Arlington, TX 76012 Pocomoke City, MD 21851 Batesville, IN 47006 http://www.riccachemical.com 1-888-GO-RICCA customerservice@riccachemical.com

## **Product Specification**

Tin ICP Standard, 1000 ppm Sn in 10% HCl

Product Number: PSN1KH Lot Number: SAMPLE

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 3161a. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade	
Water	7732-18-5	ACS/ASTM/USP/EP	
Hydrochloric Acid	7647-01-0	Trace Metals	
Nitric Acid	7697-37-2	Trace Metals	
Tin	7440-31-5	High Purity	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Tin (Sn)	995-1005 ppm	N/A	3161

1111 (011)	T		y ICP or ICP - MS	I=Spectral	Interference N=Not Tested
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		

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Specification	Reference
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Tin ICP Standard, 1 mL = 1 mg Sn (1,000 ppm Sn) Sn in 10% HCl 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)
PSN1KH-100	100 mL natural LDPE	18 months
PSN1KH-500	500 mL natural poly	18 months

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

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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