Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 59-120CRY2

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	99.3 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	98.5 µg/mL	3130a*	Lu_2O_3	99.99+
Ge	7440-56-4	100 µg/mL	99.9 µg/mL	3120a*	GeO2	99.99+	Rh	7440-16-6	100 µg/mL	99.1 µg/mL	3144*	Rh	99.99+
In	7440-74-6	100 µg/mL	99.0 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	98.7 µg/mL	3148a*	Sc_2O_3	99.99+
Li [6]	7439-93-2	100 µg/mL	98.8 µg/mL	3129a*	$^6Li_2CO_3$	99.99+	Tb	7440-27-9	100 µg/mL	99.7 µg/mL	3157a*	Tb_4O_7	99.99+

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

Purity grades:

Starting Materials: Shown above

Matrix:

10% HNO_3: HNO_3 (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: 54-079CR, 58-257CR, 59-047CR.

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	<0.3	Co	<0.1	Hf	<0.5	Nb	0.3	Ru	<0.5	Ti	<0.01
Al	7	Cr	<1	Hg	<0.2	Nd	0.04	Sb	<0.3	Tl	0.2
As	7	Cs	<1	Ho	<0.02	Ni	0.4	Se	<5	Tm	0.05
Au	<0.2	Cu	<0.9	Ir	4	P	<200	Si	<300	U	<0.02
B	<5	Dy	<0.08	K	<100	Pb	0.6	Sm	<0.06	V	<0.08
Ba	1	Er	0.06	La	0.09	Pd	<0.2	Sn	<0.5	W	<0.2
Be	<0.4	Eu	<0.03	Mg	3	Pr	0.6	Sr	1	Y	1
Ca	<70	Fe	2	Mn	<0.6	Pt	<0.1	Ta	<0.1	Yb	<0.5
Cd	0.2	Ga	<0.06	Mo	0.6	Rb	<0.2	Te	<0.8	Zn	4
Ce	0.09	Gd	<0.07	Na	2	Re	<0.08	Th	0.4	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, 2022

Date of expiration: June 30, 2024

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QC Coordinator

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