

# Product Specification

## Manganese ICP Standard, 10,000 ppm Mn in 5% HNO<sub>3</sub>

**Lot Number:** SAMPLE

**Product Number:** PMN10KN

**Manufacture Date:** N/A

**Expiration Date:** N/A

The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3132. 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
Manganese Acetate Tetrahydrate	6156-78-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Pale pink liquid	N/A	
Assay (vs. EDTA/Eriochrome Black T)	9950-10050 ppm Mn	N/A	915

### Trace Elements by ICP or ICP - MS

I=Spectral Interference N=Not Tested

All values reported in mg/L (ppm)

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

Specification	Reference
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Manganese ICP, 10K ppm in HNO<sub>3</sub>

EPA (200.7)

This standard is guaranteed to be stable and accurate provided the product is kept tightly capped and stored under normal laboratory conditions. Balances are calibrated using NIST traceable weights whose verification of maintenance and recalibration is documented per in-house Standard Operating Procedures. Class A glassware is also calibrated and routinely rechecked per in-house Standard Operating Procedures. Trace metal analyzed acids and Trace Metals Analyzed Water are used in the manufacture of this product. Triple cleaned containers are used in the manufacture of this product.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
PMN10KN-100	100 mL natural LDPE	18 months
PMN10KN-50	50 mL natural poly	18 months
PMN10KN-500	500 mL natural poly	18 months

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

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