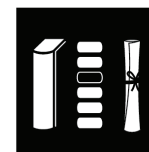


PERIODIC TABLE OF ELEMENTS

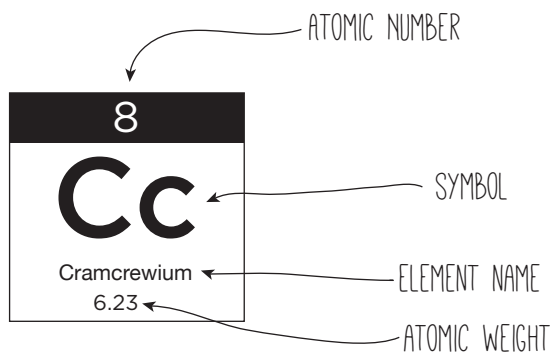


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The periodic table arranges the chemical elements in two ways. The first is by atomic number, starting with Hydrogen (atomic number = 1) in the upper left-hand corner and continuing in ascending order from left to right. The second is by the number of electrons in the outermost shell. Elements having the same number of electrons in the outermost shell are placed in the same column. Since the number of electrons in the outermost shell in large part determines the chemical nature of an element, elements in the same column have similar chemical properties.

Dmitri Mendeleev devised this arrangement of the elements in 1869, before many of the elements now known were discovered. To maintain the overall logic of the table, Mendeleev allowed space for undiscovered elements whose existence he predicted.

The Lanthanide series (elements 57-71) and the Actinide series (elements 89-103) are composed of elements with group 3b chemical properties. They are placed below the main body of the table to make it easier to read.



	1 group 1a												18 group 0					
period 1	1 H Hydrogen 1.00794	2 group 2a											13 group 3a	14 group 4a	15 group 5a	16 group 6a	17 group 7a	18 group 0 He Helium 4.0026
period 2	3 Li Lithium 6.941	4 Be Beryllium 9.0122											5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984	10 Ne Neon 20.183
period 3	11 Na Sodium 22.9898	12 Mg Magnesium 24.305	3 group 3b	4 group 4b	5 group 5b	6 group 6b	7 group 7b	8 group 8	9 group 8	10 group 8	11 group 1b	12 group 2b	13 Al Aluminum 26.9815	14 Si Silicon 28.086	15 P Phosphorus 30.9738	16 S Sulphur 32.066	17 Cl Chlorine 35.453	18 Ar Argon 39.948
period 4	19 K Potassium 39.098	20 Ca Calcium 40.08	21 Sc Scandium 44.956	22 Ti Titanium 47.87	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.9380	26 Fe Iron 55.845	27 Co Cobalt 58.9332	28 Ni Nickel 58.69	29 Cu Copper 63.546	30 Zn Zinc 65.39	31 Ga Gallium 69.72	32 Ge Germanium 72.61	33 As Arsenic 74.9216	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.80
period 5	37 Rb Rubidium 85.47	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.22	41 Nb Niobium 92.906	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.905	46 Pd Palladium 106.4	47 Ag Silver 107.868	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.75	52 Te Tellurium 127.60	53 I Iodine 126.9045	54 Xe Xenon 131.29
period 6	55 Cs Cesium 132.905	56 Ba Barium 137.33	57-71* *Lanthanides	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.2	76 Os Osmium 190.2	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	84 Po Polonium (210)	85 At Astatine (210)	86 Rn Radon (222)
period 7	87 Fr Francium (223)	88 Ra Radium (226)	89-103** **Actinides	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (265)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (281)	111 Rg Roentgenium (280)	112 Cn Copernicium (285)	113 Uut Ununtrium (284)	114 Fl Flerovium (289)	115 Uup Ununpentium (288)	116 Lv Livermorium (293)	117 Uus Ununseptium (292)	118 Uuo Ununoctium (294)

*Lanthanides	57 La Lanthanum 138.91	58 Ce Cerium 140.12	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.50	67 Ho Holmium 164.930	68 Er Erbium 167.26	69 Tm Thulium 168.934	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.97
**Actinides	89 Ac Actinium (227)	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.03	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)