

## **CERTIFICATE OF GRAVIMETRIC PREPARATION**

**PRODUCT:** Concentrate to make Arsenic Standard  
**PRODUCT No.:** 5000500C  
**MATRIX:** 0.1% NaOH aq.  
**LOT NO.:** 550C24D1  
**DATE OF PREPARATION:** 18<sup>th</sup> April 2024  
**EXPIRY DATE:** 28<sup>th</sup> April 2025  
**DENSITY VALUE:** 1.001 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 |
|----------------|------------------|--------------|--------------|
| Arsenic, as As | Arsenic Trioxide | 1000         | 999 ± 0.2 %  |

**999 mg/kg is equivalent to 1000 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. 5000500 (10ppm As aq.)**

1. To prepare Ph. Eur. 5000500 (As 10 ppm) dilute this solution to 100 times it's volume with purified water.
2. Prepare the dilute solution immediately before use.

## **TRACEABILITY IN THE PRODUCTION OF THIS STANDARD**

This product was prepared gravimetrically on a mass/mass basis, using a balance 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:** QC Supervisor



**Date:** 30<sup>th</sup> April 2024

This certificate must not be reproduced except in full.