



SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 34:2000

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REFERENCE MATERIALS PRODUCER

Valid To: July 31, 2012

Certificate Number: 0883.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this Reference Material Producer for the production of certified reference materials and reference materials of the following categories:

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
Certified Reference Materials			
Category A2.6 Trace Metals Standard	<u>Aluminum (Al)</u> 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 60,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA Titrimetry
	<u>Antimony (Sb)</u> 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 10 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	<u>Arsenic (As)</u> 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Barium (Ba) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 11-QC-006	ICP-OES ICP-MS Gravimetric Sulfate
	Beryllium (Be) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Bismuth (Bi) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Boron (B) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 100 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Cadmium (Cd) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Calcium (Ca) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 1 µg/L – 50,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Cerium (Ce) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-006	ICP-OES ICP-MS EDTA titrimetry
	Cesium (Cs) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 50,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.8 –Modified 11-QC-006 EPA 300.0	ICP-MS Gravimetric Sulfate IC
	Chromium (Cr) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Hexavalent Chromium (Cr+6) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 100 µg/L – 1000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200. –Modified In house Method 25-QC-006	ICP-OES ICP-MS Redox titrimetry
	Cobalt (Co) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Copper (Cu) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 100,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Dysprosium (Dy) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Erbium (Er) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Europium (Eu) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Gadolinium (Gd) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Gallium (Ga) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Germanium (Ge) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Gold (Au) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Hafnium (Hf) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Holmium (Ho) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Indium (In) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Iron (Fe) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Lanthanum (La) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Lead (Pb) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Lithium (Li) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 11-QC-006	ICP-OES ICP-MS Gravimetric Sulfate
	Lutetium (Lu) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Magnesium (Mg) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element –Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Manganese (Mn) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Mercury (Hg) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Molybdenum (Mo) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Neodymium (Nd) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Nickel (Ni) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 50,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Niobium (Nb) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Palladium (Pd) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element –Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	Phosphorus (P) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 70,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified 15-QC-002	ICP-OES ICP-MS Acid/Base titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Platinum (Pt) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 500 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Potassium (K) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 11-QC-006	ICP-OES ICP-MS Gravimetric Sulfate
	Praseodymium (Pr) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Rhenium (Re) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Rhodium (Rh) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Rubidium (Rb) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0-Modified; EPA Method 200.8 – Modified 11-QC-006	IC ICP-MS Gravimetric Sulfate

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	Samarium (Sm) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Scandium (Sc) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Selenium (Se) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Silicon (Si) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Silver (Ag) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 16-QC-005	ICP-OES ICP-MS Volhard titrimetry
	Sodium (Na) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 50,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 11-QC-002	ICP-OES ICP-MS Gravimetric Sulfate

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Strontium (Sr) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Sulfur (S) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 100,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified Std. Methods 2320B(15-QC-002)	ICP-OES ICP-MS Acid/Base titrimetry
	Tantalum (Ta) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Tellurium (Te) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Terbium (Tb) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Thallium (Tl) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 100 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Thorium (Th) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Thulium (Tm) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Tin (Sn) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Titanium (Ti) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Tungsten (W) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	Uranium(U) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 1 µg/L – 25,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Vanadium (V) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Ytterbium (Yb) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Yttrium (Y) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 20,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Zinc (Zn) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 40,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified 10-QC-005	ICP-OES ICP-MS EDTA titrimetry
	Zirconium (Zr) 10, 100, 1000, and 10,000 µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 10,000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
Category A9.2 Ion Chromatography & Ion Selective Electrode Calibrants	3-methoxypropylamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Acetate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

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	Ammonium 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 16-QC-0052	IC Volhard Titrimetric
	Ammonium as Nitrogen 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 16-QC-005	IC Volhard Titrimetric
	Benzoate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Bromate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 16-QC-005	IC Volhard Titrimetric
	Bromide 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 16-QC-005	IC Volhard Titrimetric
	Chlorate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified EPA Method 200.7	IC ICP-OES
	Chloride 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 16-QC-005	IC Volhard Titrimetric

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Chlorite 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified 27-QC-001	IC Iodometric titrimetric
	Chromate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 330.4 Modified EPA Method 200.7	Redox Titrimetric ICP-OES
	Citrate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Dichloroacetate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	DiEthanolamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	DiMethylamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Fluoride 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Formate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Glycolate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Iodide 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	16-QC-005	Volhard Titrimetric
	Lactate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Malate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Maleate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Methanesulfonate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	MonoEthanolamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	MonoMethylamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Nitrate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Nitrate as N 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Nitrilotriacetate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Nitrite 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Nitrite as N 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Oxalate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Perchlorate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified EPA Method 200.7	IC ICP-OES
	Phosphate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Phosphate as P 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Phthalate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Propionate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Succinate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Sulfate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Tartrate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	Thiocyanate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	16-QC-005	Volhard titrimetric
	Thiosulfate 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	Standard Methods 4500-Cl B modified	Iodometric titrimetric
	TriEthanolamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	TriEthylamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
	TriMethylamine 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	TetraMethylammonium 1000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 1000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 Modified	IC
Category A5.3 Waters	Filterable, Non-Filterable, and Total Solids Total Solids Range (70 – 5200) mg/L Non-filterable Solids (20 – 200) mg/L Dissolved Solids (50 – 5000) mg/L Best Relative uncertainty 0.005	Standard Methods 2540C, 2540D, 2540B respectively	Gravimetric
	Oil & Grease in Water Range (8 – 150) mg/L Best Relative uncertainty 0.005	Standard Methods 5520B	Gravimetric
Category A9.1 pH Standards	pH 4 Standard Range (3.9 – 4.1) pH Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 7 Standard Range (6.9 – 7.1) pH Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 10 Standard Range (9.9 – 10.1) pH Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	Custom pH Standards Range (1 – 14) pH Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
Category A9.3 Conductivity Standards	10 µmhos/cm Conductivity Standard Range (9.9 – 10.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
	100 µmhos/cm Conductivity Standard Range (9.9 – 10.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
	1000 µmhos/cm Conductivity Standard Range (99.9 – 100.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
	10,000 µmhos/cm Conductivity Standard Range (9.9 – 10.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
	100,000 µmhos/cm Conductivity Standard Range (9.9 – 10.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	1400 µmhos/cm Conductivity Standard Range (9.9 – 10.1) Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
	Custom Conductivity Standard Range (0.3 – 100,000) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510 EPA Method 120.1	Electrochemical
Category C6 Density	(included on A2.6, A9.2 (certificates))	8-QC-003	Gravimetric

¹An absolute uncertainty estimate may be determined by multiplying the stated Relative uncertainty by the reported certified reference material value on the certificate. The absolute uncertainty estimate will thus be represented in the units of the value provided on the certified reference material certificate.



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Presented this 22nd day of September 2010.





President & CEO
For the Accreditation Council
Certificate Number 883.02
Valid to July 31, 2012

For materials to which this accreditation applies, please refer to the reference material producer's Scope of Accreditation.