


Agilent 7500 Series ICP-MS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18									
1	1 H hydrogen 1.008 13.593 -269.1 -252.8																			2 He helium 4.003 24.588 54.418 -268.9	1						
2	3 Li lithium 6.941 5.392 179 75.641 1327	4 Be beryllium 9.012 9.323 1278 18.211 2399																			5 B boron 10.81 8.298 2300 25.156 2527	6 C carbon 12.01 11.266 >3500 24.383 4918	7 N nitrogen 14.01 14.53 -209.9 29.602 -195.8	8 O oxygen 16.00 13.618 -218.4 35.118 -183.0	9 F fluorine 19.00 17.423 -219.6 34.98 -188.1	10 Ne neon 20.18 21.565 -248.7 40.964 -246.1	2
3	11 Na sodium 22.99 5.139 97.81 47.29 881	12 Mg magnesium 24.31 7.644 651 15.035 1097																			13 Al aluminum 26.98 5.986 660.4 18.828 2466	14 Si silicon 28.09 8.152 1414 16.346 2642	15 P phosphorus 30.97 10.487 44.1 19.72 279.8	16 S sulfur 32.07 10.360 112.8 23.4 444.6	17 Cl chlorine 35.45 12.967 -101 23.80 -34.11	18 Ar argon 39.95 15.760 -189.2 27.62 -185.9	3
4	19 K potassium 39.10 4.341 63.5 31.81 765.5	20 Ca calcium 40.08 6.113 848 11.872 1487	21 Sc scandium 44.96 6.54 1539 12.233 2927	22 Ti titanium 47.87 6.82 1675 13.557 3262	23 V vanadium 50.94 6.74 1890 14.65 (3000)	24 Cr chromium 52.00 6.765 1890 16.49 2212	25 Mn manganese 54.94 7.432 1244 15.640 2152	26 Fe iron 55.85 7.87 1535 16.18 2754	27 Co cobalt 58.93 7.864 1494 17.05 2747	28 Ni nickel 58.69 7.635 1455 18.15 2731	29 Cu copper 63.55 7.726 1085 20.292 2580	30 Zn zinc 65.39 9.394 419.6 17.964 903	31 Ga gallium 69.72 5.999 29.78 20.51 2403	32 Ge germanium 72.61 7.900 958.5 15.935 2691	33 As arsenic 74.92 9.81 18.63	34 Se selenium 78.96 9.75 220.2 21.5 684.9	35 Br bromine 79.90 11.814 -7.2 21.6 57.9	36 Kr krypton 83.80 14.000 -156.6 24.56 -153.4	4								
5	37 Rb rubidium 85.47 4.177 38.89 25.1 703.3	38 Sr strontium 87.62 5.696 769 11.030 1383	39 Y yttrium 88.91 6.377 1495 12.233 2927	40 Zr zirconium 91.22 6.837 1852 13.13 3578	41 Nb niobium 92.91 6.883 2468 14.32 3300	42 Mo molybdenum 95.94 7.10 2610 16.15 4804	43 Tc technetium (99) 92.91 7.28 2170 15.26 3300	44 Ru ruthenium 101.1 7.28 2170 16.76 3900	45 Rh rhodium 102.9 7.461 1963 18.07 3727	46 Pd palladium 106.4 8.33 3167 19.42 4527	47 Ag silver 107.9 7.576 961.9 21.48 2184	48 Cd cadmium 112.4 8.994 321.1 16.908 764.3	49 In indium 114.8 5.786 156.6 18.833 (2000)	50 Sn tin 118.7 7.344 232.0 14.632 2270	51 Sb antimony 121.8 8.642 630.7 16.5 1617	52 Te tellurium 127.6 9.01 449.8 18.6 989.8	53 I iodine 126.9 10.459 113.6 19.135 182.8	54 Xe xenon 131.3 12.130 -111.9 24.56 -108.1	5								
6	55 Cs cesium 132.9 3.894 28.5 25.1 703.3	56 Ba barium 137.3 5.212 725 10.001 1639	57-71 L Lanthanides	72 Hf hafnium 178.5 7.0 2150 14.9 5400	73 Ta tantalum 180.9 7.88 2996 16.2 5425	74 W tungsten 183.8 7.98 3387 17.7 5927	75 Re rhenium 186.2 7.87 3180 16.6 5627	76 Os osmium 190.2 8.7 2700 (5500)	77 Ir iridium 192.2 9.2 2457 17 4527	78 Pt platinum 195.1 9.0 1772 18.56 3827	79 Au gold 197.0 9.22 1064 20.5 2710	80 Hg mercury 200.6 10.437 -38.9 18.757 356.7	81 Tl thallium 204.4 6.108 302.5 20.42 1457	82 Pb lead 207.2 7.415 327.5 15.032 1750	83 Bi bismuth 209.0 7.287 271.4 16.68 1560	84 Po polonium (210) 8.43 254 962	85 At astatine (210)	86 Rn radon (222) 10.745 -71 -61.9	6								
7	87 Fr francium (223)	88 Ra radium (226) 5.277 700 10.14 1137	89-103 A Actinides	104 Rf rutherfordium (261)	105 Db dubnium (262)	106 Sg seaborgium (263)	107 Bh bohrium (264)	108 Hs hassium (265)	109 Mt meitnerium (268)											7							

L Lanthanides	57 La lanthanum 138.9 5.61 921 10.85 3500	58 Ce cerium 140.1 5.54 795 10.55 2527	59 Pr praseodymium 140.9 5.42 935 10.73 3127	60 Nd neodymium 144.2 5.49 1024 10.55 3027	61 Pm promethium (145) 5.55 1035 11.2 (1900)	62 Sm samarium 150.4 5.63 1072 11.245 1439	63 Eu europium 152.0 5.68 826 11.245 1439	64 Gd gadolinium 157.3 6.16 1312 (3000)	65 Tb terbium 158.9 5.98 1356 2800	66 Dy dysprosium 162.5 5.93 1407 11.67 2600	67 Ho holmium 164.9 6.02 1461 11.80 2600	68 Er erbium 167.3 6.10 1522 11.93 2510	69 Tm thulium 168.9 6.18 1545 12.05 1727	70 Yb ytterbium 173.0 6.25 824 12.17 1427	71 Lu lutetium 175.0 6.15 1652 13.9 3327
A Actinides	89 Ac actinium (227) 6.9 1050 12.1 (3200)	90 Th thorium 232.0 11.5 (1800) (3000)	91 Pa protactinium 231.0 <1600	92 U uranium 238.0 6.08 1133 3887	93 Np neptunium (237) 5.8 640	94 Pu plutonium (239) 5.8 639.5 3235	95 Am americium (243) 6.05 <850 2600	96 Cm curium (247) 1340	97 Bk berkelium (247)	98 Cf californium (252)	99 Es einsteinium (252)	100 Fm fermium (257)	101 Md mendelevium (258)	102 No nobelium (259)	103 Lr lawrencium (262)

atomic number	atomic weight
Element Symbol	
(eV) first ionization potential	(°C)/1 atm melting point
second ionization potential	boiling point

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