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## **Product Specification**

Zirconium ICP Standard, 10,000 ppm Zr in 5% HCl

Lot Number: SAMPLE Product Number: PZR10KH

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 3169. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Zirconyl Chloride Octahydrate	13520-92-8	High Purity
Hydrochloric Acid	7647-01-0	Trace Metals

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Zirconium (Zr)	9950-10050 ppm	N/A	3169

Zirconium (Zr)		9950-	10050 ppm	N/A		3169
	Tra	ace Elements by All values reporte	ICP or ICP - MS	I=Spectral I	nterference	N=Not Tested
Aluminum (Al)	N/A	Lanthanum (La)	N/A	Sodium (Na)	N/A	
Antimony (Sb)	N/A	Lead (Pb)	N/A	Strontium (Sr)	N/A	
Arsenic (As)	N/A	Lithium (Li)	N/A	Sulfur (S)	N/A	
Barium (Ba)	N/A	Lutetium (Lu)	N/A	Tantalum (Ta)	N/A	
Beryllium (Be)	N/A	Magnesium (Mg)	N/A	Tellurium (Te)	N/A	
Bismuth (Bi)	N/A	Manganese (Mn)	N/A	Terbium (Tb)	N/A	
Boron (B)	N/A	Mercury (Hg)	N/A	Thallium (Tl)	N/A	
Cadmium (Cd)	N/A	Molybdenum (Mo)	N/A	Thorium (Th)	N/A	
Calcium (Ca)	N/A	Neodymium (Nd)	N/A	Thulium (Tm)	N/A	
Cerium (Ce)	N/A	Nickel (Ni)	N/A	Tin (Sn)	N/A	
Cesium (Cs)	N/A	Niobium (Nb)	N/A	Titanium (Ti)	N/A	
Chromium (Cr)	N/A	Osmium (Os)	N/A	Tungsten (W)	N/A	
Cobalt (Co)	N/A	Palladium (Pd)	N/A	Uranium (U)	N/A	
Copper (Cu)	N/A	Phosphorus (P)	N/A	Vanadium (V)	N/A	
Dysprosium (Dy)	N/A	Platinum (Pt)	N/A	Ytterbium (Yb)	N/A	
Erbium (Er)	N/A	Potassium (K)	N/A	Yttrium (Y)	N/A	
Europium (Eu)	N/A	Praseodymium (Pr)	N/A	Zinc (Zn)	N/A	
Gadolinium (Gd)	N/A	Rhenium (Re)	N/A			
Gallium (Ga)	N/A	Rhodium (Rh)	N/A			
Germanium (Ge)	N/A	Rubidium (Rb)	N/A			
Gold (Au)	N/A	Ruthenium (Ru)	N/A			
Hafnium (Hf)	N/A	Samarium (Sm)	N/A			
Holmium (Ho)	N/A	Scandium (Sc)	N/A			
Indium (In)	N/A	Selenium (Se)	N/A			
Iridium (Ir)	N/A	Silicon (Si)	N/A			
Iron (Fe)	N/A	Silver (Ag)	N/A			

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Spec	Specification						Reference	
		TOD O				 <b>5</b> (12.22	5 ) 5 6 612	ED4 (200 7)

Zirconium ICP Standard, 1 mL = 10 mg Zr (10,000 ppm Zr) ZrOCl2 EPA (200.7) in 5% HCl

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)	
PZR10KH-100	100 mL natural LDPE	18 months	
PZR10KH-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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