



Certificate of Analysis

ICP Calibration Standard

Catalog Number: ICM-107

Lot Number: T00608

Job Number: J00018299

Lot Issue Date: 05/23/2014

Expiration Date: 06/30/2018

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
antimony	100.00	± 0.50	µg/mL	ICP / ICP-MS	3102a
hafnium	100.00	± 0.50	µg/mL	ICP / ICP-MS	3122
iridium	100.00	± 0.50	µg/mL	ICP / ICP-MS	n/a
tantalum	100.00	± 0.50	µg/mL	ICP / ICP-MS	3155
tin	100.00	± 0.50	µg/mL	ICP / ICP-MS	3161
titanium	100.00	± 0.50	µg/mL	ICP / ICP-MS	3162a
zirconium	100.00	± 0.50	µg/mL	ICP / ICP-MS	3169

Matrix: 15% hydrochloric acid, trace nitric acid, trace hydrofluoric acid, and trace tartaric acid in low TOC water (< 50 pp)

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
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ISO 9001 Registered Quality System – TUV USA