Periodic Table for the *Table of Isotopes** (1999)

1 (IA)	2 (IIA)	3 (IIIB)	4 (IVB)	5 (VB)	6 (VIB)	7 (VIIB)	8 (VIII)	9 (VIII)	10 (VIII)	11 (IB)	12 (IIB)	13 (IIIA)	14 (IVA)	15 (VA)	16 (VIA)	17 (VIIA)	18 (VIIIA)
Hydrogen 1 **H_1** -259.34° -252.87° -240.18° +1-1 1.00794 91.0%																	**Helium** 2 **He_2** -272.2° -268.93° -267.96° 0 4.002602 8.9%
Lithium 2 1 **Li_3** 180.5° 1342° +1 6.941 1.86×10^{-7}%	**Beryllium** 2 2 **Be_4** 1287° 2471° +2 9.012182 2.38×10^{-9}%											**Boron** 2 3 **B_5** 2075° 4000° +3 10.811 6.9×10^{-8}%	**Carbon** 2 4 **C_6** 4492t° 3642s° +2+4-4 12.0107 0.033%	**Nitrogen** 2 5 **N_7** -210.00° -195.79° -146.94° ±1±2±3+4+5 14.00674 0.0102%	**Oxygen** 2 6 **O_8** -218.79° -182.95° -118.56° -2 15.9994 0.078%	**Fluorine** 2 7 **F_9** -219.62° -188.12° -129.02° -1 18.9984032 2.7×10^{-6}%	**Neon** 2 8 **Ne_{10}** -248.59° -246.08° -228.7° 0 20.1797 0.0112%
Sodium 2 8 1 **Na_{11}** 97.80° 883° +1 22.989770 0.000187%	**Magnesium** 2 8 2 **Mg_{12}** 650° 1090° +2 24.3050 0.00350%											**Aluminum** 2 8 3 **Al_{13}** 660.32° 2519° +3 26.981538 0.000277%	**Silicon** 2 8 4 **Si_{14}** 1414° 3265° +2+4-4 28.0855 0.00326%	**Phosphorus** 2 8 5 **P_{15}** 44.15° 280.5° 721° +3+5-3 30.973761 0.000034%	**Sulfur** 2 8 6 **S_{16}** 115.21° 444.60° 1041° +4+6-2 32.066 0.00168%	**Chlorine** 2 8 7 **Cl_{17}** -101.5° -34.04° 143.8° +1+5+7-1 35.4527 0.000017%	**Argon** 2 8 8 **Ar_{18}** -189.35° -185.85° -122.28° 0 39.948 0.000329%
Potassium 2 8 8 1 **K_{19}** 63.38° 759° +1 39.0983 0.0000123%	**Calcium** 2 8 8 2 **Ca_{20}** 842° 1484° +2 40.078 0.000199%	**Scandium** 2 8 9 2 **Sc_{21}** 1541° 2836° +3 44.955910 1.12×10^{-7}%	**Titanium** 2 8 10 2 **Ti_{22}** 1668° 3287° +2+3+4 47.867 7.8×10^{-6}%	**Vanadium** 2 8 11 2 **V_{23}** 1910° 3407° +2+3+4+5 50.9415 9.6×10^{-7}%	**Chromium** 2 8 13 1 **Cr_{24}** 1907° 2671° +2+3+6 51.9961 0.000044%	**Manganese** 2 8 13 2 **Mn_{25}** 1246° 2061° +2+3+4+7 54.938049 0.000031%	**Iron** 2 8 14 2 **Fe_{26}** 1538° 2861° +2+3 55.845 0.00294%	**Cobalt** 2 8 15 2 **Co_{27}** 1495° 2927° +2+3 58.933200 7.3×10^{-6}%	**Nickel** 2 8 16 2 **Ni_{28}** 1455° 2913° +2+3 58.6934 0.000161%	**Copper** 2 8 18 1 **Cu_{29}** 1084.62° 2562° +1+2 63.546 1.70×10^{-6}%	**Zinc** 2 8 18 2 **Zn_{30}** 419.53° 907° +2 65.39 4.11×10^{-6}%	**Gallium** 2 8 18 3 **Ga_{31}** 29.76° 2204° +3 69.723 1.23×10^{-7}%	**Germanium** 2 8 18 4 **Ge_{32}** 938.25° 2833° +2+4 72.61 3.9×10^{-7}%	**Arsenic** 2 8 18 5 **As_{33}** 817t° 614s° 1400° +3+5-3 74.92160 2.1×10^{-8}%	**Selenium** 2 8 18 6 **Se_{34}** 221° 685° 1493° +4+6-2 78.96 2.03×10^{-7}%	**Bromine** 2 8 18 7 **Br_{35}** -7.2° 58.8° 315° +1+5-1 79.904 3.8×10^{-8}%	**Krypton** 2 8 18 8 **Kr_{36}** -157.36° -153.22° -63.74° 0 83.80 1.5×10^{-7}%
Rubidium 2 8 18 8 1 **Rb_{37}** 39.31° 688° +1 85.4678 2.31×10^{-8}%	**Strontium** 2 8 18 8 2 **Sr_{38}** 777° 1382° +2 87.62 7.7×10^{-8}%	**Yttrium** 2 8 18 9 2 **Y_{39}** 1522° 3345° +3 88.90585 1.51×10^{-8}%	**Zirconium** 2 8 18 10 2 **Zr_{40}** 1855° 4409° +4 91.224 3.72×10^{-8}%	**Niobium** 2 8 18 12 1 **Nb_{41}** 2477° 4744° +3+5 92.90638 2.28×10^{-9}%	**Molybdenum** 2 8 18 13 1 **Mo_{42}** 2623° 4639° +6 95.94 8.3×10^{-9}%	**Technetium** 2 8 18 13 2 **Tc_{43}** 2157° 4265° +4+6+7 [98]	**Ruthenium** 2 8 18 15 1 **Ru_{44}** 2334° 4150° +3 101.07 6.1×10^{-9}%	**Rhodium** 2 8 18 16 1 **Rh_{45}** 1964° 3695° +3 102.90550 1.12×10^{-9}%	**Palladium** 2 8 18 18 0 **Pd_{46}** 1554.9° 2963° +2+4 106.42 4.5×10^{-9}%	**Silver** 2 8 18 18 1 **Ag_{47}** 961.78° 2162° +1 107.8682 1.58×10^{-9}%	**Cadmium** 2 8 18 18 2 **Cd_{48}** 321.07° 767° +2 112.411 5.3×10^{-9}%	**Indium** 2 8 18 18 3 **In_{49}** 156.60° 2072° +3 114.818 6.0×10^{-10}%	**Tin** 2 8 18 18 4 **Sn_{50}** 231.93° 2602° +2+4 118.710 1.25×10^{-8}%	**Antimony** 2 8 18 18 5 **Sb_{51}** 630.63° 1587° +3+5-3 121.760 1.01×10^{-9}%	**Tellurium** 2 8 18 18 6 **Te_{52}** 449.51° 988° +4+6-2 127.60 1.57×10^{-8}%	**Iodine** 2 8 18 18 7 **I_{53}** 113.7° 184.4° 546° +1+5+7-1 126.90447 2.9×10^{-9}%	**Xenon** 2 8 18 18 8 **Xe_{54}** -111.75° -108.04° 16.58° 0 131.29 1.5×10^{-8}%
Cesium 2 8 18 18 8 1 **Cs_{55}** 28.44° 671° +1 132.90545 1.21×10^{-9}%	**Barium** 2 8 18 18 8 2 **Ba_{56}** 727° 1897° +2 137.327 1.46×10^{-8}%	**Lanthanum** 2 8 18 18 9 2 **La_{57}**† 918° 3464° +3 138.9055 1.45×10^{-9}%	**Hafnium** 2 8 18 32 10 2 **Hf_{72}** 2233° 4603° +4 178.49 5.02×10^{-10}%	**Tantalum** 2 8 18 32 11 2 **Ta_{73}** 3017° 5458° +5 180.9479 6.75×10^{-11}%	**Tungsten** 2 8 18 32 12 2 **W_{74}** 3422° 5555° +6 183.84 4.34×10^{-10}%	**Rhenium** 2 8 18 32 13 2 **Re_{75}** 3186° 5596° +4+6+7 186.207 1.69×10^{-10}%	**Osmium** 2 8 18 32 14 2 **Os_{76}** 3033° 5012° +3+4 190.23 2.20×10^{-9}%	**Iridium** 2 8 18 32 15 2 **Ir_{77}** 2446° 4428° +3+4 192.217 2.16×10^{-9}%	**Platinum** 2 8 18 32 16 2 **Pt_{78}** 1768.4° 3825° +2+4 195.078 4.4×10^{-9}%	**Gold** 2 8 18 32 18 1 **Au_{79}** 1064.18° 2856° +1+3 196.96655 6.1×10^{-10}%	**Mercury** 2 8 18 32 18 2 **Hg_{80}** -38.83° 356.73° 1477° +1+2 200.59 1.11×10^{-9}%	**Thallium** 2 8 18 32 18 3 **Tl_{81}** 304° 1473° +1+3 204.3833 6.0×10^{-10}%	**Lead** 2 8 18 32 18 4 **Pb_{82}** 327.46° 1749° +2+4 207.2 1.03×10^{-8}%	**Bismuth** 2 8 18 32 18 5 **Bi_{83}** 271.40° 1564° +3+5 208.98038 4.7×10^{-10}%	**Polonium** 2 8 18 32 18 6 **Po_{84}** 254° 962° +2+4 [209]	**Astatine** 2 8 18 32 18 7 **At_{85}** 302° [210]	**Radon** 2 8 18 32 18 8 **Rn_{86}** -71° -61.7° 104° 0 [222]
Francium 2 8 18 32 18 8 1 **Fr_{87}** 27° +1 [223]	**Radium** 2 8 18 32 18 8 2 **Ra_{88}** 700° +2 [226]	**Actinium** 2 8 18 32 18 9 2 **Ac_{89}**‡ 1051° 3198° +3 [227]	**Rutherfordium** 2 8 18 32 32 10 2 **Rf_{104}** +4 [261]	**Dubnium** 2 8 18 32 32 11 2 **Db_{105}** [262]	**Seaborgium** 2 8 18 32 32 12 2 **Sg_{106}** [266]	**Bohrium** 2 8 18 32 32 13 2 **Bh_{107}** [264]	**Hassium** 2 8 18 32 32 14 2 **Hs_{108}** [269]	**Meitnerium** 2 8 18 32 32 15 2 **Mt_{109}** [268]	**Element-110** 2 8 18 32 32 16 2 **110_{110}** [271]	**Element-111** 2 8 18 32 32 17 2 **111_{111}** [272]	**Element-112** 2 8 18 32 32 18 2 **112_{112}** [277]		**Element-114** 2 8 18 32 32 20 2 **114_{114}** [289]		**Element-116** 2 8 18 32 32 22 2 **116_{116}** [289]		**Element-118** 2 8 18 32 32 24 2 **118_{118}** [293]

Group

Element
K L M N O P Q
E_Z
M.P.° B.P.° C.P.°
Ox.States
At.Weight
Abundance%

Key to Table

† Lanthanides	**Cerium**	**Praseodymium**	**Neodymium**	**Promethium**	**Samarium**	**Europium**	**Gadolinium**	**Terbium**	**Dysprosium**	**Holmium**	**Erbium**	**Thulium**	**Ytterbium**	**Lutetium**
	2 8 18 19 9 2 **Ce_{58}** 798° 3443° +3+4 140.116 3.70×10^{-9}%	2 8 18 21 8 2 **Pr_{59}** 931° 3520° +3 140.90765 5.44×10^{-10}%	2 8 18 22 8 2 **Nd_{60}** 1021° 3074° +3 144.24 2.70×10^{-9}%	2 8 18 23 8 2 **Pm_{61}** 1042° 3000° +3 [145]	2 8 18 24 8 2 **Sm_{62}** 1074° 1794° +2+3 150.36 8.42×10^{-10}%	2 8 18 25 8 2 **Eu_{63}** 822° 1596° +2+3 151.964 3.17×10^{-10}%	2 8 18 25 9 2 **Gd_{64}** 1313° 3273° +3 157.25 1.076×10^{-9}%	2 8 18 27 8 2 **Tb_{65}** 1356° 3230° +3 158.92534 1.97×10^{-10}%	2 8 18 28 8 2 **Dy_{66}** 1412° 2567° +3 162.50 1.286×10^{-9}%	2 8 18 29 8 2 **Ho_{67}** 1474° 2700° +3 164.93032 2.90×10^{-10}%	2 8 18 30 8 2 **Er_{68}** 1529° 2868° +3 167.26 8.18×10^{-10}%	2 8 18 31 8 2 **Tm_{69}** 1545° 1950° +3 168.93421 1.23×10^{-10}%	2 8 18 32 8 2 **Yb_{70}** 819° 1196° +2+3 173.04 8.08×10^{-10}%	2 8 18 32 9 2 **Lu_{71}** 1663° 3402° +3 174.967 1.197×10^{-10}%

‡ Actinides	**Thorium**	**Protactinium**	**Uranium**	**Neptunium**	**Plutonium**	**Americium**	**Curium**	**Berkelium**	**Californium**	**Einsteinium**	**Fermium**	**Mendelevium**	**Nobelium**	**Lawrencium**
	2 8 18 32 18 10 2 **Th_{90}** 1750° 4788° +4 232.0381 1.09×10^{-10}%	2 8 18 32 20 9 2 **Pa_{91}** 1572° +5+4 231.03588	2 8 18 32 21 9 2 **U_{92}** 1135° 4131° +3+4+5+6 238.0289 2.94×10^{-11}%	2 8 18 32 22 9 2 **Np_{93}** 644° +3+4+5+6 [237]	2 8 18 32 24 8 2 **Pu_{94}** 640° 3228° +3+4+5+6 [244]	2 8 18 32 25 8 2 **Am_{95}** 1176° 2011° +3+4+5+6 [243]	2 8 18 32 25 9 2 **Cm_{96}** 1345° +3 [247]	2 8 18 32 27 8 2 **Bk_{97}** 1050° +3+4 [247]	2 8 18 32 28 8 2 **Cf_{98}** 900° +3 [251]	2 8 18 32 29 8 2 **Es_{99}** 860° +3 [252]	2 8 18 32 30 8 2 **Fm_{100}** 1527° +3 [257]	2 8 18 32 31 8 2 **Md_{101}** 827° +2+3 [258]	2 8 18 32 32 8 2 **No_{102}** 827° +2+3 [259]	2 8 18 32 32 9 2 **Lr_{103}** 1627° +3 [262]

The new IUPAC Group format numbers the groups from 1 to 18. The numbering system used by the Chemical Abstracts Service (CAS) is given in parentheses. For elements that are not naturally abundant, the mass number of the longest-lived isotope is given in brackets. The abundances (atomic %) are based on meteorite and solar wind data. The melting point (M.P.), boiling point (B.P.), and critical point (C.P.)temperatures are given in °Celsius. Sublimation and critical temperatures are indicated by s and t.

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