



Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525

Lot Number: 20-40VYY2

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 mg/L	99.8 mg/L	3106*	Bi	99.99+	Lu	7439-94-3	100 mg/L	100 mg/L	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 mg/L	100 mg/L	3120a	GeO ₂	99.99+	Rh	7440-16-6	100 mg/L	101 mg/L	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 mg/L	101 mg/L	3124a*	In	99.99+	Sc	7440-20-2	100 mg/L	100 mg/L	3148a*	Sc ₂ O ₃	99.99+
Li*	7439-93-2	100 mg/L	101 mg/L	3129a*	*Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 mg/L	101 mg/L	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. 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: 17-211VY, 18-74VY, 19-71VY, 19-72VY.

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

Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<3	Co	<2	Hf	<0.4	Nb	<0.4	Ru	<2	Tl	<2
Al	20	Cr	<2	Hg	<1	Nd	<0.2	Sb	20	Tl	<20
As	5	Cs	0.1	Ho	<0.03	Ni	2	Se	<10	Tm	0.4
Au	<0.4	Cu	<4	Ir	4	P	<200	Si	<200	U	<0.1
B	<20	Dy	<0.06	K	<300	Pb	<4	Sm	<0.2	V	<4
Ba	4	Er	<0.09	La	<0.2	Pd	<0.8	Sn	<2	W	<4
Be	<0.5	Eu	<0.03	Mg	4	Pr	<0.2	Sr	4	Y	<0.7
Ca	60	Fe	10	Mn	<0.6	Pt	3	Ta	<3	Yb	<0.1
Cd	<0.3	Ga	<0.1	Mo	<20	Rb	<3	Te	<2	Zn	2
Ce	<0.2	Gd	<0.2	Na	600	Re	<0.08	Th	6	Zr	<5

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. 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.

Date of release: May 15, 2013

Date of expiration: November 30, 2014

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