

Certificate of Analysis

Inorganic Quality Control Standard #2
Catalog Number: IQC-019
Lot Number: R00181
Job Number: J00015948
Lot Issue Date: 03/01/2013
Expiration Date: 04/30/2017

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
antimony	100.0	±	0.5	µg/mL	ICP / ICP-MS	3102a
arsenic	100.0	±	0.5	µg/mL	ICP / ICP-MS	3103a
beryllium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3105a
cadmium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3108a
calcium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3109a
chromium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3112a
cobalt	100.0	±	0.5	µg/mL	ICP / ICP-MS	3113.0
copper	100.0	±	0.5	µg/mL	ICP / ICP-MS	3114.0
iron	100.0	±	0.5	µg/mL	ICP / ICP-MS	3126a
lead	100.0	±	0.5	µg/mL	ICP / ICP-MS	3128.0
magnesium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3131a
manganese	100.0	±	0.5	µg/mL	ICP / ICP-MS	3132.0
molybdenum	100.0	±	0.5	µg/mL	ICP / ICP-MS	3134.0
nickel	100.0	±	0.5	µg/mL	ICP / ICP-MS	3136.0
selenium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3149.0
thallium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3158.0
titanium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3152a
* vanadium	100.0	±	0.5	µg/mL	ICP / ICP-MS	3165.0
zinc	100.0	±	0.5	µg/mL	ICP / ICP-MS	3168a

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

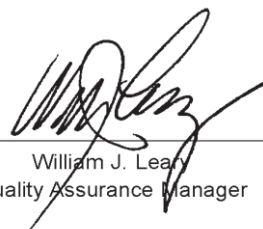
* *light sensitive*

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.



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