

Product Specification

Tin ICP-MS Standard, 1000 ppm Sn in 3% HNO₃

Lot Number: SAMPLE

Product Number: MSSN1KN

Manufacture Date: N/A

Expiration Date: N/A

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.

The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3161. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Hydrofluoric Acid	7664-39-3	Trace Metals
Tin	7440-31-5	High Purity
Nitric Acid	7697-37-2	Trace Metals

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Tin (Sn)	997-1003 ppm	N/A	3161

Trace Elements by ICP or ICP - MS

I=Spectral Interference N=Not Tested

All values reported in mg/L (ppm)

Aluminum (Al)	N/A	Iron (Fe)	N/A	Silicon (Si)	N/A
Antimony (Sb)	N/A	Lanthanum (La)	N/A	Silver (Ag)	N/A
Arsenic (As)	N/A	Lead (Pb)	N/A	Sodium (Na)	N/A
Barium (Ba)	N/A	Lithium (Li)	N/A	Strontium (Sr)	N/A
Beryllium (Be)	N/A	Lutetium (Lu)	N/A	Sulfur (S)	N/A
Bismuth (Bi)	N/A	Magnesium (Mg)	N/A	Tantalum (Ta)	N/A
Boron (B)	N/A	Manganese (Mn)	N/A	Tellurium (Te)	N/A
Cadmium (Cd)	N/A	Mercury (Hg)	N/A	Terbium (Tb)	N/A
Calcium (Ca)	N/A	Molybdenum (Mo)	N/A	Thallium (Tl)	N/A
Cerium (Ce)	N/A	Neodymium (Nd)	N/A	Thorium (Th)	N/A
Cesium (Cs)	N/A	Nickel (Ni)	N/A	Thulium (Tm)	N/A
Chromium (Cr)	N/A	Niobium (Nb)	N/A	Titanium (Ti)	N/A
Cobalt (Co)	N/A	Osmium (Os)	N/A	Tungsten (W)	N/A
Copper (Cu)	N/A	Palladium (Pd)	N/A	Uranium (U)	N/A
Dysprosium (Dy)	N/A	Phosphorus (P)	N/A	Vanadium (V)	N/A
Erbium (Er)	N/A	Platinum (Pt)	N/A	Ytterbium (Yb)	N/A
Europium (Eu)	N/A	Potassium (K)	N/A	Yttrium (Y)	N/A
Gadolinium (Gd)	N/A	Praseodymium (Pr)	N/A	Zinc (Zn)	N/A
Gallium (Ga)	N/A	Rhenium (Re)	N/A	Zirconium (Zr)	N/A
Germanium (Ge)	N/A	Rhodium (Rh)	N/A		
Gold (Au)	N/A	Rubidium (Rb)	N/A		
Hafnium (Hf)	N/A	Ruthenium (Ru)	N/A		
Holmium (Ho)	N/A	Samarium (Sm)	N/A		
Indium (In)	N/A	Scandium (Sc)	N/A		
Iridium (Ir)	N/A	Selenium (Se)	N/A		

Specification		Reference
Tin Standard, 1000 ppm		EPA (200.8)
Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.		
Part Number	Size / Package Type	Shelf Life (Unopened Container)
MSSN1KN-100	100 mL natural LDPE	18 months
Recommended Storage: 15°C - 30°C (59°F - 86°F)		

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