



Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material



Chemical Testing
Cert #2495.02

Catalog Number: CLZN2-2M

Lot No. CL12-138ZNM

Description: 1000 µg/mL Zinc

Matrix: 2% HNO₃

This **CLARITAS PPT®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 999 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

The CRM is prepared gravimetrically using high purity Zinc Metal, Lot# 09161G. The certified value listed is the average of values obtained by classical wet assay and ICP spectrometer analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 997 µg/mL

Method: EDTA titration using Eriochrome Black-T as indicator. EDTA standardized against Pb(NO₃)₂ NIST SRM #928.

Instrumental Analysis by ICP Spectrometer: 1000 µg/mL

Uncertified Properties

Density: 1.011 g/mL @ 20.0°C

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Ag	<0.6	Cr	0.5	Hg	<0.2	Na	3	Rh	<0.03	Te	<0.6
Al	2	Cs	<0.07	Ho	<0.01	Nb	<0.3	Ru	<0.2	Th	<0.01
As	<0.4	Cu	0.8	In	<0.03	Nd	<0.06	Sb	<0.05	Ti	<0.2
Au	<0.2	Dy	<0.03	Ir	<0.4	Ni	<0.4	Sc	0.3	Tl	<0.2
B	5	Er	<0.02	K	5	P	<300	Se	<0.07	Tm	<0.03
Ba	<0.06	Eu	<0.03	La	<0.02	Pb	1	Si	<200	U	<0.2
Be	<0.2	Fe	3	Li	<0.3	Pd	0.05	Sm	<0.04	V	<0.2
Bi	0.02	Ga	<0.2	Lu	<0.01	Pr	<0.03	Sn	<0.2	W	<0.2
Ca	10	Gd	<0.06	Mg	<0.6	Pt	<0.04	Sr	<0.08	Y	<0.06
Cd	3	Ge	<2	Mn	<0.4	Rb	<0.1	Ta	<0.2	Yb	<0.02
Ce	<0.02	Hf	<0.02	Mo	<0.2	Re	<0.02	Tb	<0.01	Zr	<0.2
Co	<0.2										

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of fourteen months from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: _____

Certifying Officer: _____

Katherine Cullinan
Katherine Cullinan, QC Manager