Agilent Technologies

Certificate of Analysis

7500 Series PA Tuning 2

Agilent Part Number: 5188-6524 **Lot Number:** 58-238CRY2

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
Ge	7440-56-4	10.0 µg/mL	10.0 µg/mL	3120a*	$(NH_2)_2GeF_6$	99.99+	Sb	7440-36-0	10.0 µg/mL	9.96 µg/mL	3102a*	Sb	99.99+
Mo	7439-98-7	10.0 µg/mL	9.95 µg/mL	3134*	MoO3	99.99+	Sn	7440-31-5	10.0 µg/mL	10.0 µg/mL	3161a*	Sn	99.99+
Pd	7440-05-3	10.0 µg/mL	9.98 µg/mL	3138*	Pd	99.99+	Ir	7439-88-5	5.00 µg/mL	5.03 µg/mL	1112A†	IrCl3-3H2O	99.99+
Ru	7440-18-8	10.0 µg/mL	9.96 µg/mL	0512A†	$RuCl_3$-$3H_2O$	99.99+	Ti	7440-32-6	5.00 µg/mL	4.98 µg/mL	3162a*	(NH4)2TiF6	99.99+

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

Purity grades:

Starting Materials: Shown above

Matrix:

10% HCl: HCl (CAS No. 7647-01-0) high purity grade

1% HNO_3: HNO_3 (CAS No. 7697-37-2) high purity grade

0.1% (v/v) HF: HF (CAS No. 7664-39-3) 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: 56-242CR, 57-146CR.

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	Ce	0.03	Gd	<0.06	Mn	<0.9	Re	<0.02	Th	<0.03
Al	3	Co	<0.3	Hf	<0.03	Na	20	Rh	0.1	Tl	<0.07
As	<1	Cr	5	Hg	<0.4	Nb	<0.1	Sc	<0.01	Tm	<0.01
Au	<0.3	Cs	0.2	Ho	<0.01	Nd	<0.03	Se	<9	U	<0.02
B	<2	Cu	<0.4	In	<1	Ni	<0.6	Si	<100	V	4
Ba	<0.1	Dy	<0.04	K	<100	P	<100	Sm	<0.09	W	2
Be	<0.2	Er	<0.02	La	0.5	Pb	10	Sr	<0.1	Y	0.1
Bi	0.8	Eu	<0.02	Li	8	Pr	<0.02	Ta	0.2	Yb	<0.01
Ca	<9	Fe	<0.4	Lu	<0.03	Pt	0.2	Tb	<0.02	Zn	<2
Cd	<2	Ga	<0.01	Mg	<0.4	Rb	<0.2	Te	<0.5	Zr	6

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: July 15, 2022

Date of expiration: January 31, 2024

Brijender S Tank

QC Coordinator

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