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Product Specification

Cadmium ICP Standard, 1000 ppm Cd in 3% HCl

Product Number: PCD1KH 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 3108. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade	
Water	7732-18-5		
Hydrochloric Acid	7647-01-0		
Cadmium	7440-43-9		
Test	Specification	Result	NIST SRM#

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Assay (vs. EDTA/Xylenol Orange)	995-1005 ppm Cd	N/A	915

'A/Xylenol Orange)	995-1	1005 ppm Cd	N/A		915
Т			I=Spectral	Interference	N=Not Tested
N/A	Lead (Pb)	N/A	Strontium (Sr)	N/A	
N/A	Lithium (Li)	N/A	Sulfur (S)	N/A	
N/A	Lutetium (Lu)	N/A	Tantalum (Ta)	N/A	
N/A	Magnesium (Mg)	N/A	Tellurium (Te)	N/A	
N/A	Manganese (Mn)	N/A	Terbium (Tb)	N/A	
N/A	Mercury (Hg)	N/A	Thallium (Tl)	N/A	
N/A	Molybdenum (Mo)	N/A	Thorium (Th)	N/A	
N/A	Neodymium (Nd)	N/A	Thulium (Tm)	N/A	
N/A	Nickel (Ni)	N/A	Tin (Sn)	N/A	
N/A	Niobium (Nb)	N/A	Titanium (Ti)	N/A	
N/A	Osmium (Os)	N/A	Tungsten (W)	N/A	
N/A	Palladium (Pd)	N/A	Uranium (U)	N/A	
N/A	Phosphorus (P)	N/A	Vanadium (V)	N/A	
N/A	Platinum (Pt)	N/A	Ytterbium (Yb)	N/A	
N/A	Potassium (K)	N/A	Yttrium (Y)	N/A	
N/A	Praseodymium (Pr)) N/A	Zinc (Zn)	N/A	
N/A	Rhenium (Re)	N/A	Zirconium (Zr)	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	Scandium (Sc)	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 Lead (Pb) N/A Lithium (Li) N/A Lutetium (Lu) N/A Magnesium (Mg) N/A Manganese (Mn) N/A Molybdenum (Mo) 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 Platinum (Pt) N/A Praseodymium (Re) N/A Rhenium (Re) N/A Rhodium (Rb) N/A Rubidium (Rb) N/A Ruthenium (Ru) N/A Samarium (Sc) N/A Selenium (Sc) N/A Silicon (Si) N/A Silver (Ag)	Trace Elements by ICP or ICP - MS All values reported in mg/L (ppm) N/A 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 Mercury (Hg) N/A N/A Molybdenum (Mo) N/A N/A Nobium (Nb) N/A N/A Nickel (Ni) N/A N/A Nobium (Os) N/A N/A Palladium (Pd) N/A N/A Phosphorus (P) N/A N/A Potassium (K) N/A N/A Praseodymium (Rb) N/A N/A Rhodium (Rb) N/A N/A Rhodium (Rb) N/A N/A Rhodium (Rb) N/A N/A Rhodium (Rb) N/A N/A Rubidium (Rb) N/A N/A Rubidium (Rb) N/A N/A Ruthenium (Ru) N/A N/A Seandium (Sc) N/A N/A Selenium (Se) N/A N/A Silicon (Si) N/A N/A Silicon (Si) N/A	Trace Elements by ICP or ICP - MS All values reported in mg/L (ppm)	Trace Elements by ICP or ICP MS

Lot Number: SAMPLE Product Number: PCD1KH Page 1 of 2 Version: 1.3

Specification	Reference

Cadmium ICP Standard, 1 mL = 1 mg Cd (1,000 ppm Cd) Cd in 3% EPA (200.7) 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)
PCD1KH-500	500 mL natural poly	18 months

Recommended Storage: $15^{\circ}\text{C} - 30^{\circ}\text{C} (59^{\circ}\text{F} - 86^{\circ}\text{F})$

This document is designed to comply with ISO Guide 31 "Reference Materials $^{\rm --}$ Contents of Certificates and Labels."

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