



Certificate of Analysis

ICP Calibration Standard

Catalog Number: ICM-103

Lot Number: CS-0218

Lot Issue Date: 01/18/2018

Expiration Date: 02/28/2022

This Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentration(s) were prepared and 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.

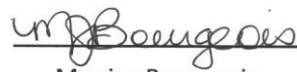
Analyte	True Value				Analytical Method	NIST SRM
aluminum	1001	±	5	µg/mL	ICP / ICP-MS	3101
barium	999.8	±	5.0	µg/mL	ICP / ICP-MS	3104
bismuth	1000	±	5	µg/mL	ICP / ICP-MS	3106
boron	999.6	±	5.0	µg/mL	ICP / ICP-MS	3107
cadmium	1002	±	5	µg/mL	ICP / ICP-MS	3108
calcium	1000	±	5	µg/mL	ICP / ICP-MS	3109
chromium	1000	±	5	µg/mL	ICP / ICP-MS	3112
cobalt	1001	±	5	µg/mL	ICP / ICP-MS	3113
copper	1002	±	5	µg/mL	ICP / ICP-MS	3114
gallium	1000	±	5	µg/mL	ICP / ICP-MS	3119
indium	1000	±	5	µg/mL	ICP / ICP-MS	3124
iron	1004	±	5	µg/mL	ICP / ICP-MS	3126
lead	999.6	±	5.0	µg/mL	ICP / ICP-MS	3128
lithium	1001	±	5	µg/mL	ICP / ICP-MS	3129
magnesium	1002	±	5	µg/mL	ICP / ICP-MS	3131
manganese	1002	±	5	µg/mL	ICP / ICP-MS	3132
nickel	1001	±	5	µg/mL	ICP / ICP-MS	3136
potassium	1002	±	5	µg/mL	ICP / ICP-MS	3141
* silver	1001	±	5	µg/mL	ICP / ICP-MS	3151
sodium	999.9	±	5.0	µg/mL	ICP / ICP-MS	3152
strontium	999.4	±	5.0	µg/mL	ICP / ICP-MS	3153
thallium	1001	±	5	µg/mL	ICP / ICP-MS	3158
zinc	1000	±	5	µg/mL	ICP / ICP-MS	3168

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

** light sensitive*

ULTRA uses purified acids, 18 megaohm double deionized water, calibrated Class A glassware, and meticulously cleaned bottles in the manufacturing of ULTRA grade 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.


John Russo
President


Monica Bourgeois
Director of QA/RA



ISO 9001 Registered Quality System – TUV USA