

Specification – Certified Reference Material

Element ICP Standard Solution 1000 mg/L



Accreditation:



Deutsche
Akkreditierungsstelle
D-RM-15185-01-00

Merck KGaA, Darmstadt, Germany is accredited by the German accreditation authority as registered reference material producer (D-RM-15185-01-00) in accordance with **ISO 17034**.



Deutsche
Akkreditierungsstelle
D-K-15185-01-00

Merck KGaA, Darmstadt, Germany - Calibration laboratory is accredited by the German accreditation authority as registered Calibration Laboratory (D-K-15185-01-00) according to **DIN EN ISO/IEC 17025**.

Description of CRM:	Element ICP standard solution 1000 mg/l
Expiry date:	4 years
Storage:	+15°C to +25°C tightly closed in the original container
Specification:	956 – 1011 mg/kg

Article	Analyte	Description of CRM	Associated uncertainty**, $U=k \cdot u$ ($k=2$) as mass fraction
170301	Al	Aluminium ICP Standard	± 5 mg/kg
170302	Sb	Antimony ICP Standard	± 5 mg/kg
170303	As	Arsenic ICP Standard	± 5 mg/kg
170304	Ba	Barium ICP Standard	± 5 mg/kg
170305	Be	Beryllium ICP Standard	± 5 mg/kg
170306	Bi	Bismuth ICP Standard	± 5 mg/kg
170307	B	Boron ICP Standard	± 5 mg/kg
170309	Cd	Cadmium ICP Standard	± 5 mg/kg
170308	Ca	Calcium ICP Standard	± 5 mg/kg
170311	Ce	Cerium ICP Standard	± 5 mg/kg
170310	Cs	Cesium ICP Standard	± 5 mg/kg
170312	Cr	Chromium ICP Standard	± 5 mg/kg
170313	Co	Cobalt ICP Standard	± 5 mg/kg
170314	Cu	Copper ICP Standard	± 5 mg/kg
170315	Dy	Dysprosium ICP Standard	± 5 mg/kg
170316	Er	Erbium ICP Standard	± 5 mg/kg
170317	Eu	Europium ICP Standard	± 5 mg/kg
170318	Gd	Gadolinium ICP Standard	± 5 mg/kg
170319	Ga	Gallium ICP Standard	± 6 mg/kg
170320	Ge	Germanium ICP Standard	± 5 mg/kg
170321	Au	Gold ICP Standard	± 5 mg/kg
170322	Hf	Hafnium ICP Standard	± 5 mg/kg
170323	Ho	Holmium ICP Standard	± 5 mg/kg
170324	In	Indium ICP Standard	± 5 mg/kg
170325	Ir	Iridium ICP Standard	± 8 mg/kg (*)

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Ontario, L6H 6J8, Phone: +1 800-565-1400



170326	Fe	Iron ICP Standard	± 5 mg/kg
170327	La	Lanthanum ICP Standard	± 5 mg/kg
170328	Pb	Lead ICP Standard	± 5 mg/kg
170329	Li	Lithium ICP Standard	± 6 mg/kg
170330	Lu	Lutetium ICP Standard	± 5 mg/kg
170331	Mg	Magnesium ICP Standard	± 5 mg/kg
170332	Mn	Manganese ICP Standard	± 5 mg/kg
170333	Hg	Mercury ICP Standard	± 7 mg/kg
170334	Mo	Molybdenum ICP Standard	± 5 mg/kg
170335	Nd	Neodymium ICP Standard	± 6 mg/kg
170336	Ni	Nickel ICP Standard	± 5 mg/kg
170337	Nb	Niobium ICP Standard	± 5 mg/kg
170338	Os	Osmium ICP Standard	± 5 mg/kg (*)
170339	Pd	Palladium ICP Standard	± 5 mg/kg
170340	P	Phosphorus ICP Standard	± 5 mg/kg
170341	Pt	Platinum ICP Standard	± 5 mg/kg
170342	K	Potassium ICP Standard	± 5 mg/kg
170343	Pr	Praseodymium ICP Standard	± 9 mg/kg
170344	Re	Rhenium ICP Standard	± 6 mg/kg
170345	Rh	Rhodium ICP Standard	± 6 mg/kg
170346	Rb	Rubidium ICP Standard	± 8 mg/kg
170347	Ru	Ruthenium ICP Standard	± 8 mg/kg (*)
170348	Sm	Samarium ICP Standard	± 6 mg/kg
170349	Sc	Scandium ICP Standard	± 5 mg/kg
170350	Se	Selenium ICP Standard	± 7 mg/kg
170365	Si	Silicon ICP Standard	± 5 mg/kg
170352	Ag	Silver ICP Standard	± 5 mg/kg
170353	Na	Sodium ICP Standard	± 5 mg/kg
170355	S	Sulfur ICP Standard	± 5 mg/kg
170354	Sr	Strontium ICP Standard	± 5 mg/kg
170356	Ta	Tantalum ICP Standard	± 5 mg/kg
170357	Te	Tellurium ICP Standard	± 5 mg/kg
170358	Tb	Terbium ICP Standard	± 5 mg/kg
170359	Tl	Thallium ICP Standard	± 5 mg/kg
170361	Tm	Thulium ICP Standard	± 6 mg/kg
170362	Sn	Tin ICP Standard	± 5 mg/kg
170363	Ti	Titanium ICP Standard	± 5 mg/kg
170364	W	Tungsten ICP Standard	± 5 mg/kg
170366	V	Vanadium ICP Standard	± 5 mg/kg
170367	Yb	Ytterbium ICP Standard	± 5 mg/kg
170368	Y	Yttrium ICP Standard	± 5 mg/kg
170369	Zn	Zinc ICP Standard	± 5 mg/kg
170370	Zr	Zirconium ICP Standard	± 5 mg/kg

(*) Standard is not within accreditation scope of ISO 17034 and DIN EN ISO/IEC 17025.

****The uncertainty can vary depending on the primary reference material.**

Metrological traceability: Directly traceable to the corresponding / suitable **NIST SRM®**
NIST: National Institute of Standards and Technology, Gaithersburg, USA.

Measurement method: Inductively coupled plasma optical emission spectrometry ICP-OES

Intended use: This reference material is intended for use as a calibration standard in element analysis.

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