

PT Total	$	CRM Total	$
Total Order	$		

☐ DMR-QA 33 Mar 18-TBD

☐ WP-216 Jan-Feb

☐ WP-217 Feb-Apr

☐ WP-219 Apr-May

You may also participate in:
WP-218 Mar-Apr
WP-220 May-Jun

COMPLETE ORDERING AND PAYMENT INFORMATION. YOU WILL BE BILLED ONLY WHEN YOUR STANDARDS SHIP:

Ordered by:

Ordered by Signature:

P.O.#

☐ VISA ☐ MASTERCARD ☐ AMEX ☐ DISCOVER

Card Number:

Expiration Date:

Cardholder Name:

Cardholder Signature:

Fax this Order Form to ERA at 303-421-0159. Questions? Call 800-372-0122.

CRM ORDER FORM

ERA
A Waters Company

www.eraqc.com

Fill in BILL TO and SHIP TO information:

ERA Customer #:

Bill to:

Phone:

Fax:

☐ (shipping address is the same as billing address)

Ship to:

Attention:

Email Address:

Fill in Order Section:

Description	Qty.	Cat. #	Shipping Frequency	Price	Extended Price

Note: that shipping charges and a $10 handling fee are prepaid and added to each invoice.

Total Order $

COMPLETE ORDERING AND PAYMENT INFORMATION. YOU WILL BE BILLED ONLY WHEN YOUR STANDARDS SHIP:

Ordered by:

Ordered by Signature:

P.O.#

☐ VISA ☐ MASTERCARD ☐ AMEX ☐ DISCOVER

Card Number:

Expiration Date:

Cardholder Name:

Cardholder Signature:

Fax this Order Form to ERA at 303-421-0159. Questions? Call 800-372-0122.

PT/CRM ORDER FORM

ERA
A Waters Company

www.eraqc.com

Fill in BILL TO and SHIP TO information:

ERA Customer #:

Bill to:

Phone:

Fax:

☐ (shipping address is the same as billing address)

Ship to:

Attention:

Email Address:

Fill in Order Section:

	Proficiency Testing Standards				CRM Standards			
Description	Cat. #	Price	Qty.	Extended Price	Cat. #	Price	Qty.	Extended Price

Note: that shipping charges and a $10 handling fee are prepaid and added toeach invoice.

PT Total	$	CRM Total	$
Total Order	$		

Please indicate which month(s) you would like your study(ies) to ship:

Study	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WS-Micro*	☐		☐		☐		☐		☐		☐	
WP	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
AIR	☐			☐			☐				☐	
RAD	☐			☐			☐			☐		
SOIL	☐			☐			☐			☐		
MRAD			☐						☐			

*WS Coliform MicrobE™ may be ordered with any monthly WS study or with an exclusive WS-Micro study. See page 33 for details.

COMPLETE ORDERING AND PAYMENT INFORMATION. YOU WILL BE BILLED ONLY WHEN YOUR STANDARDS SHIP:

Ordered by:

Ordered by Signature:

P.O.#

☐ VISA ☐ MASTERCARD ☐ AMEX ☐ DISCOVER

Card Number:

Expiration Date:

Cardholder Name:

Cardholder Signature:

Fax this Order Form to ERA at 303-421-0159. Questions? Call 800-372-0122.

CUSTOM STANDARD QUOTATION REQUEST FORM

ERA
A Waters Company

www.eraqc.com

Contact Name:			Date:
ERA Customer #:	Phone:	Fax:	
Company Name:		Email:	
Bill to:		Ship to:	

☐ (shipping address is the same as billing address) **Date Needed:**

Additional/Special Requirements (packaging, shipping, etc.):

	Analytes	CAS #	Concentrations	Units
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Sample Description (for label):

Matrix/Solvent:

Preservative:

Mass/Volume per Container: Number of Containers:

Intended Use (calibration, QC, etc.):

Prep/Analytical Method:

Select: Ready to Use ☐ Concentrate ☐ Dilution Instructions:

Most custom standards are gravimetrically certified based on the manufacturing process.
If you would also like a quotation for analytical verification of your custom standard(s), please check here: ☐

- *An ERA representative will contact you within one business day to discuss your request.*
- *ERA provides blind standards to help you evaluate your laboratory's performance; call and speak with an ERA representative to learn more.*

Email this form to info@eraqc.com or fax to 303-421-0159.

For immediate assistance with a Customs quote, call ERA at 800-372-0122 or 303-431-8454 and speak with an ERA Customer Service Representative.

4 EASY WAYS TO ORDER

1. Online

www.eraqc.com

2. Phone

800-372-0122

303-431-8454

3. Fax

303-421-0159

4. Mail

ERA

16341 Table Mountain Pkwy

Golden, CO 80403

Hours

6:00 am – 6:00 pm (Mountain Time) Mon-Thurs

6:00 am – 5:00 pm (Mountain Time) Friday

Credit Cards

ERA accepts MasterCard, VISA, American Express and Discover.

TERMS AND CONDITIONS

Confirmation

All orders are confirmed to the purchasing contact as long as fax or email information is provided. Please review the confirmation immediately to ensure the accuracy of your order.

Pricing

The prices in this catalog are effective January 1, 2013. Prices are F.O.B. Golden, CO and are subject to change without notice. Subscription prices are firm for the duration of the subscription.

Terms

Terms are net 30 days. Freight charges are prepaid and added to the invoice. A $10 charge is added to each invoice per shipment to cover regulated materials packaging and handling.

Fast Two-day Shipping

For quick & reliable delivery, all orders are shipped via two-day delivery service unless otherwise requested.

Safety

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of ERA products rests entirely with the purchaser and user. If you need a Material Safety Data Sheet (MSDS) for any ERA product, please visit www.eraqc.com or call 800-372-0122 or 303-431-8454.

Return/Replacement Policy

Please check all orders immediately upon receipt for accuracy and to ensure that there is no damage. ERA will immediately correct any problems that are reported within five working days of receipt.

NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE PRODUCTS AND/OR SERVICES. ERA EXPRESSLY EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. ERA SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR ANY OTHER INDIRECT DAMAGES RESULTING FROM ECONOMIC LOSS.

ISO/IEC GUIDE 34:2009 — ACCREDITED — REFERENCE MATERIAL PRODUCER CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 — ACCREDITED — CHEMICAL TESTING LABORATORY CERTIFICATE NO. 1539.02

ISO/IEC 17043:2010 — ACCREDITED — PROFICIENCY TESTING PROVIDER CERTIFICATE NO. 1539.01

nqa. ISO 9001 Registered — ISO 9001:2008 CERTIFICATE NO. 10551

LLOYD'S REGISTER QUALITY ASSURANCE ISO9001

UKAS TESTING — No. 4604

ERA's U.S. facility is accredited to ISO Guide 34, ISO 17025 and ISO 17043 by American Association of Laboratory Accreditation (A2LA) and registered to ISO 9001:2008 by National Quality Assurance (NQA).

ERA's UK facility is accredited to ISO Guide 34 and ISO 17025 by United Kingdom Accreditation Society (UKAS) and registered to ISO 9001:2008 by Lloyd's Register Quality Assurance (LRQA).

ERA

A Waters Company

ERA
16341 Table Mountain Pkwy
Golden, CO 80403

To order or for technical assistance
please call 800-372-0122 or 303-431-8454.
Fax 303-421-0159

www.eraqc.com

ACCREDITED PT TNI PROVIDER

www.eraqc.com

2013 PT Study Schedule
Tear out and post for easy reference
See page 86

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

C0012