Agilent

Certificate of Analysis

ICP-MS Calibration Standard

Catalog Number: IMS-120
Lot Number: CM-5976
Lot Issue Date: 11/19/2015
Expiration Date: 12/31/2019

This Certified Reference Material (CRM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentration(s) were verified by an ISO Guide 34 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s). The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Analyte	True Value				Analytical Method	NIST SRM
aluminum	10.0	±	0.1	µg/mL	ICP / ICP-MS	3101a
arsenic	100.2	±	0.5	µg/mL	ICP / ICP-MS	3103a
barium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3104a
beryllium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3105a
bismuth	10.0	±	0.1	µg/mL	ICP / ICP-MS	3106
boron	100.1	±	0.5	µg/mL	ICP / ICP-MS	3107
cadmium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3108
calcium	1001	±	5	µg/mL	ICP / ICP-MS	3109a
chromium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3112a
cobalt	10.0	±	0.1	µg/mL	ICP / ICP-MS	3113
copper	10.0	±	0.1	µg/mL	ICP / ICP-MS	3114
gallium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3119a
iron	100.2	±	0.5	µg/mL	ICP / ICP-MS	3126a
lead	10.0	±	0.1	µg/mL	ICP / ICP-MS	3128
lithium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3129a
magnesium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3131a
manganese	10.0	±	0.1	µg/mL	ICP / ICP-MS	3132
molybdenum	10.0	±	0.1	µg/mL	ICP / ICP-MS	3134
nickel	10.0	±	0.1	µg/mL	ICP / ICP-MS	3136
potassium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3141a
rubidium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3145a
selenium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3149
* silver	10.0	±	0.1	µg/mL	ICP / ICP-MS	3151
sodium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3152a
strontium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3153a
tellurium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3156
thallium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3158
uranium	10.0	±	0.1	µg/mL	ICP / ICP-MS	second source
* vanadium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3165
zinc	100.2	±	0.5	µg/mL	ICP / ICP-MS	3168a

Matrix: 5% nitric acid, trace hydrofluoric acid in low TOC water (< 50 ppb)

* *light sensitive*

ULTRA uses purified acids, 18 megohm-cm double deionized water, calibrated Class A glassware & meticulously cleaned bottles in the manufacturing of ULTRAgrade standards. Balances used in the manufacturing of this standard are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001

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ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001 Registered Quality System – TUV USA