

Certificate of Analysis

ICP Calibration Standard

Catalog Number: ICM-103

Lot Number: M01131

Job Number: J00013775

Lot Issue Date: 10/25/2011

Expiration Date: 11/30/2015

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
aluminum	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3101a
barium	1001	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3104a
bismuth	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3106
boron	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3107
cadmium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3108
calcium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3109a
chromium	1001	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3112a
cobalt	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3113
copper	1002	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3114
gallium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3119a
indium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3124a
iron	1001	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3126a
lead	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3128
lithium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3129a
magnesium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3131a
manganese	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3132
nickel	1001	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3136
potassium	1001	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3141a
* silver	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3151
sodium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3152a
strontium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3153a
thallium	1000	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3158
zinc	1005	\pm	5	$\mu\text{g/mL}$	ICP / ICP-MS	3168a

Matrix: 5% nitric acid in low TOC water (< 50 ppb)

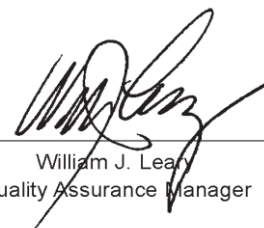
* *light sensitive*

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 17025:2005
Accredited
A2LA
Cert. No. 0851.01

ISO 9001:2000
Registered
TUV USA, Inc.
Cert. No. 06-1004



William J. Leary
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