

CERTIFICATE OF GRAVIMETRIC PREPARATION

PRODUCT: ICP Standard Zinc 1000 mg/L in 2-5% HNO₃
PRODUCT No.: PZN2A2
LOT NO.: PZN2225E1
DATE OF PREPARATION: 28th May 2025
EXPIRY DATE: 28th May 2027
DENSITY VALUE: 1.019 g/mL @ 20 °C

PREPARATION OF STANDARD:

All standard components have been pre-qualified/verified before use. All analytical measuring devices and instrumentation have been pre-calibrated. The actual concentrations reported below are based on this preparation methodology and compound impurities.

Raw Material	Purity %	Nominal mg/kg	Actual mg/kg
Zinc	99.999	982	981 ± 0.2 %

981 mg/kg is equivalent to 999 mg/L at 20 °C

The expanded uncertainty (k=2) due to weighing, volumetric preparation and homogeneity is calculated in compliance with EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurements as ± 0.2 %. All values are verified by ICP-MS analysis using externally sourced ISO Guide 34 accredited Certified Reference Materials as calibrants/quality controls where possible.

TRACEABILITY IN THE PRODUCTION OF THIS STANDARD:

This product was prepared gravimetrically on a mass/mass basis, using balances calibrated by Reagecon engineers with mass standards traceable to the National and International primary standard of mass. Reagecon holds ISO 17025 accreditation for calibration of non-automatic weighing machines. The resulting Balance Certificate of Calibration was issued in accordance with the requirements of ISO/IEC 17025. The balance was calibrated under monitored environmental conditions and atmospheric pressure. Tests were performed for capacity, readability, repeatability, eccentricity and linearity.

TEST METHOD:

The mean result of this standard was verified using a calibrated ICP-MS system according to an in-house test method. The result reported in this certificate was confirmed by analysis of a sample of this lot taken at time of manufacture. The density of this standard was determined using a high performance calibrated density meter. This test method provides traceability to high purity ISO Guide 34 Certified Reference Materials.

This certificate relates solely to the lot number given above.

Approved By: QC Technician

A handwritten signature in dark ink, appearing to read "J. Millin", is written over a faint, light-colored rectangular stamp.

Date: 04th June 2025

This certificate must not be reproduced except in full.