



# Certificate of Analysis

## ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525

Lot Number: 55-209CRY2

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	101 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	101 µg/mL	3130a*	Lu <sub>2</sub> O <sub>3</sub>	99.99+
Ge	7440-56-4	100 µg/mL	100 µg/mL	3120a*	GeO <sub>2</sub>	99.99+	Rh	7440-16-6	100 µg/mL	101 µg/mL	3144*	Rh(NO <sub>3</sub> ) <sub>3</sub> ·H <sub>2</sub> O	99.99+
In	7440-74-6	100 µg/mL	101 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	101 µg/mL	3148a*	Sc <sub>2</sub> O <sub>3</sub>	99.99+
Li <sup>o</sup>	7439-93-2	100 µg/mL	101 µg/mL	3129a*	<sup>6</sup> Li <sub>2</sub> CO <sub>3</sub>	99.99+	Tb	7440-27-9	100 µg/mL	101 µg/mL	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. Agilent 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: 55-089CR, 54-255CR, 55-155CR.

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

Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.2	Co	<0.1	Hf	0.3	Nb	<0.2	Ru	0.6	Ti	0.5
Al	4	Cr	<2	Hg	<0.6	Nd	<0.06	Sb	0.3	Tl	<0.6
As	6	Cs	<0.03	Ho	0.04	Ni	<0.7	Se	<3	Tm	0.05
Au	<0.5	Cu	0.3	Ir	9	P	<500	Si	<100	U	<0.05
B	8	Dy	0.1	K	7	Pb	1	Sm	<0.08	V	<0.5
Ba	0.9	Er	<0.05	La	0.07	Pd	<0.4	Sn	0.4	W	<0.3
Be	<0.7	Eu	0.04	Mg	3	Pr	<0.05	Sr	2	Y	0.6
Ca	80	Fe	10	Mn	0.8	Pt	<0.3	Ta	<0.06	Yb	0.5
Cd	<0.4	Ga	<0.2	Mo	<0.2	Rb	0.6	Te	<0.4	Zn	3
Ce	<0.05	Gd	<0.2	Na	3	Re	<0.09	Th	0.5	Zr	2

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. This uncertainty is at 95% confidence interval, a coverage factor of 2. 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. This standard was manufactured following the guidelines set forth under ISO 17025 and ISO 17034 regulations.

Date of release: February 28, 2021

Date of expiration: August 31, 2022

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