

Periodic Table of the Elements

1										18											
1 1.00794 ±1 H 20.28 17.81 0.08988 1s ¹ hydrogen	2 4.002602 0 He 4.216 0.8 (26 bar) 0.1787 1s ² helium																				
3 6.941 1 Li 1615 453.69 0.53 [He]2s ¹ lithium	4 9.012182 2 Be 2745 1560 1.848 [He]2s ² beryllium															13 5 10.811 3 B 4273 2352 2.34 [He]2s ² 2p ¹ boron	14 6 12.0107 3 C 5100 4096 (sub.) 2.62 [He]2s ² 2p ² carbon	15 7 14.0067 4 N 77.4 63.29 1.2506 [He]2s ² 2p ³ nitrogen	16 8 15.9994 -2 O 90.188 54.8 1.429 [He]2s ² 2p ⁴ oxygen	17 9 18.998403 -1 F 85.01 53.53 1.696 [He]2s ² 2p ⁵ fluorine	18 10 20.1797 0 Ne 27.102 24.48 0.8999 [He]2s ² 2p ⁶ neon
11 22.989769 1 Na 1156.1 370.96 0.971 [Ne]3s ¹ sodium	12 24.305 2 Mg 1363 922 1.738 [Ne]3s ² magnesium															13 13 26.981539 3 Al 2792 933.52 2.702 [Ne]3s ² 3p ¹ aluminum	14 14 28.0855 2,(4),-4 Si 3538 1683 2.33 [Ne]3s ² 3p ² silicon	15 15 30.973762 ±3,(5) P 550 317.3 1.82 [Ne]3s ² 3p ³ phosphorus	16 16 32.065 -2,(4),(6) S 717.8 388.36 2.07 [Ne]3s ² 3p ⁴ sulfur	17 17 35.453 (±1),3,5,7 Cl 238.6 172.17 3.214 [Ne]3s ² 3p ⁵ chlorine	18 18 39.948 0 Ar 87.5 84 1.7824 [Ne]3s ² 3p ⁶ argon
19 39.0983 1 K 1033.1 336.4 0.862 [Ar]4s ¹ potassium	20 40.078 2 Ca 1757 1112 1.55 [Ar]4s ² calcium	21 44.955912 3 Sc 3103 1814 3.00 [Ar]4s ² 3d ¹ scandium	22 47.867 2,3,(4) Ti 3560 1941±10 4.50 [Ar]4s ² 3d ² titanium	23 50.9415 2,3,4,(5) V 3680 2163±10 5.80 [Ar]4s ² 3d ³ vanadium	24 51.9961 2,(3),6 Cr 2945 2130 7.19 [Ar]4s ¹ 3d ⁵ chromium	25 54.938045 (2),3,4,6,7 Mn 2334 1517 7.43 [Ar]4s ² 3d ⁵ manganese	26 55.845 2,(3) Fe 3134 1808 7.86 [Ar]4s ² 3d ⁶ iron	27 58.933195 (2),3 Co 3200 1768 8.90 [Ar]4s ² 3d ⁷ cobalt	28 58.6934 (2),3 Ni 3186 1726 8.90 [Ar]4s ² 3d ⁸ nickel	29 63.546 1,(2) Cu 2840 1356 8.96 [Ar]4s ¹ 3d ¹⁰ copper	30 65.409 2 Zn 1180 692.73 7.14 [Ar]4s ² 3d ¹⁰ zinc	31 69.723 3 Ga 2477 302.93 5.907 [Ar]4s ² 3d ¹⁰ 4p ¹ gallium	32 72.64 2,(4) Ge 3103 1210.6 5.323 [Ar]4s ² 3d ¹⁰ 4p ² germanium	33 74.9216 (±3),5 As 886 (sub.) 990 (28 bar) 5.72 [Ar]4s ² 3d ¹⁰ 4p ³ arsenic	34 78.96 -2,(4),6 Se 958.1 490 4.79 [Ar]4s ² 3d ¹⁰ 4p ⁴ selenium	35 79.904 (±1),5 Br 331.93 266 3.119 [Ar]4s ² 3d ¹⁰ 4p ⁵ bromine	36 83.798 0 Kr 120.9 116.6 3.708 [Ar]4s ² 3d ¹⁰ 4p ⁶ krypton				
37 85.4678 1 Rb 959 312.04 1.53 [Kr]5s ¹ rubidium	38 87.62 2 Sr 1657 1042 2.60 [Kr]5s ² strontium	39 88.90585 3 Y 3611 1795±8 4.47 [Kr]5s ² 4d ¹ yttrium	40 91.224 4 Zr 4650 2125±2 6.40 [Kr]5s ² 4d ² zirconium	41 92.90638 3,(5) Nb 5015 2471±10 8.57 [Kr]5s ¹ 4d ⁴ niobium	42 95.94 2,3,4,5,(6) Mo 4885 2890 10.20 [Kr]5s ¹ 4d ⁵ molybdenum	43 [97.9072] 4,6,(7) Tc 5150 2445 11.5 [Kr]5s ² 4d ⁵ technetium	44 101.07 2,(3),(4),6,8 Ru 4423 2607 12.20 [Kr]5s ¹ 4d ⁷ ruthenium	45 102.90550 2,(3),4 Rh 3968 2239±3 12.40 [Kr]5s ¹ 4d ⁸ rhodium	46 106.42 (2),4 Pd 3213 1825 12.02 [Kr]4d ¹⁰ palladium	47 107.8682 1 Ag 2435 1235.08 10.50 [Kr]5s ¹ 4d ¹⁰ silver	48 112.411 2 Cd 1038 594.1 8.65 [Kr]5s ² 4d ¹⁰ cadmium	49 114.818 3 In 2353 429.76 7.31 [Kr]5s ² 4d ¹⁰ 5p ¹ indium	50 118.710 2,(4) Sn 2875 505.12 7.30 [Kr]5s ² 4d ¹⁰ 5p ² tin	51 121.760 (±3),5 Sb 1860 903.89 6.684 [Kr]5s ² 4d ¹⁰ 5p ³ antimony	52 127.60 -2,(4),6 Te 1263.1 722.7 4.93 [Kr]5s ² 4d ¹⁰ 5p ⁴ tellurium	53 126.90447 (±1),5,7 I 457.35 (35 bar) 387 6.24 [Kr]5s ² 4d ¹⁰ 5p ⁵ iodine	54 131.293 0 Xe 166.1 161.3 5.88 [Kr]5s ² 4d ¹⁰ 5p ⁶ xenon				
55 132.905452 1 Cs 942.5 301.55 1.873 [Xe]6s ¹ cesium	56 137.327 2 Ba 2170 998 3.51 [Xe]6s ² barium	57 138.90547 3 La [*] 3737 1191 6.7 [Xe]6s ² 5d ¹ lanthanum	72 178.49 4 Hf 4875 2500 13.2 [Xe]6s ² 4f ¹⁴ 5d ² hafnium	73 180.94788 5 Ta 5700±100 3269 16.6 [Xe]6s ² 4f ¹⁴ 5d ³ tantalum	74 183.84 2,3,4,5,(6) W 5933 3683±20 19.3 [Xe]6s ² 4f ¹⁴ 5d ⁴ tungsten	75 186.207 -1,2,4,6,(7) Re 5900 (est.) 3453 21.0 [Xe]6s ² 4f ¹⁴ 5d ⁵ rhenium	76 190.23 2,3,(4),6,8 Os 5300 3327 22.4 [Xe]6s ² 4f ¹⁴ 5d ⁶ osmium	77 192.217 2,3,(4),6 Ir 4403 2683 22.42 [Xe]6s ² 4f ¹⁴ 5d ⁷ iridium	78 195.084 2,(4) Pt 4100 2045 21.45 [Xe]6s ¹ 4f ¹⁴ 5d ⁹ platinum	79 196.966569 1,(3) Au 3081 1337.58 19.32 [Xe]6s ¹ 4f ¹⁴ 5d ¹⁰ gold	80 200.59 1,(2) Hg 629.73 234.28 13.546 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ mercury	81 204.3833 (1),3 Tl 1730±10 576.7 11.85 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ¹ thallium	82 207.2 (2),4 Pb 2013 600.652 11.34 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ² lead	83 208.98040 (3),5 Bi 1833±5 544.5 9.80 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ³ bismuth	84 [208.9824] 2,(4) Po 1235 527 9.4 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁴ polonium	85 [209.9871] (±1),3,5,7 At 610 575 9.73 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁵ astatine	86 [222.0176] 0 Rn 211 202 9.73 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁶ radon				
87 [223.0197] 1 Fr 950 300 — [Rn]7s ¹ francium	88 [226.0254] 2 Ra 1413 973 5.0 [Rn]7s ² radium	89 [227.0277] 3 Ac ^{**} 3500±300 1323 10.07 [Rn]7s ² 6d ¹ actinium	104 [261.1088] 4 Rf — — — [Rn]7s ² 5f ¹⁴ 6d ² rutherfordium	105 [262.1141] Db — — — [Rn]7s ² 5f ¹⁴ 6d ³ dubnium	106 [266.1219] Sg — — — [Rn]7s ² 5f ¹⁴ 6d ⁴ seaborgium	107 [264.12] Bh — — — [Rn]7s ² 5f ¹⁴ 6d ⁵ bohrium	108 [277] Hs — — — [Rn]7s ² 5f ¹⁴ 6d ⁶ hassium	109 [268.1388] Mt — — — [Rn]7s ² 5f ¹⁴ 6d ⁷ meitnerium	110 [281] Ds — — — [Rn]7s ² 5f ¹⁴ 6d ⁸ darmstadtium	111 [272] Rg — — — [Rn]7s ² 5f ¹⁴ 6d ⁹ roentgenium	112 [285] Cp — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ copernicium	113 [285] Uut — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ¹ ununtrium	114 [289] Uuq — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ² ununquadium	115 [288] Uup — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ³ ununpentium	116 [289] Uuh — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ⁴ ununhexium	117 [291] Uus — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ⁵ ununseptium	118 [293] Uuo — — — [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 6p ⁶ ununoctium				

58 140.116 (3),4 Ce 3706 1071±3 6.78 [Xe]6s ² 5d ¹ 4f ¹ cerium	59 140.90765 (3),4) Pr 3793 1204 6.77 [Xe]6s ² 4f ³ praseodymium	60 144.242 3 Nd 3347 1294 7.00 [Xe]6s ² 4f ⁴ neodymium	61 [144.9127] 3 Pm 3300 (est.) 1315 6.475 [Xe]6s ² 4f ⁵ promethium	62 150.36 2,(3) Sm 2067 1347 7.54 [Xe]6s ² 4f ⁶ samarium	63 151.964 2,(3) Eu 1800 1095 5.259 [Xe]6s ² 4f ⁷ europium	64 157.25 3 Gd 3546 1586 7.895 [Xe]6s ² 5d ¹ 4f ⁷ gadolinium	65 158.92535 (3),4 Tb 3503 1629 8.27 [Xe]6s ² 4f ⁹ terbium	66 162.500 3 Dy 2840 1685 8.536 [Xe]6s ² 4f ¹⁰ dysprosium	67 164.93032 3 Ho 2973 1747 8.80 [Xe]6s ² 4f ¹¹ holmium	68 167.259 3 Er 3141 1802 9.05 [Xe]6s ² 4f ¹² erbium	69 168.93421 2,(3) Tm 2223 1818 9.33 [Xe]6s ² 4f ¹³ thulium	70 173.04 2,(3) Yb 1469 1092 6.98 [Xe]6s ² 4f ¹⁴ ytterbium	71 174.967 3 Lu 3675 1936 9.85 [Xe]6s ² 5d ¹ 4f ¹⁴ lutetium
90 232.03806 4 Th 4273 2023 11.70 [Rn]7s ² 6d ² thorium	91 231.03588 4,(5) Pa — — — [Rn]7s ² 6d ¹ 5f ² protactinium	92 238.02891 3,4,5,(6) U 4091 1405 18.90 [Rn]7s ² 6d ¹ 5f ³ uranium	93 [237.0482] 3,4,(5),6 Np 4175 913 20.45 [Rn]7s ² 6d ¹ 5f ⁴ neptunium	94 [244.0642] 3,(4),5,6 Pu 3505 914 19.80 [Rn]7s ² 5f ⁶ plutonium	95 [243.0614] (3),4,5,6 Am 2880 1267 13.6 [Rn]7s ² 5f ⁷ americium	96 [247.0704] (3),4 Cm — — — [Rn]7s ² 6d ¹ 5f ⁷ curium	97 [247.0703] (3),4 Bk — — — [Rn]7s ² 5f ⁹ berkelium	98 [251.0796] (3),4 Cf — — — [Rn]7s ² 5f ¹⁰ californium	99 [252.0830] (2),3 Es — — — [Rn]7s ² 5f ¹¹ einsteinium	100 [257.0951] 3 Fm — — — [Rn]7s ² 5f ¹² fermium	101 [258.0984] 2,3 Md — — — [Rn]7s ² 5f ¹³ mendelevium	102 [259.1010] 2,3 No — — — [Rn]7s ² 5f ¹⁴ nobelium	103 [262.1097] 3 Lr — — — [Rn]7s ² 6d ¹ 5f ¹⁴ lawrencium

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Data from www.iupac.org. Elements 113 to 116 have been reported but not fully authenticated by IUPAC.

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