

**Reference Material Certificate**  
**Product Information Sheet**

**Product Name:** ICP-MS Tuning Solution Low Concentration-480mL

**Lot Number:** 0006735363

**Product Number:** ICUS-0001535

**Lot Issue Date:** 24-Mar-2023

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Expiration Date:** 30-Apr-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
lithium carbonate ( ICP grade ) (as lithium)	1.00	± 0.01 µg/L	000554-13-2	RM18931
yttrium oxide (ICP grade) (as yttrium)	1.00	± 0.01 µg/L	001314-36-9	RM14241
cerium (III) nitrate ( ICP grade ) (as cerium)	1.00	± 0.01 µg/L	010294-41-4	RM15197
thallium (I) nitrate ( ICP grade ) (as thallium)	1.00	± 0.01 µg/L	010102-45-1	RM14579
cobalt nitrate hexahydrate ( ICP grade ) (as cobalt)	1.00	± 0.01 µg/L	010026-22-9	RM19789
magnesium nitrate hexahydrate ( ICP grade ) (as magnesium)	1.00	± 0.01 µg/L	013446-18-9	RM16274

**Matrix:** 2% nitric acid in water

**Description:**

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference (RM) standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Expiration of Certification:**

The certification of this analytical reference standard (RM) is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

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**Sample lot approver:**

  
Monica Bourgeois  
QMS Representative