

#### Single Element Standards for ICP-MS and ICP

Decrease Your Waste and Save Your Space!

SPEX Europe has recently made a selection of our ICP-MS and ICP single-element standards available in a 30 mL volume. This product delivers the same great SPEX Europe quality you have come to expect, but in a smaller volume - reducing waste and mitigating worries about expiration dates.

As with all of our ICP-MS and ICP standards, the 30 mL standards include a comprehensive Certificate of Analysis. Each certificate is compliant with ISO 9001:2015, ISO/IEC 17025:2005 and ISO Guide 34:2009 guides and standards. The NIST traceable certified value of the main analyte is clearly stated, along with actual measured values, down to parts per trillion (ppt), of up to 68 trace impurities.

In order to ensure the best quality product possible, SPEX Europe standards are made with the finest, purest materials available. Our ICP-MS single-element standards are made using ultra high purity acids, 99.9999+% pure starting materials and ASTM Type I Water.

For additional product information, please visit www.eu.fishersci.com.

P-MS STANDARDS				
Element	Concentration	Volume	Matrix	Part #
Aluminum	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLAL2-2M
Antimony	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.6% Tartaric Acid/tr. HNO <sub>3</sub>	CLSB7-2M
Arsenic	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLAS2-2M
Barium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLBA2-2M
Beryllium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLBE2-2M
Bismuth	10 μg/mL	30 mL	2% HNO <sub>3</sub>	CLBI2-1AM
Cadmium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLCD2-2M
Calcium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLCA2-2M
Chromium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLCR2-2M
Cobalt	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLCO2-2M
Copper	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLCU2-2M
Germanium	10 μg/mL	30 mL	H <sub>2</sub> O/tr. F <sup>-</sup>	CLGE9-1AM
Gold	100 μg/mL	30 mL	2% HCI	CLAU1-1M

#### **CERTIFIED REFERENCE MATERIALS**





# 30 mL ICP-MS and ICP (cont'd)

MS STANDARDS				
Element	Concentration	Volume	Matrix	Part #
Indium	10 μg/mL	30 mL	2% HNO <sub>3</sub>	CLIN2-1AM
Iron	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLFE2-2M
Lead	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLPB2-2M
Magnesium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLMG2-2M
Manganese	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLMN2-2M
Mercury	10 μg/mL	30 mL	5% HNO <sub>3</sub>	CLHG2-1AM
Mercury	1,000 μg/mL	30 mL	10% HNO <sub>3</sub>	CLHG4-2M
Molybdenum	1,000 μg/mL	30 mL	H <sub>2</sub> O	CLMO9-2M
Nickel	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLNI2-2M
Potassium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLK2-2M
Rhodium	10 μg/mL	30 mL	2% HCI	CLRH1-1AM
Scandium	10 μg/mL	30 mL	2% HNO <sub>3</sub>	CLSC2-1AM
Selenium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLSE2-2M
Silver	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLAG2-2M
Sodium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLNA2-2M
Terbium	10 μg/mL	30 mL	2% HNO <sub>3</sub>	CLTB2-1AM
Thallium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLTL2-2M
Thorium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLTH2-2M
Tin	1,000 μg/mL	30 mL	1% HNO <sub>3</sub> /1% HF	CLSN2-2M
Titanium	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.24% F <sup>-</sup>	CLTI9-2M
Uranium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLU2-2M
Vanadium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLV2-2M
Yttrium	10 μg/mL	30 mL	2% HNO <sub>3</sub>	CLY2-1AM
Zinc	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	CLZN2-2M

IP STANDARDS					
Element	Concentration	Volume	Matrix	Part #	
Aluminum	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLAL2-2M	
Antimony	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.6% Tartaric Acid/tr. HNO <sub>3</sub>	PLSB7-2M	
Arsenic	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLAS2-2M	
Barium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLBA2-2M	
Beryllium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLBE2-2M	
Bismuth	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLBI4-2M	
Boron	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLB9-2M	
Cadmium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCD2-2M	
Calcium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCA2-2M	
Carbon	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLC9-2M	
Cerium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCE2-2M	
Cesium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCS2-2M	
Chromium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCR2-2M	
Cobalt	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCO2-2M	
Copper	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLCU2-2M	
Dysprosium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLDY2-2M	
Erbium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLER2-2M	
Europium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLEU2-2M	
Gadolinium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLGD2-2M	



## 30 mL ICP-MS and ICP (cont'd)

Element	Concentration	Volume	Matrix	Part #
Gallium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLGA2-2M
Germanium	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.16% F <sup>-</sup>	PLGE9-2M
Gold	1,000 μg/mL	30 mL	10% HCI	PLAU3-2M
Hafnium	1,000 μg/mL	30 mL	2% HCI	PLHF1-2M
Holmium	1,000 μg/mL	30 mL	2% HNO,	PLHO2-2M
Indium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLIN2-2M
Iridium	1,000 μg/mL	30 mL	10% HCI	PLIR3-2M
Iron	1,000 μg/mL	30 mL	2% HNO,	PLFE2-2M
Lanthanum	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLLA2-2M
Lead	1,000 μg/mL	30 mL	2% HNO,	PLPB2-2M
Lithium	1,000 μg/mL	30 mL	2% HNO,	PLLI2-2M
Lutetium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLLU2-2M
Magnesium	1,000 μg/mL	30 mL	2% HNO,	PLMG2-2M
Manganese	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLMN2-2M
Mercury	1,000 μg/mL	30 mL	10% HNO,	PLHG4-2M
Molybdenum	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLMO9-2M
Neodymium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLND2-2M
Nickel	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLNI2-2M
Niobium	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.4% F <sup>-</sup>	PLNB9-2M
Palladium	1,000 μg/mL	30 mL	10% HCI	PLPD3-2M
Phosphorus	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLP9-2M
Platinum	1,000 μg/mL	30 mL	10% HCI	PLPT3-2M
Potassium	1,000 μg/mL	30 mL	2% HNO,	PLK2-2M
Praseodymium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLPR2-2M
Rhenium	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLRE9-2M
Rhodium	1,000 μg/mL	30 mL	10% HCI	PLRH3-2M
Rubidium	1,000 μg/mL	30 mL	2% HCI	PLRB2-2M
Ruthenium	1,000 μg/mL	30 mL	10% HCI	PLRU3-2M
Samarium	1,000 μg/mL	30 mL	2% HNO,	PLSM2-2M
Scandium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLSC2-2M
Selenium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLSE2-2M
Silicon	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.4% F <sup>-</sup>	PLSI9-2M
Silver	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLAG2-2M
Sodium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLNA2-2M
Strontium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLSR2-2M
Sulfur	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLS9-2M
Tantalum	1,000 μg/mL	30 mL	H <sub>2</sub> O/0.8% HF	PLTA9-2M
Tellurium	1,000 μg/mL	30 mL	10% HNO <sub>3</sub>	PLTE4-2M
Terbium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLTB2-2M
Thallium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLTL2-2M
Thorium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLTH2-2M
Thulium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLTM2-2M
Tin	1,000 μg/mL	30 mL	20% HCI	PLSN5-2M
Titanium	1,000 μg/mL	30 mL	H,O/0.24% F	PLTI9-2M
Tungsten	1,000 μg/mL	30 mL	H <sub>2</sub> O	PLW9-2M
Uranium	1,000 μg/mL	30 mL	2% HNO <sub>2</sub>	PLU2-2M



### 30 mL ICP-MS and ICP (cont'd)

ICP STANDARDS					
Element	Concentration	Volume	Matrix	Part #	
Vanadium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLV2-2M	
Ytterbium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLYB2-2M	
Yttrium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLY2-2M	
Zinc	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLZN2-2M	
Zirconium	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	PLZR2-2M	

SPECIATION STANDARDS					
Element	Concentration	Volume	Matrix	Part #	
Arsenic +3	1,000 μg/mL	30 mL	2% HCI	SPEC-AS3M	
Arsenic +5	1,000 μg/mL	30 mL	H <sub>2</sub> O	SPEC-AS5M	
Chromium +3	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	SPEC-CR3M	
Chromium +6	1,000 μg/mL	30 mL	H <sub>2</sub> O	SPEC-CR6M	
Selenium +4	1,000 μg/mL	30 mL	2% HNO <sub>3</sub>	SPEC-SE4M	

#### CAN'T FIND THE STANDARDS YOU ARE LOOKING FOR?

SPEX Europe can make custom standards to meet your exact needs. Contact your Fisher Scientific Sales Representative for a quote.

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