



Certificate of Analysis

7500 Series PA Tuning 1

Agilent Part Number: 5188-6524

Lot Number: 58-160CRY2

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
As	7440-38-2	20.0 µg/mL	20.0 µg/mL	3103a*	As	99.99+	In	7440-74-6	5.00 µg/mL	5.02 µg/mL	3124a*	In	99.99+
Be	7440-41-7	20.0 µg/mL	20.1 µg/mL	3105a*	Be ₂ O(CH ₃ COO) ₆	99.99+	Li*	7439-93-2	5.00 µg/mL	5.02 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+
Cd	7440-43-9	20.0 µg/mL	20.0 µg/mL	3108*	Cd	99.99+	Lu	7439-94-3	5.00 µg/mL	5.01 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Zn	7440-66-6	20.0 µg/mL	20.1 µg/mL	3168a*	Zn	99.99+	Mn	7439-96-5	5.00 µg/mL	5.04 µg/mL	3132*	Mn	99.99+
Mg	7439-95-4	10.0 µg/mL	10.0 µg/mL	3131a*	Mg	99.99+	Na	7440-23-5	5.00 µg/mL	5.04 µg/mL	3152a*	NaHCO ₃	99.99+
Ni	7440-02-0	10.0 µg/mL	10.0 µg/mL	3136*	Ni	99.99+	Sc	7440-20-2	5.00 µg/mL	4.99 µg/mL	3148a*	Sc ₂ O ₃	99.99+
Pb	7439-92-1	10.0 µg/mL	10.0 µg/mL	3128*	PbO	99.99+	Sr	7440-24-6	5.00 µg/mL	5.03 µg/mL	3153a*	Sr(NO ₃) ₂	99.99+
Al	7429-90-5	5.00 µg/mL	5.02 µg/mL	3101a*	Al	99.99+	Th	7440-29-1	5.00 µg/mL	5.00 µg/mL	3159*	Th(NO ₃) ₄ · 4H ₂ O	99.99+
Ba	7440-39-3	5.00 µg/mL	5.04 µg/mL	3104a*	Ba(NO ₃) ₂	99.99+	Tl	7440-28-0	5.00 µg/mL	5.00 µg/mL	3158*	TlNO ₃	99.99+
Bi	7440-69-9	5.00 µg/mL	5.05 µg/mL	3106*	Bi	99.99+	U	7440-61-1	5.00 µg/mL	5.01 µg/mL	3164*	UO ₂ (NO ₃) ₂ · 6H ₂ O	99.99+
Co	7440-48-4	5.00 µg/mL	5.04 µg/mL	3113*	Co	99.99+	V	7440-62-2	5.00 µg/mL	5.03 µg/mL	3165*	NH ₄ VO ₃	99.99+
Cr	7440-47-3	5.00 µg/mL	5.06 µg/mL	3112a*	Cr(NO ₃) ₃ · 9H ₂ O	99.99+	Y	7440-65-5	2.50 µg/mL	2.50 µg/mL	3167a*	Y ₂ O ₃	99.99+
Cu	7440-50-8	5.00 µg/mL	5.03 µg/mL	3114*	Cu	99.99+	Yb	7440-64-4	2.50 µg/mL	2.52 µg/mL	3166a*	Yb ₂ O ₃	99.99+

* - indicates NIST SRM

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

Purity grades:

Starting Materials: Shown above

Matrix:

5% 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: 57-014CR, 56-080CR, 57-159CR.

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	Er	<0.2	Hg	<0.4	Nd	<0.04	Rh	0.7	Ta	<0.03
Au	<1	Eu	<0.4	Ho	<0.06	P	<100	Ru	<0.3	Tb	<0.02
B	<1	Fe	<5	Ir	0.2	Pd	<50	Sb	<0.1	Te	<0.2
Ca	20	Ga	<0.1	K	<100	Pr	<0.01	Se	<6	Ti	<0.01
Ce	<0.1	Gd	<0.08	La	<0.07	Pt	<0.1	Si	<100	Tm	<0.02
Cs	<0.2	Ge	<0.01	Mo	<0.3	Rb	<0.2	Sm	<0.07	W	<0.03
Dy	<0.04	Hf	<0.06	Nb	<0.01	Re	<0.07	Sn	<0.09	Zr	<0.08

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: May 15, 2022

Date of expiration: November 30, 2023

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QC Coordinator