

Reference Material Certificate
Product Information Sheet

Product Name: Custom Inorg Std - 29 at var conc (125mL)

Lot Number: 0006706609

Product Number: ICUS-0002129

Lot Issue Date: 06-Oct-2022

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

Expiration Date: 30-Nov-2025

Component Name	CERTIFIED VALUES			CAS#	Analyte Lot
	Concentration	Expanded	Uncertainty		
aluminum nitrate nonahydrate (ICP grade) (as aluminum)	20.0	±	0.1 µg/mL	007784-27-2	RM18137
antimony (ICP grade)	20.0	±	0.1 µg/mL	007440-36-0	RM19157
arsenic (III) oxide (ICP grade) (as arsenic)	20.0	±	0.1 µg/mL	001327-53-3	RM16346
barium nitrate (ICP grade) (as barium)	20.0	±	0.1 µg/mL	010022-31-8	RM11168
beryllium acetate (ICP grade) (as beryllium)	20.0	±	0.1 µg/mL	000543-81-7	RM10258
boric acid (ICP grade) (as boron)	20.0	±	0.1 µg/mL	010043-35-3	RM10535
cadmium nitrate hydrate (ICP grade) (as cadmium)	20.0	±	0.1 µg/mL	010022-68-1	RM20176
calcium carbonate (ICP grade) (as calcium)	20.0	±	0.1 µg/mL	000471-34-1	RM18534
chromium (III) nitrate nonahydrate (ICP grade) (as chromium)	20.0	±	0.1 µg/mL	007789-02-8	RM17981
cobalt nitrate hexahydrate (ICP grade) (as cobalt)	20.0	±	0.1 µg/mL	010026-22-9	RM12660
copper (II) nitrate hydrate (ICP grade) (as copper)	20.0	±	0.1 µg/mL	010031-43-3	RM17671
iron (III) nitrate, ferric nitrate (ICP grade) (as iron)	20.0	±	0.1 µg/mL	007782-61-8	RM16294
lead (II) nitrate (ICP grade) (as lead)	20.0	±	0.1 µg/mL	010099-74-8	RM10723
lithium carbonate (ICP grade) (as lithium)	20.0	±	0.1 µg/mL	000554-13-2	RM18931
magnesium nitrate hexahydrate (ICP grade) (as magnesium)	20.0	±	0.1 µg/mL	013446-18-9	RM16274
manganese (II) nitrate (ICP grade) (as manganese)	20.0	±	0.1 µg/mL	010377-66-9	RM19667
molybdenum (VI) oxide (ICP grade) (as molybdenum)	20.0	±	0.1 µg/mL	001313-27-5	RM07695
nickel (II) nitrate hexahydrate (ICP grade) (as nickel)	20.0	±	0.1 µg/mL	013478-00-7	RM17467
ammonium (dihydrogen) phosphate - monobasic (ICP grade) (as phosphorus)	20.0	±	0.1 µg/mL	007722-76-1	RM19155
potassium nitrate (ICP grade) (as potassium)	20.0	±	0.1 µg/mL	007757-79-1	RM18921
selenium (IV) oxide (ICP grade) (as selenium)	20.0	±	0.1 µg/mL	007446-08-4	RM10704
ammonium hexafluorosilicate (ICP grade) (as silicon)	20.0	±	0.1 µg/mL	016919-19-0	RM15048-01
silver nitrate (ICP grade) (as silver)	5.00	±	0.03 µg/mL	007761-88-8	RM16792
sodium nitrate (ICP grade) (as sodium)	20.0	±	0.1 µg/mL	007631-99-4	RM18920
strontium nitrate (ICP grade) (as strontium)	20.0	±	0.1 µg/mL	010042-76-9	RM12874
thallium (I) nitrate (ICP grade) (as thallium)	20.0	±	0.1 µg/mL	010102-45-1	RM14579
ammonium hexafluorostannate (IV) (ICP grade) (as tin)	20.0	±	0.1 µg/mL	016919-24-7	RM11231
ammonium metavanadate (ICP grade) (as vanadium)	20.0	±	0.1 µg/mL	007803-55-6	RM12372
zinc nitrate hexahydrate (ICP grade) (as zinc)	20.0	±	0.1 µg/mL	010196-18-6	RM07777

Matrix: water with dilute nitric and trace tartaric and hydrofluoric acids

CERTIFIED VALUES

Component Name

Concentration Extended Uncertainty

CAS#

Analyte Lot

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material 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.

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

