

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 56-071CRY2

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	98.9 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	98.4 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	98.6 µg/mL	3120a*	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	98.7 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 µg/mL	98.7 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	98.7 µg/mL	3148a*	Sc ₂ O ₃	99.99+
Li ^o	7439-93-2	100 µg/mL	100 µg/mL	3129a*	⁶ 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. 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: 51-164CR, 55-209CR, 54-080CR.

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

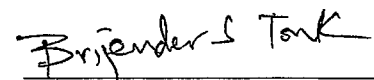
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<2	Co	0.4	Hf	0.5	Nb	0.1	Ru	<0.1	Ti	0.3
Al	5	Cr	0.6	Hg	<0.4	Nd	<0.06	Sb	<0.2	Tl	<0.7
As	7	Cs	<0.7	Ho	0.04	Ni	0.8	Se	<10	Tm	0.06
Au	<0.6	Cu	<0.4	Ir	4	P	<200	Si	<50	U	<0.02
B	<6	Dy	0.1	K	<100	Pb	0.9	Sm	<0.02	V	<0.3
Ba	4	Er	0.06	La	0.3	Pd	<0.08	Sn	0.2	W	<0.2
Be	0.06	Eu	0.05	Mg	4	Pr	0.01	Sr	3	Y	1
Ca	90	Fe	10	Mn	<0.2	Pt	<0.4	Ta	<0.04	Yb	0.6
Cd	<0.06	Ga	<0.2	Mo	<0.3	Rb	0.3	Te	<0.3	Zn	9
Ce	0.1	Gd	<0.05	Na	<100	Re	<0.03	Th	0.3	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: April 15, 2021

Date of expiration: October 31, 2022



 QC Coordinator