

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 56-139CRY2

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	98.8 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.1 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	98.9 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	99.1 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	99.1 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	99.1 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: 56-071CR, 54-123CR, 55-209CR.

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

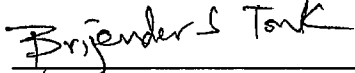
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.1	Co	0.4	Hf	0.5	Nb	0.4	Ru	<0.2	Ti	<0.01
Al	5	Cr	0.8	Hg	<0.09	Nd	0.07	Sb	0.03	Tl	0.4
As	1	Cs	<0.1	Ho	0.02	Ni	0.9	Se	<10	Tm	0.04
Au	<0.03	Cu	0.8	Ir	5	P	<200	Si	<200	U	<0.02
B	10	Dy	0.08	K	<100	Pb	0.8	Sm	0.04	V	0.2
Ba	4	Er	0.07	La	0.2	Pd	<0.08	Sn	0.7	W	<0.02
Be	<0.05	Eu	0.06	Mg	5	Pr	0.01	Sr	6	Y	2
Ca	60	Fe	10	Mn	<1	Pt	<0.06	Ta	0.1	Yb	0.5
Cd	0.2	Ga	0.1	Mo	0.05	Rb	0.8	Te	0.1	Zn	9
Ce	0.09	Gd	0.06	Na	<100	Re	<0.01	Th	0.3	Zr	4

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: June 30, 2021

Date of expiration: December 31, 2022



 QC Coordinator