

# Certificate of Analysis

## ICP-MS Internal Std Mix

**Agilent Part Number: 5188-6525**
**Lot Number: 22-204VYY2**

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	99.0 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.9 µg/mL	3130a*	Lu <sub>2</sub> O <sub>3</sub>	99.99+
Ge	7440-56-4	100 µg/mL	99.8 µg/mL	3120a	GeO <sub>2</sub>	99.99+	Rh	7440-16-6	100 µg/mL	100 µg/mL	3144*	Rh(NO <sub>3</sub> ) <sub>3</sub> ·H <sub>2</sub> O	99.99+
In	7440-74-6	100 µg/mL	99.4 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	100 µg/mL	3148a*	Sc(NO <sub>3</sub> ) <sub>3</sub> ·4H <sub>2</sub> O	99.99+
Li*	7439-93-2	100 µg/mL	100 µg/mL	3129a*	*Li <sub>2</sub> CO <sub>3</sub>	99.99+	Tb	7440-27-9	100 µg/mL	99.5 µg/mL	3157a*	Tb <sub>2</sub> O <sub>3</sub>	99.99+

\* - indicates NIST SRM

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

**Purity grades:**

Starting Materials: Shown above

Matrix:

 10% HNO<sub>3</sub>: HNO<sub>3</sub> (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: all 8,22-51VY,22-52VY.

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

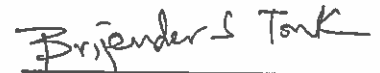
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<1	Co	<1	Hf	<0.1	Nb	<0.7	Ru	<2	Ti	<3
Al	6	Cr	2	Hg	<1	Nd	<0.2	Sb	<1	Tl	<0.2
As	<10	Cs	<0.6	Ho	0.09	Ni	<20	Se	<30	Tm	0.2
Au	<0.2	Cu	1	Ir	0.7	P	<100	Si	400	U	<0.05
B	<5	Dy	<0.1	K	<30	Pb	2	Sm	<0.1	V	<0.4
Ba	3	Er	0.4	La	0.3	Pd	<2	Sn	<0.8	W	<6
Be	<2	Eu	<0.06	Mg	<3	Pr	0.2	Sr	<3	Y	0.9
Ca	60	Fe	20	Mn	<3	Pt	<0.3	Ta	<0.5	Yb	<2
Cd	<0.5	Ga	<1	Mo	<3	Rb	<2	Te	<5	Zn	<2
Ce	0.2	Gd	<0.2	Na	200	Re	<0.04	Th	<0.3	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. 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: November 15, 2015

Date of expiration: May 31, 2017


  
 QC Coordinator