

VERSION 18

ISO 17034 | ISO 17025 | ISO 9001



Inorganic Custom & Stock Certified Reference Materials

ESSLAB

Your partner in science since 1982

A DISTRIBUTOR OF

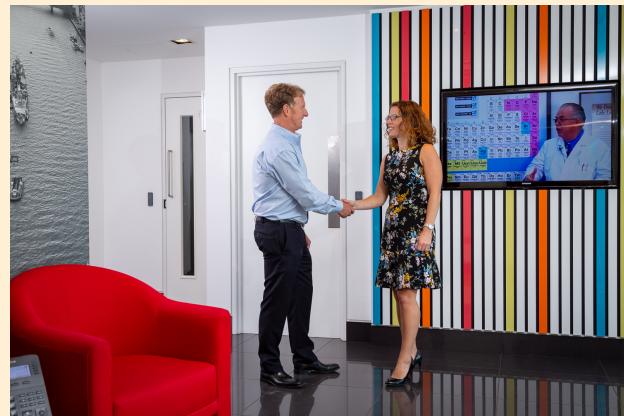
**inORGANICTM
VENTURES**

Our People Are the Key



At ESSLAB we pride ourselves on delivering results through sales and customer support and our specialist services and training.

- Fully Trained Sales Team
- Customer Support
- Logistics
- Training Academy
- Instrument Servicing & Technical Support



Our company delivers for you.



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New Products

Check out our list of contents containing NEW products. As always, we strive to manufacture a higher class of analytical standards at a fair price. Our focus is and always has been to create precise standards faster and more affordably than other manufacturers. When creating NEW products, Inorganic Ventures continues to keep in mind our customers' specific needs, and with this we will continue flexing to your specs.

Our NEW products are highlighted throughout our catalog with the symbol:



Quality

A history of accreditation. For more than 13 years, Inorganic Ventures has been accredited by A2LA to ISO 17034 & ISO 17025. These are the core standards of the analytical testing community, and Inorganic Ventures continues to lead the way in compliance to these quality standards. This means every CRM is engineered to be stable, compatible, NIST traceable and manufactured and tested under ISO 17034 & ISO 17025 guidelines.



Customs

Custom standards are Inorganic Ventures' specialty. Our catalog reveals only a fraction of the inorganic reference materials we can prepare. More than two thirds of our business is devoted entirely to preparing custom standards. As the leading manufacturer of custom inorganic standards, we've produced tens of thousands of unique blends for laboratories worldwide. It's our area of expertise, and perhaps the most prominent way in which we flex to your specs.

OTHER ACCREDITATION



And More...

On the web. Our technical library has been expanding for over a decade. Topics include ICP operations, sample preparation, trace metals analysis and much more.* There you'll discover the best online tool for analytical chemists with our Interactive Periodic Table. It includes chemical compatibilities, preferred lines, major interferences and additional data for 70+ elements. esslab.com/tech-center

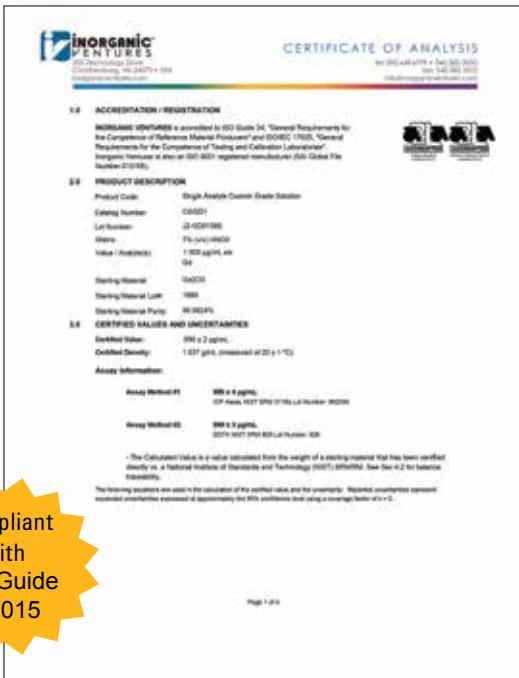
In the lab. All products ship with the required SDS and Certificate of Analysis. Additionally, our stock SDSs and CofAs can be found on our website for current lots as well as many older ones.

*For more new features, see page 9.



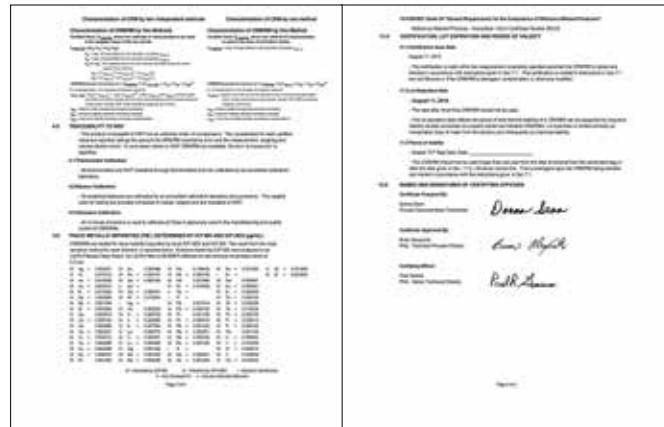
WE FLEX TO YOUR SPECS

CERTIFICATE OF ANALYSIS



You'll wonder how you ever got along without such a thorough certificate.

Contact us for a sample.



Certificate of Analysis (CoA)

Nearly every CRM we manufacture includes a highly detailed Certificate of Analysis. As an ISO 17034, A2LA accredited manufacturer, we provide certificates that include extensive data to meet the quality requirements of any laboratory:

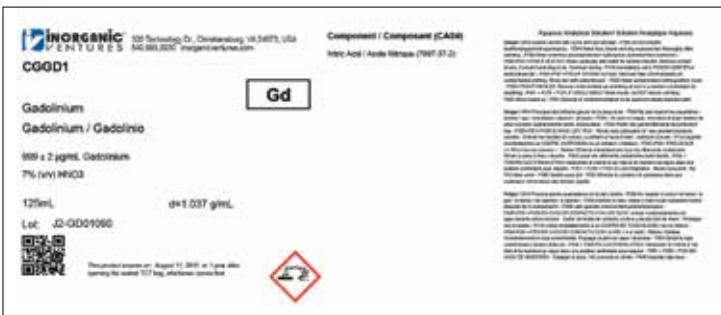
- **Traceability** — to specific NIST SRMs and lots
- **Certified Values** — based on two independent methods
- **Trace Impurities** — listed with the actual values
- **Uncertainties** — detailed information reported

ONLINE

All CoA and Safety Data Sheet (SDS) information is now available online, 24/7. Inorganic Ventures is also pleased to announce that all of our products are GHS compliant and our SDSs are available in nine different languages.

esslab.com/inorganic-standards

Inorganic Ventures Label



We're here to help. We don't just manufacture inorganic CRMs, we also provide technical support when it is needed so you can do your job. Because inorganic chemistry is all we do, Inorganic Ventures has a dedicated technical support team that can assist you with hundreds of topics: sample preparation, method development, ICP and ICP-MS measurement issues and much more. You'll be amazed when you talk to a real person with a technical background ready to help you.

Our technical advisors are available to assist you Monday to Friday, 9:00 a.m. to 5:30 p.m.

We can assist you with...

- Sample preparation
- Spectral interferences
- Chemical compatibilities
- Various ICP & ICP-MS measurement issues

Technical Questions Answered



We've posted a variety of technical questions and answers pertaining to sample preparation, chemical stability and measurement.

esslab.com

Phone

- +44(0)1702 555577

Email

- sales@esslab.com

Online

- esslab.com/iv.html

OUR GUARANTEE

Unquestionable integrity.

We believe in our products. And we value our customers. That is why every order leaving our facilities includes our "Declaration of Integrity." This document guarantees your satisfaction. Simply said, if you're dissatisfied with your order for any reason and we cannot work through the problem with you, a full refund will be issued, no questions asked.

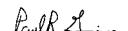


While our reputation is nearly perfect, we are not infallible. That is why every order we ship includes this document. Herein we state, in no uncertain terms, that we are 100% accountable for the quality of our standards and service.

Therefore, if you are dissatisfied with your order for any reason, tell us. We will resolve the situation in whatever way works best for you:

- A full refund
- Complimentary technical services
- A replacement item rushed to you at no cost

Our company was founded on integrity. If our standards are not measuring up to yours, we want to know.



Paul R. Gaines, PhD

CEO, Inorganic Ventures



esslab.com | 800.669.6799 | 540.585.3030

WE FLEX TO YOUR SPECS

TRANSPIRATION CONTROL TECHNOLOGY

The cornerstone of the scientific community is accuracy. That's why Inorganic Ventures has always been committed to producing the industry's most exact Certified Reference Materials.

But our control...and the control of every standard manufacturer...ends shortly after a standard is calibrated and packaged. We are improving the way we deliver our quality standards.

**What is transpiration?**

Transpiration refers to the passage of water vapor through the walls of a container and/or evaporation from the container opening. Transpiration results in an increase in the concentration of the CRM/RM.

What is the solution?

Transpiration Control Technology extends the shelf-life of the product. Inorganic Ventures uses a specially designed aluminized bag that prevents an increase in concentration of the CRM/RM until the TCT bag is opened.

How it works.

The sealed TCT bag stops the loss of water vapor from the bottle when equilibrium is reached inside the bag.

Has the product changed?

The product has not changed, it is the same high-quality product you have come to depend on from Inorganic Ventures. It is the same but only better. TCT is an investment we are making to extend shelf life and give you more control at no extra charge. Our products and unconditional guarantee remain the same.

What this means for you.

When you order stock standards from Inorganic Ventures, your product will be delivered in the TCT bag. This means you will be in control of the expiration date. Upon receiving the product, do not open the TCT bag until you are ready to use. To find out how long the product can be in the TCT bag before it expires, simply check the lot expiration found on the bottom left of the front label. Your product will expire on that date or one year after opening the sealed TCT bag, whichever comes first.

For more information on TCT, visit
esslab.com/TCT

Inorganic Ventures | Inorganic standards & Custom reference materials | 3-855-876-6507

Tech Center

Chemistry Resources for ICP, Techtalks & Spectroscopy

Inorganic Ventures' online technical library has been expanding for over a decade. Topics include ICP operations, sample preparation, trace metals analysis, and much more.

Get the latest Tech Center offerings:

- 1-855-876-6507
- E-mail us at info@esslab.com
- Check out our [Facebook page](#) for more information and updates.

Resources & Support:

- ICP Standards & Reference Materials
- ICP Technical Videos
- Sample Preparation Guide
- Technical Papers
- Sample Preparation Guide
- ICP Operations Guide
- ICP Troubleshooting Guide
- ICP Training

Transpiration Control Technology (TCT) Information:

Transpiration Control Technology extends the shelf life of the product. Inorganic Ventures offers a specially designed plastic bag to protect your products from increasing concentration of the CRM/RM until the TCT bag is opened.

YOUR EXP. In effect, this puts you in control of the expiration date, which is one year from opening the sealed TCT bag or the lot expiration date, whichever comes first.

HOW IT WORKS:

The sealed TCT bag stops the loss of water vapor from the bottle when equilibrium is established inside the bag. Inorganic Ventures guarantees the integrity of the product one full year after opening the TCT bag. TCT bags are designed to store CRM/RM under control conditions without compromising quality or risking transpiration.

HAS THE PRODUCT CHANGED? NO. If it's the same high-quality product you have come to depend on from Inorganic Ventures.

SAME AS ALWAYS.

TCT is an investment we are making to extend shelf life and give you more control of no extra charge. Our products and unconditional guarantee speak for themselves.

ASK ABOUT TCT! Visit our Tech Center to learn more about TCT and other ways we're working hard to improve your products.

A BETTER PRODUCT!

It's in the bag with Inorganic Ventures.

TCT TRANSPIRATION CONTROL TECHNOLOGY

esslab.com/tct



esslab.com/iv-tech_center

Visit us online to see all of our upgraded features.

Periodic Table

Interactive Periodic Table

Information Window

Select an element to begin:

Need help? See key and tips below:

Element Details

Single Element Standards for ICP & ICP-MS
Single Element Standards for Atomic Absorption
Single Element Standards for Ion Chromatography

ICP Periodic Table Guide

NONMETALS	METALS
Blue	Yellow
White Nonmetals	Alkali Metals
Green	Alkaline Earth Metals
Pink	Post-Alkaline Earth Metals
Orange	Transition Metals
Red	Post Transition Metals

INORGANIC VENTURES

Interactive Periodic Table

Discover the best online tool for analytical chemists. Includes chemical comparabilities, preferred lines, major interferences and additional data for 70+ elements.

47
Ag

11
Na



Guides and Papers

Inorganic Ventures' online technical library has been expanding for more than a decade. Topics include ICP operations, sample preparation, trace metals analysis and much more.

Transpiration Control Technology

With TCT, concerns about shipping or storage conditions are eliminated, as transpiration is no longer an issue.

Technical Videos

Watch technical videos pertaining to some of the most common questions in our "Ask a Chemist" video series.



CUSTOM STANDARDS

Speed. Credibility. Cooperation.

We can prepare almost any inorganic blend within the boundaries of science. Whether you need two analytes or 20, milliliters or liters, 0.001 µg/mL or 10,000 µg/mL, we can make it for you — fast. It's our specialty.



Customization — The most prominent way that we flex to your specs.

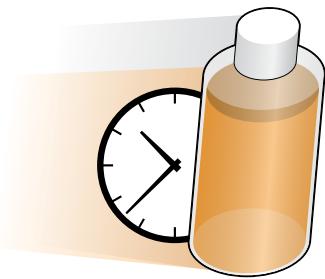
- ✓ Up to three-year shelf life*
- ✓ Traceable to NIST SRMs
- ✓ Produced under ISO 9001
- ✓ Produced under ISO 17025
- ✓ Produced under ISO 17034
- ✓ Assayed by optimal validated procedures

*Call for details.

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Our catalog reveals only a fraction of the inorganic solutions we're able to make. Much of our business is devoted entirely to custom blending. Laboratories across the globe trust us exclusively to manufacture their inorganic standards.



Fast

Our specialization in custom blending means faster service without sacrificing quality. Our experienced technicians can identify stability and compatibility issues before production even begins. Almost every blend we make is prepared, certified and shipped in five to ten business days.



Credible

Since 1999, our tri-tier ISO quality system has ensured that every standard we make is engineered to be stable, compatible and easy to use. These international accreditations guarantee that you're receiving a true Certified Reference Material.

- **ISO 17034** ensures the reliability of our reference materials.
- **ISO 17025** ensures the competency of our laboratory.
- **ISO 9001** ensures the quality of our services.



Cooperative

Speed and credibility often come at a higher price. We offer specialized purchasing options and other incentives to better accommodate your budget. Just ask. We're happy to manufacture nearly any solution in bulk quantities. This prevents the need for repeat labor, which means you'll save money. Plus, there's no waiting when you reorder the material — it'll ship the day you order.

1

REQUEST your customs.

Generate and request any number of custom solutions at esslab.com. Or call in your request to 01702 555577 and discuss your needs with a specialist. You may also fax the quotation request form to 1702 551772

2

REVIEW our quotation.

Often you'll receive our pricing within hours. If you like what you see, place your order by phone, fax or web. Each quote will contain pricing for several different quantities so you can choose the quantity that fits your budget.

3

RECEIVE your order.

Ninety-nine percent of the custom orders we prepare ship in five to ten business days. If we expect it to take longer, we'll let you know. When your need is truly urgent, we offer RUSH manufacturing. Plus, everything we make is backed by our Declaration of Integrity. Your satisfaction is 100 percent guaranteed for the lifetime of the solution.



To: Essex Scientific Laboratory Supplies Limited
356-358 Prince Avenue
Westcliff-on-Sea
Essex, SS0 0NF

Page ____ of ____

Date: _____

- 1 Photocopy this page.
- 2 Fill out the form.
- 3 Fax to 01702 551772

From: Name _____

Email _____

Company _____

Account No. _____

Address _____

Phone _____

Fax _____

Describe Your Blend:

ANALYTE CONCENTRATION	ANALYTE CONCENTRATION	UNITS:
1. _____	21. _____	[] µg/mL [] mg/L
2. _____	22. _____	[] µg/L [] ng/mL
3. _____	23. _____	[] µg/g [] ng/g
4. _____	24. _____	[] µg/Kg [] g/mL
5. _____	25. _____	
6. _____	26. _____	
7. _____	27. _____	
8. _____	28. _____	
9. _____	29. _____	
10. _____	30. _____	
11. _____	31. _____	
12. _____	32. _____	
13. _____	33. _____	
14. _____	34. _____	
15. _____	35. _____	
16. _____	36. _____	
17. _____	37. _____	
18. _____	38. _____	
19. _____	39. _____	
20. _____	40. _____	

VOLUME:

[] 30 mL [] quantity
 [] 125 mL [] quantity
 [] 250 mL [] quantity
 [] 500 mL [] quantity
 [] 1,000 mL [] quantity
 [] _____ L [] quantity

MATRIX:

[] _____
 [] Inorganic Ventures can specify

Requested Delivery Date:

Specified Requirements:

[] **RUSH Manufacturing**
Additional charges may apply.

You may also request quotations online:
esslab.com

ICP-OES & ICP-MS



Whether you use ICP or ICP-MS, we offer a wide selection of Certified Reference Materials. At your request, we've expanded our line with new instrument setup standards. And we'll continue to improve our selection based on your feedback.

User-Driven Development — Another fundamental way we flex to your specs.

- ✓ Up to four-year shelf life
- ✓ Traceable to NIST SRMs
- ✓ Produced under ISO 9001
- ✓ Produced under ISO 17025
- ✓ Produced under ISO 17034
- ✓ Assayed by validated wet chemical procedures
- ✓ Assayed by validated ICP-OES procedures
- ✓ Trace metallic impurities determined by ICP and ICP-MS

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SINGLE-ELEMENT STANDARDS

10 µg/mL Standards

Custom 10 µg/mL standards are available upon request.

10 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Aluminum, Al	HNO ₃	125 mL 500 mL	MSAL-10PPM-125ML MSAL-10PPM-500ML
Antimony, Sb	HNO ₃ /Tartaric Acid	125 mL 500 mL	MSSB-10PPM-125ML MSSB-10PPM-500ML
Arsenic, As	HNO ₃	125 mL 500 mL	MSAS-10PPM-125ML MSAS-10PPM-500ML
Barium, Ba	HNO ₃	125 mL 500 mL	MSBA-10PPM-125ML MSBA-10PPM-500ML
Beryllium, Be	HNO ₃	125 mL 500 mL	MSBE-10PPM-125ML MSBE-10PPM-500ML
Bismuth, Bi	HNO ₃	125 mL 500 mL	MSBI-10PPM-125ML MSBI-10PPM-500ML
Boron, B	HNO ₃	125 mL 500 mL	MSB-10PPM-125ML MSB-10PPM-500ML
Cadmium, Cd	HNO ₃	125 mL 500 mL	MSCD-10PPM-125ML MSCD-10PPM-500ML
Calcium, Ca	HNO ₃	125 mL 500 mL	MSCA-10PPM-125ML MSCA-10PPM-500ML
Cerium, Ce	HNO ₃	125 mL 500 mL	MSCE-10PPM-125ML MSCE-10PPM-500ML
Cesium, Cs	HNO ₃	125 mL 500 mL	MSCS-10PPM-125ML MSCS-10PPM-500ML
Chromium ⁺³ , Cr ⁺³	HNO ₃	125 mL 500 mL	MSCR(3)-10PPM-125ML MSCR(3)-10PPM-500ML
Chromium ⁺⁶ , Cr ⁺⁶	H ₂ O	125 mL 500 mL	MSCR(6)-10PPM-125ML MSCR(6)-10PPM-500ML
Cobalt, Co	HNO ₃	125 mL 500 mL	MSCO-10PPM-125ML MSCO-10PPM-500ML
Copper, Cu	HNO ₃	125 mL 500 mL	MSCU-10PPM-125ML MSCU-10PPM-500ML
Germanium, Ge	HNO ₃ /HF	125 mL 500 mL	MSGE-10PPM-125ML MSGE-10PPM-500ML
Gold, Au	HCl	125 mL 500 mL	MSAU-10PPM-125ML MSAU-10PPM-500ML
Hafnium, Hf	HNO ₃ /HF	125 mL 500 mL	MSHF-10PPM-125ML MSHF-10PPM-500ML
Holmium, Ho	HNO ₃	125 mL 500 mL	MSHO-10PPM-125ML MSHO-10PPM-500ML
Indium, In	HNO ₃	125 mL 500 mL	MSIN-10PPM-125ML MSIN-10PPM-500ML
Iron, Fe	HNO ₃	125 mL 500 mL	MSFE-10PPM-125ML MSFE-10PPM-500ML
Lead, Pb	HNO ₃	125 mL 500 mL	MSPB-10PPM-125ML MSPB-10PPM-500ML
Lithium, Li	HNO ₃	125 mL 500 mL	MSLI-10PPM-125ML MSLI-10PPM-500ML
⁶ Lithium, ⁶ Li	HNO ₃	125 mL 500 mL	MS6LI-10PPM-125ML MS6LI-10PPM-500ML
Magnesium, Mg	HNO ₃	125 mL 500 mL	MSMG-10PPM-125ML MSMG-10PPM-500ML
Manganese, Mn	HNO ₃	125 mL 500 mL	MSMN-10PPM-125ML MSMN-10PPM-500ML
Mercury, Hg	HCl	125 mL 500 mL	MSHG-10PPM-125ML MSHG-10PPM-500ML
Mercury, Hg	HNO ₃	125 mL 500 mL	MSHGN-10PPM-125ML MSHGN-10PPM-500ML

SINGLE-ELEMENT STANDARDS

10 µg/mL Standards

Custom 10 µg/mL standards are available upon request.

10 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Molybdenum, Mo	NH ₄ OH	125 mL 500 mL	MSMO-10PPM-125ML MSMO-10PPM-500ML
Nickel, Ni	HNO ₃	125 mL 500 mL	MSNI-10PPM-125ML MSNI-10PPM-500ML
Osmium, Os	HCl	125 mL 500 mL	MSOS-10PPM-125ML MSOS-10PPM-500ML
Phosphorus, P	H ₂ O	125 mL 500 mL	MSP-10PPM-125ML MSP-10PPM-500ML
Platinum, Pt	HCl	125 mL 500 mL	MSPT-10PPM-125ML MSPT-10PPM-500ML
Potassium, K	HNO ₃	125 mL 500 mL	MSK-10PPM-125ML MSK-10PPM-500ML
Rhodium, Rh	HCl	125 mL 500 mL	MSRH-10PPM-125ML MSRH-10PPM-500ML
Rhodium, Rh	HNO ₃	125 mL 500 mL	MSRHN-10PPM-125ML MSRHN-10PPM-500ML
Scandium, Sc	HNO ₃	125 mL 500 mL	MSSC-10PPM-125ML MSSC-10PPM-500ML
Selenium, Se	HNO ₃	125 mL 500 mL	MSSE-10PPM-125ML MSSE-10PPM-500ML
Silicon, Si	HNO ₃ / HF	125 mL 500 mL	MSSI-10PPM-125ML MSSI-10PPM-500ML
Silver, Ag	HNO ₃	125 mL 500 mL	MSAG-10PPM-125ML MSAG-10PPM-500ML
Sodium, Na	HNO ₃	125 mL 500 mL	MSNA-10PPM-125ML MSNA-10PPM-500ML
Strontium, Sr	HNO ₃	125 mL 500 mL	MSSR-10PPM-125ML MSSR-10PPM-500ML
Sulfur, S	H ₂ O	125 mL 500 mL	MSS-10PPM-125ML MSS-10PPM-500ML
Tellurium, Te	HNO ₃	125 mL 500 mL	MSTEN-10PPM-125ML MSTEN-10PPM-500ML
Terbium, Tb	HNO ₃	125 mL 500 mL	MSTB-10PPM-125ML MSTB-10PPM-500ML
Thallium, Tl	HNO ₃	125 mL 500 mL	MSTL-10PPM-125ML MSTL-10PPM-500ML
Thorium, Th	HNO ₃	125 mL 500 mL	MSTH-10PPM-125ML MSTH-10PPM-500ML
Tin, Sn	HNO ₃ / HF	125 mL 500 mL	MSSN-10PPM-125ML MSSN-10PPM-500ML
Titanium, Ti	HNO ₃ / HF	125 mL 500 mL	MSTI-10PPM-125ML MSTI-10PPM-500ML
Tungsten, W	HNO ₃ / HF	125 mL 500 mL	MSW-10PPM-125ML MSW-10PPM-500ML
Uranium, U	HNO ₃	125 mL 500 mL	MSU-10PPM-125ML MSU-10PPM-500ML
Vanadium, V	HNO ₃	125 mL 500 mL	MSV-10PPM-125ML MSV-10PPM-500ML
Yttrium, Y	HNO ₃	125 mL 500 mL	MSY-10PPM-125ML MSY-10PPM-500ML
Zinc, Zn	HNO ₃	125 mL 500 mL	MSZN-10PPM-125ML MSZN-10PPM-500ML

SINGLE-ELEMENT STANDARDS

100 µg/mL Standards

Custom 100 µg/mL standards are available upon request.

100 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Aluminum, Al	HNO ₃	125 mL 500 mL	MSAL-100PPM-125ML MSAL-100PPM-500ML
Antimony, Sb	HNO ₃ / Tartaric Acid	125 mL 500 mL	MSSB-100PPM-125ML MSSB-100PPM-500ML
Arsenic, As	HNO ₃	125 mL 500 mL	MSAS-100PPM-125ML MSAS-100PPM-500ML
Barium, Ba	HNO ₃	125 mL 500 mL	MSBA-100PPM-125ML MSBA-100PPM-500ML
Beryllium, Be	HNO ₃	125 mL 500 mL	MSBE-100PPM-125ML MSBE-100PPM-500ML
Bismuth, Bi	HNO ₃	125 mL 500 mL	MSBI-100PPM-125ML MSBI-100PPM-500ML
Boron, B	HNO ₃	125 mL 500 mL	MSB-100PPM-125ML MSB-100PPM-500ML
Cadmium, Cd	HNO ₃	125 mL 500 mL	MSCD-100PPM-125ML MSCD-100PPM-500ML
Calcium, Ca	HNO ₃	125 mL 500 mL	MSCA-100PPM-125ML MSCA-100PPM-500ML
Cerium, Ce	HNO ₃	125 mL 500 mL	MSCE-100PPM-125ML MSCE-100PPM-500ML
Cesium, Cs	HNO ₃	125 mL 500 mL	MSCS-100PPM-125ML MSCS-100PPM-500ML
Chromium ⁺³ , Cr ⁺³	HNO ₃	125 mL 500 mL	MSCR(3)-100PPM-125ML MSCR(3)-100PPM-500ML
Chromium ⁺⁶ , Cr ⁺⁶	H ₂ O	125 mL 500 mL	MSCR(6)-100PPM-125ML MSCR(6)-100PPM-500ML
Cobalt, Co	HNO ₃	125 mL 500 mL	MSCO-100PPM-125ML MSCO-100PPM-500ML
Copper, Cu	HNO ₃	125 mL 500 mL	MSCU-100PPM-125ML MSCU-100PPM-500ML
Germanium, Ge	HNO ₃ / HF	125 mL 500 mL	MSGE-100PPM-125ML MSGE-100PPM-500ML
Gold, Au	HCl	125 mL 500 mL	MSAU-100PPM-125ML MSAU-100PPM-500ML
Hafnium, Hf	HNO ₃ / HF	125 mL 500 mL	MSHF-100PPM-125ML MSHF-100PPM-500ML
Holmium, Ho	HNO ₃	125 mL 500 mL	MSHO-100PPM-125ML MSHO-100PPM-500ML
Indium, In	HNO ₃	125 mL 500 mL	MSIN-100PPM-125ML MSIN-100PPM-500ML
Iron, Fe	HNO ₃	125 mL 500 mL	MSFE-100PPM-125ML MSFE-100PPM-500ML
Lead, Pb	HNO ₃	125 mL 500 mL	MSPB-100PPM-125ML MSPB-100PPM-500ML
Lithium, Li	HNO ₃	125 mL 500 mL	MSLI-100PPM-125ML MSLI-100PPM-500ML
⁶ Lithium, ⁶ Li	HNO ₃	125 mL 500 mL	MS6LI-100PPM-125ML MS6LI-100PPM-500ML
Magnesium, Mg	HNO ₃	125 mL 500 mL	MSMG-100PPM-125ML MSMG-100PPM-500ML
Manganese, Mn	HNO ₃	125 mL 500 mL	MSMN-100PPM-125ML MSMN-100PPM-500ML
Mercury, Hg	HCl	125 mL 500 mL	MSHG-100PPM-125ML MSHG-100PPM-500ML
Mercury, Hg	HNO ₃	125 mL 500 mL	MSHGN-100PPM-125ML MSHGN-100PPM-500ML

SINGLE-ELEMENT STANDARDS

100 µg/mL Standards

Custom 100 µg/mL standards are available upon request.

100 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Molybdenum, Mo	NH ₄ OH	125 mL 500 mL	MSMO-100PPM-125ML MSMO-100PPM-500ML
Nickel, Ni	HNO ₃	125 mL 500 mL	MSNI-100PPM-125ML MSNI-100PPM-500ML
Osmium, Os	HCl	125 mL 500 mL	MSOS-100PPM-125ML MSOS-100PPM-500ML
Phosphorus, P	H ₂ O	125 mL 500 mL	MSP-100PPM-125ML MSP-100PPM-500ML
Platinum, Pt	HCl	125 mL 500 mL	MSPT-100PPM-125ML MSPT-100PPM-500ML
Potassium, K	HNO ₃	125 mL 500 mL	MSK-100PPM-125ML MSK-100PPM-500ML
Rhodium, Rh	HCl	125 mL 500 mL	MSRH-100PPM-125ML MSRH-100PPM-500ML
Rhodium, Rh	HNO ₃	125 mL 500 mL	MSRHN-100PPM-125ML MSRHN-100PPM-500ML
Scandium, Sc	HNO ₃	125 mL 500 mL	MSSC-100PPM-125ML MSSC-100PPM-500ML
Selenium, Se	HNO ₃	125 mL 500 mL	MSSE-100PPM-125ML MSSE-100PPM-500ML
Silicon, Si	HNO ₃ / HF	125 mL 500 mL	MSSI-100PPM-125ML MSSI-100PPM-500ML
Silver, Ag	HNO ₃	125 mL 500 mL	MSAG-100PPM-125ML MSAG-100PPM-500ML
Sodium, Na	HNO ₃	125 mL 500 mL	MSNA-100PPM-125ML MSNA-100PPM-500ML
Strontium, Sr	HNO ₃	125 mL 500 mL	MSSR-100PPM-125ML MSSR-100PPM-500ML
Sulfur, S	H ₂ O	125 mL 500 mL	MSS-100PPM-125ML MSS-100PPM-500ML
Tellurium, Te	HNO ₃	125 mL 500 mL	MSTEN-100PPM-125ML MSTEN-100PPM-500ML
Terbium, Tb	HNO ₃	125 mL 500 mL	MSTB-100PPM-125ML MSTB-100PPM-500ML
Thallium, Tl	HNO ₃	125 mL 500 mL	MSTL-100PPM-125ML MSTL-100PPM-500ML
Thorium, Th	HNO ₃	125 mL 500 mL	MSTH-100PPM-125ML MSTH-100PPM-500ML
Tin, Sn	HNO ₃ / HF	125 mL 500 mL	MSSN-100PPM-125ML MSSN-100PPM-500ML
Titanium, Ti	HNO ₃ / HF	125 mL 500 mL	MSTI-100PPM-125ML MSTI-100PPM-500ML
Tungsten, W	HNO ₃ / HF	125 mL 500 mL	MSW-100PPM-125ML MSW-100PPM-500ML
Uranium, U	HNO ₃	125 mL 500 mL	MSU-100PPM-125ML MSU-100PPM-500ML
Vanadium, V	HNO ₃	125 mL 500 mL	MSV-100PPM-125ML MSV-100PPM-500ML
Yttrium, Y	HNO ₃	125 mL 500 mL	MSY-100PPM-125ML MSY-100PPM-500ML
Zinc, Zn	HNO ₃	125 mL 500 mL	MSZN-100PPM-125ML MSZN-100PPM-500ML

SINGLE-ELEMENT STANDARDS

1,000 µg/mL Standards

Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Aluminum, Al	HNO ₃	30 mL	CGAL1-30ML
		125 mL	CGAL1-125ML
		500 mL	CGAL1-500ML
Aluminum, Al	HCl	30 mL	CGALCL1-30ML
		125 mL	CGALCL1-125ML
		500 mL	CGALCL1-500ML
Antimony, Sb	HNO ₃ / Tartaric Acid	30 mL	CGSB1-30ML
		125 mL	CGSB1-125ML
		500 mL	CGSB1-500ML
Antimony, Sb	HNO ₃ / HF	30 mL	CGSBF1-30ML
		125 mL	CGSBF1-125ML
		500 mL	CGSBF1-500ML
Arsenic, As	HNO ₃	30 mL	CGAS1-30ML
		125 mL	CGAS1-125ML
		500 mL	CGAS1-500ML
Arsenic⁺³, As⁺³	HCl / NaOH / NaHCO ₃	30 mL	CGAS(3)1-30ML
		125 mL	CGAS(3)1-125ML
		500 mL	CGAS(3)1-500ML
Arsenic⁺⁵, As⁺⁵	H ₂ O	30 mL	CGAS(5)1-30ML
		125 mL	CGAS(5)1-125ML
		500 mL	CGAS(5)1-500ML
Barium, Ba	HNO ₃	30 mL	CGBA1-30ML
		125 mL	CGBA1-125ML
		500 mL	CGBA1-500ML
Beryllium, Be	HNO ₃	30 mL	CGBE1-30ML
		125 mL	CGBE1-125ML
		500 mL	CGBE1-500ML
Bismuth, Bi Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL	CGBI1-30ML
		125 mL	CGBI1-125ML
		500 mL	CGBI1-500ML
Boron, B	NH ₄ OH	30 mL	CGB1-30ML
		125 mL	CGB1-125ML
		500 mL	CGB1-500ML
Bromide, Br- To be used for analyzing Bromide by ICP-OES.	H ₂ O	30 mL	CGICBR1-30ML
		125 mL	CGICBR1-125ML
		500 mL	CGICBR1-500ML
Cadmium, Cd	HNO ₃	30 mL	CGCD1-30ML
		125 mL	CGCD1-125ML
		500 mL	CGCD1-500ML
Calcium, Ca	HNO ₃	30 mL	CGCA1-30ML
		125 mL	CGCA1-125ML
		500 mL	CGCA1-500ML
Carbon, C No metallic impurities.	HNO ₃	30 mL	CGC1-30ML
		125 mL	CGC1-125ML
		500 mL	CGC1-500ML
Carbon, C To be used for TOC as per standard methods.	H ₂ O	125 mL	TOCKHP1-125ML
		500 mL	TOCKHP1-500ML
Cerium, Ce	HNO ₃	30 mL	CGCE1-30ML
		125 mL	CGCE1-125ML
		500 mL	CGCE1-500ML



Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Cesium, Cs	HNO_3	30 mL	CGCS1-30ML
		125 mL	CGCS1-125ML
		500 mL	CGCS1-500ML
Chloride, Cl⁻ To be used for analyzing Chloride by ICP-OES.	H_2O	30 mL	CGICCL1-30ML
		125 mL	CGICCL1-125ML
		500 mL	CGICCL1-500ML
Chromium⁺³, Cr⁺³	HNO_3	30 mL	CGCR(3)1-30ML
		125 mL	CGCR(3)1-125ML
		500 mL	CGCR(3)1-500ML
Chromium⁺⁶, Cr⁺⁶	H_2O	30 mL	CGCR(6)1-30ML
		125 mL	CGCR(6)1-125ML
		500 mL	CGCR(6)1-500ML
Cobalt, Co	HNO_3	30 mL	CGCO1-30ML
		125 mL	CGCO1-125ML
		500 mL	CGCO1-500ML
Copper, Cu	HNO_3	30 mL	CGCU1-30ML
		125 mL	CGCU1-125ML
		500 mL	CGCU1-500ML
Dysprosium, Dy	HNO_3	30 mL	CGDY1-30ML
		125 mL	CGDY1-125ML
		500 mL	CGDY1-500ML
Erbium, Er	HNO_3	30 mL	CGER1-30ML
		125 mL	CGER1-125ML
		500 mL	CGER1-500ML
Europium, Eu	HNO_3	30 mL	CGEU1-30ML
		125 mL	CGEU1-125ML
		500 mL	CGEU1-500ML
Gadolinium, Gd	HNO_3	30 mL	CGGD1-30ML
		125 mL	CGGD1-125ML
		500 mL	CGGD1-500ML
Gallium, Ga	HNO_3	30 mL	CGGA1-30ML
		125 mL	CGGA1-125ML
		500 mL	CGGA1-500ML
Germanium, Ge	HNO_3 / HF	30 mL	CGGE1-30ML
		125 mL	CGGE1-125ML
		500 mL	CGGE1-500ML
Gold, Au Can be used to stabilize low-level Hg for ICP-MS.	HCl	30 mL	CGAU1-30ML
		125 mL	CGAU1-125ML
		500 mL	CGAU1-500ML
Gold, Au	HNO_3	30 mL	CGAUN1-30ML
		125 mL	CGAUN1-125ML
		500 mL	CGAUN1-500ML
Hafnium, Hf	HNO_3 / HF	30 mL	CGHF1-30ML
		125 mL	CGHF1-125ML
		500 mL	CGHF1-500ML
Holmium, Ho Can be used as an Internal Standard for ICP-MS.	HNO_3	30 mL	CGHO1-30ML
		125 mL	CGHO1-125ML
		500 mL	CGHO1-500ML

1,000 µg/mL Standards

Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Indium, In Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL 125 mL 500 mL	CGIN1-30ML CGIN1-125ML CGIN1-500ML
Iodide, I⁻ Can be used for analyzing Iodide by ICP-OES.	H ₂ O / stabilizer	30 mL 125 mL 500 mL	CGICI1-30ML CGICI1-125ML CGICI1-500ML
Iridium, Ir	HCl	30 mL 125 mL 500 mL	CGIR1-30ML CGIR1-125ML CGIR1-500ML
Iron, Fe	HNO ₃	30 mL 125 mL 500 mL	CGFE1-30ML CGFE1-125ML CGFE1-500ML
Lanthanum, La	HNO ₃	30 mL 125 mL 500 mL	CGLA1-30ML CGLA1-125ML CGLA1-500ML
Lead, Pb	HNO ₃	30 mL 125 mL 500 mL	CGPB1-30ML CGPB1-125ML CGPB1-500ML
Lithium, Li	HNO ₃	30 mL 125 mL 500 mL	CGLI1-30ML CGLI1-125ML CGLI1-500ML
⁶Lithium, ⁶Li Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL 125 mL 500 mL	CG6LI1-30ML CG6LI1-125ML CG6LI1-500ML
Lutetium, Lu	HNO ₃	30 mL 125 mL 500 mL	CGLU1-30ML CGLU1-125ML CGLU1-500ML
Magnesium, Mg	HNO ₃	30 mL 125 mL 500 mL	CGMG1-30ML CGMG1-125ML CGMG1-500ML
Manganese, Mn	HNO ₃	30 mL 125 mL 500 mL	CGMN1-30ML CGMN1-125ML CGMN1-500ML
Mercury, Hg	HNO ₃	30 mL 125 mL 500 mL	CGHG1-30ML CGHG1-125ML CGHG1-500ML
Molybdenum, Mo	NH ₄ OH	30 mL 125 mL 500 mL	CGMO1-30ML CGMO1-125ML CGMO1-500ML
Neodymium, Nd	HNO ₃	30 mL 125 mL 500 mL	CGND1-30ML CGND1-125ML CGND1-500ML
Nickel, Ni	HNO ₃	30 mL 125 mL 500 mL	CGNI1-30ML CGNI1-125ML CGNI1-500ML
Niobium, Nb	HNO ₃ / HF	30 mL 125 mL 500 mL	CGNB1-30ML CGNB1-125ML CGNB1-500ML



Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Niobium, Nb High purity, low Tantalum	HNO ₃ / HF	130 mL	CGNB2051-30ML
		125 mL	CGNB2051-125ML
		500 mL	CGNB2051-500ML
Osmium, Os	HCl	30 mL	CGOS1-30ML
		125 mL	CGOS1-125ML
		500 mL	CGOS1-500ML
Palladium, Pd	HCl	30 mL	CGPD1-30ML
		125 mL	CGPD1-125ML
		500 mL	CGPD1-500ML
Palladium, Pd	HNO ₃	30 mL	CGPDN1-30ML
		125 mL	CGPDN1-125ML
		500 mL	CGPDN1-500ML
Phosphorus, P	H ₂ O	30 mL	CGP1-30ML
		125 mL	CGP1-125ML
		500 mL	CGP1-500ML
Platinum, Pt	HNO ₃ / HCl	30 mL	CGPTN1-30ML
		125 mL	CGPTN1-125ML
		500 mL	CGPTN1-500ML
Platinum, Pt	HCl	30 mL	CGPT1-30ML
		125 mL	CGPT1-125ML
		500 mL	CGPT1-500ML
Platinum, Pt Chloride Free	HNO ₃	30 mL	CGPTNO31-30ML
		125 mL	CGPTNO31-125ML
		500 mL	CGPTNO31-500ML
Potassium, K	HNO ₃	30 mL	CGK1-30ML
		125 mL	CGK1-125ML
		500 mL	CGK1-500ML
Praseodymium, Pr	HNO ₃	30 mL	CGPR1-30ML
		125 mL	CGPR1-125ML
		500 mL	CGPR1-500ML
Rhenium, Re	HNO ₃	30 mL	CGRE1-30ML
		125 mL	CGRE1-125ML
		500 mL	CGRE1-500ML
Rhodium, Rh Can be used as an Internal Standard for ICP-MS.	HCl	30 mL	CGRH1-30ML
		125 mL	CGRH1-125ML
		500 mL	CGRH1-500ML
Rhodium, Rh Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL	CGRHN1-30ML
		125 mL	CGRHN1-125ML
		500 mL	CGRHN1-500ML
Rubidium, Rb	HNO ₃	30 mL	CGRB1-30ML
		125 mL	CGRB1-125ML
		500 mL	CGRB1-500ML
Ruthenium, Ru	HCl	30 mL	CGRU1-30ML
		125 mL	CGRU1-125ML
		500 mL	CGRU1-500ML
Samarium, Sm	HNO ₃	30 mL	CGSM1-30ML
		125 mL	CGSM1-125ML
		500 mL	CGSM1-500ML

1,000 µg/mL Standards

Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Scandium, Sc Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL 125 mL 500 mL	CGSC1-30ML CGSC1-125ML CGSC1-500ML
Selenium⁺⁴, Se⁺⁴	HNO ₃	30 mL 125 mL 500 mL	CGSE(4)1-30ML CGSE(4)1-125ML CGSE(4)1-500ML
Selenium⁺⁶, Se⁺⁶	H ₂ O	30 mL 125 mL 500 mL	CGSE(6)1-30ML CGSE(6)1-125ML CGSE(6)1-500ML
Silica, SiO₂	HNO ₃ / HF	30 mL 125 mL 500 mL	CGSIO1-30ML CGSIO1-125ML CGSIO1-500ML
Silica, SiO₂	NaOH	30 mL 125 mL 500 mL	CGSIONA1-30ML CGSIONA1-125ML CGSIONA1-500ML
Silicon, Si	HNO ₃ / HF	30 mL 125 mL 500 mL	CGSI1-30ML CGSI1-125ML CGSI1-500ML
Silicon, Si	NaOH	30 mL 125 mL 500 mL	CGSINA1-30ML CGSINA1-125ML CGSINA1-500ML
Silver, Ag	HNO ₃	30 mL 125 mL 500 mL	CGAG1-30ML CGAG1-125ML CGAG1-500ML
Sodium, Na	HNO ₃	30 mL 125 mL 500 mL	CGNA1-30ML CGNA1-125ML CGNA1-500ML
Strontium, Sr	HNO ₃	30 mL 125 mL 500 mL	CGSR1-30ML CGSR1-125ML CGSR1-500ML
Sulfur, S Prevents incompatibility issues when mixing with Ba and Pb.	H ₂ O	30 mL 125 mL 500 mL	CGMSA1-30ML CGMSA1-125ML CGMSA1-500ML
Sulfur, S	H ₂ O	30 mL 125 mL 500 mL	CGS1-30ML CGS1-125ML CGS1-500ML
Tantalum, Ta	HNO ₃ / HF	30 mL 125 mL 500 mL	CGTA1-30ML CGTA1-125ML CGTA1-500ML
Tellurium, Te	HCl	30 mL 125 mL 500 mL	CGTE1-30ML CGTE1-125ML CGTE1-500ML
Tellurium, Te	HNO ₃	30 mL 125 mL 500 mL	CGTEN1-30ML CGTEN1-125ML CGTEN1-500ML
Terbium, Tb Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL 125 mL 500 mL	CGTB1-30ML CGTB1-125ML CGTB1-500ML



1,000 µg/mL Standards

Custom 1,000 µg/mL standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Thallium, Tl	HNO_3	30 mL	CGTL1-30ML
		125 mL	CGTL1-125ML
		500 mL	CGTL1-500ML
Thorium, Th	HNO_3	30 mL	CGTH1-30ML
		125 mL	CGTH1-125ML
		500 mL	CGTH1-500ML
Thulium, Tm	HNO_3	30 mL	CGTM1-30ML
		125 mL	CGTM1-125ML
		500 mL	CGTM1-500ML
Tin, Sn	HCl	30 mL	CGSNCL1-30ML
		125 mL	CGSNCL1-125ML
		500 mL	CGSNCL1-500ML
Tin, Sn	HNO_3 / HF	30 mL	CGSN1-30ML
		125 mL	CGSN1-125ML
		500 mL	CGSN1-500ML
Titanium, Ti	HNO_3 / HF	30 mL	CGTI1-30ML
		125 mL	CGTI1-125ML
		500 mL	CGTI1-500ML
Tungsten, W	HNO_3 / HF	30 mL	CGW1-30ML
		125 mL	CGW1-125ML
		500 mL	CGW1-500ML
Tungsten, W	H_2O	30 mL	CGWH201-30ML
		125 mL	CGWH201-125ML
		500 mL	CGWH201-500ML
Uranium, U	HNO_3	30 mL	CGU1-30ML
		125 mL	CGU1-125ML
		500 mL	CGU1-500ML
Vanadium, V	HNO_3	30 mL	CGV1-30ML
		125 mL	CGV1-125ML
		500 mL	CGV1-500ML
Ytterbium, Yb	HNO_3	30 mL	CGYB1-30ML
		125 mL	CGYB1-125ML
		500 mL	CGYB1-500ML
Yttrium, Y Can be used as an Internal Standard for ICP-MS.	HNO_3	30 mL	CGY1-30ML
		125 mL	CGY1-125ML
		500 mL	CGY1-500ML
Zinc, Zn	HNO_3	30 mL	CGZN1-30ML
		125 mL	CGZN1-125ML
		500 mL	CGZN1-500ML
Zirconium, Zr	HF	30 mL	CGZR1-30ML
		125 mL	CGZR1-125ML
		500 mL	CGZR1-500ML

See pg. 29 for our HF-free Zirconium, part number CGZRCL10-125ML or CGZRCL10-500ML.

10,000 µg/mL Standards

Custom 10,000 µg/mL standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Aluminum, Al	HNO ₃	30 mL	CGAL10-30ML
		125 mL	CGAL10-125ML
		500 mL	CGAL10-500ML
Antimony, Sb	HNO ₃ / Tartaric Acid	30 mL	CGSB10-30ML
		125 mL	CGSB10-125ML
		500 mL	CGSB10-500ML
Arsenic, As	HNO ₃	30 mL	CGAS10-30ML
		125 mL	CGAS10-125ML
		500 mL	CGAS10-500ML
Barium, Ba	HNO ₃	30 mL	CGBA10-30ML
		125 mL	CGBA10-125ML
		500 mL	CGBA10-500ML
Beryllium, Be	HNO ₃	30 mL	CGBE10-30ML
		125 mL	CGBE10-125ML
		500 mL	CGBE10-500ML
Bismuth, Bi	HNO ₃	30 mL	CGBI10-30ML
		125 mL	CGBI10-125ML
		500 mL	CGBI10-500ML
Boron, B	NH ₄ OH	30 mL	CGB10-30ML
		125 mL	CGB10-125ML
		500 mL	CGB10-500ML
Cadmium, Cd	HNO ₃	30 mL	CGCD10-30ML
		125 mL	CGCD10-125ML
		500 mL	CGCD10-500ML
Calcium, Ca	HNO ₃	30 mL	CGCA10-30ML
		125 mL	CGCA10-125ML
		500 mL	CGCA10-500ML
Carbon, C	HNO ₃	30 mL	CGC10-30ML
		125 mL	CGC10-125ML
		500 mL	CGC10-500ML
Cerium, Ce	HNO ₃	30 mL	CGCE10-30ML
		125 mL	CGCE10-125ML
		500 mL	CGCE10-500ML
Cesium, Cs	HNO ₃	30 mL	CGCS10-30ML
		125 mL	CGCS10-125ML
		500 mL	CGCS10-500ML
Chromium⁺³, Cr⁺³	HNO ₃	30 mL	CGCR(3)10-30ML
		125 mL	CGCR(3)10-125ML
		500 mL	CGCR(3)10-500ML
Cobalt, Co Can be used as an Internal Standard for ICP-OES.	HNO ₃	30 mL	CGCO10-30ML
		125 mL	CGCO10-125ML
		500 mL	CGCO10-500ML
Copper, Cu	HNO ₃	30 mL	CGCU10-30ML
		125 mL	CGCU10-125ML
		500 mL	CGCU10-500ML
Dysprosium, Dy	HNO ₃	30 mL	CGDY10-30ML
		125 mL	CGDY10-125ML
		500 mL	CGDY10-500ML
Erbium, Er	HNO ₃	30 mL	CGER10-30ML
		125 mL	CGER10-125ML
		500 mL	CGER10-500ML

10,000 µg/mL Standards

Custom 10,000 µg/mL standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Europium, Eu	HNO ₃	30 mL	CGEU10-30ML
		125 mL	CGEU10-125ML
		500 mL	CGEU10-500ML
Gadolinium, Gd	HNO ₃	30 mL	CGGD10-30ML
		125 mL	CGGD10-125ML
		500 mL	CGGD10-500ML
Gallium, Ga	HNO ₃	30 mL	CGGA10-30ML
		125 mL	CGGA10-125ML
		500 mL	CGGA10-500ML
Germanium, Ge	HNO ₃ / HF	30 mL	CGGE10-30ML
		125 mL	CGGE10-125ML
		500 mL	CGGE10-500ML
Gold, Au	HCl	30 mL	CGAU10-30ML
		125 mL	CGAU10-125ML
		500 mL	CGAU10-500ML
Hafnium, Hf	HNO ₃ / HF	30 mL	CGHF10-30ML
		125 mL	CGHF10-125ML
		500 mL	CGHF10-500ML
Holmium, Ho	HNO ₃	30 mL	CGHO10-30ML
		125 mL	CGHO10-125ML
		500 mL	CGHO10-500ML
Indium, In Can be used as an Internal Standard for ICP-OES.	HNO ₃	30 mL	CGIN10-30ML
		125 mL	CGIN10-125ML
		500 mL	CGIN10-500ML
Iridium, Ir	HCl	30 mL	CGIR10-30ML
		125 mL	CGIR10-125ML
		500 mL	CGIR10-500ML
Iron, Fe	HNO ₃	30 mL	CGFE10-30ML
		125 mL	CGFE10-125ML
		500 mL	CGFE10-500ML
Lanthanum, La	HNO ₃	30 mL	CGLA10-30ML
		125 mL	CGLA10-125ML
		500 mL	CGLA10-500ML
Lead, Pb	HNO ₃	30 mL	CGPB10-30ML
		125 mL	CGPB10-125ML
		500 mL	CGPB10-500ML
Lithium, Li	HNO ₃	30 mL	CGLI10-30ML
		125 mL	CGLI10-125ML
		500 mL	CGLI10-500ML
Lutetium, Lu	HNO ₃	30 mL	CGLU10-30ML
		125 mL	CGLU10-125ML
		500 mL	CGLU10-500ML
Magnesium, Mg	HNO ₃	30 mL	CGMG10-30ML
		125 mL	CGMG10-125ML
		500 mL	CGMG10-500ML
Manganese, Mn	HNO ₃	30 mL	CGMN10-30ML
		125 mL	CGMN10-125ML
		500 mL	CGMN10-500ML
Mercury, Hg	HNO ₃	30 mL	CGHG10-30ML
		125 mL	CGHG10-125ML
		500 mL	CGHG10-500ML

10,000 µg/mL Standards

Custom 10,000 µg/mL standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Molybdenum, Mo	NH ₄ OH	30 mL	CGMO10-30ML
		125 mL	CGMO10-125ML
		500 mL	CGMO10-500ML
Neodymium, Nd	HNO ₃	30 mL	CGND10-30ML
		125 mL	CGND10-125ML
		500 mL	CGND10-500ML
Nickel, Ni	HNO ₃	30 mL	CGNI10-30ML
		125 mL	CGNI10-125ML
		500 mL	CGNI10-500ML
Niobium, Nb	HNO ₃ / HF	30 mL	CGNB10-30ML
		125 mL	CGNB10-125ML
		500 mL	CGNB10-500ML
Niobium, Nb High purity, low Tantalum	HNO ₃ / HF	30 mL	CGNB20510-30ML
		125 mL	CGNB20510-125ML
		500 mL	CGNB20510-500ML
Palladium, Pd	HCl	30 mL	CGPD10-30ML
		125 mL	CGPD10-125ML
		500 mL	CGPD10-500ML
Phosphorus, P	H ₂ O	30 mL	CGP10-30ML
		125 mL	CGP10-125ML
		500 mL	CGP10-500ML
Platinum, Pt	HCl	30 mL	CGPT10-30ML
		125 mL	CGPT10-125ML
		500 mL	CGPT10-500ML
Potassium, K	HNO ₃	30 mL	CGK10-30ML
		125 mL	CGK10-125ML
		500 mL	CGK10-500ML
Praseodymium, Pr	HNO ₃	30 mL	CGPR10-30ML
		125 mL	CGPR10-125ML
		500 mL	CGPR10-500ML
Rhenium, Re	HNO ₃	30 mL	CGRE10-30ML
		125 mL	CGRE10-125ML
		500 mL	CGRE10-500ML
Rhodium, Rh	HCl	30 mL	CGRH10-30ML
		125 mL	CGRH10-125ML
		500 mL	CGRH10-500ML
Rubidium, Rb	HNO ₃	30 mL	CGRB10-30ML
		125 mL	CGRB10-125ML
		500 mL	CGRB10-500ML
Ruthenium, Ru	HCl	30 mL	CGRU10-30ML
		125 mL	CGRU10-125ML
		500 mL	CGRU10-500ML
Samarium, Sm	HNO ₃	30 mL	CGSM10-30ML
		125 mL	CGSM10-125ML
		500 mL	CGSM10-500ML
Scandium, Sc Can be used as an Internal Standard for ICP-OES.	HNO ₃	30 mL	CGSC10-30ML
		125 mL	CGSC10-125ML
		500 mL	CGSC10-500ML
Selenium, Se	HNO ₃	30 mL	CGSE10-30ML
		125 mL	CGSE10-125ML
		500 mL	CGSE10-500ML

10,000 µg/mL Standards

Custom 10,000 µg/mL standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Silicon, Si	HNO ₃ / HF	30 mL	CGSI10-30ML
		125 mL	CGSI10-125ML
		500 mL	CGSI10-500ML
Silver, Ag	HNO ₃	30 mL	CGAG10-30ML
		125 mL	CGAG10-125ML
		500 mL	CGAG10-500ML
Sodium, Na	HNO ₃	30 mL	CGNA10-30ML
		125 mL	CGNA10-125ML
		500 mL	CGNA10-500ML
Strontium, Sr	HNO ₃	30 mL	CGSR10-30ML
		125 mL	CGSR10-125ML
		500 mL	CGSR10-500ML
Sulfur, S Prevents incompatibility issues when mixing with Ba and Pb.	H ₂ O	30 mL	CGMSA10-30ML
		125 mL	CGMSA10-125ML
		500 mL	CGMSA10-500ML
Sulfur, S	H ₂ O	30 mL	CGS10-30ML
		125 mL	CGS10-125ML
		500 mL	CGS10-500ML
Tantalum, Ta	HNO ₃ / HF	30 mL	CGTA10-30ML
		125 mL	CGTA10-125ML
		500 mL	CGTA10-500ML
Tellurium, Te	HCl	30 mL	CGTE10-30ML
		125 mL	CGTE10-125ML
		500 mL	CGTE10-500ML
Terbium, Tb	HNO ₃	30 mL	CGTB10-30ML
		125 mL	CGTB10-125ML
		500 mL	CGTB10-500ML
Thallium, Tl	HNO ₃	30 mL	CGTL10-30ML
		125 mL	CGTL10-125ML
		500 mL	CGTL10-500ML
Thorium, Th	HNO ₃	30 mL	CGTH10-30ML
		125 mL	CGTH10-125ML
		500 mL	CGTH10-500ML
Thulium, Tm	HNO ₃	30 mL	CGTM10-30ML
		125 mL	CGTM10-125ML
		500 mL	CGTM10-500ML
Tin, Sn	HNO ₃ / HF	30 mL	CGSN10-30ML
		125 mL	CGSN10-125ML
		500 mL	CGSN10-500ML
Titanium, Ti	HNO ₃ / HF	30 mL	CGTI10-30ML
		125 mL	CGTI10-125ML
		500 mL	CGTI10-500ML
Tungsten, W	HNO ₃ / HF	30 mL	CGW10-30ML
		125 mL	CGW10-125ML
		500 mL	CGW10-500ML
Uranium, U	HNO ₃	30 mL	CGU10-30ML
		125 mL	CGU10-125ML
		500 mL	CGU10-500ML
Vanadium, V	HNO ₃	30 mL	CGV10-30ML
		125 mL	CGV10-125ML
		500 mL	CGV10-500ML

10,000 µg/mL Standards

Custom 10,000 µg/mL standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Ytterbium, Yb	HNO_3	30 mL	CGYB10-30ML
		125 mL	CGYB10-125ML
		500 mL	CGYB10-500ML
Yttrium, Y Can be used as an Internal Standard for ICP-OES.	HNO_3	30 mL	CGY10-30ML
		125 mL	CGY10-125ML
		500 mL	CGY10-500ML
Zinc, Zn	HNO_3	30 mL	CGZN10-30ML
		125 mL	CGZN10-125ML
		500 mL	CGZN10-500ML
Zirconium, Zr	HF	30 mL	CGZR10-30ML
		125 mL	CGZR10-125ML
		500 mL	CGZR10-500ML
Zirconium, Zr HF free	HCl	30 mL	CGZRCL10-30ML
		125 mL	CGZRCL10-125ML
		500 mL	CGZRCL10-500ML



ESSLAB Academy

Calling all ICP users — don't miss our annual ICP academy held in October.

You will hear from ESSLAB experts on a wide range of topics, including Sample Preparation Basics for ICP, Sample and CRM Stability Considerations, Trace Metals Analysis and much more.

For more information, visit esslab.com/ICP-academy

ICP-OES & ICP-MS
ISOTOPIC AND MERCURY STANDARDS

Isotopic Standards

ANALYTE	$\mu\text{g/mL}$	MATRIX	VOLUME	CATALOG #
¹³⁵ Barium, ¹³⁵ Ba	10	HNO ₃	100 mL	MS135BA-10PPM-100ML
¹⁰ Boron, ¹⁰ B	10	HNO ₃	100 mL	MS10B-10PPM-100ML
¹¹ Boron, ¹¹ B	10	HNO ₃	100 mL	MS11B-10PPM-100ML
¹⁰⁶ Cadmium, ¹⁰⁶ Cd	10	HNO ₃	100 mL	MS106CD-10PPM-100ML
⁵⁰ Chromium, ⁵⁰ Cr	10	HNO ₃	100 mL	MS50CR-10PPM-100ML
⁶⁵ Copper, ⁶⁵ Cu	10	HNO ₃	100 mL	MS65CU-10PPM-100ML
⁵⁴ Iron, ⁵⁴ Fe	10	HNO ₃	100 mL	MS54FE-10PPM-100ML
⁵⁷ Iron, ⁵⁷ Fe	10	HNO ₃	100 mL	MS57FE-10PPM-100ML
²⁰⁴ Lead, ²⁰⁴ Pb	10	HNO ₃	100 mL	MS204PB-10PPM-100ML
²⁰⁶ Lead, ²⁰⁶ Pb	10	HNO ₃	100 mL	MS206PB-10PPM-100ML
²⁰⁷ Lead, ²⁰⁷ Pb	10	HNO ₃	100 mL	MS207PB-10PPM-100ML
⁶ Lithium, ⁶ Li	10	HNO ₃	125 mL 500 mL	MS6LI-10PPM-125ML MS6LI-10PPM-500ML
⁶ Lithium, ⁶ Li	100	HNO ₃	125 mL 500 mL	MS6LI-100PPM-125ML MS6LI-100PPM-500ML
⁶ Lithium, ⁶ Li Can be used as an Internal Standard for ICP-MS.	1,000	HNO ₃	30 mL 125 mL 500 mL	CG6LI1-30ML CG6LI1-125ML CG6LI1-500ML
²⁵ Magnesium, ²⁵ Mg	10	HNO ₃	100 mL	MS25MG-10PPM-100ML
⁶¹ Nickel, ⁶¹ Ni	10	HNO ₃	100 mL	MS61NI-10PPM-100ML
⁷⁸ Selenium, ⁷⁸ Se	10	HNO ₃	100 mL	MS78SE-10PPM-100ML
⁸² Selenium, ⁸² Se	10	HNO ₃	100 mL	MS82SE-10PPM-100ML
¹⁰⁹ Silver, ¹⁰⁹ Ag	10	HNO ₃	100 mL	MS109AG-10PPM-100ML
⁸⁶ Strontium, ⁸⁶ Sr	10	HNO ₃	100 mL	MS86SR-10PPM-100ML
²⁰³ Thallium, ²⁰³ Tl	10	HNO ₃	100 mL	MS203TL-10PPM-100ML
²⁰⁵ Thallium, ²⁰⁵ Tl	10	HNO ₃	100 mL	MS205TL-10PPM-100ML
¹²² Tin, ¹²² Sn	10	HNO ₃ / HF	100 mL	MS122SN-10PPM-100ML
⁶⁷ Zinc, ⁶⁷ Zn	10	HNO ₃	100 mL	MS67ZN-10PPM-100ML

Mercury Standards

Custom mercury standards are available upon request.

100 ppb ($\mu\text{g/L}$)

ANALYTE	ppb ($\mu\text{g/L}$)	MATRIX	VOLUME	CATALOG #
 Mercury, Hg	100	7% v/v HNO ₃	125 mL 500 mL	IV-STOCK-72-125ML IV-STOCK-72-500ML
 Mercury, Hg	100	10% v/v HCl	125 mL 500 mL	IV-STOCK-73-125ML IV-STOCK-73-500ML

SPECIATION STANDARDS

Speciation Standards

Custom speciation standards are available upon request.

ANALYTE	µg/mL	MATRIX	VOLUME	CATALOG #
Arsenic⁺³, As⁺³	1,000	HCl / NaOH / NaHCO ₃	30 mL	CGAS(3)1-30ML
			125 mL	CGAS(3)1-125ML
			500 mL	CGAS(3)1-500ML
Arsenic⁺⁵, As⁺⁵	1,000	H ₂ O	30 mL	CGAS(5)1-30ML
			125 mL	CGAS(5)1-125ML
			500 mL	CGAS(5)1-500ML
Chromium⁺³, Cr⁺³	10	HNO ₃	125 mL	MSCR(3)-10PPM-125ML
			500 mL	MSCR(3)-10PPM-500ML
Chromium⁺³, Cr⁺³	100	HNO ₃	125 mL	MSCR(3)-100PPM-125ML
			500 mL	MSCR(3)-100PPM-500ML
Chromium⁺³, Cr⁺³	1,000	HNO ₃	30 mL	CGCR(3)1-30ML
			125 mL	CGCR(3)1-125ML
			500 mL	CGCR(3)1-500ML
Chromium⁺³, Cr⁺³	10,000	HNO ₃	30 mL	CGCR(3)10-30ML
			125 mL	CGCR(3)10-125ML
			500 mL	CGCR(3)10-500ML
Chromium⁺⁶, Cr⁺⁶	10	H ₂ O	125 mL	MSCR(6)-10PPM-125ML
			500 mL	MSCR(6)-10PPM-500ML
Chromium⁺⁶, Cr⁺⁶	100	H ₂ O	125 mL	MSCR(6)-100PPM-125ML
			500 mL	MSCR(6)-100PPM-500ML
Chromium⁺⁶, Cr⁺⁶	1,000	H ₂ O	30 mL	CGCR(6)1-30ML
			125 mL	CGCR(6)1-125ML
			500 mL	CGCR(6)1-500ML
Selenium⁺⁶, Se⁺⁶	1,000	H ₂ O	30 mL	CGSE(6)1-30ML
			125 mL	CGSE(6)1-125ML
			500 mL	CGSE(6)1-500ML

Cyanide Standards

Custom cyanide standards are available upon request.

1,000 µg/mL

ANALYTE	µg/mL	MATRIX	VOLUME	CATALOG #
Copper, Cu	1,000	NaCN	125 mL	AACUCN-125ML
			500 mL	AACUCN-500ML
Gold, Au	1,000	NaCN	125 mL	AAAUCN-125ML
			500 mL	AAAUCN-500ML
Silver, Ag	1,000	NaCN	125 mL	AAAGCN-125ML
			500 mL	AAAGCN-500ML
Zinc, Zn	1,000	NaCN	125 mL	AAZNCN-125ML
			500 mL	AAZNCN-500ML

Instrument Cross-Reference Table

Inorganic Ventures is not affiliated with the companies and brands referenced on these pages (other than Inorganic Ventures), and their names and marks are owned by the respective company and/or brand. The names appear solely for the purpose of permitting cross-referencing and comparison of products and standards.

Identical or **near identical** formulations.

Agilent/Varian AV		
Agilent/Varian#	Inorganic Ventures#	Page
5183-4681	IV-STOCK-53	p.41
5183-4688	IV-STOCK-50	p.41
5185-5959	IV-STOCK-74	p.42
5188-6524	IV-STOCK-51	p.41
5188-6525	IV-STOCK-75	p.42
5188-6564	AGI-TS-1	p.46
8500-6940	IV-STOCK-27	p.39
8500-6944	IV-STOCK-26	p.39
8500-6948	IV-STOCK-28	p.39
6610030000	IV-STOCK-24	p.39
6610030400	VAR-IS-1	p.49
6610030500	VAR-CAL-1	p.48
6610030600	VAR-CAL-2	p.48
6610030700	IV-STOCK-33	p.40

HORIBA Jobin Yvon JY		
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JYICP-MIX23	IV-STOCK-4	p.36
JYICP-MIXMAJ	IV-STOCK-34	p.40

Merck/MilliporeSigma M		
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109410	IV-STOCK-23	p.39
109411	IV-STOCK-24	p.39
109480	IV-STOCK-13	p.37
109481	IV-STOCK-14	p.38
109492	IV-STOCK-8	p.37
109493	IV-STOCK-10	p.37
109494	IV-STOCK-9	p.37
109495	IV-STOCK-17	p.38
109498	IV-STOCK-21	p.38
109500	IV-STOCK-18	p.38
110322	IV-STOCK-7	p.37
110714	IV-STOCK-5	p.36

NIST Multi-Element Standards N		
NIST#	Inorganic Ventures#	Page
SRM1643	IV-STOCK-1643	p.46

Cross-Reference Table Symbols

AV Agilent/Varian

PE Perkin Elmer

C Common Multi-Element Standards

JY HORIBA Jobin Yvon

S Spectro

I Common Multi-Ion Standards

M Merck/MilliporeSigma

T Thermo Scientific

U USP Method <232>

N NIST

Instrument Cross-Reference Table

Perkin Elmer PE		
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N0681470	IV-STOCK-14	p.38
N8125032	IV-STOCK-22	p.38
N8145051	IV-STOCK-77	p.42
N9300208	IV-STOCK-54	p.41
N9300218	IV-STOCK-34	p.40
N9300231	IV-STOCK-30	p.40
N9300232	IV-STOCK-26	p.39
N9300234	IV-STOCK-28	p.39
N9300235	IV-STOCK-29	p.40
N9301720	IV-STOCK-21	p.38
N9302946	IV-STOCK-55	p.41
N9303818	IV-STOCK-35	p.40
N9303821	PE-CHK-1	p.46
N9303832	IV-STOCK-53	p.41
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Spectro S		
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USA00875	CIROS-OES-TS	p.46
USA00888	GENESIS-ICAL	p.46

Thermo Scientific T		
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1323760	THERMO-5A	p.47
1323770	THERMO-4AREV	p.47
2G22950	TUNE F-X-SERIES	p.48

Common Multi-Element Standards C	
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CMS-SET (65 Element Set)	p.43
CCS-SET (69 Element Set)	p.44
IV-ICPMS-SET (71 Element Set)	p.45
IV-STOCK-2	p.36
IV-STOCK-3	p.36
IV-STOCK-31	p.40
IV-STOCK-36	p.40
IV-STOCK-56	p.42
IV-STOCK-57	p.42
IV-STOCK-58	p.42
THM-TS-1	p.47

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IV-STOCK-40	p.35
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IV-STOCK-70	p.34

IONS	
Common Multi-Ion Standards I	
Inorganic Ventures#	Page
IC-FAS-1A	p.77
IC-SCS1	p.77
IV-STOCK-7	p.37, 77
IV-STOCK-59	p.77

For the pharmaceutical industry, Inorganic Ventures has developed CRMs to comply with the United States Pharmacopeia (USP) general chapters on elemental impurity USP <232> limits and USP <233> procedures. These methods are for testing inorganic impurities in pharmaceutical products by ICP. The International Conference on Harmonization (ICH) Working Group on Elemental Impurities is in the process of developing a harmonized approach for controlling these impurities as well.

USP <232> / ICH Q3D Class 1 Oral Elemental Impurities			
IV-STOCK-65	U	Matrix: HNO ₃	
IV-STOCK-65-125ML		Volume: 125 mL	
IV-STOCK-65-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	15	Hg	30
Cd	5	Pb	5

USP <232> / ICH Q3D Class 2A Oral Elemental Impurities			
IV-STOCK-66	U	Matrix: HNO ₃	
IV-STOCK-66-125ML		Volume: 125 mL	
IV-STOCK-66-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Co	50	V	100
Ni	200		

USP <232> / ICH Q3D Oral Elemental Impurities			
IV-STOCK-70	U	Matrix: HCl	
IV-STOCK-70-125ML		Volume: 125 mL	
IV-STOCK-70-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	15	Ni	20
As	1.5	Os	10
Au	10	Pb	0.5
Ba	140	Pd	10
Cd	0.5	Pt	10
Co	5	Rh	10
Cr	1100	Ru	10
Cu	300	Sb	120
Hg	3	Se	15
Ir	10	Sn	600
Li	55	Tl	0.8
Mo	300	V	10

USP <232> / ICH Q3D Class 2B Oral Elemental Impurities			
IV-STOCK-67	U	Matrix: HCl	
IV-STOCK-67-125ML		Volume: 125 mL	
IV-STOCK-67-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Au	100	Rh	100
Ir	100	Ru	100
Os	100	Se	150
Pd	100	Tl	8
Pt	100		

USP <232> / ICH Q3D Class 2B Oral Elemental Impurities			
IV-STOCK-68	U	Matrix: HNO ₃	
IV-STOCK-68-125ML		Volume: 125 mL	
IV-STOCK-68-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag*	150		

* Silver has been separated from the other Class 2B elements due to long-term stability concerns. However, IV-STOCK-68 can be combined with IV-STOCK-67 at working levels. Contact Technical Support or visit our Technical Forum for more information regarding Ag in HCl matrices.

USP <232> / ICH Q3D Class 3 Oral Elemental Impurities			
IV-STOCK-69	U	Matrix: HNO ₃ /tr HF	
IV-STOCK-69-125ML		Volume: 125 mL	
IV-STOCK-69-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba	140	Mo	300
Cr	1100	Sb	120
Cu	300	Sn	600
Li	55		

 USP Method <232>

USP <232> Precious Metals Elemental Impurities			
IV-STOCK-38		Matrix: HCl	
IV-STOCK-38-125ML			Volume: 125 mL
IV-STOCK-38-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ir	100	Pt	100
Os	100	Rh	100
Pd	100	Ru	100

USP <232> Parenteral Elemental Impurities			
IV-STOCK-41		Matrix: HNO ₃	
IV-STOCK-41-125ML			Volume: 125 mL
IV-STOCK-41-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	1.5	Mo	10
Cd	2.5	Ni	50
Cu	100	Pb	5
Hg	1.5	V	10

USP <232> Oral Elemental Impurities			
IV-STOCK-40		Matrix: HNO ₃	
IV-STOCK-40-125ML			Volume: 125 mL
IV-STOCK-40-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	1.5	Mo	100
Cd	25	Ni	500
Cu	1000	Pb	5
Hg	15	V	100

USP <232> Drug Substance and Excipients			
IV-STOCK-60		Matrix: HCl	
IV-STOCK-60-125ML			Volume: 125 mL
IV-STOCK-60-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	1.5	Os	10
Cd	0.5	Pb	0.5
Cr	1100	Pd	10
Cu	300	Pt	10
Hg	3	Rh	10
Ir	10	Ru	10
Mo	300	V	10
Ni	20		



Don't see exactly what you are looking for?

With the continuous USP <232> revisions over the years, you may require an older method or possibly a newer one. Contact us to find out the best USP method for your custom manufacturing needs. Just one way we flex to your specs.

Multi-Element Standards

Identical or near identical formulations

ICP Calibration Standard			
IV-STOCK-2 C		Matrix: HNO ₃	
IV-STOCK-2-125ML		Volume: 125 mL	
IV-STOCK-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ca	10,000	Mg	10,000
K	10,000	Na	10,000

ICP Calibration Standard			
IV-STOCK-3 C		Matrix: HNO ₃	
IV-STOCK-3-125ML		Volume: 125 mL	
IV-STOCK-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ca	1,000	Mg	1,000
K	1,000	Na	1,000

ICP Calibration Standard			
IV-STOCK-4 JY		Matrix: HNO ₃	
IV-STOCK-4-125ML		Volume: 125 mL	
IV-STOCK-4-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	1,000	In	1,000
Al	1,000	K	1,000
B	1,000	Li	1,000
Ba	1,000	Mg	1,000
Bi	1,000	Mn	1,000
Ca	1,000	Na	1,000
Cd	1,000	Ni	1,000
Co	1,000	Pb	1,000
Cr	1,000	Sr	1,000
Cu	1,000	Tl	1,000
Fe	1,000	Zn	1,000
Ga	1,000		

Wavelength Calibration Standard			
IV-STOCK-5 M		Matrix: HCl / HF	
IV-STOCK-5-125ML		Volume: 125 mL	
IV-STOCK-5-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	20	Mg	1
As	20	Mn	1
B	2	Na	20
Ba	2	Ni	5
Be	1	P	10
Ca	10	Pb	20
Cd	2	Sc	1
Cr	2	Se	20
Cu	2	Sr	1
Fe	2	Te	20
Hg	5	Ti	2
K	100	Y	1
Li	2	Zn	2

ICP Calibration Standard			
IV-STOCK-6		Matrix: HNO ₃	
IV-STOCK-6-125ML		Volume: 125 mL	
IV-STOCK-6-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Li	10
Al	10	Mg	10
As	100	Mn	10
B	100	Mo	10
Ba	10	Na	10
Be	100	Ni	10
Bi	10	Pb	10
Ca	1,000	Rb	10
Cd	10	Se	100
Co	10	Sr	10
Cr	10	Te	10
Cu	10	Tl	10
Fe	100	U	10
Ga	10	V	10
K	10	Zn	100

C Common Multi-Element StandardsJY HORIBA Jobin YvonM Merck/MilliporeSigma

MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or near identical formulations

Cation Calibration Standard			
IV-STOCK-7	M	I	Matrix: HNO ₃
IV-STOCK-7-125ML			Volume: 125 mL
IV-STOCK-7-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ba ⁺²	100	Mn ⁺²	100
Ca ⁺²	100	Na ⁺	100
K ⁺	100	NH ₄ ⁺	100
Li ⁺	100	Sr ⁺²	100
Mg ⁺²	100		

ICP Calibration Standard			
IV-STOCK-8	M	Matrix: HNO ₃	
IV-STOCK-8-125ML			Volume: 125 mL
IV-STOCK-8-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Al	100	K	100
B	100	Li	100
Ba	100	Mg	100
Be	100	Mn	100
Bi	100	Na	100
Ca	100	Ni	100
Cd	100	Pb	100
Co	100	Se	100
Cr	100	Sr	100
Cu	100	Te	100
Fe	100	Tl	100
Ga	100	Zn	100

ICP Calibration Standard – Toxic Elements			
IV-STOCK-9	M	Matrix: HNO ₃	
IV-STOCK-9-125ML			Volume: 125 mL
IV-STOCK-9-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	100	Pb	100
Be	100	Se	100
Cd	100	Tl	100
Ni	100		

 Common Multi-Ion Standards

 Merck/MilliporeSigma

ICP Calibration Standard – Surface Water			
IV-STOCK-10	M	Matrix: HNO ₃	
IV-STOCK-10-125ML			Volume: 125 mL
IV-STOCK-10-500ML			Volume: 500 mL
Analyte	µg/L*	Analyte	µg/L*
As	50	Mg	15,000
B	100	Mn	30
Ba	50	Mo	100
Be	20	Na	8,000
Bi	10	Ni	50
Ca	35,000	Pb	25
Cd	20	Se	10
Co	25	Sr	100
Cr	20	Tl	10
Cu	20	V	50
Fe	100	Zn	50
K	3,000		

*Parts per billion

ICP-MS Calibration Standard			
IV-STOCK-12	Matrix: HNO ₃		
IV-STOCK-12-125ML			Volume: 125 mL
IV-STOCK-12-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ba	10	In	10
Be	10	Li	10
Bi	10	Ni	10
Ce	10	Pb	10
Co	10	U	10

ICP Calibration Standard – Trace Metals			
IV-STOCK-13	M	Matrix: HNO ₃	
IV-STOCK-13-125ML			Volume: 125 mL
IV-STOCK-13-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Al	500	Fe	100
As	100	Mn	100
Be	100	Ni	100
Cd	25	Pb	100
Co	100	Se	25
Cr	100	V	250
Cu	100	Zn	100

Wavelength Calibration Standard			
IV-STOCK-14	M	PE	Matrix: HCl / HNO ₃ / HF
IV-STOCK-14-125ML			Volume: 125 mL
IV-STOCK-14-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	20	Na	20
K	100	Ni	20
La	20	P	100
Li	20	S	100
Mn	20	Sc	20
Mo	20		

ICP-MS Calibration Standard			
IV-STOCK-15			Matrix: HNO ₃
IV-STOCK-15-125ML			Volume: 125 mL
IV-STOCK-15-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ca	10	Li	10
Fe	10	Na	10
K	10		

ICP Calibration Standard – Alkaline Earth Element			
IV-STOCK-16			Matrix: HNO ₃
IV-STOCK-16-125ML			Volume: 125 mL
IV-STOCK-16-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ba	1,000	Mg	1,000
Ca	1,000	Sr	1,000

ICP Calibration Standard – HCl Soluble Elements			
IV-STOCK-17	M		Matrix: HCl/HNO ₃ /HF
IV-STOCK-17-125ML			Volume: 125 mL
IV-STOCK-17-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Hf	100	Ta	100
Ir	100	Ti	100
Sb	100	Zr	100
Sn	100		

 Merck/MilliporeSigma

 Perkin Elmer

GFAA Calibration Standard			
IV-STOCK-18	M		Matrix: HNO ₃
IV-STOCK-18-125ML			Volume: 125 mL
IV-STOCK-18-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Cu	50
Al	100	Fe	20
As	100	Mn	20
Ba	50	Ni	50
Be	5	Pb	100
Cd	5	Sb	100
Co	50	Se	100
Cr	20	Tl	100

ICP Calibration Standard			
IV-STOCK-21	M	PE	Matrix: HNO ₃
IV-STOCK-21-125ML			Volume: 125 mL
IV-STOCK-21-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	10	K	10
Al	10	Li	10
As	10	Mg	10
Ba	10	Mn	10
Be	10	Na	10
Bi	10	Ni	10
Ca	10	Pb	10
Cd	10	Rb	10
Co	10	Se	10
Cr	10	Sr	10
Cs	10	Tl	10
Cu	10	U	10
Fe	10	V	10
Ga	10	Zn	10
In	10		

ICP Calibration Standard			
IV-STOCK-22		PE	Matrix: HNO ₃
IV-STOCK-22-125ML			Volume: 125 mL
IV-STOCK-22-500ML			Volume: 500 mL
Analyte	µg/L*	Analyte	µg/L*
Cd	200	Pb	200
Cu	200	Rh	200
Mg	200		

*Parts per billion

Multi-Element Standards

Identical or near identical formulations

ICP Calibration Standard			
IV-STOCK-23 		Matrix: HNO ₃	
IV-STOCK-23-125ML		Volume: 125 mL	
IV-STOCK-23-500ML		Volume: 500 mL	
Analyte	µg/L*	Analyte	µg/L*
B	1	Lu	1
Ba	1	Na	1
Co	1	Rh	1
Fe	1	Sc	1
Ga	1	Tl	1
In	1	U	1
K	1	Y	1
Li	1	*Parts per billion	

Tuning Solution			
IV-STOCK-24 		Matrix: HNO ₃	
IV-STOCK-24-125ML		Volume: 125 mL	
IV-STOCK-24-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	50	Mn	50
As	50	Mo	50
Ba	50	Ni	50
Cd	50	Pb	50
Co	50	Se	50
Cr	50	Sr	50
Cu	50	Zn	50
K	500		

ICP Calibration Standard			
IV-STOCK-26 		Matrix: HNO ₃	
IV-STOCK-26-125ML		Volume: 125 mL	
IV-STOCK-26-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ce	10	Pr	10
Dy	10	Sc	10
Er	10	Sm	10
Eu	10	Tb	10
Gd	10	Th	10
Ho	10	Tm	10
La	10	Y	10
Lu	10	Yb	10
Nd	10		

ICP Calibration Standard			
IV-STOCK-27 		Matrix: HNO ₃	
IV-STOCK-27-125ML		Volume: 125 mL	
IV-STOCK-27-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Li	10
Al	10	Mg	10
As	10	Mn	10
Ba	10	Na	10
Be	10	Ni	10
Ca	10	Pb	10
Cd	10	Rb	10
Co	10	Se	10
Cr	10	Sr	10
Cs	10	Tl	10
Cu	10	U	10
Fe	10	V	10
Ga	10	Zn	10
K	10		

ICP Calibration Standard			
IV-STOCK-28 		Matrix: HCl / HNO ₃	
IV-STOCK-28-125ML		Volume: 125 mL	
IV-STOCK-28-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Au	10	Rh	10
Hf	10	Ru	10
Ir	10	Sb	10
Pd	10	Sn	10
Pt	10	Te	10

 Agilent/Varian

 Merck/MilliporeSigma

 Perkin Elmer

Multi-Element Standards

Identical or near identical formulations

ICP Calibration Standard			
IV-STOCK-29		PE	
Matrix: HNO ₃ / HF			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
B	10	S	10
Ge	10	Si	10
Mo	10	Ta	10
Nb	10	Ti	10
P	10	W	10
Re	10	Zr	10

ICP Calibration Standard			
IV-STOCK-30		PE	
Matrix: HNO ₃			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Be	10	Mg	10
Bi	10	Ni	10
Ce	10	Pb	10
Co	10	U	10
In	10		

ICP Calibration Standard			
IV-STOCK-31		C	
Matrix: HNO ₃			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Al	1	Mg	0.2
Ba	0.2	Mn	1
Ca	0.2	Ni	5
Cu	1	P	10
K	5	Zn	0.2

Calibration Standard – Mix Majors			
IV-STOCK-33		AV	
Matrix: HNO ₃			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Ca	500	Mg	500
Fe	500	Na	500
K	500		

ICP Calibration Standard			
IV-STOCK-34		PE JY	
Matrix: HNO ₃			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Ca	5,000	Mg	5,000
K	5,000	Na	5,000

ICP Calibration Standard			
IV-STOCK-35		PE	
Matrix: HNO ₃			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Ca	1,000	Mg	1,000
Fe	1,000	Na	1,000
K	1,000		

ICP Calibration Standard			
IV-STOCK-36		C	
Matrix: HCl			
Volume: 125 mL			
Volume: 500 mL			
Analyte	µg/mL	Analyte	µg/mL
Au	100	Pt	100
Pd	100		

AV Agilent/Varian**C** Common Multi-Element Standards**JY** HORIBA Jobin Yvon**PE** Perkin Elmer

MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or near identical formulations

Environmental Calibration Standard			
IV-STOCK-50	AV	Matrix: HNO ₃ / HF	
IV-STOCK-50-125ML		Volume: 125 mL	
IV-STOCK-50-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Mn	10
Al	10	Mo	10
As	10	Na	1000
Ba	10	Ni	10
Be	10	Pb	10
Ca	1000	Sb	10
Cd	10	Se	10
Co	10	Th	10
Cr	10	Tl	10
Cu	10	U	10
Fe	1000	V	10
K	1000	Zn	10
Mg	1000		

7500 Series PA Tuning Solution 1 (commonly used with IV-Stock-52)			
IV-STOCK-51	AV	Matrix: HNO ₃	
IV-STOCK-51-125ML		Volume: 125 mL	
IV-STOCK-51-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	5	Mn	5
As	20	Na	5
Ba	5	Ni	10
Be	20	Pb	10
Bi	5	Sc	5
Cd	20	Sr	5
Co	5	Th	5
Cr	5	Tl	5
Cu	5	U	5
In	5	V	5
⁶ Li	5	Y	2.5
Lu	5	Yb	2.5
Mg	10	Zn	20

AV Agilent/Varian

PE Perkin Elmer

7500 Series PA Tuning Solution 2 (commonly used with IV-Stock-51)			
IV-STOCK-52	Matrix: HCl		
IV-STOCK-52-125ML		Volume: 125 mL	
IV-STOCK-52-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ge	10	Ru	10
Ir	5	Sb	10
Mo	10	Sn	10
Pd	10	Ti	5

Internal Standard			
IV-STOCK-53	AV PE	Matrix: HNO ₃ / HF	
IV-STOCK-53-125ML		Volume: 125 mL	
IV-STOCK-53-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Sc	10
Ge	10	Tb	10
In	10	Y	10
⁶ Li	10		

Interference Check Standard			
IV-STOCK-54	PE	Matrix: HNO ₃	
IV-STOCK-54-125ML		Volume: 125 mL	
IV-STOCK-54-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	1200	Mg	3000
Ca	6000	Na	1000
Fe	5000		

Wavecal Standard			
IV-STOCK-55	PE	Matrix: HNO ₃	
IV-STOCK-55-125ML		Volume: 125 mL	
IV-STOCK-55-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba	1	Li	10
Ca	1	Mn	10
K	50	Na	10
La	10	Sr	10



Multi-Element Standards

Identical or near identical formulations

ICP Calibration Standard			
IV-STOCK-56		Matrix: HNO ₃ / HF	
IV-STOCK-56-125ML		Volume: 125 mL	
IV-STOCK-56-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Mo	100	Sn	100
Sb	100	Ti	100
Si	100		

ICP-MS Tuning Solution			
IV-STOCK-74		Matrix: HNO ₃	
IV-STOCK-74-125ML		Volume: 125 mL	
IV-STOCK-74-500ML		Volume: 500 mL	
Analyte	µg/L*	Analyte	µg/L*
Ce	1	Mg	1
Co	1	Tl	1
Li	1	Y	1

*Parts per billion

ICP Calibration Standard			
IV-STOCK-57		Matrix: HNO ₃ / HF	
IV-STOCK-57-125ML		Volume: 125 mL	
IV-STOCK-57-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Mo	10	Sn	10
Sb	10	Ti	10

ICP-MS Internal Standard			
IV-STOCK-75		Matrix: HNO ₃ / HF	
IV-STOCK-75-125ML		Volume: 125 mL	
IV-STOCK-75-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	100	Lu	100
Ge	100	Rh	100
In	100	Sc	100
⁶ Li	100	Tb	100

ICP Calibration Standard			
IV-STOCK-58		Matrix: HCl	
IV-STOCK-58-125ML		Volume: 125 mL	
IV-STOCK-58-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Au	100	Pt	100
Ir	100	Re	100
Os	100	Rh	100
Pd	100	Ru	100

ICP-MS Tuning Solution			
IV-STOCK-77		Matrix: HNO ₃	
IV-STOCK-77-125ML		Volume: 125 mL	
IV-STOCK-77-500ML		Volume: 500 mL	
Analyte	µg/L*	Analyte	µg/L*
Be	1	Li	1
Ce	1	Mg	1
Fe	1	Pb	1
In	1	U	1

*Parts per billion

ICP-MS Tuning Solution			
IV-STOCK-71		Matrix: HNO ₃	
IV-STOCK-71-125ML		Volume: 125 mL	
IV-STOCK-71-500ML		Volume: 500 mL	
Analyte	µg/L*	Analyte	µg/L*
Be	10	Co	5
Bi	2	In	2
Ce	2	Mn	5

*Parts per billion

 Agilent/Varian Common Multi-Element Standards Perkin Elmer

MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or near identical formulations

These elements are grouped for ease of use. Intended for ICP-MS, they can be used individually or combined in any combination upon dilution into 1% HNO₃. Custom ICP-MS/OES calibration standards are available upon request.

65-Element Group

Rare Earth ICP-MS Standard			
CMS-1		Matrix: HNO ₃	
CMS-1-125ML		Volume: 125 mL	
CMS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ce	10	Pr	10
Dy	10	Sc	10
Er	10	Sm	10
Eu	10	Tb	10
Gd	10	Th	10
Ho	10	Tm	10
La	10	U	10
Lu	10	Y	10
Nd	10	Yb	10

Hot Plasma ICP-MS Complete Standard			
CMS-4		Matrix: HNO ₃	
CMS-4-125ML		Volume: 125 mL	
CMS-4-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	10	In	10
B	10	Pb	10
Ba	10	Sb	10
Be	10	Se	10
Bi	10	Tl	10
Cd	10	V	10
Ga	10		

Precious Metals ICP-MS Standard			
CMS-2		Matrix: HCl	
CMS-2-125ML		Volume: 125 mL	
CMS-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Au	10	Re	10
Ir	10	Rh	10
Pd	10	Ru	10
Pt	10	Te	10

Cool Plasma ICP-MS Complete Standard			
CMS-5		Matrix: HNO ₃	
CMS-5-125ML		Volume: 125 mL	
CMS-5-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Li	10
Al	10	Mg	10
Ca	10	Mn	10
Co	10	Na	10
Cr	10	Ni	10
Cs	10	Rb	10
Cu	10	Sr	10
Fe	10	Zn	10
K	10		

Fluoride Soluble ICP-MS Standard			
CMS-3		Matrix: HNO ₃ /HF	
CMS-3-125ML		Volume: 125 mL	
CMS-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ge	10	Ta	10
Hf	10	Ti	10
Mo	10	W	10
Nb	10	Zr	10
Sn	10		

 Common Multi-Element Standard

These elements are grouped for ease of use. Intended for ICP-MS, they can be used individually or combined in any combination upon dilution into 1% HNO₃. Custom ICP-MS/OES calibration standards are available upon request.

69-Element Group

Rare Earth ICP-MS Standard			
CCS-1		Matrix: HNO ₃	
CCS-1-125ML		Volume: 125 mL	
CCS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ce	100	Pr	100
Dy	100	Sc	100
Er	100	Sm	100
Eu	100	Tb	100
Gd	100	Th	100
Ho	100	Tm	100
La	100	U	100
Lu	100	Y	100
Nd	100	Yb	100

Fluoride Soluble ICP-MS Standard			
CCS-5		Matrix: HNO ₃ /HF	
CCS-5-125ML		Volume: 125 mL	
CCS-5-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
B	100	Sb	100
Ge	100	Si	100
Hf	100	Sn	100
Mo	100	Ta	100
Nb	100	Ti	100
P	100	W	100
Re	100	Zr	100
S	100		

Precious Metals ICP-MS Standard			
CCS-2		Matrix: HCl	
CCS-2-125ML		Volume: 125 mL	
CCS-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Au	100	Pt	100
Ir	100	Rh	100
Pd	100	Ru	100

Transition ICP-MS Standard			
CCS-6		Matrix: HNO ₃	
CCS-6-125ML		Volume: 125 mL	
CCS-6-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mn	100
Cd	100	Ni	100
Co	100	Pb	100
Cr	100	Tl	100
Cu	100	V	100
Fe	100	Zn	100
Hg	100		

Alkali, Alkaline, Non-Transition ICP-MS Standard			
CCS-4		Matrix: HNO ₃	
CCS-4-125ML		Volume: 125 mL	
CCS-4-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	100	In	100
As	100	K	100
Ba	100	Li	100
Be	100	Mg	100
Bi	100	Na	100
Ca	100	Rb	100
Cs	100	Se	100
Ga	100	Sr	100

Tellurium ICP-MS Standard			
MSTEN-100PPM		Matrix: HNO ₃	
MSTEN-100PPM-125ML		Volume: 125 mL	
MSTEN-100PPM-500ML		Volume: 500 mL	
Analyte	µg/mL		
Te	100		

C Common Multi-Element Standard

MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or near identical formulations

These elements are grouped for ease of use. Intended for ICP-MS, they can be used individually or combined in any combination upon dilution into 1% HNO₃. Custom ICP-MS/OESw calibration standards are available upon request.

71-Element Group

ICP-MS Complete Standard			
IV-ICPMS-71A	C	Matrix: HNO ₃	
IV-ICPMS-71A-125ML			Volume: 125 mL
IV-ICPMS-71A-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Lu	10
Al	10	Mg	10
As	10	Mn	10
B	10	Na	10
Ba	10	Nd	10
Be	10	Ni	10
Ca	10	P	10
Cd	10	Pb	10
Ce	10	Pr	10
Co	10	Rb	10
Cr	10	S	10
Cs	10	Se	10
Cu	10	Sm	10
Dy	10	Sr	10
Er	10	Th	10
Eu	10	Tl	10
Fe	10	Tm	10
Ga	10	U	10
Gd	10	V	10
Ho	10	Yb	10
K	10	Zn	10
La	10		

Lithium ICP-MS Standard			
MSLI-10PPM	C	Matrix: HNO ₃	
MSLI-10PPM-125ML			Volume: 125 mL
MSLI-10PPM-500ML			Volume: 500 mL
Analyte	µg/mL		
Li	10		

C Common Multi-Element Standard

ICP-MS Refractory Elements Standard			
IV-ICPMS-71B	C	Matrix: HNO ₃ / HF	
IV-ICPMS-71B-125ML			Volume: 125 mL
IV-ICPMS-71B-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ge	10	Sn	10
Hf	10	Ta	10
Mo	10	Te	10
Nb	10	Ti	10
Sb	10	W	10
Si	10	Zr	10

ICP-MS Precious Metals Standard			
IV-ICPMS-71C	C	Matrix: HCl	
IV-ICPMS-71C-125ML			Volume: 125 mL
IV-ICPMS-71C-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Au	10	Pt	10
Ir	10	Re	10
Os	10	Rh	10
Pd	10	Ru	10

ICP-MS Internal Standard			
IV-ICPMS-71D	C	Matrix: HNO ₃	
IV-ICPMS-71D-125ML			Volume: 125 mL
IV-ICPMS-71D-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Sc	10
In	10	Tb	10
⁶ Li	10	Y	10

Mercury ICP-MS Standard			
MSHG-10PPM	C	Matrix: HCl	
MSHG-10PPM-125ML			Volume: 125 mL
MSHG-10PPM-500ML			Volume: 500 mL
Analyte	µg/mL		
Hg	10		

AGI Tuning Solution			
AGI-TS-1		AV	Matrix: HNO ₃
AGI-TS-1-125ML		Volume: 125 mL	
AGI-TS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ce	10	Tl	10
Co	10	Y	10
Li	10		

CIROS Tuning Solution			
CIROS-OES-TS		S	Matrix: HCl / HNO ₃
CIROS-OES-TS-125ML		Volume: 125 mL	
CIROS-OES-TS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Fe	10	P	10
K	10	S	50
La	10	Sc	10
Mg	5	Ti	10
Mn	5		

GENESIS Calibration Standard			
GENESIS-ICAL		S	Matrix: HNO ₃ / HCl / HF
GENESIS-ICAL-125ML		Volume: 125 mL	
GENESIS-ICAL-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Be	2	Na	5
Ca	1	Ni	10
Ce	10	P	10
Cu	10	S	50
Eu	10	Sc	5
Fe	10	Si	10
In	10	Sr	2
K	10	Ti	10
Li	2	V	10
Mn	5	Y	10
Mo	5	Zr	10

Trace Metals in Water—SRM1643			
IV-STOCK-1643		N	Matrix: HNO ₃
IV-STOCK-1643-125ML		Volume: 125 mL	
IV-STOCK-1643-500ML		Volume: 500 mL	
Analyte	µg/L*	Analyte	µg/L*
Ag	1	Mg	8,000
Al	142	Mn	39
As	60	Mo	121
B	158	Na	21,000
Ba	544	Ni	62
Be	14	Pb	20
Bi	14	Rb	14
Ca	32,000	Re	113
Cd	7	Sb	58
Co	27	Se	12
Cr	20	Sr	323
Cu	23	Te	1
Fe	98	Tl	7
K	2,000	V	38
Li	17	Zn	79

*Parts per billion

Instrument Check Standard			
PE-CHK-1		PE	Matrix: HNO ₃ / HF
PE-CHK-1-125ML		Volume: 125 mL	
PE-CHK-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Mn	10
Al	10	Ni	10
As	10	Pb	10
Ba	10	Sb	10
Be	10	Se	10
Cd	10	Tl	10
Co	10	V	10
Cr	10	Zn	10
Cu	10		

AV Agilent/Varian

N NIST

PE Perkin Elmer

S Spectro

MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or near identical formulations

Tuning Solution			
PE-TS-1		PE	Matrix: HNO ₃
PE-TS-1-125ML		Volume: 125 mL	
PE-TS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba	10	Mg	10
Be	10	Pb	10
Ce	10	Rh	10
Co	10	Tl	10
In	10	U	10
Li	10	Y	10

ICP-MS Tuning Solution – Tune B iCAP			
THERMO-4AREV		T	Matrix: HNO ₃ /HCl
THERMO-4AREV-500ML		Volume: 500 mL	
THERMO-4AREV-1L		Volume: 1 L	
Analyte	µg/L*	Analyte	µg/L*
Ba	1	In	1
Bi	1	Li	1
Ce	1	U	1
Co	1		

*Parts per billion

ICP-MS Tuning Solution – iCAP Q			
THERMO-5A		T	Matrix: HNO ₃
THERMO-5A-125ML		Volume: 125 mL	
THERMO-5A-250ML		Volume: 250 mL	
Analyte	µg/L*	Analyte	µg/L*
Ag	6	Mg	10
Al	10	Mn	6
Ba	4	Ni	15
Be	35	Rh	3
Bi	3	Sc	8
Ce	3	Sr	5
Co	8	Ta	3
Cs	3	Tb	3
Cu	15	Tl	4
Ga	10	U	3
Ho	3	Y	3
In	3	Zn	20
Li	8		

*Parts per billion

Tuning Solution			
THM-TS-1		C	Matrix: HNO ₃
THM-TS-1-125ML		Volume: 125 mL	
THM-TS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
B	10	Lu	10
Ba	10	Na	10
Co	10	Rh	10
Fe	10	Sc	10
Ga	10	Th	10
In	10	U	10
K	10	Y	10
Li	10		

C Common Multi-Element Standard

PE Perkin Elmer

T Thermo Scientific

Tune F-X-Series Tuning Solution			
TUNE F-X-SERIES		Matrix: HNO ₃ /HF	
TUNE F-X-SERIES-125ML		Volume: 125 mL	
Analyte	ng/mL*	Analyte	ng/mL*
Ag	40	Na	40
Al	50	Nb	20
As	250	Nd	45
B	200	Ni	150
Ba	50	P	1000
Be	500	Pb	10
Bi	5	Pd	100
Ca	1000	Pr	10
Cd	100	Rb	30
Ce	10	Re	15
Co	35	Sb	40
Cr	40	Sc	30
Cs	15	Se	1250
Cu	150	Si	1000
Dy	25	Sm	45
Er	15	Sn	45
Eu	10	Sr	20
Fe	20	Ta	5
Ga	45	Tb	5
Gd	45	Te	500
Ge	150	Th	5
Hf	15	Ti	500
Ho	5	Tl	10
In	10	Tm	5
K	35	U	5
La	10	V	40
Li	100	W	25
Lu	5	Y	15
Mg	50	Yb	25
Mn	20	Zn	150
Mo	100	Zr	35

*Parts per billion

Calibration Standard			
VAR-CAL-1		Matrix: HNO ₃ / HF	
VAR-CAL-1-125ML		Volume: 125 mL	
VAR-CAL-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Mo	100	Sn	100
Sb	100	Ti	100

Calibration Standard			
VAR-CAL-2		Matrix: HNO ₃	
VAR-CAL-2-125ML		Volume: 125 mL	
VAR-CAL-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mn	100
Al	100	Ni	100
As	100	Pb	100
Ba	100	Se	100
Be	100	Th	100
Cd	100	Tl	100
Co	100	U	100
Cr	100	V	100
Cu	100	Zn	100

Calibration Standard			
VAR-CAL-7		Matrix: HNO ₃ /HF	
VAR-CAL-7-125ML		Volume: 125 mL	
VAR-CAL-7-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	5	Mn	5
As	5	Mo	5
Ba	5	Ni	5
Cd	5	Pb	5
Co	5	Se	5
Cr	5	Sr	5
Cu	5	Zn	5
K	50		

 Agilent/Varian Thermo Scientific

Ionization Buffers

Multi-Element Standards

Identical or **near identical** formulations

ICP Internal Standard			
VAR-IS-1		AV	Matrix: HNO ₃
VAR-IS-1-125ML		Volume: 125 mL	
VAR-IS-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	100	Sc	100
In	100	Tb	100
⁶ Li	100	Y	100

AV Agilent/Varian

Tuning Solution			
VAR-TS-MS		AV	Matrix: HNO ₃
VAR-TS-MS-125ML		Volume: 125 mL	
VAR-TS-MS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba	10	Mg	10
Be	10	Pb	10
Ce	10	Th	10
Co	10	Tl	10
In	10		

HIGH-PURITY IONIZATION BUFFERS

Ionization buffers are 99.999+% pure. They are analyzed using both axial-view ICP-OES and ICP-MS for 70+ impurities. Custom ionization buffers are available upon request.

1% Cesium Ionization Buffer	
CSN-ISB	Matrix: HNO ₃
CSN-ISB-125ML	Volume: 125 mL
CSN-ISB-500ML	Volume: 500 mL
Analyte	µg/mL
Cs	10,000
High Purity buffer; ideal for Axial View ICP-OES	

2% Lithium Ionization Buffer	
LINB2	Matrix: HNO ₃
LINB2-125ML	Volume: 125 mL
LINB2-500ML	Volume: 500 mL
Analyte	µg/mL
Li	20,000

5% Cesium Ionization Buffer	
CSN-ISB5	Matrix: HNO ₃
CSN-ISB5-125ML	Volume: 125 mL
CSN-ISB5-500ML	Volume: 500 mL
Analyte	µg/mL
Cs	50,000

EPA STANDARDS



Over the years, we've developed a unique line of EPA standards. If you do not see what you are looking for, please contact us with an EPA custom request and we will get you competitive pricing guaranteed.

Industry Advancements —

Developing new technology that drives us forward is another way we Flex to Your Specs.

- ✓ Up to four-year shelf life
- ✓ Traceable to NIST SRMs
- ✓ Produced under ISO 9001
- ✓ Produced under ISO 17025
- ✓ Produced under ISO 17034
- ✓ Assayed by validated Wet Chemical procedures
- ✓ Assayed by validated instrument procedures

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Standards for ILMO3.0 are designed for use with ICP-OES. Custom EPA standards are available upon request.

Calibration Standard			
CLPP-CAL-1		Matrix: HNO ₃ Dilution 1:100	
CLPP-CAL-1-125ML CLPP-CAL-1-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	250	Fe	1,000
Al	2,000	K	5,000
Ba	2,000	Mg	5,000
Be	50	Mn	500
Ca	5,000	Na	5,000
Co	500	Ni	500
Cr	200	V	500
Cu	250	Zn	500

Calibration Standard			
CLPP-CAL-3		Matrix: HNO ₃ Dilution 1:100	
CLPP-CAL-3-125ML CLPP-CAL-3-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	1,000	Se	1,000
Cd	500	Tl	1,000
Pb	1,000		

Calibration Standard	
CGSB1	
Matrix: HNO ₃ /Tartaric Acid Dilution 1:100	
CGSB1-30ML	Volume: 30 mL
CGSB1-125ML	Volume: 125 mL
CGSB1-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	1,000

CICV Standards – Continuing and Initial Calibration Verification

CICV Standard [†]			
QCP-CICV-1		Matrix: HNO ₃ Dilution 1:100 or 1:500	
QCP-CICV-1-125ML QCP-CICV-1-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	125	Fe	500
Al	1,000	K	2,500
Ba	1,000	Mg	2,500
Be	25	Mn	250
Ca	2,500	Na	2,500
Co	250	Ni	250
Cr	100	V	250
Cu	125	Zn	250

[†]Manufactured from in-house Second Source concentrates, whenever possible.

CICV Standard [†]	
QCP-CICV-2	
Matrix: HNO ₃ /Tartaric Acid Dilution 1:100 or 1:500	
QCP-CICV-2-125ML	Volume: 125 mL
QCP-CICV-2-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	500

[†]Manufactured from in-house Second Source concentrates, whenever possible.

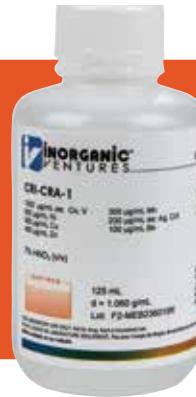
CICV Standard [†]			
QCP-CICV-3		Matrix: HNO ₃ Dilution 1:100 or 1:500	
QCP-CICV-3-125ML QCP-CICV-3-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	500	Se	500
Cd	250	Tl	500
Pb	500		

[†]Manufactured from in-house Second Source concentrates, whenever possible.

CRDL Standards – Contract Required Detection Limit

We can create any CRDL standard to best fit your needs.

Custom solutions are our specialty.



Soil & Water Spike Standards

Spike Standard*			
CLPP-SPK-1		Matrix: HNO ₃ Dilution 1:1,000	
CLPP-SPK-1-125ML		Volume: 125 mL	
CLPP-SPK-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	50	Cu	250
Al	2,000	Fe	1,000
Ba	2,000	Mn	500
Be	50	Ni	500
Co	500	V	500
Cr	200	Zn	500

Spike Standard*			
CLPP-SPK-2		Matrix: HNO ₃ /Tartaric Acid Dilution 1:1,000	
CLPP-SPK-2-125ML		Volume: 125 mL	
CLPP-SPK-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
		Sb	500

*Instructions included.

Interference Check Standards

Interference Check Standard			
CLPP-ICS-A		Matrix: HNO ₃ Dilution 1:10	
CLPP-ICS-A-125ML		Volume: 125 mL	
CLPP-ICS-A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	5,000	Fe	2,000
Ca	5,000	Mg	5,000

Interference Check Standard			
CLPP-ICS-B		Matrix: HNO ₃ Dilution 1:100	
CLPP-ICS-B-125ML		Volume: 125 mL	
CLPP-ICS-B-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Cu	50
Ba	50	Mn	50
Be	50	Ni	100
Cd	100	Pb	100
Co	50	V	50
Cr	50	Zn	100

Standards for ILMO4.0 are designed for use with ICP-OES. Custom EPA standards are available upon request.

Calibration Standards

Calibration Standard			
CLPP-CAL-1		Matrix: HNO ₃ , Dilution 1:100	
CLPP-CAL-1-125ML		Volume: 125 mL	
CLPP-CAL-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	250	Fe	1,000
Al	2,000	K	5,000
Ba	2,000	Mg	5,000
Be	50	Mn	500
Ca	5,000	Na	5,000
Co	500	Ni	500
Cr	200	V	500
Cu	250	Zn	500

Calibration Standard			
CLPP-CAL-3		Matrix: HNO ₃ , Dilution 1:100	
CLPP-CAL-3-125ML		Volume: 125 mL	
CLPP-CAL-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	1,000	Se	1,000
Cd	500	Tl	1,000
Pb	1,000		

Calibration Standard	
CGSB1	Matrix: HNO ₃ /Tartaric Acid Dilution 1:100
CGSB1-30ML	Volume: 30 mL
CGSB1-125ML	Volume: 125 mL
CGSB1-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	1,000

CICV Standards – Continuing and Initial Calibration Verification

CICV Standard [†]			
QCP-CICV-1		Matrix: HNO ₃ , Dilution 1:100 or 1:500	
QCP-CICV-1-125ML		Volume: 125 mL	
QCP-CICV-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	125	Fe	500
Al	1,000	K	2,500
Ba	1,000	Mg	2,500
Be	25	Mn	250
Ca	2,500	Na	2,500
Co	250	Ni	250
Cr	100	V	250
Cu	125	Zn	250

CICV Standard [†]	
QCP-CICV-2	
QCP-CICV-2-125ML	Matrix: HNO ₃ /Tartaric Acid Dilution 1:100 or 1:500
QCP-CICV-2-500ML	Volume: 125 mL
QCP-CICV-2-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	500

CICV Standard [†]			
QCP-CICV-3		Matrix: HNO ₃ , Dilution 1:100 or 1:500	
QCP-CICV-3-125ML		Volume: 125 mL	
QCP-CICV-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	500	Se	500
Cd	250	Tl	500
Pb	500		

[†]Manufactured from in-house Second Source concentrates, whenever possible.

CRDL Standards – Contract Required Detection Limit

We can create any CRDL standard to best fit your needs.

Custom solutions are our specialty.



Soil & Water Spike Standards

Spike Standard*			
CLPP-SPK-1		Matrix: HNO ₃ Dilution 1:1,000	
CLPP-SPK-1-125ML		Volume: 125 mL	
CLPP-SPK-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	50	Cu	250
Al	2,000	Fe	1,000
Ba	2,000	Mn	500
Be	50	Ni	500
Co	500	V	500
Cr	200	Zn	500

*Instructions included.



Don't see what you need?
Contact us with the solution part number and instrument manufacturer you're seeking, and we'll check our extensive library of solutions.

Interference Check Standards

Interference Check Standard A			
CLPP-ICS-A		Matrix: HNO ₃ Dilution 1:10	
CLPP-ICS-A-125ML		Volume: 125 mL	
CLPP-ICS-A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	5,000	Fe	2,000
Ca	5,000	Mg	5,000

Interference Check Standard B4

CLPP-ICS-B4	Matrix: HNO ₃ Dilution 1:100		
CLPP-ICS-B4-125ML	Volume: 125 mL		
CLPP-ICS-B4-500ML	Volume: 500 mL		
Analyte	µg/mL	Analyte	µg/mL
Ag	20	Mn	50
As	10	Ni	100
Ba	50	Pb	5
Be	50	Sb	60
Cd	100	Se	5
Co	50	Tl	10
Cr	50	V	50
Cu	50	Zn	100

See individual products for recommended instrumentation and revision. Custom EPA standards are available upon request.

Calibration Standards

Calibration Standard	
CGSB1	Matrix: HNO ₃ /Tartaric Acid Dilution 1:100
CGSB1-30ML	Volume: 30 mL
CGSB1-125ML	Volume: 125 mL
CGSB1-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	1,000

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

Calibration Standard			
CLPP-CAL-1		Matrix: HNO ₃ Dilution 1:100	
CLPP-CAL-1-125ML		Volume: 125 mL	
CLPP-CAL-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	250	Fe	1,000
Al	2,000	K	5,000
Ba	2,000	Mg	5,000
Be	50	Mn	500
Ca	5,000	Na	5,000
Co	500	Ni	500
Cr	200	V	500
Cu	250	Zn	500

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

Calibration Standard			
CLPP-CAL-3		Matrix: HNO ₃ Dilution 1:100	
CLPP-CAL-3-125ML		Volume: 125 mL	
CLPP-CAL-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	1,000	Se	1,000
Cd	500	Tl	1,000
Pb	1,000		

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

CICV Standards – Continuing and Initial Calibration Verification

CICV Standard [†]			
QCP-CICV-1		Matrix: HNO ₃ Dilution 1:100 or 1:500	
QCP-CICV-1-125ML		Volume: 125 mL	
QCP-CICV-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	125	Fe	500
Al	1,000	K	2,500
Ba	1,000	Mg	2,500
Be	25	Mn	250
Ca	2,500	Na	2,500
Co	250	Ni	250
Cr	100	V	250
Cu	125	Zn	250

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

CICV Standard [†]			
QCP-CICV-2		Matrix: HNO ₃ /Tartaric Acid Dilution 1:100 or 1:500	
QCP-CICV-2-125ML		Volume: 125 mL	
QCP-CICV-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
		Sb	500

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

CICV Standard [†]			
QCP-CICV-3		Matrix: HNO ₃ Dilution 1:100 or 1:500	
QCP-CICV-3-125ML		Volume: 125 mL	
QCP-CICV-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	500	Se	500
Cd	250	Tl	500
Pb	500		

For use with ICP-OES. Designed for ILM05.2 and ILM05.3.

[†]Manufactured from in-house Second Source concentrates, whenever possible.

Contract Required Detection Limit (CRDL) and Contract Required Quantitation Limit (CRQL) Standards

CRQL Standard			
CLP-AES-CRQL-2		Matrix: HNO ₃ Dilution 1:100 (water samples) 1:500 (soil samples)	
CLP-AES-CRQL-2-125ML		Volume: 125 mL	
CLP-AES-CRQL-2-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	1	K	500
Al	20	Mg	500
As	1	Mn	1.5
Ba	20	Na	500
Be	0.5	Ni	4
Ca	500	Pb	1
Cd	0.5	Sb	6
Co	5	Se	3.5
Cr	1	Tl	2.5
Cu	2.5	V	5
Fe	10	Zn	6

For use with ICP-OES. Designed for ILMO5.3.

Interference Check Standards

Interference Check Standard A			
CLPP-ICS-A		Matrix: HNO ₃ Dilution 1:10	
CLPP-ICS-A-125ML		Volume: 125 mL	
CLPP-ICS-A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	5,000	Fe	2,000
Ca	5,000	Mg	5,000

For use with ICP-OES and ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Interference Check Standard B4			
CLPP-ICS-B4		Matrix: HNO ₃ Dilution 1:100	
CLPP-ICS-B4-125ML		Volume: 125 mL	
CLPP-ICS-B4-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	20	Mn	50
As	10	Ni	100
Ba	50	Pb	5
Be	50	Sb	60
Cd	100	Se	5
Co	50	Tl	10
Cr	50	V	50
Cu	50	Zn	100

For use with ICP-OES and ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Soil & Water Spike Standards

Spike Standard			
CLP-MS-SPK		Matrix: HNO ₃ , Dilution 1:100	
CLP-MS-SPK-125ML		Volume: 125 mL	
CLP-MS-SPK-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	5	Mn	50
Al	200	Ni	50
As	4	Pb	2
Ba	200	Sb	10
Be	5	Se	1
Cd	5	Tl	5
Co	50	V	50
Cr	20	Zn	50
Cu	25		

For use with ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Spike Standard			
CLPP-SPK-1		Matrix: HNO ₃ , Dilution 1:1,000	
CLPP-SPK-1-125ML		Volume: 125 mL	
CLPP-SPK-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	50	Cu	250
Al	2,000	Fe	1,000
Ba	2,000	Mn	500
Be	50	Ni	500
Co	500	V	500
Cr	200	Zn	500

For use with ICP-OES. Designed for ILMO5.2 and ILMO5.3.

Internal Standards & Tuning Solutions

Internal Standard			
6020ISS		Matrix: HNO ₃ , Dilution 1:100	
6020ISS-125ML		Volume: 125 mL	
6020ISS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Rh	10
Ho	10	Sc	10
In	10	Tb	10
⁶ Li	10	Y	10

For use with ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Tuning Solution			
6020TS		Matrix: HNO ₃ , Dilution 1:100	
6020TS-125ML		Volume: 125 mL	
6020TS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Co	10	Li	10
In	10	Tl	10

For use with ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Tuning Solution			
2008TS		Matrix: HNO ₃ , Dilution 1:100 to 1:1,000	
2008TS-125ML		Volume: 125 mL	
2008TS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Be	10	Mg	10
Co	10	Pb	10
In	10		

For use with ICP-MS. Designed for ILMO5.2 and ILMO5.3.

Blank & Rinse Solutions

Blank & Rinse solutions are prepared using double-distilled reagents and 18 megohm ($M\Omega$) deionized water. They come packaged in ultra-clean LDPE bottles and are ready to use. Custom solutions are available upon request.

2% (v/v) Nitric Acid Rinse	
CLP-MS-RINSE	Matrix: HNO_3
CLP-MS-RINSE-125ML	Volume: 125 mL
CLP-MS-RINSE-500ML	Volume: 500 mL

For use with ICP-MS. Designed for ILMO5.2 and ILMO5.3.

See page 100 for more options.

200.7 Calibration

Standards for Method 200.7 are designed for use with ICP-OES. Custom EPA standards are available upon request.

Standards are designed for Method 200.7, Method 3120, Method 6010A Rev. 1 and Method 200.7 CLP-M.

Calibration Standard		
CLPP-SPK-2	Matrix: HNO_3 /Tartaric Acid Dilution 1:100	
CLPP-SPK-2-125ML	Volume: 125 mL	
CLPP-SPK-2-500ML	Volume: 500 mL	
Analyte	$\mu g/mL$	$\lambda(nm)$
Sb	500	206.833

Calibration Standard		
WW-CAL-1A	Matrix: HNO_3 Dilution 1:100	
WW-CAL-1A-125ML	Volume: 125 mL	
WW-CAL-1A-500ML	Volume: 500 mL	
Analyte	$\mu g/mL$	$\lambda(nm)$
Ag	50	328.068
As	1,000	193.759
B	100	249.678
Ba	100	493.409
Ca	1,000	315.887
Cd	200	226.502
Cu	200	324.754
Mn	200	257.610
Se	500	196.090
Sr*	100	421.552

*NOTE: Sr does not exhibit spectral interference problems with any of the EPA Method 200.7 analytes.

Calibration Standard		
WW-CAL-2	Matrix: HNO_3 / HF Dilution 1:100	
WW-CAL-2-125ML	Volume: 125 mL	
WW-CAL-2-500ML	Volume: 500 mL	
Analyte	$\mu g/mL$	$\lambda(nm)$
K	2,000	766.491
Li	500	670.784
Mo	1,000	203.844
Na	1,000	588.995
Ti	1,000	334.941

Calibration Standard		
WW-CAL-3	Matrix: HNO_3 Dilution 1:100	
WW-CAL-3-125ML	Volume: 125 mL	
WW-CAL-3-500ML	Volume: 500 mL	
Analyte	$\mu g/mL$	$\lambda(nm)$
Ce	200	413.765
Co	200	228.616
P	1,000	214.914
V	200	292.402

Method 200.7**200.7 Calibration**

Calibration Standard		
WW-CAL-4A		Matrix: HNO ₃ Dilution 1:100
WW-CAL-4A-125ML WW-CAL-4A-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Al	1,000	308.215
Cr	500	205.552
Hg	200	194.227
Zn	500	213.856

Calibration Standard		
WW-CAL-4B		Matrix: HNO ₃ / HF Dilution 1:100
WW-CAL-4B-125ML WW-CAL-4B-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
SiO ₂	1,000	251.611
Sn	400	189.980

Calibration Standard		
WW-CAL-5		Matrix: HNO ₃ Dilution 1:100
WW-CAL-5-125ML WW-CAL-5-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Be	100	313.042
Fe	1,000	259.940
Mg	1,000	279.079
Ni	200	231.604
Pb	1,000	220.353
Tl	500	190.864

200.7 Interference Checks

Interference Check Standard	
CGSB1	Matrix: HNO ₃ /Tartaric Acid Dilution 1:100
CGSB1-125ML	Volume: 125 mL
CGSB1-500ML	Volume: 500 mL
Analyte	µg/mL
Sb	1,000

Interference Check Standard			
2007ICS-1		Matrix: HNO ₃ / HF Dilution 1:100	
2007ICS-1-125ML 2007ICS-1-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
B	500	Si	230
Mo	300	Ti	1,000

Interference Check Standard			
2007ICS-3		Matrix: HNO ₃ Dilution 1:100	
2007ICS-3-125ML 2007ICS-3-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	300	K	20,000
As	1,000	Mn	200
Ba	300	Ni	300
Be	100	Pb	1,000
Cd	300	Se	500
Co	300	Tl	1,000
Cr	300	V	300
Cu	300	Zn	300

Interference Check Standard			
2007ICS-4		Matrix: HNO ₃ Dilution 1:50	
2007ICS-4-125ML 2007ICS-4-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	3,000	Mg	7,500
Ca	15,000	Na	2,500
Fe	12,500		

200.7 Quality Controls

Quality Control Standard [†]		
QCP-QCS-1		Matrix: HNO ₃ Dilution 1:100
QCP-QCS-1-125ML		Volume: 125 mL
QCP-QCS-1-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	25	328.068
Al	100	308.215
As	200	193.759
B	100	249.678
Ba	100	493.409
Be	100	313.042
Ca	100	315.887
Cd	100	226.502
Ce	100	413.765
Co	100	228.616
Cr	100	205.552
Cu	100	324.754
Fe	100	259.940
Hg	200	194.227
K	500	766.491
Li	100	670.784
Mg	100	279.079
Mn	100	257.610
Na	100	588.995
Ni	100	231.604
P	500	214.914
Pb	200	220.353
Se	100	196.090
Sr	100	421.552
Tl	500	190.864
V	100	292.402
Zn	100	213.856

Quality Control Standard [†]		
QCP-QCS-2		Matrix: HNO ₃ / HF Dilution 1:100
QCP-QCS-2-125ML		Volume: 125 mL
QCP-QCS-2-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Mo	100	203.844
Sb	200	206.833
SiO ₂	500	251.611
Sn	500	189.980
Ti	100	334.941

Quality Control Standard [†]			
IV-7		Matrix: HNO ₃ / HF Dilution 1:100	
IV-7-125ML			Volume: 125 mL
IV-7-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	100	K	1,000
Al	100	Na	100
B	100	Si	50
Ba	100		

Quality Control Standard [†]			
IV-19		Matrix: HNO ₃ / HF Dilution 1:100	
IV-19-125ML			Volume: 125 mL
IV-19-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
As	100	Mo	100
Be	100	Ni	100
Ca	100	Pb	100
Cd	100	Sb	100
Co	100	Se	100
Cr	100	Ti	100
Cu	100	Tl	100
Fe	100	V	100
Mg	100	Zn	100
Mn	100		

[†]Manufactured from in-house Second Source concentrates, whenever possible.

200.7 Quality Controls

Quality Control Standard [†]			
IV-21		Matrix: HNO ₃ / HF Dilution 1:100	
IV-21-125ML		Volume: 125 mL	
IV-21-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	100	Mo	100
Be	100	Ni	100
Ca	100	Pb	100
Cd	100	Sb	100
Co	100	Se	100
Cr	100	Sr	100
Cu	100	Ti	100
Fe	100	Tl	100
Li	100	V	100
Mg	100	Zn	100
Mn	100		

Quality Control Standard [†]			
IV-28		Matrix: HNO ₃ / HF Dilution 1:100	
IV-28-125ML		Volume: 125 mL	
IV-28-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mg	100
Al	100	Mn	100
As	100	Mo	100
B	100	Na	100
Ba	100	Ni	100
Be	100	Pb	100
Ca	100	Sb	100
Cd	100	Se	100
Co	100	Si	50
Cr	100	Sr	100
Cu	100	Ti	100
Fe	100	Tl	100
K	1,000	V	100
Li	100	Zn	100

Quality Control Standard [†]			
IV-26		Matrix: HNO ₃ / HF Dilution 1:100	
IV-26-125ML		Volume: 125 mL	
IV-26-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mg	100
Al	100	Mn	100
As	100	Mo	100
B	100	Na	100
Ba	100	Ni	100
Be	100	Pb	100
Ca	100	Sb	100
Cd	100	Se	100
Co	100	Si	50
Cr	100	Ti	100
Cu	100	Tl	100
Fe	100	V	100
K	1,000	Zn	100



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[†]Manufactured from in-house Second Source concentrates, whenever possible.

Rev. 3.3 & 4.4 Calibrations – Standards may be used for either revision.

Calibration Standard		
CLPP-SPK-2		Matrix: HNO ₃ /Tartaric Acid Dilution 1:100
CLPP-SPK-2-125ML CLPP-SPK-2-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Sb	500	206.833

Calibration Standard		
WW-CAL-1A		Matrix: HNO ₃ Dilution 1:100
WW-CAL-1A-125ML WW-CAL-1A-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	50	328.068
As	1,000	193.759
B	100	249.678
Ba	100	493.409
Ca	1,000	315.887
Cd	200	226.502
Cu	200	324.754
Mn	200	257.610
Se	500	196.090
Sr	100	421.552

NOTE: Sr does not exhibit spectral interference problems with any of the EPA Method 200.7 analytes.

Calibration Standard		
WW-CAL-2		Matrix: HNO ₃ / HF Dilution 1:100
WW-CAL-2-125ML WW-CAL-2-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
K	2,000	766.491
Li	500	670.784
Mo	1,000	203.844
Na	1,000	588.995
Ti	1,000	334.941

Calibration Standard		
WW-CAL-3		Matrix: HNO ₃ Dilution 1:100
WW-CAL-3-125ML WW-CAL-3-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ce	200	413.765
Co	200	228.616
P	1,000	214.914
V	200	292.402

Calibration Standard		
WW-CAL-4A		Matrix: HNO ₃ Dilution 1:100
WW-CAL-4A-125ML WW-CAL-4A-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Al	1,000	308.215
Cr	500	205.552
Hg	200	194.227
Zn	500	213.856

Calibration Standard		
WW-CAL-4B		Matrix: HNO ₃ / HF Dilution 1:100
WW-CAL-4B-125ML WW-CAL-4B-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
SiO ₂	1,000	251.611
Sn	400	189.980

Calibration Standard		
WW-CAL-5		Matrix: HNO ₃ Dilution 1:100
WW-CAL-5-125ML WW-CAL-5-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Be	100	313.042
Fe	1,000	259.940
Mg	1,000	279.079
Ni	200	231.604
Pb	1,000	220.353
Tl	500	190.864

Rev. 3.3 & 4.4 Instrument Performance Checks – Standards may be used for either revision.

Instrument Performance Check		
WW-IPC-1		Matrix: HNO ₃ Dilution 1:100
WW-IPC-1-125ML WW-IPC-1-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	25	328.068
Al	200	308.215
As	200	193.759
B	200	249.678
Ba	200	493.409
Be	200	313.042
Ca	200	315.887
Cd	200	226.502
Ce	200	413.765
Co	200	228.616
Cr	200	205.552
Cu	200	324.754
Fe	200	259.940
Hg	200	194.227
K	1,000	766.491
Li	200	670.784
Mg	200	279.079
Mn	200	257.610
Na	200	588.995
Ni	200	231.604
P	1,000	214.914
Pb	200	220.353
Se	200	196.090
Sr	200	421.552
Tl	200	190.864
V	200	292.402
Zn	200	213.856

Instrument Performance Check		
WW-IPC-3		Matrix: HNO ₃ Dilution 1:100
WW-IPC-3-125ML WW-IPC-3-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	25	328.068
Al	200	308.215
As	200	193.759
B	200	249.678
Ba	200	493.409
Be	200	313.042
Ca	200	315.887
Cd	200	226.502
Co	200	228.616
Cr	200	205.552
Cu	200	324.754
Fe	200	259.940
K	1,000	766.491
Li	200	670.784
Mg	200	279.079
Mn	200	257.610
Na	200	588.995
Ni	200	231.604
P	1,000	214.914
Pb	200	220.353
Se	200	196.090
Sr	200	421.552
Tl	200	190.864
V	200	292.402
Zn	200	213.856

Instrument Performance Check		
WW-IPC-2		Matrix: HNO ₃ / HF Dilution 1:100
WW-IPC-2-125ML WW-IPC-2-500ML		Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	λ(nm)
Mo	200	203.844
Sb	200	206.833
SiO ₂	1,000	251.611
Sn	200	189.980
Ti	200	334.941

Rev. 3.3 & 4.4 Laboratory Fortified Stocks – Standards may be used for either revision.

Laboratory Fortified Stock Solution		
WW-LFS-1	Matrix: HNO ₃ Dilution 1:100	
WW-LFS-1-125ML		Volume: 125 mL
WW-LFS-1-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	7.5	328.068
Al	200	308.215
As	80	193.759
B	30	249.678
Ba	20	493.409
Be	20	313.042
Ca	100	315.887
Cd	20	226.502
Ce	200	413.765
Co	20	228.616
Cr	40	205.552
Cu	30	324.754
Fe	300	259.940
Hg	70	194.227
K	1,000	766.491
Li	20	670.784
Mg	200	279.079
Mn	20	257.610
Na	300	588.995
Ni	50	231.604
P	600	214.914
Pb	100	220.353
Se	200	196.090
Sr	20	421.552
Tl	200	190.864
V	30	292.402
Zn	20	213.856

Laboratory Fortified Stock Solution		
WW-LFS-2	Matrix: HNO ₃ / HF Dilution 1:100	
WW-LFS-2-125ML		Volume: 125 mL
WW-LFS-2-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Mo	40	203.844
Sb	80	206.833
SiO ₂	200	251.611
Sn	70	189.980
Ti	20	334.941



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Rev. 3.3 & 4.4 Quality Controls – Standards may be used for either revision.

Quality Control Standard [†]		
QCP-QCS-1		Matrix: HNO ₃ Dilution 1:100
QCP-QCS-1-125ML		Volume: 125 mL
QCP-QCS-1-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Ag	25	328.068
Al	100	308.215
As	200	193.759
B	100	249.678
Ba	100	493.409
Be	100	313.042
Ca	100	315.887
Cd	100	226.502
Ce	100	413.765
Co	100	228.616
Cr	100	205.552
Cu	100	324.754
Fe	100	259.940
Hg	200	194.227
K	500	766.491
Li	100	670.784
Mg	100	279.079
Mn	100	257.610
Na	100	588.995
Ni	100	231.604
P	500	214.914
Pb	200	220.353
Se	100	196.090
Sr	100	421.552
Tl	500	190.864
V	100	292.402
Zn	100	213.856

Quality Control Standard [†]		
QCP-QCS-2		Matrix: HNO ₃ / HF Dilution 1:100
QCP-QCS-2-125ML		Volume: 125 mL
QCP-QCS-2-500ML		Volume: 500 mL
Analyte	µg/mL	λ(nm)
Mo	100	203.844
Sb	200	206.833
SiO ₂	500	251.611
Sn	500	189.980
Ti	100	334.941

Quality Control Standard [†]			
IV-7		Matrix: HNO ₃ / HF Dilution 1:100	
IV-7-125ML		Volume: 125 mL	
IV-7-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	K	1,000
Al	100	Na	100
B	100	Si	50
Ba	100		

Quality Control Standard [†]			
IV-19		Matrix: HNO ₃ / HF Dilution 1:100	
IV-19-125ML		Volume: 125 mL	
IV-19-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	100	Mo	100
Be	100	Ni	100
Ca	100	Pb	100
Cd	100	Sb	100
Co	100	Se	100
Cr	100	Ti	100
Cu	100	Tl	100
Fe	100	V	100
Mg	100	Zn	100
Mn	100		

[†]Manufactured from in-house Second Source concentrates, whenever possible.

Rev. 3.3 & 4.4 Quality Controls – Standards may be used for either revision.

Quality Control Standard [†]			
IV-21		Matrix: HNO ₃ / HF Dilution 1:100	
IV-21-125ML IV-21-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
As	100	Mo	100
Be	100	Ni	100
Ca	100	Pb	100
Cd	100	Sb	100
Co	100	Se	100
Cr	100	Sr	100
Cu	100	Ti	100
Fe	100	Tl	100
Li	100	V	100
Mg	100	Zn	100
Mn	100		

Quality Control Standard [†]			
IV-28		Matrix: HNO ₃ / HF Dilution 1:100	
IV-28-125ML IV-28-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mg	100
Al	100	Mn	100
As	100	Mo	100
B	100	Na	100
Ba	100	Ni	100
Be	100	Pb	100
Ca	100	Sb	100
Cd	100	Se	100
Co	100	Si	50
Cr	100	Sr	100
Cu	100	Ti	100
Fe	100	Tl	100
K	1,000	V	100
Li	100	Zn	100

Quality Control Standard [†]			
IV-26		Matrix: HNO ₃ / HF Dilution 1:100	
IV-26-125ML IV-26-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	100	Mg	100
Al	100	Mn	100
As	100	Mo	100
B	100	Na	100
Ba	100	Ni	100
Be	100	Pb	100
Ca	100	Sb	100
Cd	100	Se	100
Co	100	Si	50
Cr	100	Ti	100
Cu	100	Tl	100
Fe	100	V	100
K	1,000	Zn	100

[†]Manufactured from in-house Second Source concentrates, whenever possible.

Method 200.8

Standards for Method 200.8 are designed for use with ICP-MS. Custom EPA standards are available upon request.

Rev. 4.4 & 5.4 Calibration – See individual products for recommended revisions.

Calibration Standard			
2008CAL-1			Matrix: HNO ₃ / HF Dilution 1:100
2008CAL-1-125ML			Volume: 125 mL
2008CAL-1-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Mo	20	Sb	20

Designed for Rev. 4.4 and 5.4.

Calibration Standard			
WW-MSCAL-1			Matrix: HNO ₃ Dilution 1:1,000
WW-MSCAL-1-125ML			Volume: 125 mL
WW-MSCAL-1-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Hg	5		

Designed for Rev. 5.4.

Calibration Standard			
2008CAL-2			Matrix: HNO ₃ Dilution 1:100
2008CAL-2-125ML			Volume: 125 mL
2008CAL-2-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	20	Mn	20
Al	20	Ni	20
As	20	Pb	20
Ba	20	Se	20
Be	20	Th	20
Cd	20	Tl	20
Co	20	U	20
Cr	20	V	20
Cu	20	Zn	20

Designed for Rev. 4.4.

Calibration Standard			
WW-MSCAL-2			Matrix: HNO ₃ Dilution 1:100
WW-MSCAL-2-125ML			Volume: 125 mL
WW-MSCAL-2-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	20	Mn	20
Al	20	Ni	20
As	20	Pb	20
Ba	20	Se	100
Be	20	Th	20
Cd	20	Tl	20
Co	20	U	20
Cr	20	V	20
Cu	20	Zn	20

Designed for Rev. 5.4.

Mercury Standard	
MSHG-1PPM	Matrix: HCl
MSHG-1PPM-125ML	Volume: 125 mL
MSHG-1PPM-500ML	Volume: 500 mL
Analyte	µg/mL
Hg	1

Rev. 4.4 & 5.4 Internal Standards

Internal Standard			
2008ISS		Matrix: HNO ₃ , Dilution 1:100 to 1:1,000	
2008ISS-125ML		Volume: 125 mL	
2008ISS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	20	Tb	20
In	20	Y	20
Sc	20		

Designed for Rev. 4.4 and 5.4. Recommended working level is 200 µg/L for Rev. 4.4; 20-200 µg/L for Rev. 5.4. Use this solution with CGAUN1 for Rev. 5.4 if Hg is to be determined by direct analysis.

Rev. 4.4 & 5.4 Quality Controls

Quality Control Standard [†]			
QCP-QCS-3		Matrix: HNO ₃ , Dilution 1:100	
QCP-QCS-3-125ML		Volume: 125 mL	
QCP-QCS-3-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Mn	10
Al	10	Mo	10
As	10	Na	10
Ba	10	Ni	10
Be	10	Pb	10
Ca	10	Sb	10
Cd	10	Se	50
Co	10	Th	10
Cr	10	Tl	10
Cu	10	U	10
Fe	10	V	10
K	10	Zn	10
Mg	10		

Designed for Rev. 4.4 and 5.4.

Quality Control Standard [†]			
QCP-QCS-4		Matrix: HNO ₃ , Dilution 1:100	
QCP-QCS-4-125ML		Volume: 125 mL	
QCP-QCS-4-500ML		Volume: 500 mL	
Analyte	µg/mL		
Hg	5		

Designed for Rev. 4.4 and 5.4.

[†]Manufactured from in-house Second Source concentrates, whenever possible.

Mercury Preservation Solution	
CGAUN1	Matrix: HNO ₃ , Dilution 1:100
CGAUN1-30ML	Volume: 30 mL
CGAUN1-125ML	Volume: 125 mL
CGAUN1-500ML	Volume: 500 mL
Analyte	µg/mL
Au	1,000

Designed for Rev. 5.4. Add an aliquot of this solution to 2008ISS, sufficient to provide a concentration of 100 µg/L in the final dilution of all blanks, calibration standards, and samples.

Rev. 4.4 & 5.4 Tuning

Tuning Solution			
2008TS		Matrix: HNO ₃ , Dilution 1:100 to 1:1,000	
2008TS-125ML		Volume: 125 mL	
2008TS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Be	10	Mg	10
Co	10	Pb	10
In	10		

Designed for Rev. 4.4 and 5.4.

Standards for Method 6020 are designed for use with ICP-MS. Custom EPA standards are available upon request.

CLP-M Version 8

Calibration Standard			
6020CAL-1			Matrix: HNO ₃ / HF Dilution 1:100
6020CAL-1-125ML			Volume: 125 mL
6020CAL-1-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	20	K	20
Al	20	Mg	20
As	20	Mn	20
Ba	20	Na	20
Be	20	Ni	20
Ca	20	Pb	20
Cd	20	Sb	20
Co	20	Se	20
Cr	20	Tl	20
Cu	20	V	20
Fe	20	Zn	20

Spike Standard – Soil			
6020SPK-S			Matrix: HNO ₃ Dilution 1:100
6020SPK-S-125ML			Volume: 125 mL
6020SPK-S-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Ni	25
As	10	Pb	20
Ba	50	Sb	20
Be	5	Se	5
Cd	10	Tl	5
Co	20	V	30
Cr	50	Zn	50
Cu	50		

Interference Check Standard			
6020ICS-8A			Matrix: HNO ₃ Dilution 1:10
6020ICS-8A-125ML			Volume: 125 mL
6020ICS-8A-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Al	1,000	Mg	1,000
C	2,000	Mo	20
Ca	3,000	Na	2,500
Cl ⁻	18,000	P	1,000
Fe	2,500	S	1,000
K	1,000	Ti	20

Spike Standard – Water			
6020SPK-W			Matrix: HNO ₃ Dilution 1:100
6020SPK-W-125ML			Volume: 125 mL
6020SPK-W-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	5	Mn	20
As	10	Ni	20
Ba	50	Pb	10
Be	5	Sb	20
Cd	5	Se	5
Co	20	Tl	5
Cr	20	V	20
Cu	20	Zn	50
Fe	100		

Internal Standard			
6020ISS			Matrix: HNO ₃ Dilution 1:100
6020ISS-125ML			Volume: 125 mL
6020ISS-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Rh	10
Ho	10	Sc	10
In	10	Tb	10
⁶ Li	10	Y	10

Tuning Solution			
6020TS			Matrix: HNO ₃ Dilution 1:100
6020TS-125ML			Volume: 125 mL
6020TS-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Co	10	Li	10
In	10	Tl	10

CLP-M Version 9

Calibration Standard			
6020CAL-1		Matrix: HNO ₃ / HF Dilution 1:100	
6020CAL-1-125ML		Volume: 125 mL	
6020CAL-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	20	K	20
Al	20	Mg	20
As	20	Mn	20
Ba	20	Na	20
Be	20	Ni	20
Ca	20	Pb	20
Cd	20	Sb	20
Co	20	Se	20
Cr	20	Tl	20
Cu	20	V	20
Fe	20	Zn	20

Interference Check Standard			
6020ICS-9A		Matrix: HNO ₃ Dilution 1:10	
6020ICS-9A-125ML		Volume: 125 mL	
6020ICS-9A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	1,000	Mg	1,000
C	2,000	Mo	20
Ca	3,000	Na	2,500
Cl ⁻	21,215	P	1,000
Fe	2,500	S	1,000
K	1,000	Ti	20

Interference Check Standard			
6020ICS-9B		Matrix: HNO ₃ Dilution 1:100	
6020ICS-9B-125ML		Volume: 125 mL	
6020ICS-9B-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	5	Mn	20
As	10	Ni	20
Cd	10	Se	10
Co	20	V	20
Cr	20	Zn	10
Cu	20		

Internal Standard			
6020ISS		Matrix: HNO ₃ Dilution 1:100	
6020ISS-125ML		Volume: 125 mL	
6020ISS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Rh	10
Ho	10	Sc	10
In	10	Tb	10
⁶ Li	10	Y	10

Spike Standard – Soil			
6020SPK-S		Matrix: HNO ₃ Dilution 1:100	
6020SPK-S-125ML		Volume: 125 mL	
6020SPK-S-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Ni	25
As	10	Pb	20
Ba	50	Sb	20
Be	5	Se	5
Cd	10	Tl	5
Co	20	V	30
Cr	50	Zn	50
Cu	50		

Spike Standard – Water			
6020SPK-W		Matrix: HNO ₃ Dilution 1:100	
6020SPK-W-125ML		Volume: 125 mL	
6020SPK-W-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	5	Mn	20
As	10	Ni	20
Ba	50	Pb	10
Be	5	Sb	20
Cd	5	Se	5
Co	20	Tl	5
Cr	20	V	20
Cu	20	Zn	50
Fe	100		

CLP-M Version 9

Tuning Solution			
6020TS		Matrix: HNO ₃ Dilution 1:100	
6020TS-125ML		Volume: 125 mL	
6020TS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Co	10	Li	10
In	10	Tl	10

REV. 0

Calibration Standard			
6020CAL-1		Matrix: HNO ₃ / HF Dilution 1:100	
6020CAL-1-125ML		Volume: 125 mL	
6020CAL-1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	20	K	20
Al	20	Mg	20
As	20	Mn	20
Ba	20	Na	20
Be	20	Ni	20
Ca	20	Pb	20
Cd	20	Sb	20
Co	20	Se	20
Cr	20	Tl	20
Cu	20	V	20
Fe	20	Zn	20

Internal Standard			
6020ISS		Matrix: HNO ₃ Dilution 1:100	
6020ISS-125ML		Volume: 125 mL	
6020ISS-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Bi	10	Rh	10
Ho	10	Sc	10
In	10	Tb	10
⁶ Li	10	Y	10

Interference Check Standard			
6020ICS-0A		Matrix: HNO ₃ Dilution 1:10	
6020ICS-0A-125ML		Volume: 125 mL	
6020ICS-0A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Al	1,000	Mg	1,000
C	2,000	Mo	20
Ca	1,000	Na	1,000
Cl ⁻	10,000	P	1,000
Fe	1,000	S	1,000
K	1,000	Ti	20

Interference Check Standard			
6020ICS-0B		Matrix: HNO ₃ Dilution 1:100	
6020ICS-0B-125ML		Volume: 125 mL	
6020ICS-0B-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	2	Cu	2
As	2	Mn	2
Cd	2	Ni	2
Co	2	Zn	2
Cr	2		

REV. 0

Spike Standard – Soil			
6020SPK-S		Matrix: HNO ₃ Dilution 1:100	
6020SPK-S-125ML 6020SPK-S-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Ni	25
As	10	Pb	20
Ba	50	Sb	20
Be	5	Se	5
Cd	10	Tl	5
Co	20	V	30
Cr	50	Zn	50
Cu	50		

Tuning Solution			
6020TS		Matrix: HNO ₃ Dilution 1:100	
6020TS-125ML 6020TS-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Co	10	Li	10
In	10	Tl	10

Spike Standard – Water			
6020SPK-W		Matrix: HNO ₃ Dilution 1:100	
6020SPK-W-125ML 6020SPK-W-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ag	5	Mn	20
As	10	Ni	20
Ba	50	Pb	10
Be	5	Sb	20
Cd	5	Se	5
Co	20	Tl	5
Cr	20	V	20
Cu	20	Zn	50
Fe	100		

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ION CHROMATOGRAPHY ANION STANDARDS

1,000 µg/mL Anions

Custom anion standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	STARTING MATERIAL	VOLUME	CATALOG #
Acetate, C₂H₃O₂⁻	H ₂ O	Sodium acetate	125 mL 500 mL	ICOAC1-125ML ICOAC1-500ML
Adipate, C₆H₈O₄⁻²	H ₂ O	Adipic acid	125 mL 500 mL	ICADP1-125ML ICADP1-500ML
Benzoate, C₆H₅CO₂⁻	H ₂ O	Benzoic acid	125 mL 500 mL	ICBEN1-125ML ICBEN1-500ML
Bromate, BrO₃⁻	H ₂ O	KBrO ₃	125 mL 500 mL	ICBRO31-125ML ICBRO31-500ML
Bromide, Br⁻	H ₂ O	KBr	125 mL 500 mL	ICBR1-125ML ICBR1-500ML
Butyrate, C₄H₇O₂⁻	H ₂ O	Butyric acid	125 mL 500 mL	ICBTR1-125ML ICBTR1-500ML
Carbonate, CO₃⁻²	H ₂ O	Na ₂ CO ₃	125 mL 500 mL	ICCO31-125ML ICCO31-500ML
Chlorate, ClO₃⁻	H ₂ O	KClO ₃	125 mL 500 mL	ICCLO31-125ML ICCLO31-500ML
Chloride, Cl⁻	H ₂ O	KCl	125 mL 500 mL	ICCL1-125ML ICCL1-500ML
Chlorite, ClO₂⁻	H ₂ O	NaClO ₂	125 mL 500 mL	ICCLO21-125ML ICCLO21-500ML
Chromate, CrO₄⁻²	H ₂ O	(NH ₄) ₂ Cr ₂ O ₇	125 mL 500 mL	ICCR041-125ML ICCR041-500ML
Citrate, C₆H₅O₇⁻³	H ₂ O	Citric acid	125 mL 500 mL	ICCIT1-125ML ICCIT1-500ML
Cyanide, NaCN	H ₂ O	Sodium cyanide	20 mL	CN-1000-25-20ML
Fluoride, F⁻	H ₂ O	NaF	125 mL 500 mL	ICF1-125ML ICF1-500ML
Formate, HCO₂⁻	H ₂ O	Sodium formate	125 mL 500 mL	ICHCO1-125ML ICHCO1-500ML
Glutarate, C₅H₆O₄⁻²	H ₂ O	Glutaric acid	125 mL 500 mL	ICGTR1-125ML ICGTR1-500ML
Glycolate, C₂H₃O₃⁻	H ₂ O	Glycolic acid	125 mL 500 mL	ICGLY1-125ML ICGLY1-500ML
Iodide, I⁻	H ₂ O / stabilizer	NH ₄ I	125 mL 500 mL	ICI1-125ML ICI1-500ML
Lactate, C₃H₅O₃⁻	H ₂ O	Lactic acid	125 mL 500 mL	ICLCT1-125ML ICLCT1-500ML
Malate, C₄H₄O₅⁻²	H ₂ O	Malic acid	125 mL 500 mL	ICMLA1-125ML ICMLA1-500ML
Maleate, C₄H₂O₄⁻²	H ₂ O	Maleic acid	125 mL 500 mL	ICMLE1-125ML ICMLE1-500ML
Malonate, C₃H₂O₄⁻²	H ₂ O	Malonic acid	125 mL 500 mL	ICMLO1-125ML ICMLO1-500ML
Methanesulfonate, CH₃SO₃⁻	H ₂ O	Methanesulfonic acid	125 mL 500 mL	ICMSA1-125ML ICMSA1-500ML
Nitrate, NO₃⁻	H ₂ O	NaNO ₃	125 mL 500 mL	ICNO31-125ML ICNO31-500ML

1,000 µg/mL Anions

Custom anion standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	STARTING MATERIAL	VOLUME	CATALOG #
Nitrate as Nitrogen	H ₂ O	NaNO ₃	125 mL 500 mL	ICNNO31-125ML ICNNO31-500ML
Nitrilotriacetate, NC ₆ H ₆ O ₆ ⁻³	H ₂ O	Nitrilotriacetic acid	125 mL 500 mL	ICNTA1-125ML ICNTA1-500ML
Nitrite, NO ₂ ⁻	H ₂ O	NaNO ₂	125 mL 500 mL	ICNO21-125ML ICNO21-500ML
Nitrite as Nitrogen	H ₂ O	NaNO ₂	125 mL 500 mL	ICNNO21-125ML ICNNO21-500ML
Oxalate, C ₂ O ₄ ⁻²	H ₂ O	Sodium oxalate	125 mL 500 mL	ICOXA1-125ML ICOXA1-500ML
Perchlorate, ClO ₄ ⁻	H ₂ O	KClO ₄	125 mL 500 mL	ICCLO41-125ML ICCLO41-500ML
Phosphate, PO ₄ ⁻³	H ₂ O	NH ₄ H ₂ PO ₄	125 mL 500 mL	ICPO41-125ML ICPO41-500ML
Phosphate as Phosphorus	H ₂ O	NH ₄ H ₂ PO ₄	125 mL 500 mL	ICPPO41-125ML ICPPO41-500ML
Phthalate, C ₆ H ₄ (CO ₂) ₂ ⁻²	H ₂ O	Potassium hydrogen phthalate	125 mL 500 mL	ICKHP1-125ML ICKHP1-500ML
Propionate, C ₃ H ₅ CO ₂ ⁻	H ₂ O	Sodium propionate	125 mL 500 mL	ICOPR1-125ML ICOPR1-500ML
Succinate, C ₄ H ₄ O ₄ ⁻²	H ₂ O	Succinic acid	125 mL 500 mL	ICSCC1-125ML ICSCC1-500ML
Sulfate, SO ₄ ⁻²	H ₂ O	K ₂ SO ₄	125 mL 500 mL	ICSO41-125ML ICSO41-500ML
Tartrate, C ₄ H ₄ O ₆ ⁻²	H ₂ O	Tartaric acid	125 mL 500 mL	ICTRTR1-125ML ICTRTR1-500ML
Thiocyanate, SCN ⁻	H ₂ O	KSCN	125 mL 500 mL	ICSCN1-125ML ICSCN1-500ML
Thiosulfate, S ₂ O ₃ ⁻²	H ₂ O	Sodium thiosulfate	125 mL 500 mL	ICS2031-125ML ICS2031-500ML

10,000 µg/mL

Custom anion standards are available upon request.

10,000 µg/mL

ANALYTE	MATRIX	STARTING MATERIAL	VOLUME	CATALOG #
Chloride, Cl ⁻	H ₂ O	KCl	125 mL 500 mL	ICCL10-125ML ICCL10-500ML
Sulfate, SO ₄ ⁻²	H ₂ O	K ₂ SO ₄	125 mL 500 mL	ICSO410-125ML ICSO410-500ML

100 ppm

Custom anion standards are available upon request.

100 ppm

ANALYTE	MATRIX	µg/mL	VOLUME	CATALOG #
Nitrite, NO ₂ ⁻	H ₂ O	100	125 mL 500 mL	ICNO2-100PPM-125ML ICNO2-100PPM-500ML



ION CHROMATOGRAPHY CATION STANDARDS

1,000 µg/mL Cations

Custom cation standards are available upon request.

1,000 µg/mL

ANALYTE	MATRIX	STARTING MATERIAL	VOLUME	CATALOG #
3-Methoxypropylamine <chem>CH3O(CH2)3NH2</chem>	HCl	3-Methoxypropylamine	125 mL 500 mL	ICMPA1-125ML ICMPA1-500ML
Ammonium, NH₄⁺	H ₂ O	NH ₄ Cl	125 mL 500 mL	ICNH41-125ML ICNH41-500ML
Ammonium as Nitrogen	H ₂ O	NH ₄ Cl	125 mL 500 mL	ICNNH41-125ML ICNNH41-500ML
Barium, Ba⁺²	HNO ₃	Ba(NO ₃) ₂	125 mL 500 mL	ICBA1-125ML ICBA1-500ML
Calcium, Ca⁺²	HNO ₃	CaO	125 mL 500 mL	ICCA1-125ML ICCA1-500ML
Cesium, Cs⁺	HNO ₃	CsNO ₃	125 mL 500 mL	ICCS1-125ML ICCS1-500ML
Diethanolamine, <chem>(HOCH2CH2)2NH</chem>	H ₂ O	Diethanolamine	125 mL 500 mL	ICDEA1-125ML ICDEA1-500ML
Dimethylamine, <chem>NH(CH3)2</chem>	HCl	Dimethylamine	125 mL 500 mL	ICDMA1-125ML ICDMA1-500ML
Lithium, Li⁺	HNO ₃	Li ₂ CO ₃	125 mL 500 mL	ICLI1-125ML ICLI1-500ML
Magnesium, Mg⁺²	HNO ₃	Mg metal	125 mL 500 mL	ICMG1-125ML ICMG1-500ML
Monoethanolamine, <chem>HOCH2CH2NH2</chem>	H ₂ O	Monoethanolamine	125 mL 500 mL	ICMEA1-125ML ICMEA1-500ML
Monomethylamine, <chem>NH2CH3</chem>	HCl	Monomethylamine	125 mL 500 mL	ICMMA1-125ML ICMMA1-500ML
Potassium, K⁺	HNO ₃	KNO ₃	125 mL 500 mL	ICK1-125ML ICK1-500ML
Rubidium, Rb⁺	HNO ₃	RbNO ₃	125 mL 500 mL	ICRB1-125ML ICRB1-500ML
Sodium, Na⁺	HNO ₃	Na ₂ CO ₃	125 mL 500 mL	ICNA1-125ML ICNA1-500ML
Strontium, Sr⁺²	HNO ₃	SrCO ₃	125 mL 500 mL	ICSR1-125ML ICSR1-500ML
Tetramethylammonium, <chem>N+(CH3)4</chem>	H ₂ O	Tetramethylammonium hydroxide	125 mL 500 mL	ICTMAH1-125ML ICTMAH1-500ML
Triethanolamine, <chem>(HOCH2CH2)3N</chem>	H ₂ O	Triethanolamine	125 mL 500 mL	ICTEA1-125ML ICTEA1-500ML
Triethylamine, <chem>(CH3CH2)3N</chem>	HCl	Triethylamine	125 mL 500 mL	ICTA1-125ML ICTA1-500ML
Trimethylamine, <chem>(CH3)3N</chem>	HCl	Trimethylamine	125 mL 500 mL	ICTMA1-125ML ICTMA1-500ML

Multi-Ion Standards

Anion Calibration Standard			
IC-FAS-1A		Matrix: H ₂ O	
IC-FAS-1A-125ML		Volume: 125 mL	
IC-FAS-1A-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Br ⁻	100	NO ₂ ⁻	100
Cl ⁻	30	PO ₄ ⁻³	150
F ⁻	20	SO ₄ ⁻²	150
NO ₃ ⁻	100		

Cation Calibration Standard			
IC-SCS1		Matrix: HNO ₃	
IC-SCS1-125ML		Volume: 125 mL	
IC-SCS1-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ca ⁺²	1,000	Mg ⁺²	200
K ⁺	200	Na ⁺	200
Li ⁺	50	NH ₄ ⁺	400

Used for daily calibration.

Cation Calibration Standard			
IV-STOCK-7		Matrix: HNO ₃	
IV-STOCK-7-125ML		Volume: 125 mL	
IV-STOCK-7-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba ⁺²	100	Mn ⁺²	100
Ca ⁺²	100	Na ⁺	100
K ⁺	100	NH ₄ ⁺	100
Li ⁺	100	Sr ⁺²	100
Mg ⁺²	100		

Used for daily calibration.

Anion Calibration Standard			
IV-STOCK-59		Matrix: H ₂ O	
IV-STOCK-59-125ML		Volume: 125 mL	
IV-STOCK-59-500ML		Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Br ⁻	1000	NO ₂ ⁻	1000
Cl ⁻	1000	PO ₄ ⁻³	1000
F ⁻	1000	SO ₄ ⁻²	1000
NO ₃ ⁻	1000		

Anion Mix A	
IV-STOCK-61	Matrix: H ₂ O
IV-STOCK-61-125ML	Volume: 125 mL
IV-STOCK-61-500ML	Volume: 500 mL
Analyte	Range
Br ⁻	20
F ⁻	10
NO ₂ ⁻	20
SO ₄ ⁻²	30
Cl ⁻	20
NO ₃ ⁻	20
PO ₄ ⁻³	30

Cation Mix B	
IV-STOCK-62	Matrix: H ₂ O
IV-STOCK-62-125ML	Volume: 125 mL
IV-STOCK-62-500ML	Volume: 500 mL
Analyte	Range
Br ⁻	20
F ⁻	10
NO ₂ ⁻	20
SO ₄ ⁻²	30
Cl ⁻	20
NO ₃ ⁻	20
PO ₄ ⁻³	30

I Common Multi-Ion Standards



ION CHROMATOGRAPHY MULTI-ION STANDARDS

Multi-Ion Standards

Anion Mix 4	
IV-STOCK-63	Matrix: H ₂ O
IV-STOCK-63-125ML	Volume: 125 mL
IV-STOCK-63-500ML	Volume: 500 mL
Analyte	Range
Br ⁻	40
F ⁻	20
NO ₂ ⁻	40
Cl ⁻	40
NO ₃ ⁻	40
SO ₄ ⁻²	40

Anion Mix 5	
IV-STOCK-64	Matrix: H ₂ O
IV-STOCK-64-125ML	Volume: 125 mL
IV-STOCK-64-500ML	Volume: 500 mL
Analyte	Range
Br ⁻	50
Cl ⁻	50
Fl ⁻	25
NO ₃ ⁻	50
NO ₂ ⁻	50
PO ₄ ⁻³	50
SO ₄ ⁻²	50

Custom eluent concentrates are available upon request.

0.18 M Sodium Carbonate/0.17 M Sodium Bicarbonate

ELUENT1817-100ML	Volume: 100 mL	Matrix: H ₂ O
ELUENT1817-500ML	Volume: 500 mL	Dilution: 1:100
For preparation of 1.8 mM CO ₃ ⁻² / 1.7 mM HCO ₃ ⁻ eluent.		

0.35 M Sodium Carbonate/0.10 M Sodium Bicarbonate

ELUENT3510-100ML	Volume: 100 mL	Matrix: H ₂ O
ELUENT3510-500ML	Volume: 500 mL	Dilution: 1:100
For preparation of 3.5 mM CO ₃ ⁻² / 1.0 mM HCO ₃ ⁻ eluent.		

0.5 M Sodium Bicarbonate

BICARB-100ML	Volume: 100 mL	Matrix: H ₂ O
BICARB-500ML	Volume: 500 mL	Dilution: 1:100
For preparation of various CO ₃ ⁻² / HCO ₃ ⁻ eluents.		

0.5 M Sodium Carbonate

CARB-100ML	Volume: 100 mL	Matrix: H ₂ O
CARB-500ML	Volume: 500 mL	Dilution: 1:100
For preparation of various CO ₃ ⁻² / HCO ₃ ⁻ eluents.		

1.8 M Methanesulfonic Acid

MSAELUENT-100ML	Volume: 100 mL	Matrix: H ₂ O
MSAELUENT-500ML	Volume: 500 mL	Dilution: 1:100
For preparation of 18 mM CH ₃ SO ₃ H eluent for analyzing cations.		

Method 300.0 & 300.1

300.0 Rev. 2.1 Part A / 300.1 Part A Custom EPA standards are available upon request.

0.18 M Sodium Carbonate/0.17 M Sodium Bicarbonate

ELUENT1817-100ML	Volume: 100 mL	Matrix: H ₂ O
ELUENT1817-500ML	Volume: 500 mL	Dilution 1:100

For preparation of 1.8 mM CO₃⁻² / 1.7 mM HCO₃⁻ eluent.

Calibration Standard

300-CAL-A-125ML	Volume: 125 mL	Matrix: H ₂ O	
300-CAL-A-500ML	Volume: 500 mL	Dilution 1:10 to 1:100	
Analyte	µg/mL	Analyte	µg/mL
Br ⁻	100	Nitrite as Nitrogen	30
Cl ⁻	30	Nitrate as Nitrogen	25
F ⁻	20	Phosphate as Phosphorus	50
SO ₄ ⁻²	150		

Dichloroacetate Standard

ICDCA-S-125ML	Volume: 125 mL	Matrix: H ₂ O
ICDCA-S-500ML	Volume: 500 mL	
Analyte	µg/mL	
Cl ₂ HC ₂ O ₂ ⁻	500	

For use as a surrogate analyte.

Laboratory Fortification Stock Standard

300-LFS-A-125ML	Volume: 125 mL	Matrix: H ₂ O	
300-LFS-A-500ML	Volume: 500 mL	Dilution 1:100 to 1:1,000	
Analyte	µg/mL	Analyte	µg/mL
Br ⁻	1,000	Nitrite as Nitrogen	300
Cl ⁻	300	Nitrate as Nitrogen	300
F ⁻	200	Phosphate as Phosphorus	500
SO ₄ ⁻²	1,500		

This standard is used to prepare the Laboratory Fortified Blank and the Laboratory Fortified Sample Matrix

QC Standard/Instrument Performance Check[†]

QCP-QCS-5-125ML	Volume: 125 mL	Matrix: H ₂ O	
QCP-QCS-5-500ML	Volume: 500 mL	Dilution 1:10 to 1:100	
Analyte	µg/mL	Analyte	µg/mL
Br ⁻	50	Nitrite as Nitrogen	15
Cl ⁻	15	Nitrate as Nitrogen	10
F ⁻	10	Phosphate as Phosphorus	25
SO ₄ ⁻²	75		

[†]Manufactured from in-house Second Source concentrates.

Can be used to prepare the QC Sample or the IPC Solution.

ION CHROMATOGRAPHY EPA STANDARDS

Method 300.0 & 300.1

300.1 Part B Custom EPA standards are available upon request.

Bromate	
ICBRO31	Matrix: H ₂ O
ICBRO31-125ML	Volume: 125 mL
ICBRO31-500ML	Volume: 500 mL
Analyte	µg/mL
BrO₃⁻	1,000

Chlorate	
ICCLO31	Matrix: H ₂ O
ICCLO31-125ML	Volume: 125 mL
ICCLO31-500ML	Volume: 500 mL
Analyte	µg/mL
ClO₃⁻	1,000

Bromide	
ICBR1	Matrix: H ₂ O
ICBR1-125ML	Volume: 125 mL
ICBR1-500ML	Volume: 500 mL
Analyte	µg/mL
Br⁻	1,000

Dichloracetate Standard	
ICDCA-S	Matrix: H ₂ O
ICDCA-S-125ML	Volume: 125 mL
ICDCA-S-500ML	Volume: 500 mL
Analyte	µg/mL
Cl₂HC₂O₂⁻	500

For use as a surrogate analyte.

Chlorite	
ICCLO21	Matrix: H ₂ O
ICCLO21-125ML	Volume: 125 mL
ICCLO21-500ML	Volume: 500 mL
Analyte	µg/mL
ClO₂⁻	1,000

NOTE: Contains less than 10 ppm ClO₃⁻.

Custom EPA standards are available upon request.

1,400 µmhos/cm Conductivity at 25°C	
CON1400-25	Matrix: H ₂ O
CON1400-25-125ML	Volume: 125 mL
CON1400-25-500ML	Volume: 500 mL
CON1400-25-1L	Volume: 1 L

Perchlorate	
ICCLO41	Matrix: H ₂ O
ICCLO41-125ML	Volume: 125 mL
ICCLO41-500ML	Volume: 500 mL
Analyte	µg/mL
ClO₄⁻	1,000



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 - ✓ Traceable to NIST SRMs
 - ✓ Produced under ISO 9001
 - ✓ Assayed by validated procedures

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ATOMIC ABSORPTION SINGLE-ELEMENT STANDARDS

1,000 µg/mL Standards

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Aluminum, Al	HNO ₃	125 mL 500 mL	AAAL1-125ML AAAL1-500ML
Antimony, Sb	HNO ₃ / Tartaric Acid	125 mL 500 mL	AASB1-125ML AASB1-500ML
Arsenic, As	HNO ₃	125 mL 500 mL	AAAS1-125ML AAAS1-500ML
Barium, Ba	HNO ₃	125 mL 500 mL	AABA1-125ML AABA1-500ML
Beryllium, Be	HNO ₃	125 mL 500 mL	AABE1-125ML AABE1-500ML
Bismuth, Bi	HNO ₃	125 mL 500 mL	AABI1-125ML AABI1-500ML
Boron, B	NH ₄ OH	125 mL 500 mL	AAB1-125ML AAB1-500ML
Cadmium, Cd	HNO ₃	125 mL 500 mL	AACD1-125ML AACD1-500ML
Calcium, Ca	HNO ₃	125 mL 500 mL	AACA1-125ML AACA1-500ML
Cerium, Ce	HNO ₃	125 mL 500 mL	AACE1-125ML AACE1-500ML
Cesium, Cs	HNO ₃	125 mL 500 mL	AACS1-125ML AACS1-500ML
Chromium, Cr	HNO ₃	125 mL 500 mL	AACR1-125ML AACR1-500ML
Cobalt, Co	HNO ₃	125 mL 500 mL	AACO1-125ML AACO1-500ML
Copper, Cu	HNO ₃	125 mL 500 mL	AAUC1-125ML AAUC1-500ML
Dysprosium, Dy	HNO ₃	125 mL 500 mL	AADY1-125ML AADY1-500ML
Erbium, Er	HNO ₃	125 mL 500 mL	AAER1-125ML AAER1-500ML
Europium, Eu	HNO ₃	125 mL 500 mL	AAEU1-125ML AAEU1-500ML
Gadolinium, Gd	HNO ₃	125 mL 500 mL	AAGD1-125ML AAGD1-500ML
Gallium, Ga	HNO ₃	125 mL 500 mL	AAGA1-125ML AAGA1-500ML
Germanium, Ge	HNO ₃ / HF	125 mL 500 mL	AAGE1-125ML AAGE1-500ML
Gold, Au	HCl	125 mL 500 mL	AAAU1-125ML AAAU1-500ML
Hafnium, Hf	HNO ₃ / HF	125 mL 500 mL	AAHF1-125ML AAHF1-500ML
Holmium, Ho	HNO ₃	125 mL 500 mL	AAHO1-125ML AAHO1-500ML
Indium, In	HNO ₃	125 mL 500 mL	AAIN1-125ML AAIN1-500ML

1,000 µg/mL Standards

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Iridium, Ir	HCl	125 mL 500 mL	AAIR1-125ML AAIR1-500ML
Iron, Fe	HNO ₃	125 mL 500 mL	AAFE1-125ML AAFE1-500ML
Lanthanum, La	HNO ₃	125 mL 500 mL	AALA1-125ML AALA1-500ML
Lead, Pb	HNO ₃	125 mL 500 mL	AAPB1-125ML AAPB1-500ML
Lithium, Li	HNO ₃	125 mL 500 mL	AALI1-125ML AALI1-500ML
Lutetium, Lu	HNO ₃	125 mL 500 mL	AALU1-125ML AALU1-500ML
Magnesium, Mg	HNO ₃	125 mL 500 mL	AAMG1-125ML AAMG1-500ML
Manganese, Mn	HNO ₃	125 mL 500 mL	AAMN1-125ML AAMN1-500ML
Mercury, Hg	HNO ₃	125 mL 500 mL	AAHG1-125ML AAHG1-500ML
Molybdenum, Mo	NH ₄ OH	125 mL 500 mL	AAMO1-125ML AAMO1-525ML
Neodymium, Nd	HNO ₃	125 mL 500 mL	AAND1-125ML AAND1-500ML
Nickel, Ni	HNO ₃	125 mL 500 mL	AANI1-125ML AANI1-500ML
Niobium, Nb	HNO ₃ / HF	125 mL 500 mL	AANB1-125ML AANB1-500ML
Palladium, Pd	HCl	125 mL 500 mL	AAPD1-125ML AAPD1-500ML
Phosphorus, P	H ₂ O	125 mL 500 mL	AAP1-125ML AAP1-500ML
Platinum, Pt	HCl	125 mL 500 mL	AAPT1-125ML AAPT1-500ML
Potassium, K	HNO ₃	125 mL 500 mL	AAK1-125ML AAK1-500ML
Praseodymium, Pr	HNO ₃	125 mL 500 mL	AAPR1-125ML AAPR1-500ML
Rhenium, Re	HNO ₃	125 mL 500 mL	AARE1-125ML AARE1-500ML
Rhodium, Rh	HCl	125 mL 500 mL	AARH1-125ML AARH1-500ML
Rubidium, Rb	HNO ₃	125 mL 500 mL	AARB1-125ML AARB1-500ML
Ruthenium, Ru	HCl	125 mL 500 mL	AARU1-125ML AARU1-500ML
Samarium, Sm	HNO ₃	125 mL 500 mL	AASM1-125ML AASM1-500ML
Scandium, Sc	HNO ₃	125 mL 500 mL	AASC1-125ML AASC1-500ML

ATOMIC ABSORPTION SINGLE-ELEMENT STANDARDS

1,000 µg/mL Standards

1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Selenium, Se	HNO ₃	125 mL 500 mL	AASE1-125ML AASE1-500ML
Silicon, Si	HNO ₃ / HF	125 mL 500 mL	AASI1-125ML AASI1-500ML
Silver, Ag	HNO ₃	125 mL 500 mL	AAAG1-125ML AAAG1-500ML
Sodium, Na	HNO ₃	125 mL 500 mL	AANA1-125ML AANA1-500ML
Strontium, Sr	HNO ₃	125 mL 500 mL	AASR1-125ML AASR1-500ML
Sulfur, S	H ₂ O	125 mL 500 mL	AAS1-125ML AAS1-500ML
Tantalum, Ta	HNO ₃ / HF	125 mL 500 mL	AATA1-125ML AATA1-500ML
Tellurium, Te	HCl	125 mL 500 mL	AATE1-125ML AATE1-500ML
Terbium, Tb	HNO ₃	125 mL 500 mL	AATB1-125ML AATB1-500ML
Thallium, Tl	HNO ₃	125 mL 500 mL	AATL1-125ML AATL1-500ML
Thorium, Th	HNO ₃	125 mL 500 mL	AATH1-125ML AATH1-500ML
Thulium, Tm	HNO ₃	125 mL 500 mL	AATM1-125ML AATM1-500ML
Tin, Sn	HNO ₃ / HF	125 mL 500 mL	AASN1-125ML AASN1-500ML
Titanium, Ti	HNO ₃ / HF	125 mL 500 mL	AATI1-125ML AATI1-500ML
Tungsten, W	HNO ₃ / HF	125 mL 500 mL	AAW1-125ML AAW1-500ML
Uranium, U	HNO ₃	125 mL 500 mL	AAU1-125ML AAU1-500ML
Vanadium, V	HNO ₃	125 mL 500 mL	AAV1-125ML AAV1-500ML
Ytterbium, Yb	HNO ₃	125 mL 500 mL	AAYB1-125ML AAYB1-500ML
Yttrium, Y	HNO ₃	125 mL 500 mL	AAY1-125ML AAY1-500ML
Zinc, Zn	HNO ₃	125 mL 500 mL	AAZN1-125ML AAZN1-500ML
Zirconium, Zr	HF	125 mL 500 mL	AAZR1-125ML AAZR1-500ML

Modifiers, Buffers & Releasing Agents

Custom modifiers, buffers and releasing agents are available upon request.

1% Lanthanum Releasing Agent	
LACB1	Matrix: HCl
LACB1-125ML LACB1-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
La	10,000

0.5% Palladium Modifier	
MM-PD-5	Matrix: HNO ₃
MM-PD-5-125ML MM-PD-5-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
Pd	5,000

2% Lithium Ionization Buffer	
LINB2	Matrix: HNO ₃
LINB2-125ML LINB2-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
Li	20,000

1% Palladium Modifier	
MM-PD-10	Matrix: HNO ₃
MM-PD-10-125ML MM-PD-10-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
Pd	10,000

1% Magnesium Nitrate Modifier	
MM-MG-10	Matrix: HNO ₃
MM-MG-10-125ML MM-MG-10-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
Mg(NO ₃) ₂	10,000

0.3% Palladium / 0.2% Magnesium Nitrate Modifier			
MM-PDMG-32	Matrix: HNO ₃	MM-PDMG-32-125ML MM-PDMG-32-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Mg(NO ₃) ₂	2,000	Pd	3,000

4% Phosphate Modifier	
MM-P-40	Matrix: H ₂ O
MM-P-40-125ML MM-P-40-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
PO ₄	40,000

Don't see what you need?

Contact us with the solution part number and instrument manufacturer you're seeking, and we'll check our extensive library of solutions.



ATOMIC ABSORPTION MULTI-ELEMENT STANDARDS

Multi-Element Standards

GFAA Calibration Standard			
IV-STOCK-18 M		Matrix: HNO ₃	
IV-STOCK-18-125ML			Volume: 125 mL
IV-STOCK-18-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	10	Cu	50
Al	100	Fe	20
As	100	Mn	20
Ba	50	Ni	50
Be	5	Pb	100
Cd	5	Sb	100
Co	50	Se	100
Cr	20	Tl	100

AA Calibration Standard			
IV-STOCK-25 C		Matrix: HNO ₃	
IV-STOCK-25-125ML			Volume: 125 mL
IV-STOCK-25-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Cr	3	Ni	10

C Common Multi-Element Standards

M Merck/MilliporeSigma

TCLP

Toxicity Characteristic Leachate Procedure (TCLP)

Custom EPA standards are available upon request.

TCLP Hg Standard	
TCLP-AA-HG	Matrix: HNO ₃ , Dilution: As required
TCLP-AA-HG-125ML	Volume: 125 mL
TCLP-AA-HG-500ML	Volume: 500 mL
Analyte	µg/mL
Hg	20

TCLP Standard			
TCLP-1REV		Matrix: HNO ₃ , Dilution: As required	
TCLP-1REV-125ML			Volume: 125 mL
TCLP-1REV-500ML			Volume: 500 mL
Analyte	µg/mL	Analyte	µg/mL
Ag	25	Cr	25
As	25	Pb	25
Ba	500	Se	5
Cd	5		

CLP Graphite Furnace Standards

Custom EPA standards are available upon request.

We can create any CLP Graphite Furnace Standard to best fit your needs.





Should you ever have a problem with any standard, Water QC or otherwise, let us know. We'll immediately investigate the problem by testing a retained sample of your solution. If the error is on our end, you'll be offered a full refund or a free replacement — your choice.

Our priority is your total satisfaction.

Customer Satisfaction — The primary reason we flex to your specs.

- ✓ Up to four-year shelf life
- ✓ Traceable to NIST SRMs
- ✓ Produced under ISO 9001
- ✓ Produced under ISO 17025
- ✓ Produced under ISO 17034
- ✓ Assayed by optimal validated procedures

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POTABLE WATER STANDARDS

Portable Water Standards

Custom potable water standards for certain products are available upon request.

Bromate	
ICBRO31	Matrix: H ₂ O
ICBRO31-125ML	Volume: 125 mL
ICBRO31-500ML	Volume: 500 mL
Analyte	µg/mL
BrO₃⁻	1,000

Chlorite	
ICCLO21	Matrix: H ₂ O
ICCLO21-125ML	Volume: 125 mL
ICCLO21-500ML	Volume: 500 mL
Analyte	µg/mL
ClO₂⁻	1,000

NOTE: Contains less than 10 ppm ClO₂⁻.

Bromide	
ICBR1	Matrix: H ₂ O
ICBR1-125ML	Volume: 125 mL
ICBR1-500ML	Volume: 500 mL
Analyte	µg/mL
Br⁻	1,000

Cyanide Standard	
QCP-CN-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Total Cyanide	0.1–1 mg/L
Free Cyanide	0.05–0.5 mg/L
Cyanide Amenable to Chlorination	0.05–0.5 mg/L

Cation Standard	
QCP-CAT-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:100
Analyte	Range
Ca⁺²	3.5–110 mg/L
K⁺	4–40 mg/L
Mg⁺²	2–40 mg/L
Na⁺	6–100 mg/L

Demand Standard	
QCP-DMD-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
TOC	6–100 mg/L
COD	30–250 mg/L
CBOD	15–250 mg/L
BOD	15–250 mg/L

Chlorate	
ICCLO31	Matrix: H ₂ O
ICCLO31-125ML	Volume: 125 mL
ICCLO31-500ML	Volume: 500 mL
Analyte	µg/mL
ClO₃⁻	1,000

Hg Standard	
QCP-HG-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:200
Analyte	Range*
Hg	2–30 µg/L

Used in conjunction with QCP-TMS and QCP-MTL. *Parts per billion

POTABLE WATER STANDARDS

Potable Water Standards

Water Hardness Standard	
QCP-WH-500ML	Volume: 500 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
Ca	8.7–275 mg/L
Mg	2.9–92 mg/L
Hardness as CaCO₃	17–440 mg/L

pH Standard	
QCP-PH-20ML	Volume: 20 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
pH	5–10 units

Metals Standard	
QCP-MTL-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:200
Analyte	Range*
Ag	26–1,000 µg/L
Al	200–4,000 µg/L
As	70–900 µg/L
Ba	100–2,500 µg/L
Be	8–900 µg/L
Ca	3.5–110 mg/L
Cd	8–1,000 µg/L
Cr	17–1,000 µg/L
Cu	40–1,000 µg/L
Fe	200–4,000 µg/L
Mn	70–4,000 µg/L
Ni	80–3,000 µg/L
Pb	70–3,000 µg/L
Sb	90–900 µg/L
Se	90–2,000 µg/L
Tl	60–900 µg/L
Zn	100–2,000 µg/L

*Parts per billion

Minerals Standard	
QCP-MIN-500ML	Volume: 500 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
Cl⁻	35–275 mg/L
F⁻	0.3–4 mg/L
K⁺	4–40 mg/L
Nitrate as Nitrogen	0.25–40 mg/L
Conductivity	200–1,200 µmhos
Alkalinity	10–400 mg/L
Na⁺	6–100 mg/L
SO₄⁻²	5–125 mg/L

Nitrite Standard	
QCP-NT-20ML	Volume: 20 mL Matrix: H ₂ O Dilution: 1:100
Analyte	Range
Nitrite as Nitrogen	0.4–4 mg/L

Simple Nutrients Standard	
QCP-NUT-1-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Phosphate as Phosphorus	0.5–5.5 mg/L
Nitrate plus Nitrite as Nitrogen	0.25–40 mg/L
Nitrate as Nitrogen	0.25–40 mg/L
Ammonium as Nitrogen	0.65–20 mg/L

Potable Water Standards

Simulated Rainwater Standard	
QCP-RAIN-125ML	Volume: 125 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
Ca ⁺²	0.05–0.5 mg/L
Cl ⁻	0.1–5 mg/L
F ⁻	0.05–1 mg/L
K ⁺	0.05–1 mg/L
Mg ⁺²	0.05–0.5 mg/L
pH	3.5–4.5 units
Conductivity	20–120 µmhos
Na ⁺	0.2–2 mg/L
NH ₄ ⁺	0.1–1.5 mg/L
NO ₃ ⁻	0.1–10 mg/L
SO ₄ ⁻²	1–12 mg/L

Total Residual Chlorine Standard	
QCP-TRC-10ML	Volume: 10 mL Matrix: H ₂ O Dilution: 1:200
Analyte	Range
Total Residual Chlorine	0.5–3.0 mg/L

Turbidity Standard	
QCP-TURB-20ML	Volume: 20 mL Matrix: H ₂ O Dilution: 1:100
Analyte	Range
Turbidity	2–30 NTU

Custom wastewater standards for certain products are available upon request.

Cation Standard	
QCP-CAT-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:100
Analyte	Range
Ca ⁺²	3.5–110 mg/L
K ⁺	4–40 mg/L
Mg ⁺²	2–40 mg/L
Na ⁺	6–100 mg/L

Complex Nutrients Standard	
QCP-NUT-2-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Total Organic Phosphorus as Phosphorus (P)	0.5–10 mg/L
Total Kjeldahl Nitrogen as Nitrogen (N)	1.5–35 mg/L

Chromium ⁺⁶ Standard	
QCP-CR6-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:100
Analyte	Range*
Cr ⁺⁶	45–900 µg/L

*Parts per billion

Cyanide Standard	
QCP-CN-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Total Cyanide	0.01–1 mg/L
Free Cyanide	0.05–0.5 mg/L
Cyanide Amenable to Chlorination	0.05–0.5 mg/L

WASTEWATER STANDARDS

Wastewater Standards

Demand Standard	
QCP-DMD-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
TOC	6–100 mg/L
COD	30–250 mg/L
CBOD	15–250 mg/L
BOD	15–250 mg/L

Water Hardness Standard	
QCP-WH-500ML	Volume: 500 mL Matrix: HNO ₃ Dilution: Certificate of Analysis
Analyte	Range
Ca	8.7–275 mg/L
Mg	2.9–92 mg/L
Hardness as CaCO ₃	17–440 mg/L

Hg Standard	
QCP-HG-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:200
Analyte	Range*
Hg	2–30 µg/L

Can be used in conjunction with QCP-TMS and QCP-MTL. *Parts per billion.

Minerals Standard	
QCP-MIN-500ML	Volume: 500 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
Cl ⁻	35–275 mg/L
F ⁻	0.3–4 mg/L
K ⁺	4–40 mg/L
Nitrate as Nitrogen	0.25–40 mg/L
Conductivity	200–1,200 µmhos
Alkalinity	10–400 mg/L
Na ⁺	6–100 mg/L
SO ₄ ⁻²	5–125 mg/L

Oil & Grease Standard	
QCP-OG-A-20ML	Volume: 20 mL Matrix: Acetone Dilution 1:100
Analyte	Range
Oil & Grease	20–200 mg/L

Applicable to gravimetric methods only.

Oil & Grease Standard	
QCP-OG-W-250ML	Volume: 250 mL Matrix: H ₂ O Dilution: See Certificate of Analysis
Analyte	Range
Oil & Grease	20–200 mg/L

pH Standard	
QCP-PH-20ML	Volume: 20 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
pH	5–10 units

Phenolics Standard	
QCP-PHEN-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Total Phenolics	0.06–5 mg/L

Simple Nutrients Standard	
QCP-NUT-1-20ML	Volume: 20 mL Matrix: H ₂ O Dilution 1:200
Analyte	Range
Phosphate as Phosphorus	0.5–5.5 mg/L
Nitrate plus Nitrite as Nitrogen	0.25–40 mg/L
Nitrate as Nitrogen	0.25–40 mg/L
Ammonium as Nitrogen	0.65–20 mg/L

Wastewater Standards

Solids Standard	
QCP-SLD-450ML	Volume: 450 mL Matrix: H ₂ O Dilution: Ready to Use
Analyte	Range
Total Solids (total residue)	140–800 mg/L
Suspended Solids (nonfilterable residue)	20–100 mg/L
Dissolved Solids (filterable residue)	140–800 mg/L

Total Residual Chlorine Standard	
QCP-TRC-10ML	Volume: 10 mL Matrix: H ₂ O Dilution: 1:200
Analyte	Range
Total Residual Chlorine	0.5–3.0 mg/L

1,000 µg/mL Total Cyanide	
CN-1000-25-20ML	Volume: 20 mL Matrix: H ₂ O
Analyte	µg/mL
CN ⁻	1,000

1,000 µg/mL Total Cyanide (Set of 6)	
CN-1000-25-6	Volume: 20 mL X 6 Matrix: H ₂ O
Analyte	µg/mL
CN ⁻	1,000

For confidence in your results, keep refrigerated/frozen and use individual vials as needed.

Mercury Standard	
MSHG-1PPM	Matrix: HCl
MSHG-1PPM-125ML	Volume: 125 mL
MSHG-1PPM-500ML	Volume: 500 mL
Analyte	µg/mL
Hg	1

Trace Metals Standard	
QCP-TMS-20ML	Volume: 20 mL Matrix: HNO ₃ Dilution 1:100
Analyte	Range*
Ag	26–1,000 µg/L
Al	200–4,000 µg/L
As	70–900 µg/L
B	800–2,000 µg/L
Ba	100–2,500 µg/L
Be	8–900 µg/L
Cd	8–1,000 µg/L
Co	28–1,000 µg/L
Cr	17–1,000 µg/L
Cu	40–1,000 µg/L
Fe	200–4,000 µg/L
Mn	70–4,000 µg/L
Mo	60–600 µg/L
Ni	80–3,000 µg/L
Pb	70–3,000 µg/L
Sb	90–900 µg/L
Se	90–2,000 µg/L
Sr	30–500 µg/L
Tl	60–900 µg/L
V	50–2,000 µg/L
Zn	100–2,000 µg/L

*Parts per billion

Turbidity Standard	
QCP-TURB-20ML	Volume: 20 mL Matrix: H ₂ O Dilution: 1:100
Analyte	Range
Turbidity	2–30 NTU

TOTAL ORGANIC CARBON (TOC) STANDARDS

TOC Standards

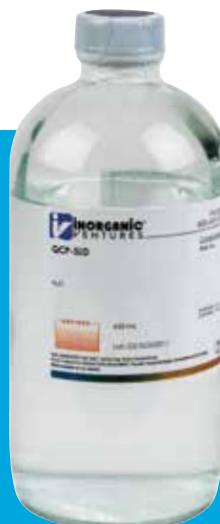
Custom wastewater standards are available upon request.

ANALYTE	MATRIX	STARTING MATERIAL	VOLUME	CATALOG #
Carbon, C	H ₂ O	KHP	125 mL 500 mL	TOCKHP1-125ML TOCKHP1-500ML



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exactly what
you are
looking for?**

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materials are our specialty.



W E T C H E M I S T R Y



At times, Wet Chemistry involves some difficult and unusual techniques. If you find yourself in a bind, give us a call. One of our experts will be happy to assist you. Plus, we offer analytical advice and in-depth technical guides on our website, esslab.com.

- ✓ Up to four-year shelf life
- ✓ Traceable to NIST SRMs
- ✓ Produced under ISO 9001
- ✓ Produced under ISO 17025
- ✓ Produced under ISO 17034
- ✓ Assayed by optimal validated procedures

Shared Knowledge —

The most rewarding part of how we flex to your specs.

Each pH standard is manufactured to be compatible with your instrumentation and meets all requirements for calibration by a true Certified Reference Material. Each standard is traceable to a NIST SRM and engineered for homogeneity and long-term/short-term stability testing. Manufactured under our ISO 17025 and ISO 17034 accreditations and ISO 9001 registered, each pH standard comes with a CoA with a temperature chart for your convenience. Detailed error budgets provide accurate and consistent certified values and uncertainties. Each product is packaged in our TCT technology, where each lot has up to a three- to four-year shelf life and a one-year* expiration date from opening. Also provided is a GHS-compliant SDS and GHS label and temperature chart on the product and TCT foil bag.

*For most products.

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Conductivity Standards

Custom conductivity standards are available upon request. |

2 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON2-25-125ML	Volume: 125 mL
CON2-25-500ML	Volume: 500 mL

5 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON5-25-125ML	Volume: 125 mL
CON5-25-500ML	Volume: 500 mL

10 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON10-25-125ML	Volume: 125 mL
CON10-25-500ML	Volume: 500 mL

84 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON84-25-125ML	Volume: 125 mL
CON84-25-500ML	Volume: 500 mL
CON84-25-1L	Volume: 1 L

100 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON100-25-125ML	Volume: 125 mL
CON100-25-500ML	Volume: 500 mL
CON100-25-1L	Volume: 1 L

147 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON147-25-125ML	Volume: 125 mL
CON147-25-500ML	Volume: 500 mL
CON147-25-1L	Volume: 1 L

500 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON500-25-125ML	Volume: 125 mL
CON500-25-500ML	Volume: 500 mL
CON500-25-1L	Volume: 1 L

1,000 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON1000-25-125ML	Volume: 125 mL
CON1000-25-500ML	Volume: 500 mL
CON1000-25-1L	Volume: 1 L

1,200 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON1200-25-125ML	Volume: 125 mL
CON1200-25-500ML	Volume: 500 mL
CON1200-25-1L	Volume: 1 L

1,400 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON1400-25-125ML	Volume: 125 mL
CON1400-25-500ML	Volume: 500 mL
CON1400-25-1L	Volume: 1 L

1,413 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON1413-25-125ML	Volume: 125 mL
CON1413-25-500ML	Volume: 500 mL
CON1413-25-1L	Volume: 1 L

1,430 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON1430-25-125ML	Volume: 125 mL
CON1430-25-500ML	Volume: 500 mL
CON1430-25-1L	Volume: 1 L

10,000 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON10000-25-125ML	Volume: 125 mL
CON10000-25-500ML	Volume: 500 mL
CON10000-25-1L	Volume: 1 L

100,000 µmhos/cm Conductivity at 25°C	
Matrix: H ₂ O	
CON100000-25-125ML	Volume: 125 mL
CON100000-25-500ML	Volume: 500 mL
CON100000-25-1L	Volume: 1 L



Custom pH standards are available upon request.

pH 1.68	
Potassium tetroxalate	
PH-1.68-250ML	Volume: 250 mL
PH-1.68-500ML	Volume: 500 mL
PH-1.68-1L	Volume: 1 L
PH-1.68-4L	Volume: 4 L
PH-1.68-10L	Volume: 10 L

pH 5	
Potassium acid phthalate and sodium hydroxide	
PH-5-250ML	Volume: 250 mL
PH-5-500ML	Volume: 500 mL
PH-5-1L	Volume: 1 L
PH-5-4L	Volume: 4 L
PH-5-10L	Volume: 10 L

pH 2	
Potassium chloride and hydrochloric acid	
PH-2-250ML	Volume: 250 mL
PH-2-500ML	Volume: 500 mL
PH-2-1L	Volume: 1 L
PH-2-4L	Volume: 4 L
PH-2-10L	Volume: 10 L

pH 6	
Monobasic potassium phosphate and sodium hydroxide	
PH-6-250ML	Volume: 250 mL
PH-6-500ML	Volume: 500 mL
PH-6-1L	Volume: 1 L
PH-6-4L	Volume: 4 L
PH-6-10L	Volume: 10 L

pH 3	
Potassium acid phthalate and hydrochloric acid	
PH-3-250ML	Volume: 250 mL
PH-3-500ML	Volume: 500 mL
PH-3-1L	Volume: 1 L
PH-3-4L	Volume: 4 L
PH-3-10L	Volume: 10 L

pH 6.86	
Potassium phosphate and dibasic sodium phosphate	
PH-6.86-250ML	Volume: 250 mL
PH-6.86-500ML	Volume: 500 mL
PH-6.86-1L	Volume: 1 L
PH-6.86-4L	Volume: 4 L
PH-6.86-10L	Volume: 10 L

pH 4	
Potassium acid phthalate	
PH-4-250ML	Volume: 250 mL
PH-4-500ML	Volume: 500 mL
PH-4-1L	Volume: 1 L
PH-4-4L	Volume: 4 L
PH-4-10L	Volume: 10 L

pH 7	
Monobasic potassium phosphate and sodium hydroxide	
PH-7-250ML	Volume: 250 mL
PH-7-500ML	Volume: 500 mL
PH-7-1L	Volume: 1 L
PH-7-4L	Volume: 4 L
PH-7-10L	Volume: 10 L

pH 4 RED	
Potassium acid phthalate	
PHRED-4-250ML	Volume: 250 mL
PHRED-4-500ML	Volume: 500 mL
PHRED-4-1L	Volume: 1 L
PHRED-4-4L	Volume: 4 L
PHRED-4-10L	Volume: 10 L

pH 7 YELLOW	
Monobasic potassium phosphate and sodium hydroxide	
PHYELLOW-7-250ML	Volume: 250 mL
PHYELLOW-7-500ML	Volume: 500 mL
PHYELLOW-7-1L	Volume: 1 L
PHYELLOW-7-4L	Volume: 4 L
PHYELLOW-7-10L	Volume: 10 L

pH Standards

pH 8	
Monobasic potassium phosphate and sodium hydroxide	
PH-8-250ML	Volume: 250 mL
PH-8-500ML	Volume: 500 mL
PH-8-1L	Volume: 1 L
PH-8-4L	Volume: 4 L
PH-8-10L	Volume: 10 L

pH 11	
Dibasic sodium phosphate and sodium hydroxide	
PH-11-250ML	Volume: 250 mL
PH-11-500ML	Volume: 500 mL
PH-11-1L	Volume: 1 L
PH-11-4L	Volume: 4 L
PH-11-10L	Volume: 10 L

pH 9	
Boric acid, potassium chloride and sodium hydroxide	
PH-9-250ML	Volume: 250 mL
PH-9-500ML	Volume: 500 mL
PH-9-1L	Volume: 1 L
PH-9-4L	Volume: 4 L
PH-9-10L	Volume: 10 L

pH 12	
Potassium chloride and sodium hydroxide	
PH-12-250ML	Volume: 250 mL
PH-12-500ML	Volume: 500 mL
PH-12-1L	Volume: 1 L
PH-12-4L	Volume: 4 L
PH-12-10L	Volume: 10 L

pH 9.18	
Sodium borate decahydrate	
PH-9.18-250ML	Volume: 250 mL
PH-9.18-500ML	Volume: 500 mL
PH-9.18-1L	Volume: 1 L
PH-9.18-4L	Volume: 4 L
PH-9.18-10L	Volume: 10 L

pH 12.47	
Sodium hydroxide and potassium chloride	
PH-12.47-250ML	Volume: 250 mL
PH-12.47-500ML	Volume: 500 mL
PH-12.47-1L	Volume: 1 L
PH-12.47-4L	Volume: 4 L
PH-12.47-10L	Volume: 10 L

pH 10	
Sodium bicarbonate and sodium carbonate	
PH-10-250ML	Volume: 250 mL
PH-10-500ML	Volume: 500 mL
PH-10-1L	Volume: 1 L
PH-10-4L	Volume: 4 L
PH-10-10L	Volume: 10 L

Cyanide Standards

Custom cyanide standards are available upon request.

1,000 ug/mL Total Cyanide	
CN-1000-25-20ML	Volume: 20 mL Matrix: H ₂ O
Analyte	µg/mL
CN⁻	1,000

pH 10 BLUE	
Sodium bicarbonate and sodium carbonate	
PHBLUE-10-250ML	Volume: 250 mL
PHBLUE-10-500ML	Volume: 500 mL
PHBLUE-10-1L	Volume: 1 L
PHBLUE-10-4L	Volume: 4 L
PHBLUE-10-10L	Volume: 10 L

WET CHEMISTRY
SAMPLE PREPARATION

Dissolution Reagents

Dissolution Reagents are designed for the preparation and measurement of samples containing silica mixed with fluoride insoluble elements, including zeolites, alumina and/or silica based catalysts, sand, limestone, coal fly ash and talc. The dissolution of these types of materials requires HF. See the article titled *Elemental Analysis of Zeolites* on our website for more information.

Acid Dissolution Reagent	
UA-1-500ML	Volume: 500 mL
Recommended for the dissolution of aluminosilicates, such as zeolites.	

Acid Dissolution Reagent [†]	
UA-2-500ML	Volume: 500 mL
Designed to dissolve coal fly ash and aluminosilicates.	

Acid Dissolution Reagent*	
UA-3-500ML	Volume: 500 mL
Similar to UA-2, except UA-3 can handle higher levels of iron.	

Acid Dissolution Reagent	
UA-4-500ML	Volume: 500 mL
Designed for the dissolution of aluminosilicates, such as zeolites, containing moderate to high levels of fluoride-insoluble elements.	

Acid Dissolution Reagent	
UA-5-500ML	Volume: 500 mL
Designed to handle samples high in calcium, such as limestone.	

Acid Dissolution Reagent	
UA-6-500ML	Volume: 500 mL
Designed for samples high in magnesium, such as dolomite.	

Acid Dissolution Reagent	
UA-7-500ML	Volume: 500 mL
Designed for the determination of trace elements in samples containing predominately silica, such as silica gel.	

[†]Boron cannot be determined.

*Boron and Phosphorus cannot be determined.

Don't see exactly what you are looking for?

Give us a call. Custom reference materials are our specialty.



Neutralizers & Stabilizers**Fusion Fluxes**

These products are applicable to the determination of aluminosilicates containing various elements. For details, refer to the description for Dissolution Reagents on the preceding page.

Stabilizing Reagent	
UNS-1-500ML	Volume: 500 mL
UNS-1-2.5L	Volume: 2.5 L
Designed for use with UA-1.	

Stabilizing Reagent	
UNS-2-SET	Volume: 2.5 L
Two reagent set consisting of equal amounts of UNS-2A and UNS-2B. Recommended for use with UA-2, UA-3, UA-4, or UA-5.	

Stabilizing Reagent	
UNS-2A-2.5L	Volume: 2.5 L
Stabilizing Agent	

Stabilizing Reagent	
UNS-2B-2.5L	Volume: 2.5 L
Stabilizing Agent	

Stabilizing Reagent	
UNS-3-2.5L	Volume: 2.5 L
Designed for use with UA-7.	

Stabilizing Reagent	
UNS-4-2.5L	Volume: 2.5 L
Prevents salting-out effects from borate fusions and/or boric acid treated HF preparations. Also recommended for use with UA-6.	

Stabilizing Reagent	
UNS-100-500ML	Volume: 500 mL
UNS-100-2.5L	Volume: 2.5 L
For use with all acids and applications. Improved capacity. Contact us for more information.	

Stabilizing Reagent	
UNS-300-2.5L	Volume: 2.5 L
For use with all acids and applications. Improved capacity. Contact us for more information.	

Lithium Carbonate	
FF-LI2CO3-500G	Volume: 500 g
FF-LI2CO3-2.5KG	Volume: 2.5 Kg
See section 13 of the Reliable Measurements Guide found on our website for a sample preparation method designed to work perfectly with this product.	

CERTIFIED TITRANTS AND REAGENTS

Certified Titrants

These Certified Titrants for Standardized Acid and Base are ISO 17034 and ISO 17025 as well as traceable to NIST. Basic stock sizes and customs are available.

0.05M EDTA	
0.05M-EDTA-500ML	Matrix: H ₂ O Volume: 500 mL
0.05M EDTA, 500mL	

0.5M EDTA	
0.5M-EDTA-500ML	Matrix: H ₂ O Volume: 500 mL
0.5M EDTA, 500mL	

0.1M Hydrochloric Acid	
0.1M-HCL-500ML	Matrix: H ₂ O Volume: 500 mL
0.1M Hydrochloric Acid, 500mL	

1.0M Hydrochloric Acid	
1.0M-HCL-500ML	Matrix: H ₂ O Volume: 500 mL
1.0M Hydrochloric Acid, 500mL	

0.1M Nitric Acid	
0.1M-HNO3-500ML	Matrix: H ₂ O Volume: 500 mL
0.1M Nitric Acid, 500mL	

1.0M Nitric Acid	
1.0M-HNO3-500ML	Matrix: H ₂ O Volume: 500 mL
1.0M Nitric Acid, 500mL	

0.1M Perchloric Acid	
0.1M-HClO4-500ML	Matrix: H ₂ O/0.1M HClO ₄ in Glacial Acetic Acid Volume: 500 mL
0.1M Perchloric Acid, 500mL	

0.1N Silver Nitrate	
0.1N-AGNO3-500ML	Matrix: H ₂ O Volume: 500 mL
0.1N Silver Nitrate, 500mL	

0.1M Sodium Hydroxide	
0.1M-NAOH-500ML	Matrix: H ₂ O Volume: 500 mL
0.1M Sodium Hydroxide, 500mL	

0.1N Sodium Thiosulfate	
0.1N-NA2S2O3-500ML	Matrix: H ₂ O Volume: 500 mL
0.1N Sodium Thiosulfate 500 mL. Prepared and standardized according to USP specifications.	

Reagents

Blank & Rinse Solutions

Blank & Rinse solutions are prepared using double-distilled reagents and 18 megohm ($M\Omega$) deionized water. They come packaged in ultra-clean LDPE bottles and are ready to use. Custom solutions are available upon request.

2% (v/v) Nitric Acid Rinse	
CLP-MS-RINSE Ultra Pure	Matrix: HNO ₃ Dilution: Ready to Use
CLP-MS-RINSE-125ML CLP-MS-RINSE-500ML	Volume: 125 mL Volume: 500 mL

For use with ICP-MS. Designed for ILM05.2 and ILM05.3.

Deionized Blank	
IV-DI-BLANK	Matrix: H ₂ O
IV-DI-BLANK-500ML IV-DI-BLANK-1L	Volume: 500 mL Volume: 1 L

5% (v/v) Nitric Acid Blank	
IV-ACID-BLANK Ultra Pure	Matrix: HNO ₃
IV-ACID-BLANK-500ML IV-ACID-BLANK-1L	Volume: 500 mL Volume: 1 L

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