

A Table of Polyatomic Interferences in ICP-MS

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Spectroscopic interferences are probably the largest class of interferences in ICP-MS and are caused by atomic or molecular ions that have the same mass-to-charge as analytes of interest. Current ICP-MS instrumental software corrects for all known atomic "isobaric" interferences, or those caused by overlapping isotopes of different elements, but does not correct for most polyatomic interferences. Such interferences are caused by polyatomic ions that are formed from precursors having numerous

sources, such as the sample matrix, reagents used for preparation, plasma gases, and entrained atmospheric gases.

A prior knowledge of polyatomic interferences cited in the literature for a particular analyte mass may be helpful to the analyst for selecting reagents and conditions that would preclude or at least reduce the possibility of their formation. A good perspective of known polyatomic interferences is difficult because of the number of affected masses, the

number of interferences themselves, and the number of literature references in which they are reported. In a review of the ICP-MS literature, reported polyatomic interferences were consolidated to produce a table that may serve as a useful tool for the ICP-MS analyst. For quick reference, the masses are arranged in alphabetical order by elemental symbol. This list of interferences is not intended to be complete, but does cover those more frequently reported.

A Table of Polyatomic Interferences in ICP-MS

Isotope	Abundance	Interference	Reference
¹⁰⁷ Ag	51.8	⁹¹ Zr ¹⁶ O ⁺	(6)(9)
¹⁰⁹ Ag	48.2	⁹² Zr ¹⁶ O ¹ H ⁺	(9)
²⁷ Al	100.	¹² C ¹⁵ N ⁺ , ¹³ C ¹⁴ N ⁺ , ¹⁴ N ² spread, ¹ H ¹² C ¹⁴ N ⁺	(11)(18)(29)
⁷⁵ As	100.	⁴⁰ Ar ³⁵ Cl ⁺ , ⁵⁹ Co ¹⁶ O ⁺ , ³⁶ Ar ³⁸ Ar ¹ H ⁺ , ³⁸ Ar ³⁷ Cl ⁺ , ³⁶ Ar ³⁹ K, ⁴³ Ca ¹⁶ O ₂ , ²³ Na ¹² C ⁴⁰ Ar, ¹² C ³¹ P ¹⁶ O ₂ ⁺	(2)(9)(15)(19)(22)(33)(34) (35)
¹⁹⁷ Au	100.	¹⁸¹ Ta ¹⁶ O ⁺	(9)
¹¹ B	80.09	¹² C spread	(18)
¹³⁰ Ba	0.106	⁹⁸ Ru ¹⁶ O ₂ ⁺	(32)
¹³² Ba	0.101	¹⁰⁰ Ru ¹⁶ O ₂ ⁺	(32)
¹³⁴ Ba	2.417	¹⁰² Ru ¹⁶ O ₂ ⁺	(32)
¹³⁶ Ba	7.854	¹⁰⁴ Ru ¹⁶ O ₂ ⁺	(32)
²⁰⁹ Bi	100.	¹⁹³ Ir ¹⁶ O ⁺	(32)
⁷⁹ Br	50.54	⁴⁰ Ar ³⁹ K ⁺ , ³¹ P ¹⁶ O ₃ ⁺ , ³⁸ Ar ⁴⁰ Ar ¹ H ⁺	(19)(22)
⁸¹ Br	49.46	³² S ¹⁶ O ₃ ¹ H ⁺ , ⁴⁰ Ar ⁴⁰ Ar ¹ H ⁺ , ³³ S ¹⁶ O ₃ ⁺	(19)(22)
⁴⁰ Ca	96.97	⁴⁰ Ar ⁺	(4)(22)
⁴² Ca	0.64	⁴⁰ Ar ¹ H ₂	(12)(22)
⁴³ Ca	0.145	²⁷ Al ¹⁶ O ⁺	(21)
⁴⁴ Ca	2.06	¹² C ¹⁶ O ₂ , ¹⁴ N ₂ ¹⁶ O ⁺ , ²⁸ Si ¹⁶ O ⁺	(12)(22)(29)
⁴⁶ Ca	0.003	¹⁴ N ¹⁶ O ₂ ⁺ , ³² S ¹⁴ N ⁺	(22)
⁴⁸ Ca	0.19	³³ S ¹⁵ N ⁺ , ³⁴ S ¹⁴ N ⁺ , ³² S ¹⁶ O ⁺	(22)
¹¹⁰ Cd	12.5	³⁹ K ₂ ¹⁶ O ⁺	(6)
¹¹¹ Cd	12.8	⁹⁵ Mo ¹⁶ O ⁺ , ⁹⁴ Zr ¹⁶ O ¹ H ⁺ , ³⁹ K ₂ ¹⁶ O ₂ ¹ H ⁺	(1)(6)
¹¹² Cd	24.1	⁴⁰ Ca ₂ ¹⁶ O ₂ , ⁴⁰ Ar ₂ ¹⁶ O ₂ , ⁹⁶ Ru ¹⁶ O ⁺	(6)(32)
¹¹³ Cd	12.22	⁹⁶ Zr ¹⁶ O ¹ H ⁺ , ⁴⁰ Ca ₂ ¹⁶ O ₂ ¹ H ⁺ , ⁴⁰ Ar ₂ ¹⁶ O ₂ ¹ H ⁺ , ⁹⁶ Ru ¹⁷ O ⁺	(1)(6)(32)
¹¹⁴ Cd	28.7	⁹⁸ Mo ¹⁶ O ⁺ , ⁹⁸ Ru ¹⁶ O ⁺	(6)(32)
¹¹⁶ Cd	7.49	¹⁰⁰ Ru ¹⁶ O ⁺	(32)

A Table of Polyatomic Interferences in ICP-MS (cont'd)

Isotope	Abundance	Interference	Reference
³⁵ Cl	75.77	¹⁶ O ¹⁸ O ¹ H ⁺ , ³⁴ S ¹ H ⁺ , ³⁵ Cl ⁺	(22)
³⁷ Cl	24.23	³⁶ Ar ¹ H ⁺ , ³⁶ S ¹ H ⁺ , ³⁷ Cl ⁺	(22)
⁵⁹ Co	100.	⁴³ Ca ¹⁶ O ⁺ , ⁴² Ca ¹⁶ O ¹ H ⁺ , ²⁴ Mg ³⁵ Cl ⁺ , ³⁶ Ar ²³ Na ⁺ , ⁴⁰ Ar ¹⁸ O ¹ H ⁺ , ⁴⁰ Ar ¹⁹ F ⁺	(5)(8)(9)(13)(19)(22)(29)(34)
⁵⁰ Cr	4.35	³⁴ S ¹⁶ O ⁺ , ³⁶ Ar ¹⁴ N ⁺ , ³⁵ Cl ¹⁵ N ⁺ , ³⁶ S ¹⁴ N ⁺ , ³² S ¹⁸ O ⁺ , ³³ S ¹⁷ O ⁺	(2)(15)(22)
⁵² Cr	83.76	³⁵ Cl ¹⁶ O ¹ H ⁺ , ⁴⁰ Ar ¹² C ⁺ , ³⁶ Ar ¹⁶ O ⁺ , ³⁷ Cl ¹⁵ N ⁺ ³⁴ S ¹⁸ O ⁺ , ³⁶ S ¹⁶ O ⁺ , ³⁸ Ar ¹⁴ N ⁺ , ³⁶ Ar ¹⁵ N ¹ H ⁺ , ³⁵ Cl ¹⁷ O ⁺	(1)(2)(9)(15)(18) (19)(22)(29)(35)
⁵³ Cr	9.51	³⁷ Cl ¹⁶ O ⁺ , ³⁸ Ar ¹⁵ N ⁺ , ³⁸ Ar ¹⁴ N ¹ H ⁺ , ³⁶ Ar ¹⁷ O ⁺ , ³⁶ Ar ¹⁶ O ¹ H ⁺ , ³⁵ Cl ¹⁷ O ¹ H ⁺ , ³⁵ Cl ¹⁸ O ⁺ , ³⁶ S ¹⁷ O ⁺ , ⁴⁰ Ar ¹³ C ⁺	(1)(22)(29)(34)
⁵⁴ Cr	2.38	³⁷ Cl ¹⁶ O ¹ H ⁺ , ⁴⁰ Ar ¹⁴ N ⁺ , ³⁸ Ar ¹⁵ N ¹ H ⁺ , ³⁶ Ar ¹⁸ O ⁺ , ³⁸ Ar ¹⁶ O ⁺ , ³⁶ Ar ¹⁷ O ¹ H ⁺ , ³⁷ Cl ¹⁷ O ⁺ , ¹⁹ F ² ¹⁶ O ⁺	(2)(22)(29)(34)
¹³³ Cs	100.	¹⁰¹ Ru ¹⁶ O ₂ ⁺	(32)
⁶³ Cu	69.1	³¹ P ¹⁶ O ₂ ⁺ , ⁴⁰ Ar ²³ Na ⁺ , ⁴⁷ Ti ¹⁶ O ⁺ , ²³ Na ⁴⁰ Ca ⁺ , ⁴⁶ Ca ¹⁶ O ¹ H ⁺ , ³⁶ Ar ¹² C ¹⁴ N ¹ H ⁺ , ¹⁴ N ¹² C ³⁷ Cl ⁺ , ¹⁶ O ¹² C ³⁵ Cl ⁺	(2)(9)(19)(28)(29)
⁶⁵ Cu	30.9	⁴⁹ Ti ¹⁶ O ⁺ , ³² S ¹⁶ O ₂ ¹ H ⁺ , ⁴⁰ Ar ²⁵ Mg ⁺ , ⁴⁰ Ca ¹⁶ O ¹ H ⁺ , ³⁶ Ar ¹⁴ N ₂ ¹ H ⁺ , ³² S ³³ S ⁺ , ³² S ¹⁶ O ¹⁷ O ⁺ , ³³ S ¹⁶ O ₂ ⁺ , ¹² C ¹⁶ O ³⁷ Cl ⁺ , ¹² C ¹⁸ O ³⁵ Cl ⁺ , ³¹ P ¹⁶ O ¹⁸ O ⁺	(5)(15)(17)(21)(22)(29)(34)
¹⁶³ Dy	24.97	¹⁴⁷ Sm ¹⁶ O ⁺	(27)(38)
¹⁶⁶ Er	33.6	¹⁶⁰ Nd ¹⁶ O, ¹⁵⁰ Sm ¹⁶ O	(38)
¹⁶⁷ Er	22.94	¹⁵¹ Eu ¹⁶ O ⁺	(27)
¹⁵¹ Eu	47.82	¹³⁵ Ba ¹⁶ O ⁺	(23)(27)
¹⁵³ Eu	52.2	¹³⁷ Ba ¹⁶ O ⁺	(9)(38)
⁵⁴ Fe	5.82	³⁷ Cl ¹⁶ O ¹ H ⁺ , ⁴⁰ Ar ¹⁴ N, ³⁸ Ar ¹⁵ N ¹ H ⁺ , ³⁶ Ar ¹⁸ O ⁺ , ³⁸ Ar ¹⁶ O ⁺ , ³⁶ Ar ¹⁷ O ¹ H ⁺ , ³⁶ S ¹⁸ O ⁺ , ³⁵ Cl ¹⁸ O ¹ H ⁺ , ³⁷ Cl ¹⁷ O	(15)(18)(22)(29)(36)
⁵⁶ Fe	91.66	⁴⁰ Ar ¹⁶ O ⁺ , ⁴⁰ Ca ¹⁶ O ⁺ , ⁴⁰ Ar ¹⁵ N ¹ H ⁺ , ³⁸ Ar ¹⁸ O ⁺ , ³⁸ Ar ¹⁷ O ¹ H ⁺ ³⁷ Cl ¹⁸ O ¹ H ⁺	(3)(22)(29)
⁵⁷ Fe	2.19	⁴⁰ Ar ¹⁶ O ¹ H ⁺ , ⁴⁰ Ca ¹⁶ O ¹ H ⁺ , ⁴⁰ Ar ¹⁷ O ⁺ , ³⁸ Ar ¹⁸ O ¹ H ⁺ , ³⁸ Ar ¹⁹ F ⁺	(8)(9)(21)(22)(29)(34)
⁵⁸ Fe	0.33	⁴⁰ Ar ¹⁸ O ⁺ , ⁴⁰ Ar ¹⁷ O ¹ H ⁺	(22)
⁶⁹ Ga	60.16	³⁵ Cl ¹⁶ O ¹⁸ O ⁺ , ³⁵ Cl ¹⁷ O ₂ ⁺ , ³⁷ Cl ¹⁶ O ₂ ⁺ , ³⁶ Ar ³³ S ⁺ , ³³ S ¹⁸ O ₂ ⁺ , ³⁴ S ¹⁷ O ¹⁸ O ⁺ , ³⁶ S ¹⁶ O ¹⁷ O ⁺ , ³³ S ³⁶ S ⁺	(22)
⁷¹ Ga	39.84	³⁵ Cl ¹⁸ O ₂ ⁺ , ³⁷ Cl ¹⁶ O ¹⁸ O ⁺ , ³⁷ Cl ¹⁷ O ₂ ⁺ , ³⁶ Ar ³⁵ Cl ⁺ , ³⁶ S ¹⁷ O ¹⁸ O ⁺ , ³⁸ Ar ³³ S ⁺	(22)
¹⁵⁵ Gd	14.8	¹³⁹ La ¹⁶ O ⁺	(3)
¹⁵⁷ Gd	15.68	¹³⁸ B ¹⁹ F ⁺ , ¹⁴¹ Pr ¹⁶ O ⁺	(26)(27)
⁷⁰ Ge	20.51	⁴⁰ Ar ¹⁴ N ¹⁶ O ⁺ , ³⁵ Cl ¹⁷ O ¹⁸ O ⁺ , ³⁷ Cl ¹⁶ O ¹⁷ O ⁺ , ³⁴ S ¹⁸ O ₂ ⁺ , ³⁶ S ¹⁶ O ¹⁸ O ⁺ , ³⁶ S ¹⁷ O ₂ ⁺ , ³⁴ S ³⁶ S ⁺ , ³⁶ Ar ³⁴ S ⁺ , ³⁸ Ar ³² S ⁺ , ³⁵ Cl ₂ ⁺	(22)(30)
⁷² Ge	27.4	³⁶ Ar ₂ ⁺ , ³⁷ Cl ¹⁷ O ¹⁸ O ⁺ , ³⁵ Cl ³⁷ Cl ⁺ , ³⁶ S ¹⁸ O ₂ ⁺ , ³⁶ S ₂ ⁺ , ³⁶ Ar ³⁶ S ⁺ ⁵⁶ Fe ¹⁶ O ⁺ , ⁴⁰ Ar ¹⁶ O ₂ ⁺ , ⁴⁰ Ca ¹⁶ O ₂ ⁺ , ⁴⁰ Ar ³² S ⁺	(22)(28)
⁷³ Ge	7.76	³⁶ Ar ₂ ¹ H ⁺ , ³⁷ Cl ¹⁸ O ₂ ⁺ , ³⁶ Ar ³⁷ Cl ⁺ , ³⁸ Ar ³⁵ Cl ⁺ , ⁴⁰ Ar ³³ S ⁺	(22)
⁷⁴ Ge	36.56	⁴⁰ Ar ³⁴ S ⁺ , ³⁶ Ar ³⁸ Ar ⁺ , ³⁷ Cl ³⁷ Cl ⁺ , ³⁸ Ar ³⁶ S ⁺	(22)
⁷⁶ Ge	7.77	³⁶ Ar ⁴⁰ Ar ⁺ , ³⁸ Ar ³⁸ Ar ⁺ , ⁴⁰ Ar ³⁶ S ⁺	(22)
¹⁷⁷ Hf	18.5	¹⁶¹ Dy ¹⁶ O ⁺	(27)
¹⁶⁵ Ho	100.	¹⁴⁹ Sm ¹⁶ O	(27)

A Table of Polyatomic Interferences in ICP-MS (cont'd)

Isotope	Abundance	Interference	Reference
¹¹³ In	4.3	⁹⁶ Ru ¹⁷ O ⁺	(32)
³⁹ K	93.08	³⁸ Ar ¹ H ⁺	(22)(29)
⁴⁰ K	0.01	⁴⁰ Ar ⁺	(22)
⁴¹ K	6.91	⁴⁰ Ar ¹ H ⁺	(22)
⁷⁸ Kr	0.35	³⁸ Ar ⁴⁰ Ar ⁺	(22)
⁸⁰ Kr	2.27	⁴⁰ Ar ₂ ⁺ , ³² S ¹⁶ O ₃ ⁺	(22)
⁸² Kr	11.56	⁴⁰ Ar ⁴⁰ Ar ¹ H ₂ ⁺ , ³⁴ S ¹⁶ O ₃ ⁺ , ³³ S ¹⁶ O ₃ ¹ H ⁺	(22)
⁸³ Kr	11.55	³⁴ S ¹⁶ O ₃ ¹ H ⁺	(22)
⁸⁴ Kr	56.9	³⁶ S ¹⁶ O ₃ ⁺	(22)
¹⁷⁵ Lu	97.41	¹⁵⁹ Tb ¹⁶ O ⁺	(27)(38)
²⁴ Mg	78.7	¹² C ₂ ⁺	(29)
²⁵ Mg	10.13	¹² C ₂ ¹ H ⁺	(29)
²⁶ Mg	11.17	¹² C ¹⁴ N ⁺ , ¹² C ₂ ¹ H ₂ ⁺ , ¹² C ¹³ C ¹ H ⁺	(29)
⁵⁵ Mn	100.	⁴⁰ Ar ¹⁴ N ¹ H ⁺ , ³⁹ K ¹⁶ O ⁺ , ³⁷ Cl ¹⁸ O ⁺ , ⁴⁰ Ar ¹⁵ N ⁺ , ³⁸ Ar ¹⁷ O ⁺ , ³⁶ Ar ¹⁸ O ¹ H ⁺ ³⁸ Ar ¹⁶ O ¹ H ⁺ , ³⁷ Cl ¹⁷ O ¹ H ⁺ , ²³ Na ³² S ⁺ , ³⁶ Ar ¹⁹ F ⁺	(2)(9)(11)(19)(22)(29)(34) (35)
⁹⁴ Mo	9.3	³⁹ K ₂ ¹⁶ O ⁺	(11)
⁹⁵ Mo	15.9	⁴⁰ Ar ³⁹ K ¹⁶ O ⁺ , ⁷⁹ Br ¹⁶ O ⁺	(11)
⁹⁶ Mo	16.7	³⁹ K ⁴¹ K ¹⁶ O ⁺ , ⁷⁹ Br ¹⁷ O ⁺	(11)
⁹⁷ Mo	9.6	⁴⁰ Ar ₂ ¹⁶ O ¹ H ⁺ , ⁴⁰ Ca ₂ ¹⁶ O ¹ H ⁺ , ⁴⁰ Ar ⁴¹ K ¹⁶ O ⁺ , ⁸¹ Br ¹⁶ O ⁺	(6)(11)
⁹⁸ Mo	24.1	⁸¹ Br ¹⁷ O ⁺ , ⁴¹ K ₂ O ⁺	(6)(11)
¹⁴⁴ Nd	23.80	⁹⁶ Ru ¹⁶ O ₃ ⁺	(32)
¹⁴⁶ Nd	17.19	⁹⁸ Ru ¹⁶ O ₃ ⁺	(32)
¹⁴⁸ Nd	5.76	¹⁰⁰ Ru ¹⁶ O ₃ ⁺	(32)
¹⁵⁰ Nd	5.64	¹⁰² Ru ¹⁶ O ₃ ⁺	(32)
⁵⁸ Ni	67.77	²³ Na ³⁵ Cl ⁺ , ⁴⁰ Ar ¹⁸ O ⁺ , ⁴⁰ Ca ¹⁸ O ⁺ , ⁴⁰ Ca ¹⁷ O ¹ H ⁺ , ⁴² Ca ¹⁶ O ⁺ , ²⁹ Si ₂ ⁺ , ⁴⁰ Ar ¹⁷ O ¹ H ⁺ , ²³ Na ³⁵ Cl ⁺	(9)(16)(18)(19)(20)(22)(29)
⁶⁰ Ni	26.16	⁴⁴ Ca ¹⁶ O ⁺ , ²³ Na ³⁷ Cl ⁺ , ⁴³ Ca ¹⁶ O ¹ H ⁺	(3)(13)(26)(29)
⁶¹ Ni	1.25	⁴⁴ Ca ¹⁶ O ¹ H ⁺ , ⁴⁵ Sc ¹⁶ O ⁺	(1)(25)
⁶² Ni	3.66	⁴⁶ Ti ¹⁶ O ⁺ , ²³ Na ³⁹ K ⁺ , ⁴⁶ Ca ¹⁶ O ⁺	(1)(9)(25)
⁶⁴ Ni	1.16	³² S ¹⁶ O ₂ ⁺ , ³² S ₂ ⁺	(22)(29)
³¹ P	100.	¹⁴ N ¹⁶ O ¹ H ⁺ , ¹⁵ N ¹⁵ N ¹ H ⁺ , ¹⁵ N ¹⁶ O ⁺ , ¹⁴ N ¹⁷ O ⁺ , ¹³ C ¹⁸ O ⁺ , ¹² C ¹⁸ O ¹ H ⁺	(3)(22)(29)
²⁰⁶ Pb	24.1	¹⁹⁰ Pt ¹⁶ O ⁺	(32)
²⁰⁷ Pb	22.1	¹⁹¹ Ir ¹⁶ O ⁺	(32)
²⁰⁸ Pb	52.4	¹⁹² Pt ¹⁶ O ⁺	(32)
¹⁰⁵ Pd	22.3	⁴⁰ Ar ⁶⁵ Cu ⁺	(9)
¹⁰³ Rh	100.	⁴⁰ Ar ⁶³ Cu ⁺	(9)(26)
¹⁰¹ Ru	17.0	⁴⁰ Ar ⁶¹ Ni ⁺ , ⁶⁴ Ni ³⁷ Cl ⁺	(9)
³² S	95.02	¹⁶ O ₂ ⁺ , ¹⁴ N ¹⁸ O ⁺ , ¹⁵ N ¹⁷ O ⁺ , ¹⁴ N ¹⁷ O ¹ H ⁺ , ¹⁵ N ¹⁶ O ¹ H ⁺ , ³² S ⁺ ¹⁴ N ¹⁶ O ¹ H ₂ ⁺	(9)(22)(29)
³³ S	0.75	¹⁵ N ¹⁸ O ⁺ , ¹⁴ N ¹⁸ O ¹ H ⁺ , ¹⁵ N ¹⁷ O ¹ H ⁺ , ¹⁶ O ¹⁷ O ⁺ , ¹⁶ O ₂ ¹ H ⁺ , ³³ S ⁺ , ³² S ¹ H ⁺	(22)(29)
³⁴ S	4.21	¹⁵ N ¹⁸ O ¹ H ⁺ , ¹⁶ O ¹⁸ O ⁺ , ¹⁷ O ₂ ⁺ , ¹⁶ O ¹⁷ O ¹ H ⁺ , ³⁴ S ⁺ , ³³ S ¹ H ⁺	(22)(29)
¹²¹ Sb	57.36	¹⁰⁵ Pd ¹⁶ O ⁺	(32)

A Table of Polyatomic Interferences in ICP-MS (cont'd)

Isotope	Abundance	Interference	Reference
¹²³ Sb	47.6	⁹⁴ Zr ¹⁶ O ₂	(1)
⁴⁵ Sc	100.	¹² C ¹⁶ O ₂ ¹ H ⁺ , ²⁸ Si ¹⁶ O ¹ H ⁺ , ²⁹ Si ¹⁶ O ⁺ , ¹⁴ N ₂ ¹⁶ O ¹ H ⁺ , ¹³ C ¹⁶ O ₂ ⁺	(2)(9)(22)(29)
⁷⁴ Se	0.87	³⁷ Cl ³⁷ Cl ⁺ , ³⁶ Ar ³⁸ Ar ⁺ , ³⁸ Ar ³⁶ S ⁺ , ⁴⁰ Ar ³⁴ S ⁺	(9)(22)(35)
⁷⁶ Se	9.02	⁴⁰ Ar ³⁶ Ar ⁺ , ³⁸ Ar ³⁸ Ar ⁺	(2)(10)(22)(35)
⁷⁷ Se	7.58	⁴⁰ Ar ³⁷ Cl ⁺ , ³⁶ Ar ⁴⁰ Ar ¹ H ⁺ , ³⁸ Ar ₂ ¹ H ⁺ , ¹² C ¹⁹ F ¹⁴ N ¹⁶ O ₂ ⁺	(2)(15)(19)(22)(34)
⁷⁸ Se	23.52	⁴⁰ Ar ³⁸ Ar ⁺ , ³⁸ Ar ⁴⁰ Ca ⁺	(2)(24)(35)
⁸⁰ Se	49.82	⁴⁰ Ar ₂ ⁺ , ³² S ¹⁶ O ₃ ⁺	(7)(19)(22)
⁸² Se	9.19	¹² C ³⁵ Cl ₂ ⁺ , ³⁴ S ¹⁶ O ₃ ⁺ , ⁴⁰ Ar ₂ ¹ H ₂ ⁺	(9)(11)(22)
²⁸ Si	92.21	¹⁴ N ₂ ⁺ , ¹² C ¹⁶ O ⁺	(21)(22)(29)
²⁹ Si	4.7	¹⁴ N ¹⁵ N ⁺ , ¹⁴ N ₂ ¹ H ⁺ , ¹³ C ¹⁶ O ⁺ , ¹² C ¹⁷ O ⁺ , ¹² C ¹⁶ O ¹ H ⁺	(22)(29)
³⁰ Si	3.09	¹⁵ N ₂ ⁺ , ¹⁴ N ¹⁵ N ¹ H ⁺ , ¹⁴ N ¹⁶ O ⁺ , ¹² C ¹⁸ O ⁺ , ¹³ C ¹⁷ O ⁺ , ¹³ C ¹⁶ O ¹ H ⁺ , ¹² C ¹⁷ O ¹ H ⁺ , ¹⁴ N ₂ ¹ H ₂ ⁺ , ¹² C ¹⁶ O ¹ H ₂ ⁺	(22)(29)(31)
¹⁴⁴ Sm	3.1	⁹⁶ Ru ¹⁶ O ₃ ⁺	(32)
¹⁴⁷ Sm	15.0	⁹⁹ Ru ¹⁶ O ₃ ⁺	(32)
¹⁴⁸ Sm	11.3	¹⁰⁰ Ru ¹⁶ O ₃ ⁺	(32)
¹⁴⁹ Sm	13.8	¹⁰¹ Ru ¹⁶ O ₃ ⁺	(32)
¹⁵⁰ Sm	7.4	¹⁰² Ru ¹⁶ O ₃ ⁺	(32)
¹⁵² Sm	26.7	¹⁰⁴ Ru ¹⁶ O ₃ ⁺	(32)
¹¹² Sn	0.97	⁹⁶ Ru ¹⁶ O ⁺	(32)
¹¹⁵ Sn	0.34	⁹⁹ Ru ¹⁶ O ⁺	(32)
¹¹⁶ Sn	14.53	¹⁰⁰ Ru ¹⁶ O ⁺	(32)
¹¹⁷ Sn	7.68	¹⁰¹ Ru ¹⁶ O ⁺	(32)
¹¹⁸ Sn	24.23	¹⁰² Ru ¹⁶ O ⁺ , ¹⁰² Pd ¹⁶ O ⁺	(32)
¹¹⁹ Sn	8.59	¹⁰³ Rh ¹⁶ O ⁺	(32)
¹²⁰ Sn	32.59	¹⁰⁴ Ru ¹⁶ O ⁺ , ¹⁰⁴ Pd ¹⁶ O ⁺	(32)
¹²² Sn	4.63	¹⁰⁶ Pd ¹⁶ O ⁺	(32)
¹²⁴ Sn	5.79	¹⁰⁸ Pd ¹⁶ O ⁺	(32)
⁸⁴ Sr	0.56	³⁶ S ¹⁶ O ₃ ⁺	(22)
⁸⁶ Sr	9.86	⁸⁵ Rb ¹ H ⁺	(26)(27)
¹⁸¹ Ta	99.988	¹⁶⁵ Ho ¹⁶ O ⁺	(27)
¹⁵⁹ Tb	100.	¹⁴³ Nd ¹⁶ O ⁺	(27)(38)
¹²² Te	2.603	¹⁰⁶ Pd ¹⁶ O ⁺	(32)
¹²⁴ Te	4.816	¹⁰⁸ Pd ¹⁶ O ⁺	(32)
¹²⁶ Te	18.95	¹¹⁰ Pd ¹⁶ O ⁺	(32)
¹²⁸ Te	31.69	⁹⁶ Ru ¹⁶ O ₂ ⁺	(32)
¹³⁰ Te	33.80	⁹⁸ Ru ¹⁶ O ₂ ⁺	(32)
⁴⁶ Ti	7.99	³² S ¹⁴ N ⁺ , ¹⁴ N ¹⁶ O ₂ ⁺ , ¹⁵ N ₂ ¹⁶ O ⁺	(3)(22)(29)
⁴⁷ Ti	7.32	³² S ¹⁴ N ¹ H ⁺ , ³⁰ Si ¹⁶ O ¹ H ⁺ , ³² S ¹⁵ N ⁺ , ³³ N ¹⁴ N ⁺ , ³³ S ¹⁴ N ⁺ , ¹⁵ N ¹⁶ O ₂ ⁺ , ¹⁴ N ¹⁶ O ₂ ¹ H ⁺ , ¹² C ³⁵ Cl ⁺ , ³¹ P ¹⁶ O ⁺	(3)(9)(22)(29)(37)
⁴⁸ Ti	73.98	³² S ¹⁶ O ⁺ , ³⁴ S ¹⁴ N ⁺ , ³³ S ¹⁵ N ⁺ , ¹⁴ N ¹⁶ O ¹⁸ O ⁺ , ¹⁴ N ¹⁷ N ₂ ⁺ , ¹² C ₄ ⁺ , ³⁶ Ar ¹² C ⁺	(3)(18)(19)(22)(29)
⁴⁹ Ti	5.46	³² S ¹⁷ O ⁺ , ³² S ¹⁶ O ¹ H ⁺ , ³⁵ Cl ¹⁴ N ⁺ , ³⁴ S ¹⁵ N ⁺ , ³³ S ¹⁶ O ⁺ , ¹⁴ N ¹⁷ O ₂ ¹ H ⁺ , ¹⁴ N ³⁵ Cl ⁺ , ³⁶ Ar ¹³ C ⁺ , ³⁶ Ar ¹² C ¹ H ⁺ , ¹² C ³⁷ Cl ⁺ , ³¹ P ¹⁸ O ⁺	(3)(22)(29)(37)

A Table of Polyatomic Interferences in ICP-MS (cont'd)

Isotope	Abundance	Interference	Reference
⁵⁰ Ti	5.25	³² S ¹⁸ O ⁺ , ³² S ¹⁷ O ¹ H ⁺ , ³⁶ Ar ¹⁴ N ⁺ , ³⁵ Cl ¹⁵ N ⁺ , ³⁶ S ¹⁴ N ⁺ , ³³ S ¹⁷ O ⁺ ³⁴ S ¹⁶ O ⁺ , ¹ H ¹⁴ N ³⁵ Cl ⁺ , ³⁴ S ¹⁵ O ¹ H ⁺	(3)(22)(29)
²⁰³ Tl	29.5	¹⁸⁷ Re ¹⁶ O ⁺ , ¹⁸⁶ W ¹⁶ O ¹ H ⁺	(3)
¹⁶⁹ Tm	100.	¹⁵³ Eu ¹⁶ O ⁺	(27)
⁵⁰ V	0.24	³⁴ S ¹⁶ O ⁺ , ³⁶ Ar ¹⁴ N ⁺ , ³⁵ Cl ¹⁵ N ⁺ , ³⁶ S ¹⁴ N ⁺ , ³² S ¹⁸ O ⁺ , ³³ S ¹⁷ O ⁺	(2)(22)(29)
⁵¹ V	99.76	³⁴ S ¹⁶ O ¹ H ⁺ , ³⁵ Cl ¹⁶ O ⁺ , ³⁸ Ar ¹³ C ⁺ , ³⁶ Ar ¹⁵ N ⁺ , ³⁶ Ar ¹⁴ N ¹ H ⁺ , ³⁷ Cl ¹⁴ N ⁺ , ³⁶ S ¹⁵ N ⁺ , ³³ S ¹⁸ O ⁺ , ³⁴ S ¹⁷ O ⁺	(2)(3)(14)(15)(19)(22) (29)(35)
¹⁸² W	26.41	¹⁶⁶ Er ¹⁶ O ⁺	(27)
¹⁷² Yb	21.9	¹⁵⁶ Gd ¹⁶ O ⁺	(38)
¹⁷³ Yb	16.13	¹⁵⁷ Gd ¹⁶ O ⁺	(27)
⁶⁴ Zn	48.89	³² S ¹⁶ O ₂ ⁺ , ⁴⁸ Ti ¹⁶ O ⁺ , ³¹ P ¹⁶ O ₂ ¹ H ⁺ , ⁴⁸ Ca ¹⁶ O ⁺ , ³² S ₂ ⁺ , ³¹ P ¹⁶ O ¹⁷ O ⁺ ³⁴ S ¹⁶ O ₂ ⁺ , ³⁶ Ar ¹⁴ N ₂ ⁺	(2)(9)(11)(15)(19)(22)(34) (35)
⁶⁶ Zn	27.81	⁵⁰ Ti ¹⁶ O ⁺ , ³⁴ S ¹⁶ O ₂ ⁺ , ³³ S ¹⁶ O ₂ ¹ H ⁺ , ³² S ¹⁶ O ¹⁸ O ⁺ , ³² S ¹⁷ O ₂ ⁺ , ³³ S ¹⁶ O ¹⁷ O ⁺ , ³² S ³⁴ S ⁺ , ³³ S ₂ ⁺	(9)(11)(15)(22)
⁶⁷ Zn	4.11	³⁵ Cl ¹⁶ O ₂ ⁺ , ³³ S ³⁴ S ⁺ , ³⁴ S ¹⁶ O ₂ ¹ H ⁺ , ³² S ¹⁶ O ¹⁸ O ¹ H ⁺ , ³³ S ³⁴ S ⁺ , ³⁴ S ¹⁶ O ¹⁷ O ⁺ , ³³ S ¹⁶ O ¹⁸ O ⁺ , ³² S ¹⁷ O ¹⁸ O ⁺ , ³³ S ¹⁷ O ₂ ⁺ , ³⁵ Cl ¹⁶ O ₂ ⁺	(1)(9)(11)(15)(22) (35)
⁶⁸ Zn	18.57	³⁶ S ¹⁶ O ₂ ⁺ , ³⁴ S ¹⁶ O ¹⁸ O ⁺ , ⁴⁰ Ar ¹⁴ N ₂ ⁺ , ³⁵ Cl ¹⁶ O ¹⁷ O ⁺ , ³⁴ S ₂ ⁺ , ³⁶ Ar ³² S ⁺ , ³⁴ S ¹⁷ O ₂ ⁺ , ³³ S ¹⁷ O ¹⁸ O ⁺ , ³² S ¹⁸ O ₂ ⁺ , ³² S ³⁶ S ⁺	(11)(15)(22) (35)
⁷⁰ Zn	0.62	³⁵ Cl ³⁵ Cl ⁺ , ⁴⁰ Ar ¹⁴ N ¹⁶ O ⁺ , ³⁵ Cl ¹⁷ O ¹⁸ O ⁺ , ³⁷ Cl ¹⁶ O ¹⁷ O ⁺ , ³⁴ S ¹⁸ O ₂ ⁺ , ³⁶ S ¹⁶ O ¹⁸ O ⁺ , ³⁶ S ¹⁷ O ₂ ⁺ , ³⁴ S ³⁶ S ⁺ , ³⁶ Ar ³⁴ S ⁺ , ³⁸ Ar ³² S ⁺	(9)(22)

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