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ISO 17034

Certified Reference Material

Product Name: Magnesium Standard
Product Number: ICP-412
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006723360
Lot Issue Date: 27-Jan-2023
Expiration Date: 29-Feb-2028

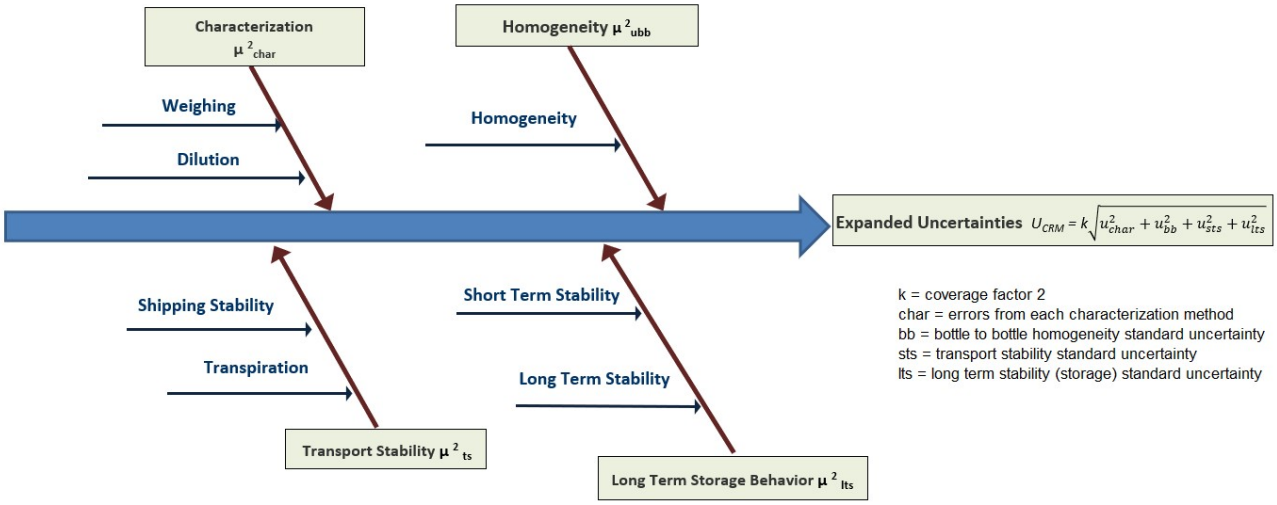
	CERTIFIED VALUES				
Analyte	Concentration	Expanded Uncertainty	CAS#	Verification	SRM
magnesium nitrate hexahydrate (ICP grade) (as magnesium)	10.01	± 0.18 µg/mL	013446-18-9	ICP-OES	3131a

Matrix: 0.5% nitric acid in water

Description:
This document was prepared in accordance with ISO 17034 and Guide 31. This Certified Reference Material is intended for use as a calibration standard for the quantitative determination of the analyte listed. The CRM was manufactured and verified in accordance with the ISO 9001 registered Quality Management System. The certified concentration value reported for the analyte is based upon the gravimetric and volumetric measurements made during the preparation of the standard. The analyte concentrations were verified by the accredited ISO 17025 laboratory using an appropriate analytical technique.

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, 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.

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using the coverage factor of k=2.



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Homogeneity:
This analytical 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Sample aliquots for analysis should be withdrawn at 20ºC to 25ºC immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Non-Certified Values:

Density: 1.001 g/mL @ 20.0 ± 0.5°C

Trace Metallic Impurities in Solution Standard in µg/mL:

*	Al	<0.005	ND	*	Ga	<0.005	ND	n	Nb			n	S				
*	Sb	<0.005	ND	n	Ge			n	Os			n	Ta				
*	As	<0.005	ND	n	Au			*	Pd	<0.005	ND	n	Te				
*	Ba	<0.005	ND	n	Hf			*	P	<0.005	ND	n	Tb				
*	Be	<0.005	ND	n	Ho			*	Pt	<0.005	ND	*	Tl	<0.005	ND		
*	Bi	<0.005	ND	*	In	<0.005	ND	*	K	<0.005	ND	n	Th				
*	B	<0.005	ND	n	Ir			n	Pr			n	Tm				
*	Cd	<0.005	ND	*	Fe	<0.005	ND	n	Re			*	Sn	<0.005	ND		
n	Cs			*	La	<0.005	ND	n	Rh			*	Ti	<0.005	ND		
*	Ca	<0.005	D	*	Pb	<0.005	ND	n	Rb			n	W				
n	Ce			*	Li	<0.005	ND	n	Ru			n	U				
*	Cr	<0.005	ND	n	Lu			n	Sm			*	V	<0.005	ND		
*	Co	<0.005	ND	s	Mg			n	Sc			n	Yb				
*	Cu	<0.005	ND	*	Mn	<0.005	ND	*	Se	<0.005	ND	n	Y				
n	Dy			*	Hg	<0.005	D	*	Si	<0.005	ND	*	Zn	<0.005	ND		
*	Er	<0.005	ND	*	Mo	<0.005	ND	*	Ag	<0.005	ND	n	Zr				
*	Eu	<0.005	ND	n	Nd			*	Na	<0.005	D						
*	Gd	<0.005	ND	*	Ni	<0.005	ND	*	Sr	<0.005	ND						

* - element checked for
D - detected
n - not checked for
ND - not detected
s - standard element
i - spectral interference

Safety:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this standard.

Intended Use:
This analytical 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:

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The certification of this 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

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/
CSD-QA-011.1

ISO 17025

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