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CERTIFICATE OF GRAVIMETRIC PREPARATION

PRODUCT: Concentrate to make Iron Standard in 0.05M H_2SO_4

PRODUCT No.: 5001600C

LOT NO.: 516C25A1

DATE OF PREPARATION: 23rd January 2025

EXPIRY DATE: 28th January 2026

DENSITY VALUE: 1.002 g/ml @ 20°C

PREPARATION OF CONCENTRATE:

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.

Analyte	Raw Material	Nominal mg/L	Actual mg/kg
Iron, as Fe	Ammonium Iron III Sulphate	200.0	199.5 ± 0.2 %

199.5 mg/kg is equivalent to 199.9 mg/L @ 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 17034 accredited Certified Reference Materials as calibrants/quality controls where possible.

DILUTION INSTRUCTIONS FOR PREPARATION OF Ph. Eur. 5001600 (20ppm Iron aq.)

1. To prepare Ph. Eur. 5001600 (Iron 20 ppm) dilute this solution to 10 times it's volume with purified water.
2. Prepare the dilute solutions immediately before use.

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 certificate relates solely to the lot number given above.

Approved By: Quality Technician

gabriel

Date: 04th February 2025