



Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525

Lot Number: 21-25VYY2

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 µg/mL	99.5 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.5 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	98.7 µg/mL	3120a	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	102 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 µg/mL	98.6 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	98.4 µg/mL	3148a*	Sc(NO ₃) ₃ ·4H ₂ O	99.99+
Li*	7439-93-2	100 µg/mL	100 µg/mL	3129a*	*Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	98.8 µg/mL	3157a*	Tb ₂ O ₃	99.99+

* - indicates NIST SRM

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

Purity grades:

Starting Materials: Shown above

Matrix:

10% HNO₃: HNO₃ (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: 14-182VY,20-139VY.

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	<0.2	Co	<3	Hf	<0.2	Nb	<0.9	Ru	<2	Ti	<9
Al	20	Cr	<2	Hg	<2	Nd	<0.1	Sb	10	Tl	<10
As	<7	Cs	<0.1	Ho	<0.08	Ni	<4	Se	<30	Tm	0.5
Au	<1	Cu	<2	Ir	5	P	<400	Si	<200	U	<0.07
B	<20	Dy	<0.2	K	<500	Pb	1	Sm	<1	V	<4
Ba	<5	Er	<0.3	La	0.2	Pd	<0.5	Sn	<1	W	<10
Be	<3	Eu	<0.2	Mg	<5	Pr	0.2	Sr	<4	Y	<0.9
Ca	<80	Fe	<20	Mn	<2	Pt	2	Ta	<0.4	Yb	<2
Cd	<0.4	Ga	<0.3	Mo	<2	Rb	<0.5	Te	<1	Zn	<5
Ce	<0.2	Gd	<0.1	Na	400	Re	<0.3	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: September 30, 2014

Date of expiration: March 31, 2016

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