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## **Product Specification**

Scandium ICP Standard, 10,000 ppm Sc in 5% HNO<sub>3</sub>

Product Number: PSC10KN Lot Number: SAMPLE

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 uncertainty associated with the certified value is  $\pm 0.5\%$  relative, which 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 3148. 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	
Scandium Oxide	12060-08-1	High Purity	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Scandium (Sc)	9950-10050 ppm	N/A	3148

		9950-	10050 ppm	N/A		3148
		•		I=Spectral	Interference	N=Not Tested
N/A		Lanthanum (La)	N/A	Strontium (Sr)	N/A	
N/A		Lead (Pb)	N/A	Sulfur (S)	N/A	
N/A		Lithium (Li)	N/A	Tantalum (Ta)	N/A	
N/A		Lutetium (Lu)	N/A	Tellurium (Te)	N/A	
N/A		Magnesium (Mg)	N/A	Terbium (Tb)	N/A	
N/A		Manganese (Mn)	N/A	Thallium (Tl)	N/A	
N/A		Mercury (Hg)	N/A	Thorium (Th)	N/A	
N/A		Molybdenum (Mo)	N/A	Thulium (Tm)	N/A	
N/A		Neodymium (Nd)	N/A	Tin (Sn)	N/A	
N/A		Nickel (Ni)	N/A	Titanium (Ti)	N/A	
N/A		Niobium (Nb)	N/A	Tungsten (W)	N/A	
N/A		Osmium (Os)	N/A	Uranium (U)	N/A	
N/A		Palladium (Pd)	N/A	Vanadium (V)	N/A	
N/A		Phosphorus (P)	N/A	Ytterbium (Yb)	N/A	
N/A		Platinum (Pt)	N/A	Yttrium (Y)	N/A	
N/A		Potassium (K)	N/A	Zinc (Zn)	N/A	
N/A		Praseodymium (Pr)	N/A	Zirconium (Zr)	N/A	
N/A		Rhenium (Re)	N/A			
N/A		Rhodium (Rh)	N/A			
N/A		Rubidium (Rb)	N/A			
N/A		Ruthenium (Ru)	N/A			
N/A		Samarium (Sm)	N/A			
N/A		Selenium (Se)	N/A			
N/A		Silicon (Si)	N/A			
N/A		Silver (Ag)	N/A			
N/A		Sodium (Na)	N/A			
	N/A	N/A	Trace Elements by All values reporte  N/A Lanthanum (La) N/A Lead (Pb) N/A Lithium (Li) N/A Magnesium (Mg) N/A Manganese (Mn) N/A Molybdenum (Mo) N/A Nickel (Ni) N/A Niobium (Nb) N/A Niobium (Nb) N/A Palladium (Pd) N/A Phosphorus (P) N/A Phosphorus (P) N/A Phosphorus (P) N/A Phosphorus (P) N/A Rhenium (Re) N/A Rhodium (Rb) N/A Rubidium (Rb) N/A Ruthenium (Ru) N/A Samarium (Sm) N/A Silicon (Si) N/A Silicon (Si) N/A Siliver (Ag)	N/A         Lead (Pb)         N/A           N/A         Lithium (Li)         N/A           N/A         Lutetium (Lu)         N/A           N/A         Magnesium (Mg)         N/A           N/A         Manganese (Mn)         N/A           N/A         Mercury (Hg)         N/A           N/A         Molybdenum (Mo)         N/A           N/A         Molybdenum (Mo)         N/A           N/A         N/A         N/A </td <td>Trace Elements by ICP or ICP - MS  All values reported in mg/L (ppm)  N/A  Lanthanum (La) N/A  Lead (Pb) N/A  Lithium (Li) N/A  Lithium (Li) N/A  Lutetium (Lu) N/A  Magnesium (Mg) N/A  Manganese (Mn) N/A  Mercury (Hg) N/A  Molybdenum (Mo) N/A  N/A  Nickel (Ni) N/A  Niobium (Nb) N/A  Niobium (Nb) N/A  Palladium (Pd)  N/A  Phosphorus (P)  N/A  Phosphorus (P)  N/A  Potassium (K)  N/A  Praseodymium (Pr)  N/A  Ruthenium (Ru)  N/A  Ruthenium (Ru)  N/A  Niokel (Ni)  N/A  Ruthenium (Ru)  N/A  Rilcenium (Ru)  N/A  Rilcenium (Ru)  N/A  Rilcenium (Ru)  N/A  Ruthenium (Ru)  N/A  Silicon (Si) N/A  N/A  Silicon (Si)  N/A  N/A  Silver (Ag)</td> <td>  Trace Elements by ICP or ICP - MS   All values reported in mg/L (ppm)    </td>	Trace Elements by ICP or ICP - MS  All values reported in mg/L (ppm)  N/A  Lanthanum (La) N/A  Lead (Pb) N/A  Lithium (Li) N/A  Lithium (Li) N/A  Lutetium (Lu) N/A  Magnesium (Mg) N/A  Manganese (Mn) N/A  Mercury (Hg) N/A  Molybdenum (Mo) N/A  N/A  Nickel (Ni) N/A  Niobium (Nb) N/A  Niobium (Nb) N/A  Palladium (Pd)  N/A  Phosphorus (P)  N/A  Phosphorus (P)  N/A  Potassium (K)  N/A  Praseodymium (Pr)  N/A  Ruthenium (Ru)  N/A  Ruthenium (Ru)  N/A  Niokel (Ni)  N/A  Ruthenium (Ru)  N/A  Rilcenium (Ru)  N/A  Rilcenium (Ru)  N/A  Rilcenium (Ru)  N/A  Ruthenium (Ru)  N/A  Silicon (Si) N/A  N/A  Silicon (Si)  N/A  N/A  Silver (Ag)	Trace Elements by ICP or ICP - MS   All values reported in mg/L (ppm)

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Specification	Reference
Scandium ICP, 10,000 ppm in HNO3	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)
PSC10KN-100	100 mL natural LDPE	18 months

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

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