

# Product Specification

## Aluminum ICP-MS Standard, 1000 ppm Al in 3% HNO<sub>3</sub>

**Lot Number:** SAMPLE

**Product Number:** MSAL1KN

**Manufacture Date:** N/A

**Expiration Date:** N/A

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3101. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Nitric Acid	7697-37-2	Trace Metals
Aluminum Nitrate Nonahydrate	7784-27-2	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Assay (vs. EDTA/Dithizone)	995-1005 ppm Al	N/A	915

### Trace Elements by ICP or ICP - MS

I=Spectral Interference N=Not Tested

All values reported in mg/L (ppm)

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

Specification	Reference	
Aluminum 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)
MSAL1KN-100	100 mL natural LDPE	18 months
Recommended Storage: 15°C - 30°C (59°F - 86°F)		

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