

IUPAC Periodic Table of the Elements

| | | | | | | | | | | | | | | | | | | |
|--|---|--|---|--|--|---|---|---|---|--|---|---|---|---|---|---|---|---------------------------------------|
| 1 | | | | | | | | | | | | | 18 | | | | | |
| 1 H hydrogen 1.007 94(7) | 2 | | | | | | | | | | | 13 | 14 | 15 | 16 | 17 | 2 He helium 4.002 602(2) | |
| 3 Li lithium 6.941(2) | 4 Be beryllium 9.012 182(3) | Key: atomic number Symbol name standard atomic weight | | | | | | | | | | | 5 B boron 10.811(7) | 6 C carbon 12.0107(8) | 7 N nitrogen 14.0067(2) | 8 O oxygen 15.9994(3) | 9 F fluorine 18.998 4032(5) | 10 Ne neon 20.1797(6) |
| 11 Na sodium 22.989 769 28(2) | 12 Mg magnesium 24.3050(6) | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 Al aluminium 26.981 538 6(8) | 14 Si silicon 28.0855(3) | 15 P phosphorus 30.973 762(2) | 16 S sulfur 32.065(5) | 17 Cl chlorine 35.453(2) | 18 Ar argon 39.948(1) | |
| 19 K potassium 39.0983(1) | 20 Ca calcium 40.078(4) | 21 Sc scandium 44.955 912(6) | 22 Ti titanium 47.867(1) | 23 V vanadium 50.9415(1) | 24 Cr chromium 51.9961(6) | 25 Mn manganese 54.938 045(5) | 26 Fe iron 55.845(2) | 27 Co cobalt 58.933 195(5) | 28 Ni nickel 58.6934(2) | 29 Cu copper 63.546(3) | 30 Zn zinc 65.409(4) | 31 Ga gallium 69.723(1) | 32 Ge germanium 72.64(1) | 33 As arsenic 74.921 60(2) | 34 Se selenium 78.96(3) | 35 Br bromine 79.904(1) | 36 Kr krypton 83.798(2) | |
| 37 Rb rubidium 85.4678(3) | 38 Sr strontium 87.62(1) | 39 Y yttrium 88.905 85(2) | 40 Zr zirconium 91.224(2) | 41 Nb niobium 92.906 38(2) | 42 Mo molybdenum 95.94(2) | 43 Tc technetium [98] | 44 Ru ruthenium 101.07(2) | 45 Rh rhodium 102.905 50(2) | 46 Pd palladium 106.42(1) | 47 Ag silver 107.8682(2) | 48 Cd cadmium 112.411(8) | 49 In indium 114.818(3) | 50 Sn tin 118.710(7) | 51 Sb antimony 121.760(1) | 52 Te tellurium 127.60(3) | 53 I iodine 126.904 47(3) | 54 Xe xenon 131.293(6) | |
| 55 Cs caesium 132.905 451 9(2) | 56 Ba barium 137.327(7) | 57-71 lanthanoids | 72 Hf hafnium 178.49(2) | 73 Ta tantalum 180.947 88(2) | 74 W tungsten 183.84(1) | 75 Re rhenium 186.207(1) | 76 Os osmium 190.23(3) | 77 Ir iridium 192.217(3) | 78 Pt platinum 195.084(9) | 79 Au gold 196.966 569(4) | 80 Hg mercury 200.59(2) | 81 Tl thallium 204.3833(2) | 82 Pb lead 207.2(1) | 83 Bi bismuth 208.980 40(1) | 84 Po polonium [209] | 85 At astatine [210] | 86 Rn radon [222] | |
| 87 Fr francium [223] | 88 Ra radium [226] | 89-103 actinoids | 104 Rf rutherfordium [261] | 105 Db dubnium [262] | 106 Sg seaborgium [266] | 107 Bh bohrium [264] | 108 Hs hassium [277] | 109 Mt meitnerium [268] | 110 Ds darmstadtium [271] | 111 Rg roentgenium [272] | | | | | | | | |
| | | | 57 La lanthanum 138.905 47(7) | 58 Ce cerium 140.116(1) | 59 Pr praseodymium 140.907 65(2) | 60 Nd neodymium 144.242(3) | 61 Pm promethium [145] | 62 Sm samarium 150.36(2) | 63 Eu europium 151.964(1) | 64 Gd gadolinium 157.25(3) | 65 Tb terbium 158.925 35(2) | 66 Dy dysprosium 162.500(1) | 67 Ho holmium 164.930 32(2) | 68 Er erbium 167.259(3) | 69 Tm thulium 168.934 21(2) | 70 Yb ytterbium 173.04(3) | 71 Lu lutetium 174.967(1) | |
| | | | 89 Ac actinium [227] | 90 Th thorium 232.038 06(2) | 91 Pa protactinium 231.035 88(2) | 92 U uranium 238.028 91(3) | 93 Np neptunium [237] | 94 Pu plutonium [244] | 95 Am americium [243] | 96 Cm curium [247] | 97 Bk berkelium [247] | 98 Cf californium [251] | 99 Es einsteinium [252] | 100 Fm fermium [257] | 101 Md mendelevium [258] | 102 No nobelium [259] | 103 Lr lawrencium [262] | |



Notes

- 'Aluminum' and 'caesium' are commonly used alternative spellings for 'aluminium' and 'caesium'.

- IUPAC 2005 standard atomic weights (mean relative atomic masses) are listed with uncertainties in the last figure in parentheses [M. E. Wieser, *Pure Appl. Chem.* **78**, 2051 (2006)].

These values correspond to current best knowledge of the elements in natural terrestrial sources. For elements that have no stable or long-lived nuclides, the mass number of the nuclide with the longest confirmed half-life is listed between square brackets.

- Elements with atomic numbers 112 and above have been reported but not fully authenticated.