

Periodic Table of the Elements

1										18									
1 1.0080 ±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 6.97 1 Li 1615 453.69 0.53 [He]2s ¹ lithium	4 9.012182 2 Be 2745 1560 1.848 [He]2s ² beryllium																		
11 22.989769 1 Na 1156.1 370.96 0.971 [Ne]3s ¹ sodium	12 24.3050 2 Mg 1363 922 1.738 [Ne]3s ² magnesium																		
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 65.38 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 72.63 2,(4) Ge 3103 1210.6 5.323 [Ar]4s ² 3d ¹⁰ 4p ² germanium	33 74.92160 (±3),5 As 886 (sub.) 1000 (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 92.906 3,(5) Nb 5015 2471±10 8.57 [Kr]5s ¹ 4d ⁴ niobium	42 95.96 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 6.24 [Kr]5s ² 4d ¹⁰ 5p ⁴ tellurium	53 126.90447 (±1),5,7 I 487.35 (35 bar) 387 4.93 [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	81 204.384 (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 — [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] Cn — — — [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		

atomic number → 26
atomic mass → 55.845
boiling point /K → 3134
melting point /K → 1808
density /g/cm³, g/L for gases → 7.86
name → iron
common oxidation states (most stable) → 2,(3)
symbol → Fe
electronic configuration → [Ar]4s²3d⁶
solid, liquid, gas, synthetic

All properties at 298.15 K and 1 bar unless noted.

The latest version of this document is available from www.consol.ca.

Data from www.iupac.org. Elements 113 to 118 have been reported but not fully authenticated by IUPAC. For several elements, the variability depends substantially on whether the sample origin is organic or inorganic. For these elements, the average, with decreased precision, is reported herein.

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58 140.116 (3),4 3706 1071±3 6.78 [Xe]6s ² 5d ¹ 4f ¹ cerium	59 140.90765 (3),(4) 3793 1204 6.77 [Xe]6s ² 4f ³ praseodymium	60 144.242 3 3347 1294 7.00 [Xe]6s ² 4f ⁴ neodymium	61 [144.9127] 3 3300 (est.) 1315 6.475 [Xe]6s ² 4f ⁵ promethium	62 150.36 2,(3) 2067 1347 7.54 [Xe]6s ² 4f ⁶ samarium	63 151.964 2,(3) 1800 1095 5.259 [Xe]6s ² 4f ⁷ europium	64 157.25 3 3546 1586 7.895 [Xe]6s ² 5d ¹ 4f ⁷ gadolinium	65 158.925 (3),4 3503 1629 8.27 [Xe]6s ² 4f ⁹ terbium	66 162.500 3 2840 1685 8.536 [Xe]6s ² 4f ¹⁰ dysprosium	67 164.93032 3 2973 1747 8.80 [Xe]6s ² 4f ¹¹ holmium	68 167.259 3 3141 1802 9.05 [Xe]6s ² 4f ¹² erbium	69 168.93421 2,(3) 2223 1818 9.33 [Xe]6s ² 4f ¹³ thulium	70 173.054 2,(3) 1469 1092 6.98 [Xe]6s ² 4f ¹⁴ ytterbium	71 174.9668 3 3675 1936 9.85 [Xe]6s ² 5d ¹ 4f ¹⁴ lutetium
90 232.03806 4 4273 2023 11.70 [Rn]7s ² 6d ² thorium	91 231.03588 4,(5) — 1873 15.40 [Rn]7s ² 6d ¹ 5f ² protactinium	92 238.02891 3,4,5,(6) 4091 1405 18.90 [Rn]7s ² 6d ¹ 5f ³ uranium	93 [237.0482] 3,4,(5),6 4175 913 20.45 [Rn]7s ² 6d ¹ 5f ⁴ neptunium	94 [244.0642] 3,(4),5,6 3505 914 19.80 [Rn]7s ² 5f ⁶ plutonium	95 [243.0614] (3),4,5,6 2880 1267 13.6 [Rn]7s ² 5f ⁷ americium	96 [247.0704] (3),4 — 1613 13.5 [Rn]7s ² 6d ¹ 5f ⁷ curium	97 [247.0703] (3),4 — — — [Rn]7s ² 5f ⁹ berkelium	98 [251.0796] (3),4 — — — [Rn]7s ² 5f ¹⁰ californium	99 [252.0830] (2),3 — — — [Rn]7s ² 5f ¹¹ einsteinium	100 [257.0951] 3 — — — [Rn]7s ² 5f ¹² fermium	101 [258.0984] 2,3 — — — [Rn]7s ² 5f ¹³ mendelevium	102 [259.1010] 2,3 — — — [Rn]7s ² 5f ¹⁴ nobelium	103 [262.1097] 3 — — — [Rn]7s ² 6d ¹ 5f ¹⁴ lawrencium

