

CLP ICP Spike Standard #1
Catalog Number: ICM-451
Lot Number: CS-1526
Lot Issue Date: 03/29/2018
Expiration Date: 04/30/2021

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	2003	±	10	µg/mL	ICP / ICP-MS	3101
barium	2003	±	10	µg/mL	ICP / ICP-MS	3104
beryllium	50.10	±	0.25	µg/mL	ICP / ICP-MS	3105
chromium	200.0	±	1.0	µg/mL	ICP / ICP-MS	3112
cobalt	500.8	±	2.5	µg/mL	ICP / ICP-MS	3113
copper	250.1	±	1.3	µg/mL	ICP / ICP-MS	3114
iron	1001	±	5	µg/mL	ICP / ICP-MS	3126
manganese	500.1	±	2.5	µg/mL	ICP / ICP-MS	3132
nickel	500.4	±	2.5	µg/mL	ICP / ICP-MS	3136
* silver	50.10	±	0.25	µg/mL	ICP / ICP-MS	3151
* vanadium	500.7	±	2.5	µg/mL	ICP / ICP-MS	3165
zinc	500.6	±	2.5	µg/mL	ICP / ICP-MS	3168

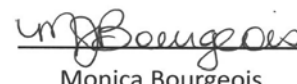
Matrix: 5% nitric acid, with trace hydrofluoric acid in low TOC water (< 50 ppb)

* light sensitive

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