



Certificate of Analysis

Combined Quality Control Standard

Catalog Number: IQC-026

Lot Number: CM-4749

Lot Issue Date: 09/09/2015

Expiration Date: 10/31/2018

This Certified Reference Material (CRM) 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	100.1	±	0.5	µg/mL	ICP / ICP-MS	3101a
antimony	100.0	±	0.5	µg/mL	ICP / ICP-MS	3102a
arsenic	100.2	±	0.5	µg/mL	ICP / ICP-MS	3103a
barium	100.1	±	0.5	µg/mL	ICP / ICP-MS	3104a
beryllium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3105a
boron	100.1	±	0.5	µg/mL	ICP / ICP-MS	3107
cadmium	100.1	±	0.5	µg/mL	ICP / ICP-MS	3108
calcium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3109a
chromium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3112a
cobalt	100.2	±	0.5	µg/mL	ICP / ICP-MS	3113
copper	100.1	±	0.5	µg/mL	ICP / ICP-MS	3114
iron	100.2	±	0.5	µg/mL	ICP / ICP-MS	3126a
lead	100.2	±	0.5	µg/mL	ICP / ICP-MS	3128
magnesium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3131a
manganese	100.1	±	0.5	µg/mL	ICP / ICP-MS	3132
molybdenum	100.2	±	0.5	µg/mL	ICP / ICP-MS	3134
nickel	100.2	±	0.5	µg/mL	ICP / ICP-MS	3136
potassium	1002	±	5	µg/mL	ICP / ICP-MS	3141a
selenium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3149
silicon	50.0	±	0.3	µg/mL	ICP / ICP-MS	3150
* silver	100.0	±	0.5	µg/mL	ICP / ICP-MS	3151
sodium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3152a
thallium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3158
titanium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3162a
* vanadium	100.2	±	0.5	µg/mL	ICP / ICP-MS	3165
zinc	100.2	±	0.5	µg/mL	ICP / ICP-MS	3168a

Matrix: 5% nitric acid and trace tartaric and HF acids, in low TOC water (< 50 ppb)

** light sensitive*

ULTRA uses purified acids, 18 megohm 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.



ISO 9001 Registered Quality System – TUV USA


William J. Leary
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