

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 in which 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

Contents

Single-Element Standards	15
Isotopic Standards	30
Mercury Standards	30
Speciation Standards	31
Cyanide Standards	31
Multi-Element Standards	32
Instrument Cross-Reference Table.....	32
USP <232> — Elemental Impurities	
Compliance Standards.....	34
Multi-Element Standards.....	36
High-Purity Ionization Buffers.....	49
Need a Custom CRM?	13

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

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10 µg/mL

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

Custom 100 µg/mL standards are available upon request.

100 µg/mL

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

Custom 100 µg/mL standards are available upon request.

100 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Molybdenum, Mo	NH ₄ OH	125 mL	MSMO-100PPM-125ML
		500 mL	MSMO-100PPM-500ML
Nickel, Ni	HNO ₃	125 mL	MSNI-100PPM-125ML
		500 mL	MSNI-100PPM-500ML
Osmium, Os	HCl	125 mL	MSOS-100PPM-125ML
		500 mL	MSOS-100PPM-500ML
Phosphorus, P	H ₂ O	125 mL	MSP-100PPM-125ML
		500 mL	MSP-100PPM-500ML
Platinum, Pt	HCl	125 mL	MSPT-100PPM-125ML
		500 mL	MSPT-100PPM-500ML
Potassium, K	HNO ₃	125 mL	MSK-100PPM-125ML
		500 mL	MSK-100PPM-500ML
Rhodium, Rh	HCl	125 mL	MSRH-100PPM-125ML
		500 mL	MSRH-100PPM-500ML
Rhodium, Rh	HNO ₃	125 mL	MSRHN-100PPM-125ML
		500 mL	MSRHN-100PPM-500ML
Scandium, Sc	HNO ₃	125 mL	MSSC-100PPM-125ML
		500 mL	MSSC-100PPM-500ML
Selenium, Se	HNO ₃	125 mL	MSSE-100PPM-125ML
		500 mL	MSSE-100PPM-500ML
Silicon, Si	HNO ₃ / HF	125 mL	MSSI-100PPM-125ML
		500 mL	MSSI-100PPM-500ML
Silver, Ag	HNO ₃	125 mL	MSAG-100PPM-125ML
		500 mL	MSAG-100PPM-500ML
Sodium, Na	HNO ₃	125 mL	MSNA-100PPM-125ML
		500 mL	MSNA-100PPM-500ML
Strontium, Sr	HNO ₃	125 mL	MSSR-100PPM-125ML
		500 mL	MSSR-100PPM-500ML
Sulfur, S	H ₂ O	125 mL	MSS-100PPM-125ML
		500 mL	MSS-100PPM-500ML
Tellurium, Te	HNO ₃	125 mL	MSTEN-100PPM-125ML
		500 mL	MSTEN-100PPM-500ML
Terbium, Tb	HNO ₃	125 mL	MSTB-100PPM-125ML
		500 mL	MSTB-100PPM-500ML
Thallium, Tl	HNO ₃	125 mL	MSTL-100PPM-125ML
		500 mL	MSTL-100PPM-500ML
Thorium, Th	HNO ₃	125 mL	MSTH-100PPM-125ML
		500 mL	MSTH-100PPM-500ML
Tin, Sn	HNO ₃ / HF	125 mL	MSSN-100PPM-125ML
		500 mL	MSSN-100PPM-500ML
Titanium, Ti	HNO ₃ / HF	125 mL	MSTI-100PPM-125ML
		500 mL	MSTI-100PPM-500ML
Tungsten, W	HNO ₃ / HF	125 mL	MSW-100PPM-125ML
		500 mL	MSW-100PPM-500ML
Uranium, U	HNO ₃	125 mL	MSU-100PPM-125ML
		500 mL	MSU-100PPM-500ML
Vanadium, V	HNO ₃	125 mL	MSV-100PPM-125ML
		500 mL	MSV-100PPM-500ML
Yttrium, Y	HNO ₃	125 mL	MSY-100PPM-125ML
		500 mL	MSY-100PPM-500ML
Zinc, Zn	HNO ₃	125 mL	MSZN-100PPM-125ML
		500 mL	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	CGB11-30ML
		125 mL	CGB11-125ML
		500 mL	CGB11-500ML
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 ₂ O	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 ₂ O	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

SINGLE-ELEMENT STANDARDS

1,000 µg/mL Standards

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1,000 µg/mL

ANALYTE	MATRIX	VOLUME	CATALOG #
Indium, In Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL	CGIN1-30ML
		125 mL	CGIN1-125ML
		500 mL	CGIN1-500ML
Iodide, I⁻ Can be used for analyzing Iodide by ICP-OES.	H ₂ O / stabilizer	30 mL	CGIC11-30ML
		125 mL	CGIC11-125ML
		500 mL	CGIC11-500ML
Iridium, Ir	HCl	30 mL	CGIR1-30ML
		125 mL	CGIR1-125ML
		500 mL	CGIR1-500ML
Iron, Fe	HNO ₃	30 mL	CGFE1-30ML
		125 mL	CGFE1-125ML
		500 mL	CGFE1-500ML
Lanthanum, La	HNO ₃	30 mL	CGLA1-30ML
		125 mL	CGLA1-125ML
		500 mL	CGLA1-500ML
Lead, Pb	HNO ₃	30 mL	CGPB1-30ML
		125 mL	CGPB1-125ML
		500 mL	CGPB1-500ML
Lithium, Li	HNO ₃	30 mL	CGLI1-30ML
		125 mL	CGLI1-125ML
		500 mL	CGLI1-500ML
⁶Lithium, ⁶Li Can be used as an Internal Standard for ICP-MS.	HNO ₃	30 mL	CG6LI1-30ML
		125 mL	CG6LI1-125ML
		500 mL	CG6LI1-500ML
Lutetium, Lu	HNO ₃	30 mL	CGLU1-30ML
		125 mL	CGLU1-125ML
		500 mL	CGLU1-500ML
Magnesium, Mg	HNO ₃	30 mL	CGMG1-30ML
		125 mL	CGMG1-125ML
		500 mL	CGMG1-500ML
Manganese, Mn	HNO ₃	30 mL	CGMN1-30ML
		125 mL	CGMN1-125ML
		500 mL	CGMN1-500ML
Mercury, Hg	HNO ₃	30 mL	CGHG1-30ML
		125 mL	CGHG1-125ML
		500 mL	CGHG1-500ML
Molybdenum, Mo	NH ₄ OH	30 mL	CGMO1-30ML
		125 mL	CGMO1-125ML
		500 mL	CGMO1-500ML
Neodymium, Nd	HNO ₃	30 mL	CGND1-30ML
		125 mL	CGND1-125ML
		500 mL	CGND1-500ML
Nickel, Ni	HNO ₃	30 mL	CGNI1-30ML
		125 mL	CGNI1-125ML
		500 mL	CGNI1-500ML
Niobium, Nb	HNO ₃ / HF	30 mL	CGNB1-30ML
		125 mL	CGNB1-125ML
		500 mL	CGNB1-500ML

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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

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

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	CGT11-30ML
		125 mL	CGT11-125ML
		500 mL	CGT11-500ML
Tungsten, W	HNO ₃ / HF	30 mL	CGW1-30ML
		125 mL	CGW1-125ML
		500 mL	CGW1-500ML
Tungsten, W	H ₂ O	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.

SINGLE-ELEMENT STANDARDS

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

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

SINGLE-ELEMENT STANDARDS

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	CGM010-30ML
		125 mL	CGM010-125ML
		500 mL	CGM010-500ML
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

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

SINGLE-ELEMENT STANDARDS

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



Inorganic Ventures' Annual ICP Conference

Calling all ICP users — don't miss our annual ICP Conference held in the fall. You will hear from Inorganic Ventures' 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 [inorganicventures.com/ICP](https://www.inorganicventures.com/ICP).

Isotopic Standards

ANALYTE	$\mu\text{g/mL}$	MATRIX	VOLUME	CATALOG #
¹⁰ Boron, ¹⁰ B	10	HNO ₃	100 mL	MS10B-10PPM-100ML
¹¹ Boron, ¹¹ B	10	HNO ₃	100 mL	MS11B-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

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

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

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Products in bold are **near identical** formulations due to small differences in matrix percentages or additional elements.

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		
Jobin Yvon#	Inorganic Ventures#	Page
JYICP-MIX23	IV-STOCK-4	p.36
JYICP-MIXMAJ	IV-STOCK-34	p.40

Merck/MilliporeSigma M		
Merck#	Inorganic Ventures#	Page
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
SRM1643f	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		

MULTI-ELEMENT STANDARDS

Instrument Cross-Reference Table

Perkin Elmer PE		
Perkin Elmer#	Inorganic Ventures#	Page
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
N9303843	PE-TS-1	p.47

Spectro S		
Spectro#	Inorganic Ventures#	Page
USA00875	CIROS-OES-TS	p.46
USA00888	GENESIS-ICAL	p.46

Thermo Scientific T		
Thermo Scientific#	Inorganic Ventures#	Page
1323760	THERMO-5A	p.47
1323770	THERMO-4AREV	p.47
ZG22950	TUNE F-X-SERIES	p.48

Common Multi-Element Standards C	
Inorganic Ventures#	Page
CMS-SET	p.43
CCS-SET	p.44
IV-ICPMS-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

USP Method <232> U	
Inorganic Ventures#	Page
IV-STOCK-38	p.35
IV-STOCK-40	p.35
IV-STOCK-41	p.35
IV-STOCK-60	p.35
IV-STOCK-65	p.34
IV-STOCK-66	p.34
IV-STOCK-67	p.34
IV-STOCK-68	p.34
IV-STOCK-69	p.34
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 IV-STOCK-65-500ML		Volume: 125 mL 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 IV-STOCK-66-500ML		Volume: 125 mL 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 IV-STOCK-70-500ML		Volume: 125 mL 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 IV-STOCK-67-500ML		Volume: 125 mL 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 IV-STOCK-68-500ML		Volume: 125 mL 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 IV-STOCK-69-500ML		Volume: 125 mL Volume: 500 mL	
Analyte	µg/mL	Analyte	µg/mL
Ba	140	Mo	300
Cr	1100	Sb	120
Cu	300	Sn	600
Li	55		

U USP Method <232>

MULTI-ELEMENT STANDARDS

USP Method <232> — Elemental Impurities Compliance Standards

USP <232> Precious Metals Elemental Impurities			
IV-STOCK-38 U		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> Oral Elemental Impurities			
IV-STOCK-40 U		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> Parenteral Elemental Impurities			
IV-STOCK-41 U		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> Drug Substance and Excipients			
IV-STOCK-60 U		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.

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 Standards

JY HORIBA Jobin Yvon

M Merck/MilliporeSigma

MULTI-ELEMENT STANDARDS

Identical or near identical formulations | Multi-Element Standards

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		

I Common Multi-Ion Standards**M** 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		

M Merck/MilliporeSigma**PE** 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 | Multi-Element Standards

ICP Calibration Standard			
IV-STOCK-23 M		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 AV M		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 AV PE		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 AV		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 AV PE		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

- AV** Agilent/Varian
M Merck/MilliporeSigma
PE Perkin Elmer

ICP Calibration Standard			
IV-STOCK-29 PE		Matrix: HNO ₃ /HF	
IV-STOCK-29-125ML		Volume: 125 mL	
IV-STOCK-29-500ML		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	
IV-STOCK-30-125ML		Volume: 125 mL	
IV-STOCK-30-500ML		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	
IV-STOCK-31-125ML		Volume: 125 mL	
IV-STOCK-31-500ML		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	
IV-STOCK-33-125ML		Volume: 125 mL	
IV-STOCK-33-500ML		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	
IV-STOCK-34-125ML		Volume: 125 mL	
IV-STOCK-34-500ML		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	
IV-STOCK-35-125ML		Volume: 125 mL	
IV-STOCK-35-500ML		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	
IV-STOCK-36-125ML		Volume: 125 mL	
IV-STOCK-36-500ML		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



Identical or near identical formulations | Multi-Element Standards


Environmental Calibration Standard			
IV-STOCK-50 		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 		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

 Agilent/Varian 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  		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 		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 		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

ICP Calibration Standard			
IV-STOCK-56 C		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 Calibration Standard			
IV-STOCK-57 C		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 Calibration Standard			
IV-STOCK-58 C		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-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

ICP-MS Tuning Solution			
IV-STOCK-74 AV		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-MS Internal Standard			
IV-STOCK-75 AV		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-MS Tuning Solution			
IV-STOCK-77 PE		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

AV Agilent/Varian**C** Common Multi-Element Standards**PE** Perkin Elmer

MULTI-ELEMENT STANDARDS

Identical or near identical formulations | Multi-Element Standards

These elements are grouped for ease of use. Intended for ICP-MS and ICP-OES, 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 C		Matrix: HNO ₃	
CMS-1-125ML CMS-1-500ML		Volume: 125 mL 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

Precious Metals ICP-MS Standard			
CMS-2 C		Matrix: HCl	
CMS-2-125ML CMS-2-500ML		Volume: 125 mL 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

Fluoride Soluble ICP-MS Standard			
CMS-3 C		Matrix: HNO ₃ /HF	
CMS-3-125ML CMS-3-500ML		Volume: 125 mL 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		

Hot Plasma ICP-MS Complete Standard			
CMS-4 C		Matrix: HNO ₃	
CMS-4-125ML CMS-4-500ML		Volume: 125 mL 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		

Cool Plasma ICP-MS Complete Standard			
CMS-5 C		Matrix: HNO ₃	
CMS-5-125ML CMS-5-500ML		Volume: 125 mL 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		

C Common Multi-Element Standard

These elements are grouped for ease of use. Intended for ICP-MS and ICP-OES, 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 C		Matrix: HNO ₃	
CCS-1-125ML CCS-1-500ML		Volume: 125 mL 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

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

Alkali, Alkaline, Non-Transition ICP-MS Standard			
CCS-4 C		Matrix: HNO ₃	
CCS-4-125ML CCS-4-500ML		Volume: 125 mL 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

C Common Multi-Element Standard

Fluoride Soluble ICP-MS Standard			
CCS-5 C		Matrix: HNO ₃ /HF	
CCS-5-125ML CCS-5-500ML		Volume: 125 mL 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		

Transition ICP-MS Standard			
CCS-6 C		Matrix: HNO ₃	
CCS-6-125ML CCS-6-500ML		Volume: 125 mL 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		

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

MULTI-ELEMENT STANDARDS

Identical or near identical formulations | Multi-Element Standards

These elements are grouped for ease of use. Intended for ICP-MS and ICP-OES, 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

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

C Common Multi-Element Standard

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

Identical or near identical formulations | Multi-Element Standards

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


MULTI-ELEMENT STANDARDS

Multi-Element Standards

Identical or **near identical** formulations

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


 Agilent/Varian


Tuning Solution			
VAR-TS-MS 		Matrix: HNO ₃	
VAR-TS-MS-125ML VAR-TS-MS-500ML		Volume: 125 mL 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

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 CSN-ISB-500ML	Volume: 125 mL 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 LINB2-500ML	Volume: 125 mL Volume: 500 mL
Analyte	µg/mL
Li	20,000

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