

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 57-198CRY2

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	100 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	100 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	99.9 µg/mL	3120a*	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	99.3 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ 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 ₂ O ₃	99.99+
Li *	7439-93-2	100 µg/mL	101 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	101 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. 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: 57-017CR.

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

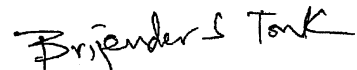
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.4	Co	<0.3	Hf	0.4	Nb	0.4	Ru	0.4	Ti	<2
Al	4	Cr	<2	Hg	<0.5	Nd	0.06	Sb	0.3	Tl	<0.5
As	6	Cs	0.07	Ho	0.02	Ni	0.6	Se	<7	Tm	0.06
Au	0.03	Cu	<1	Ir	10	P	<200	Si	200	U	<0.01
B	7	Dy	<0.08	K	<300	Pb	1	Sm	<0.01	V	<0.1
Ba	1	Er	<0.07	La	0.09	Pd	0.2	Sn	0.4	W	<0.2
Be	<0.2	Eu	0.05	Mg	4	Pr	0.02	Sr	7	Y	1
Ca	<100	Fe	10	Mn	<0.7	Pt	0.1	Ta	<0.04	Yb	<0.6
Cd	<0.2	Ga	<0.2	Mo	<0.2	Rb	<0.3	Te	<0.6	Zn	3
Ce	<0.07	Gd	<0.06	Na	<20	Re	<0.02	Th	0.5	Zr	3

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: December 15, 2021

Date of expiration: June 30, 2023



 QC Coordinator