

Certificate of Analysis

Combined Quality Control Standard

Catalog Number: IQC-026

Lot Number: CS-2539

Lot Issue Date: 05/23/2018

Expiration Date: 06/30/2021

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	100.1	±	0.5	µg/mL	ICP / ICP-MS	3101a
antimony	100.0	±	0.5	µg/mL	ICP / ICP-MS	3102a
arsenic	100.1	±	0.5	µg/mL	ICP / ICP-MS	3103a
barium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3104a
beryllium	100.0	±	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	100.0	±	0.5	µg/mL	ICP / ICP-MS	3109a
chromium	100.1	±	0.5	µg/mL	ICP / ICP-MS	3112a
cobalt	100.0	±	0.5	µg/mL	ICP / ICP-MS	3113
copper	100.0	±	0.5	µg/mL	ICP / ICP-MS	3114
iron	100.1	±	0.5	µg/mL	ICP / ICP-MS	3126a
lead	100.1	±	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	100.1	±	0.5	µg/mL	ICP / ICP-MS	3134
nickel	100.1	±	0.5	µg/mL	ICP / ICP-MS	3136
potassium	1001	±	5	µg/mL	ICP / ICP-MS	3141a
selenium	100.1	±	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	100.0	±	0.5	µg/mL	ICP / ICP-MS	3158
titanium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3162a
* vanadium	100.1	±	0.5	µg/mL	ICP / ICP-MS	3165
zinc	100.1	±	0.5	µg/mL	ICP / ICP-MS	3168a

Matrix: 5% nitric acid and trace tartaric and hydrofluoric 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.


John Russo
President


Monica Bourgeois
Director of QA/RA



ISO 9001 Registered Quality System