

Reference Material Certificate
Product Information Sheet

Product Name: ICP-MS Calibration Standard
Product Number: IMS-101
Storage Conditions: Room Temperature

Lot Number: 0006748016
Lot Issue Date: 06-Jun-2023
Expiration Date: 31-May-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
cerium (III) nitrate (ICP grade) (as cerium)	10.0 ±	0.1 µg/mL	010294-41-4	RM
dysprosium oxide (ICP grade) (as dysprosium)	10.0 ±	0.1 µg/mL	001308-87-8	RM14997-01-001
erbium oxide(ICP grade) as erbium	10.0 ±	0.1 µg/mL	012061-16-4	RM12227
europium oxide (ICP grade) (as europium)	10.0 ±	0.1 µg/mL	007440-53-1	RM12418
gadolinium oxide (ICP grade) (as gadolinium)	10.0 ±	0.1 µg/mL	012064-62-9	RM09365
holmium nitrate (ICP grade) (as holmium)	10.0 ±	0.1 µg/mL	010168-82-8	RM10286
lanthanum (ICP grade) (as lanthanum)	10.0 ±	0.1 µg/mL	007439-91-0	RM07907
lutetium(III) nitrate hydrate (ICP grade) (as lutetium)	10.0 ±	0.1 µg/mL	100641-16-5	RM10534
neodymium (ICP grade)	10.0 ±	0.1 µg/mL	007440-00-8	RM12189
praseodymium oxide (ICP grade) (as praseodymium)	10.0 ±	0.1 µg/mL	007440-10-0	RM10597
samarium oxide (ICP grade)	10.0 ±	0.1 µg/mL	007440-19-9	RM12089
scandium oxide (ICP grade) (as scandium)	10.0 ±	0.1 µg/mL	012060-08-1	RM10780
terbium oxide (ICP grade) (as terbium)	10.0 ±	0.1 µg/mL	007440-27-9	RM14266
thorium oxide (ICP grade) (as thorium)	10.0 ±	0.1 µg/mL	007440-29-1	RM14606
thulium oxide (ICP Grade) (as thulium)	10.0 ±	0.1 µg/mL	007440-30-4	RM10149
ytterbium oxide (ICP grade) (as ytterbium)	10.0 ±	0.1 µg/mL	001314-37-0	RM11310
yttrium oxide (ICP grade) (as yttrium)	10.0 ±	0.1 µg/mL	001314-36-9	RM13832

Matrix: 5% nitric acid in water

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO 17034 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s) when available. The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

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 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 for information regarding this analytical reference material.

Intended Use:

This analytical reference 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.

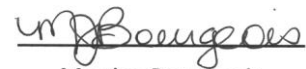
Expiration of Certification:

The certification of this analytical reference standard 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.

Sample lot approver:



Monica Bourgeois
QMS Representative