



SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 34:2009

INORGANIC VENTURES
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REFERENCE MATERIALS PRODUCER

Valid To: July 31, 2016

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 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 titrimetric
	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 WI-QC-26	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 ⁺⁵ (As ⁺⁵) 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 titrimetric
	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 titrimetric
	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 titrimetric
	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

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	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 WI-QC-37	ICP-OES ICP-MS Redox titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric

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 titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric
	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

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	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 titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric
	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

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	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 titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric
	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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	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 titrimetric
	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 titrimetric
	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 titrimetric
	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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	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 titrimetric
	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 200.7 – 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 titrimetric

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	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 titrimetric
	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 titrimetric

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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 titrimetric
	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 WI-QC-28 & WI-QC-46	ICP-OES ICP-MS Acid/Base titrimetric
	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 titrimetric
	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 titrimetric
	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 titrimetric

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 titrimetric
	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 titrimetric

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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)
	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 titrimetric
	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 titrimetric
	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

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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)
	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

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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)
	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

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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)
	Nitritotriacetate 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

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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)
	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

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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)
	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 (140 – 800) mg/L Non-filterable Solids (20 – 100) mg/L Dissolved Solids (140 – 800) mg/L Best Relative uncertainty 0.005	Standard Methods 2540C, 2540D, 2540B respectively	Gravimetric
	Oil & Grease, Total Recoverable Range (20 – 200) mg/L Best Relative uncertainty 0.005	Standard Methods 5520B	Gravimetric
	Cation Standard Ca ⁺² Range (3.5 – 110 mg/L) K ⁺¹ Range (4 – 40 mg/L) Mg ⁺² Range (2 – 40 mg/L) Na ⁺¹ Range (6 – 100 mg/L) Best Relative uncertainty 0.005	EPA Method 200.7 – Modified	ICP-OES
	Chromium ⁺⁶ Standard Cr ⁺⁶ Range (45 – 900 µg/L) Best Relative uncertainty 0.005	Standard Methods 3500-Cr B Modified	Spectrophotometer
	Hg Standard Hg Range (2 – 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 (26 – 1000µg/L) Al Range (200 – 4000µg/L) As Range (70 – 900µg/L) Ba Range (100 – 2500 µg/L) Be Range (8 – 900 µg/L) Ca Range (3.5 – 100 mg/L) Cd Range (8 – 1000µg/L) Cr Range (17 – 1000 µg/L) Cu Range (40 – 1000 µg/L) Fe Range (200 – 4000 µg/L) Mn Range (70 – 4000µg/L) Ni Range (80 – 3000 µg/L) Pb Range (70 – 3000µg/L) Sb Range (90 – 900µg/L) Se Range (90 – 2000 µg/L) Tl Range (60 – 900µg/L) Zn Range (100 – 2000 µg/L) Best Relative uncertainty 0.005	EPA Method 200.7 – Modified	ICP-OES
	Nitrite Standard Nitrite as Nitrogen Range (0.4 – 4 mg/L) Best Relative uncertainty 0.005	EPA Method 300.0 – Modified	IC
	Simple Nutrients Standard Phosphate as Phosphorous Range (0.5 – 5.5mg/L) Nitrate as Nitrogen Range (0.25 – 40 mg/L) Ammonium as Nitrogen (0.65 – 20 mg/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 (3.5 – 110 mg/L) Cl ⁻ Range (35 – 275 mg/L) F ⁻ Range (0.3 – 4 mg/L) K ⁺ Range (4 – 40 mg/L) Mg ⁺² Range (2 – 40 mg/L) pH Range (5 – 10 units) Conductivity Range (200 – 1200 µmhos) Na ⁺ Range (6 – 100 mg/L) NH ₄ ⁺ Range (0.79 – 24 mg/L) NO ₃ ⁻ Range (1.1 – 177 mg/L) SO ₄ ⁻² Range (5 – 125 mg/L) Best Relative uncertainty 0.005	EPA Method 200.7- Modified EPA Method 300.0 – Modified Standard Methods 4500H ⁺ Standard Methods 2510B	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 (26 – 1000 µg/L) Al Range (200 – 4000 µg/L) As Range (70 – 900 µg/L) B Range (800 – 2000 µg/L) Ba Range (100-2500 µg/L) Be Range (8-900 µg/L) Cd Range (8 – 1000 µg/L) Co Range (28-1000µg/L) Cr Range (17-1000 µg/L) Cu Range (140 – 1000 µg/L) Fe Range (200 – 4000 µg/L) Mn Range (70 – 4000 µg/L) Mo Range (60 – 600 µg/L) Ni Range (80 – 3000 µg/L) Pb Range (70 – 3000 µg/L) Sb Range (90 – 900 µg/L) Se Range (90 – 2000 µg/L) Sr Range (30 – 500 µg/L) Tl Range (60 – 900 µg/L) V Range (50 – 2000 µg/L) Zn Range (100 – 2000 µg/L) Best Relative uncertainty 0.005	EPA Method 200.7 – Modified	ICP-OES
	Water Hardness Standard Ca Range (8.7 – 275mg/L) Mg Range (2.9 – 92mg/L) Hardness as CaCO ₃ Range (17 – 440mg/L) Best Relative uncertainty 0.005	EPA Method 200.7 – Modified	ICP-OES
	Minerals Standard Cl ⁻ Range (35 – 275 mg/L) F ⁻ Range (0.3 – 4 mg/L) K ⁺ Range (4 – 40mg/L) Nitrate as Nitrogen Range (0.25 – 40 mg/L) Conductivity Range (200 – 1200 µmhos) Alkalinity Range (10 – 400mg/L) Na ⁺ Range (-6 – 100 mg/L) SO ₄ ⁻² Range (5 – 125 mg/L) Best Relative uncertainty 0.005	EPA Method 200.7 – Modified EPA Method 300.0 – Modified Standard Methods 2510B 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-45	Acid/Base titrimetric

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty¹	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 (3.97 – 4.03) 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 (6.97 – 7.03) 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 (9.97 – 10.03) 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

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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 2510B	Electrochemical
	10 µmhos/cm Conductivity Standard Range (9.0 – 11.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	20 µmhos/cm Conductivity Standard Range (18 – 22) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	75 µmhos/cm Conductivity Standard Range (73.5 – 76.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	100 µmhos/cm Conductivity Standard Range (98.0 – 102.2) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	147 µmhos/cm Conductivity Standard Range (144 - 150) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	250 µmhos/cm Conductivity Standard Range (247.5 – 252.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	500 µmhos/cm Conductivity Standard Range (495 - 505) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	1000 µmhos/cm Conductivity Standard Range (990.0 – 1010.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	1200 µmhos/cm Conductivity Standard Range (1188.0 – 1212.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	1400 µmhos/cm Conductivity Standard Range (1386.0 – 1414.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	1413 µmhos/cm Conductivity Standard Range (1399 - 1427) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	1430 µmhos/cm Conductivity Standard Range (1416.0 – 1444.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	10,000 µmhos/cm Conductivity Standard Range (9900.0 – 10100.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	12856 µmhos/cm Conductivity Standard Range (12727.4 – 12984.6) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical

Category and sub-category of Reference Material	Concentration Ranges and Best Relative uncertainty ¹	Test, Analysis, Measurement, Methods	Measurement Technique(s)
	20000 µmhos/cm Conductivity Standard Range (19800.0 – 20200.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	30000 µmhos/cm Conductivity Standard Range (29700.0 – 30300.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	40000 µmhos/cm Conductivity Standard Range (39600.0 – 40400.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	50000 µmhos/cm Conductivity Standard Range (49500.0 – 50500.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	58650 µmhos/cm Conductivity Standard Range (58063.5 – 59236.5) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	70000 µmhos/cm Conductivity Standard Range (69300.0 – 70700.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	100,000 µmhos/cm Conductivity Standard Range (99000.0 – 101000.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	175000 µmhos/cm Conductivity Standard Range (173250.0 – 176750.0) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
	Custom Conductivity Standard Range (2.0 – 175000) µmhos/cm Relative uncertainty 0.004 to 0.01	Standard Methods 2510B	Electrochemical
Category C6 Density	(included on A2.6, A9.2 (certificates))	SOP-LAB-2	Gravimetric

¹ An 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.

² This reference material producer is approved to produce Certified Reference Materials (CRM) for all items listed on the scope of accreditation.



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Presented this 30th day of September 2014.



President & CEO
For the Accreditation Council
Certificate Number 883.02
Valid to July 31, 2016

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