



SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 34:2009

INORGANIC VENTURES
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REFERENCE MATERIALS PRODUCER

Valid To: July 31, 2014

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	Aluminum (Al) 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 WI-QC-21	ICP-OES ICP-MS EDTA Titrimetry
	Antimony (Sb) 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
	Arsenic (As) 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
	Arsenic ⁺³ (As ⁺³) 1000 µg /mL stock CRM Customs and Stock Blends Containing this element – Range 2 µg/L – 1000 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)
	Arsenic ⁷⁵ (As ⁷⁵) 1000µg /mL stock CRM Customs and Stock Blends Containing this element – Range 2 µg/L – 1000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 – Modified	ICP-OES ICP-MS
	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 WI-QC-22	ICP-OES ICP-MS Gravimetric Sulfate
	¹³⁵ Barium(¹³⁵ Ba) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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
	¹⁰ Boron(¹⁰ B) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /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)
	¹¹ Boron(¹¹ B) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	¹⁰⁶ Cadmium(¹⁰⁶ Cd) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	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 WI-QC-21	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 WI-QC-22 EPA 300.0	ICP-MS Gravimetric Sulfate IC
	Chromium ⁺³ (Cr ⁺³) 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

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 200.8-Modified In house Method WI-QC-37	ICP-OES ICP-MS Redox titrimetry
	⁵⁰ Chromium(⁵⁰ Cr) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	⁶⁵ Copper(⁶⁵ Cu) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-21	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 WI-QC-21	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 WI-QC-21	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 WI-QC-21	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
	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

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	Iodide (I) 1000µg /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 WI-QC-29	ICP-OES ICP-MS Volhard 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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	Iridium (Ir) 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
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	⁵⁴ Iron(⁵⁴ Fe) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /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)
	⁵⁷ Iron(⁵⁷ Fe) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	²⁰⁴ Lead(²⁰⁴ Pb) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	²⁰⁶ Lead(²⁰⁶ Pb) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	²⁰⁷ Lead(²⁰⁷ Pb) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-22	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)
	⁶ Lithium(⁶ Li) 10, 100 and 1000µg /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 WI-QC-22	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 WI-QC-21	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	²⁵ Magnesium(²⁵ Mg) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	Mercury (Hg) 1, 5, 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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	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

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Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-21	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	⁶¹ Nickel(⁶¹ Ni) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-28	ICP-OES ICP-MS Acid/Base titrimetry
	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

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Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-22	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 WI-QC-21	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 WI-QC-22	IC ICP-MS Gravimetric Sulfate
	Ruthenium (Ru) 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
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry

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Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	Selenium ⁺⁴ (Se ⁺⁴) 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
	Selenium ⁺⁶ (Se ⁺⁶) 1000µg /mL stock CRMs Customs and Stock Blends Containing this element – Range 2 µg/L – 1000 µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	⁷⁸ Selenium(⁷⁸ Se) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	⁸² Selenium(⁸² Se) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /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 WI-QC-29	ICP-OES ICP-MS Volhard titrimetry

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	¹⁰⁹ Silver(¹⁰⁹ Ag) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-22	ICP-OES ICP-MS Gravimetric Sulfate
	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	⁸⁶ Strontium(⁸⁶ Sr) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-28	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

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	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 WI-QC-21	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
	²⁰³ Thallium(²⁰³ Tl) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	²⁰⁵ Thallium(²⁰⁵ Tl) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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 WI-QC-21	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 WI-QC-21	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)
	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
	¹²² Tin(¹²² Sn) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /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
	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 WI-QC-21	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry

Peter Nkyer

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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 WI-QC-21	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 WI-QC-21	ICP-OES ICP-MS EDTA titrimetry
	⁶⁷ Zinc(⁶⁷ Zn) 10µg /mL stock CRM Customs and Stock Blends Containing this element – Range 100 µg/L – 10µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 200.7-Modified; EPA Method 200.8 –Modified	ICP-OES ICP-MS
	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
	Ammonium 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified WI-QC-29	IC Volhard Titrimetric

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Ammonium as Nitrogen 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified WI-QC-29	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 WI-QC-29	IC Volhard Titrimetric
	Bromide 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified WI-QC-29	IC Volhard Titrimetric
	Carbonate 1000 ug /mL stock CRM and Custom and Stock Blends Containing this chemical Range (100 – 100000) ug /mL Relative uncertainty 0.004 to 0.01	WI-QC-33	Acidimetric Titration / Potentiometric detection
	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 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified WI-QC-29	IC Volhard Titrimetric
	Chlorite 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified WI-QC-32	IC Iodometric titrimetric

Peter Noyes

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Chromate 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) 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 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	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

Peter Whyte

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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
	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 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	Nitrate as Nitrogen 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC

Peter Njaya

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Nitilotriacetate 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 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	Nitrite as Nitrogen 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	Oxalate 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	Perchlorate 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified EPA Method 200.7	IC ICP-OES
	Phosphate 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) µg /mL Relative uncertainty 0.004 to 0.01	EPA Method 300.0 - Modified	IC
	Phosphate as Phosphorous 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) 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

Peter Nhyje

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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
	Sulfate 1000 and 10,000 µg /mL stock CRM and Custom and Stock Blends Containing this chemical – Range (0.1 – 10,000) 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	WI-QC-29	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-C1 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

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	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
	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, Total Recoverable Range (8 – 150) mg/L Best Relative uncertainty 0.005	Standard Methods 5520B	Gravimetric
	Cation Standard Ca ⁺² Range (5-200 mg/L) K ⁺¹ Range (1-100 mg/L) Mg ⁺² Range (1-200 mg/L) Na ⁺¹ Range (6-250 mg/L) Best Relative uncertainty 0.005	EPA Method 200.7-Modified	ICP-OES
	Chromium ⁺⁶ Standard Cr ⁺⁶ Range (10-1000µg/L) Best Relative uncertainty 0.005	Standard Methods 3500-Cr D Modified	Spectrophotometer
	Hg Standard Hg Range (0.5-30 µg /L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified	ICP-OES

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Metals Standard Ag Range (4-500µg/L) Al Range (40-2000µg/L) As Range (4-500µg/L) Ba Range (40-2000µg/L) Be Range (4-500µg/L) Ca Range (30-75mg/L) Cd Range (4-500µg/L) Cr Range (40-2000µg/L) Cu Range (40-2000µg/L) Fe Range (40-2000µg/L) Mn Range (40-2000µg/L) Ni Range (40-2000µg/L) Pb Range (2-250µg/L) Sb Range (4-500µg/L) Se Range (4-500µg/L) Tl Range (4-500µg/L) Zn Range (100-1000µg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified	ICP-OES
	Nitrite Standard Nitrite as Nitrogen Range (0.1-2mg/L) Best Relative uncertainty 0.005	EPA Method 300.0 - Modified	IC
	Simple Nutrients Standard Phosphate as Phosphorous Range (0.05-10mg/L) Nitrate as Nitrogen Range (0.25-40mg/L) Ammonium as Nitrogen (0.25-40mg/L) Best Relative uncertainty 0.005	EPA Method 300.0 - Modified	IC
	pH Standard pH Range (5-10units) Best Relative uncertainty 0.005	Standard Methods 4500H ⁺	Potentiometry
	Simulated Rainwater Standard Ca ⁺² Range(0.05-0.5mg/L) Cl ⁻ Range(0.1-5mg/L) F ⁻ Range(0.05-1mg/L) K ⁺ Range(0.05-1mg/L) Mg ⁺² Range(0.05-0.5mg/L) pH Range(3.5-4.5units) Conductivity Range(20-120µmhos) Na ⁺ Range(0.2-2mg/L) NH ₄ ⁺ Range(0.1-1.5mg/L) NO ₃ ⁻ Range(0.1-10mg/L) SO ₄ ⁻² Range(1-12mg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified EPA Method 300.0 - Modified Standard Methods 4500H ⁺ Standard Methods 2510	ICP-OES IC Potentiometry Electrochemical

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	Trace Metals Standard Ag Range (20-600µg/L) Al Range (100-4000µg/L) As Range (20-900µg/L) B Range (50-1000µg/L) Ba Range (100-2500µg/L) Be Range (8-900µg/L) Cd Range (8-750µg/L) Co Range (28-1000µg/L) Cr Range (17-1000µg/L) Cu Range (18-1000µg/L) Fe Range (30-4000µg/L) Mn Range (70-4000µg/L) Mo Range (24-1000µg/L) Ni Range (80-3000µg/L) Pb Range (70-3000µg/L) Sb Range (20-900µg/L) Se Range (20-2000µg/L) Sr Range (3.5-1000µg/L) Tl Range (20-900µg/L) V Range (100-10000µg/L) Zn Range (30-2000µg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified	ICP-OES
	Water Hardness Standard Ca Range(3.5-150mg/L) Mg Range(0.9-50mg/L) Hardness as CaCO ₃ Range(45-575mg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified	ICP-OES
	Minerals Standard Cl ⁻ Range(10-250mg/L) F ⁻ Range(0.2-10mg/L) K ⁺ Range(2.6-150mg/L) Nitrate as Nitrogen Range (0.5-10mg/L) Conductivity Range(50-1050µmhos) Alkalinity Range(10-150mg/L) Na ⁺ Range(7-300mg/L) SO ₄ ⁻² Range(5-150mg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified EPA Method 300.0 - Modified Standard Methods 2510 Standard Methods 2320B	ICP-OES IC Electrochemical Electrochemical
	Carbon Total Organic Carbon from KHP 1000µg /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	WI-QC-28	Acid/Base titrimetry

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
Category A9.1 pH Standards	pH 0.5 Standard Range (0.48 – 0.52) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 1.68 Standard Range (1.66 – 1.70) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 2 Standard Range (1.98 – 2.02) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 3 Standard Range (2.97 – 3.03) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 4 Standard Range (3.9 – 4.1) pH Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 5 Standard Range (4.95-5.05) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 6 Standard Range (5.94 – 6.06) 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 8 Standard Range (7.92 – 8.08) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 9 Standard Range (8.91 – 9.09) 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
	pH 11 Standard Range (10.89 – 11.11) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 12 Standard Range (11.88 – 12.12) Relative uncertainty 0.004 to 0.01	Standard Methods 4500H ⁺	Potentiometry
	pH 12.47 Standard Range (12.35 – 12.59) 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 and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
Category A9.3 Conductivity Standards	2 µmhos/cm Conductivity Standard Range (1.8 – 2.2) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	10 µmhos/cm Conductivity Standard Range (9.9 – 10.1) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	20 µmhos/cm Conductivity Standard Range (18 – 22) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	75 µmhos/cm Conductivity Standard Range (73.5 – 76.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	100 µmhos/cm Conductivity Standard Range (98.0 – 102.2) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	147 µmhos/cm Conductivity Standard Range (144 - 150) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	250 µmhos/cm Conductivity Standard Range (247.5 – 252.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	500 µmhos/cm Conductivity Standard Range (495 - 505) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	1000 µmhos/cm Conductivity Standard Range (990.0 – 1010.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	1200 µmhos/cm Conductivity Standard Range (1188.0 – 1212.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	1400 µmhos/cm Conductivity Standard Range (1386.0 – 1414.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	1413 µmhos/cm Conductivity Standard Range (1399 - 1427) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	1430 µmhos/cm Conductivity Standard Range (1416.0 – 1444.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	10,000 µmhos/cm Conductivity Standard Range (9900.0 – 10100.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	12856 µmhos/cm Conductivity Standard Range (12727.4 – 12984.6) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	20000 µmhos/cm Conductivity Standard Range (19800.0 – 20200.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical

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Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	30000 µmhos/cm Conductivity Standard Range (29700.0 – 30300.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	40000 µmhos/cm Conductivity Standard Range (39600.0 – 40400.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	50000 µmhos/cm Conductivity Standard Range (49500.0 – 50500.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	58650 µmhos/cm Conductivity Standard Range (58063.5 – 59236.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	70000 µmhos/cm Conductivity Standard Range (69300.0 – 70700.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	100,000 µmhos/cm Conductivity Standard Range (99000.0 – 101000.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	175000 µmhos/cm Conductivity Standard Range (173250.0 – 176750.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
	Custom Conductivity Standard Range (2.0 – 175000) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510	Electrochemical
Category C6 Density	(included on A2.6, A9.2 (certificates))	WI-QC-36	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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President & CEO
For the Accreditation Council
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