



# Certificate of Analysis

## ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525

Lot Number: 20-41VYY2

Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity	Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity
Bi	7440-69-9	100 mg/L	98.9 mg/L	3106*	Bi	99.99+	Lu	7439-94-3	100 mg/L	99.9 mg/L	3130a*	Lu <sub>2</sub> O <sub>3</sub>	99.99+
Ge	7440-56-4	100 mg/L	100 mg/L	3120a	GeO <sub>2</sub>	99.99+	Rh	7440-16-6	100 mg/L	101 mg/L	3144*	Rh(NO <sub>3</sub> ) <sub>3</sub> ·H <sub>2</sub> O	99.99+
In	7440-74-6	100 mg/L	99.7 mg/L	3124a*	In	99.99+	Sc	7440-20-2	100 mg/L	99.5 mg/L	3148a*	Sc <sub>2</sub> O <sub>3</sub>	99.99+
Li*	7439-93-2	100 mg/L	100 mg/L	3129a*	*Li <sub>2</sub> CO <sub>3</sub>	99.99+	Tb	7440-27-9	100 mg/L	100 mg/L	3157a*	Tb <sub>2</sub> O <sub>3</sub>	99.99+

\* - indicates NIST SRM

† - indicates CRM (when NIST SRM is not available)

### Purity grades:

Starting Materials: Shown above

Matrix:

10% HNO<sub>3</sub>: HNO<sub>3</sub> (CAS No. 7697-37-2) high purity grade

### Traceability:

This standard has been produced gravimetrically and volumetrically using ISO 9001 quality procedures. ICP / ICP-MS Spectrometer was used to determine the concentration of the main elements via NIST SRMs shown above, as well as the impurities. Other reference standards used: 17-211VY, 18-74VY, 19-71VY, 19-72VY.

### Trace Metallic Impurities in the Actual Solution, in µg/L, via ICP-MS Analysis, results are accurate to ±10%:

Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<3	Co	<2	Hf	<0.3	Nb	<0.4	Ru	<2	Tl	<2
Al	20	Cr	<2	Hg	<1	Nd	<0.2	Sb	20	Tl	<20
As	<5	Cs	0.07	Ho	<0.03	Ni	2	Se	<20	Tm	0.5
Au	<0.5	Cu	<4	Ir	3	P	<200	Si	<200	U	<0.1
B	<20	Dy	<0.1	K	<400	Pb	2	Sm	<0.2	V	<4
Ba	8	Er	<0.2	La	<0.2	Pd	<0.7	Sn	<2	W	<4
Be	<0.5	Eu	<0.03	Mg	<2	Pr	<0.2	Sr	5	Y	<0.7
Ca	40	Fe	20	Mn	<0.8	Pt	3	Ta	<3	Yb	<0.4
Cd	<0.5	Ga	<0.1	Mo	<20	Rb	<3	Te	<2	Zn	2
Ce	<0.2	Gd	<0.08	Na	600	Re	<0.08	Th	5	Zr	<5

Balances are calibrated regularly with weight sets traceable to NIST.

Agilent reference standards are guaranteed stable and accurate to ±0.5% of measured analyte concentration. For these solutions we use the highest purity acids applicable, 18 megohm double deionized water and acid-leached, triple rinsed bottles. All glassware used is class A.

Date of release: May 31, 2013

Date of expiration: November 30, 2014

QC Coordinator  
CertiPrep, Inc.