



Certificate of Analysis

ICP/MS Calibration Standard #3

Catalog Number: IMS-103

Lot Number: M00713

Job Number: J00013162

Lot Issue Date: 07/05/2011

Expiration Date: 08/31/2015

This Certified Reference Material (CRM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentrations were verified by our ISO 17025 accredited laboratory to be within $\pm 5.0\%$, when 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
	Value	Uncertainty	Unit		
antimony	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3102a
gold	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3121
hafnium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3122
iridium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	n/a
* palladium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3138
platinum	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3140
rhodium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3144
ruthenium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	n/a
tellurium	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3156
tin	10.00	± 0.05	$\mu\text{g/mL}$	ICP / ICP-MS	3161a

Matrix: 10% hydrochloric acid, trace tartaric acid 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



ISO 9001 Registered Quality System – TUV USA


William J. Leary
Quality Assurance Manager