

Product Specification

Yttrium ICP-MS Standard, 1000 ppm Y in 3% HNO₃

Lot Number: SAMPLE

Product Number: MSY1KN

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 3167. 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
Yttrium Oxide	1314-36-9	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Yttrium (Y)	995-1005 ppm	N/A	3167

Trace Elements by ICP or ICP - MS

I=Spectral Interference N=Not Tested

All values reported in mg/L (ppm)

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

Specification	Reference
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Yttrium ICPMS, 1000 ppm / HNO ₃	EPA (200.8)
Yttrium ICPMS, 1000 ppm / HNO ₃	EPA (SW-846) (6020)

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)
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MSY1KN-100	100 mL natural LDPE	18 months
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Recommended Storage: 15°C - 30°C (59°F - 86°F)



Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."