

Certificate of Analysis

Custom Standard

Catalog Number: ICUS-1076

Lot Number: CP-3180

Lot Issue Date: 07/05/2016

Expiration Date: 08/31/2017

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
arsenic	50.1	±	0.3	µg/mL	ICP / ICP-MS	3103a
cadmium	50.1	±	0.3	µg/mL	ICP / ICP-MS	3108
chromium	50.1	±	0.3	µg/mL	ICP / ICP-MS	3112a
cobalt	50.1	±	0.3	µg/mL	ICP / ICP-MS	3113
lead	50.1	±	0.3	µg/mL	ICP / ICP-MS	3128
nickel	50.1	±	0.3	µg/mL	ICP / ICP-MS	3136
* vanadium	50.0	±	0.3	µg/mL	ICP / ICP-MS	3165
copper	50.1	±	0.3	µg/mL	ICP / ICP-MS	3114
manganese	50.0	±	0.3	µg/mL	ICP / ICP-MS	3132
beryllium	5.00	±	0.03	µg/mL	ICP / ICP-MS	3105a
iron	500.2	±	2.5	µg/mL	ICP / ICP-MS	3126a
zinc	500.6	±	2.5	µg/mL	ICP / ICP-MS	3168a
aluminium	500.7	±	2.5	µg/mL	ICP / ICP-MS	3101a
magnesium	500.6	±	2.5	µg/mL	ICP / ICP-MS	3131a
calcium	500.9	±	2.5	µg/mL	ICP / ICP-MS	3109a
titanium	500.9	±	2.5	µg/mL	ICP / ICP-MS	3162a
molybdenum	501.0		2.5	µg/mL	ICP / ICP-MS	3134

Matrix: 5% nitric acid with trace hydrofluoric acid 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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