

# PERIODIC TABLE OF THE ELEMENTS

**LEGEND:**  
**Hh** Black element symbol = SOLID  
**Hh** Green element symbol = LIQUID  
**Hh** Blue element symbol = GAS  
**Red Outline** = synthetically produced

\* Parentheses indicate atomic mass of the most stable known isotopes.  
 \*\* No names have been given and no mass data available.

METALS, SEMICONDUCTORS, NON-METALS, HALOGENS (excluding hydrogen), NOBLE GASES

PERIOD	GROUP	1 IA	2 IIA	TRANSITION METALS										13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1		1.0079 <b>H<sup>+</sup></b> Hydrogen																1.0079 <b>H<sup>+</sup></b> Hydrogen	4.002 <b>He</b> Helium
2		3 6.941 <b>Li<sup>+</sup></b> Lithium	4 9.012 <b>Be<sup>2+</sup></b> Beryllium											5 10.811 <b>B</b> Boron	6 12.011 <b>C</b> Carbon	7 14.006 <b>N<sup>3-</sup></b> Nitrogen	8 15.999 <b>O<sup>2-</sup></b> Oxygen	9 18.998 <b>F<sup>-</sup></b> Fluorine	10 20.180 <b>Ne</b> Neon
3		11 22.989 <b>Na<sup>+</sup></b> Sodium	12 24.305 <b>Mg<sup>2+</sup></b> Magnesium	3 III B	4 IV B	5 V B	6 VI B	7 VII B	8 VIII B	9 VIII B	10 VIII B	11 IB	12 IIB	13 26.982 <b>Al<sup>3+</sup></b> Aluminum	14 28.086 <b>Si</b> Silicon	15 30.973 <b>P<sup>3-</sup></b> Phosphorus	16 32.066 <b>S<sup>2-</sup></b> Sulfur	17 35.453 <b>Cl<sup>-</sup></b> Chlorine	18 39.948 <b>Ar</b> Argon
4		19 39.098 <b>K<sup>+</sup></b> Potassium	20 40.078 <b>Ca<sup>2+</sup></b> Calcium	21 44.955 <b>Sc<sup>3+</sup></b> Scandium	22 47.867 <b>Ti<sup>4+</sup></b> Titanium	23 50.942 <b>V<sup>4+</sup></b> Vanadium	24 51.996 <b>Cr<sup>3+</sup></b> Chromium	25 54.938 <b>Mn<sup>2+</sup></b> Manganese	26 55.847 <b>Fe<sup>3+</sup></b> Iron	27 58.933 <b>Co<sup>2+</sup></b> Cobalt	28 58.693 <b>Ni<sup>2+</sup></b> Nickel	29 63.546 <b>Cu<sup>2+</sup></b> Copper	30 65.39 <b>Zn<sup>2+</sup></b> Zinc	31 69.723 <b>Ga<sup>3+</sup></b> Gallium	32 72.59 <b>Ge<sup>4+</sup></b> Germanium	33 74.922 <b>As<sup>3-</sup></b> Arsenic	34 78.96 <b>Se<sup>2-</sup></b> Selenium	35 79.904 <b>Br<sup>-</sup></b> Bromine	36 83.80 <b>Kr</b> Krypton
5		37 85.467 <b>Rb<sup>+</sup></b> Rubidium	38 87.62 <b>Sr<sup>2+</sup></b> Strontium	39 88.905 <b>Y</b> Yttrium	40 91.224 <b>Zr</b> Zirconium	41 92.906 <b>Nb</b> Niobium	42 95.94 <b>Mo</b> Molybdenum	43 (97.907)* <b>Tc</b> Technetium	44 101.07 <b>Ru</b> Ruthenium	45 102.905 <b>Rh</b> Rhodium	46 106.42 <b>Pd<sup>2+</sup></b> Palladium	47 107.868 <b>Ag<sup>+</sup></b> Silver	48 112.41 <b>Cd<sup>2+</sup></b> Cadmium	49 114.82 <b>In<sup>3+</sup></b> Indium	50 118.71 <b>Sn<sup>4+</sup></b> Tin	51 121.75 <b>Sb<sup>3+</sup></b> Antimony	52 127.60 <b>Te<sup>2-</sup></b> Tellurium	53 126.904 <b>I<sup>-</sup></b> Iodine	54 131.29 <b>Xe</b> Xenon
6		55 132.905 <b>Cs<sup>+</sup></b> Cesium	56 137.33 <b>Ba<sup>2+</sup></b> Barium	57 138.905 <b>La</b> Lanthanum	72 178.49 <b>Hf</b> Hafnium	73 180.947 <b>Ta</b> Tantalum	74 183.85 <b>W</b> Tungsten	75 186.21 <b>Re</b> Rhenium	76 190.23 <b>Os</b> Osmium	77 192.22 <b>Ir</b> Iridium	78 195.08 <b>Pt<sup>4+</sup></b> Platinum	79 196.966 <b>Au<sup>3+</sup></b> Gold	80 200.59 <b>Hg<sup>2+</sup></b> Mercury	81 204.383 <b>Tl<sup>+</sup></b> Thallium	82 207.20 <b>Pb<sup>2+</sup></b> Lead	83 208.980 <b>Bi<sup>3+</sup></b> Bismuth	84 (208.982)* <b>Po<sup>2+</sup></b> Polonium	85 (209.987)* <b>At<sup>-</sup></b> Astatine	86 (222.017)* <b>Rn</b> Radon
7		87 (223.019)* <b>Fr<sup>+</sup></b> Francium	88 226.025 <b>Ra<sup>2+</sup></b> Radium	89 227.027 <b>Ac<sup>3+</sup></b> Actinium	104 (261.11)* <b>Rf</b> Rutherfordium	105 (262.11)* <b>Db</b> Dubnium	106 (263.12)* <b>Sg</b> Seaborgium	107 (264.12)* <b>Bh</b> Bohrium	108 (265.13)* <b>Hs</b> Hassium	109 (268.14)* <b>Mt</b> Meitnerium	110 (269)* <b>Uun</b> Ununnilium	111 (272)* <b>Uuu</b> Unununium	112 (277)* <b>Uub</b> Ununbium	113** <b>Uut</b> Ununtrium	114 (285)* <b>Uuq</b> Ununquadium	115** <b>Uup</b> Ununpentium	116 (289)* <b>Uuh</b> Ununhexium	117** <b>Uus</b> Ununseptium	118 (293)* <b>Uuo</b> Ununoctium
Lanthanides:		58 140.12 <b>Ce<sup>3+</sup></b> Cerium	59 140.907 <b>Pr<sup>3+</sup></b> Praseodymium	60 144.24 <b>Nd<sup>3+</sup></b> Neodymium	61 (144.912) <b>Pm<sup>3+</sup></b> Promethium	62 150.36 <b>Sm<sup>3+</sup></b> Samarium	63 151.96 <b>Eu<sup>3+</sup></b> Europium	64 157.25 <b>Gd<sup>3+</sup></b> Gadolinium	65 158.925 <b>Tb<sup>3+</sup></b> Terbium	66 162.50 <b>Dy<sup>3+</sup></b> Dysprosium	67 164.93 <b>Ho<sup>3+</sup></b> Holmium	68 167.26 <b>Er<sup>3+</sup></b> Erbium	69 168.934 <b>Tm<sup>3+</sup></b> Thulium	70 173.04 <b>Yb<sup>3+</sup></b> Ytterbium	71 174.967 <b>Lu<sup>3+</sup></b> Lutetium				
Actinides:		90 (232.038) <b>Th<sup>4+</sup></b> Thorium	91 (231.035) <b>Pa<sup>5+</sup></b> Protactinium	92 238.028 <b>U<sup>6+</sup></b> Uranium	93 237.048 <b>Np<sup>5+</sup></b> Neptunium	94 (244.064) <b>Pu<sup>6+</sup></b> Plutonium	95 (243.061) <b>Am<sup>3+</sup></b> Americium	96 (247.07) <b>Cm<sup>3+</sup></b> Curium	97 (247.07) <b>Bk<sup>3+</sup></b> Berkelium	98 (251.079) <b>Cf<sup>3+</sup></b> Californium	99 (252.082) <b>Es</b> Einsteinium	100 (257.095) <b>Fm</b> Fermium	101 (258.098) <b>Md</b> Mendelevium	102 (259.10) <b>No</b> Nobelium	103 (260.105) <b>Lr</b> Lawrencium				

RARE EARTH ELEMENTS

## KEY TO ELEMENTS

Atomic Number      Atomic Mass  
 Symbol of the Element      Ionic Charge (top number is the most common)  
 Element Name

Example: **Sb<sup>3+</sup>**  
 Antimony