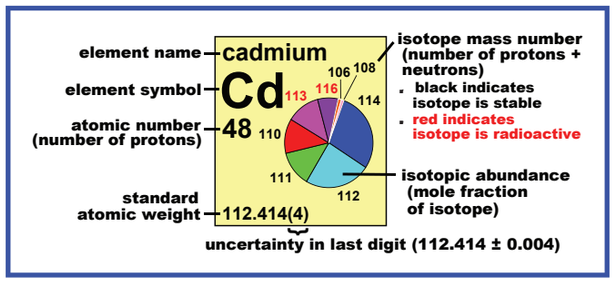
IUPAC Periodic Table of the Isotopes

Element Background Color Key

Standard atomic weights are the best estimates by IUPAC of atomic weights that are found in normal materials, which are terrestrial materials that are reasonably possible sources for elements and their compounds in commerce, industry, or science. They are determined using all stable isotopes and selected radioactive isotopes (having relatively long half-lives and characteristic terrestrial isotopic compositions). Isotopes are considered stable (non-radioactive) if evidence for radioactive decay has not been detected experimentally.

- **Element has two or more isotopes that are used to determine its standard atomic weight. The isotopic abundances and atomic weights vary in normal materials. These variations are well known, and the standard atomic weight is given as lower and upper bounds within square brackets, [ ].**
- **Element has two or more isotopes that are used to determine its standard atomic weight. The isotopic abundances and atomic weights vary in normal materials, but upper and lower bounds of the standard atomic weight have not been assigned by IUPAC or the variations may be too small to affect the standard atomic weight value significantly. Thus, the standard atomic weight is given as a single value with an uncertainty that includes both measurement uncertainty and uncertainty due to isotopic abundance variations.**
- **Element has only one isotope that is used to determine its standard atomic weight. Thus, the standard atomic weight is invariant and is given as a single value with an IUPAC evaluated uncertainty.**
- **Element has no standard atomic weight because all of its isotopes are radioactive and, in normal materials, no isotope occurs with a characteristic isotopic abundance from which a standard atomic weight can be determined.**



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
hydrogen H 1 [1.007 84, 1.008 11]																	helium He 2 4.002 602(2)
lithium Li 3 [6.938, 6.997]	beryllium Be 4 9.012 1831(5)											boron B 5 [10.806, 10.821]	carbon C 6 [12.0096, 12.0116]	nitrogen N 7 [14.006 43, 14.007 28]	oxygen O 8 [15.999 03, 15.999 77]	fluorine F 9 18.998 403 163(6)	neon Ne 10 20.1797(6)
sodium Na 11 22.989 769 28(2)	magnesium Mg 12 [24.304, 24.307]											aluminium (aluminum) Al 13 26.981 5385(7)	silicon Si 14 [28.084, 28.086]	phosphorus P 15 30.973 761 998(5)	sulfur S 16 [32.059, 32.076]	chlorine Cl 17 [35.446, 35.457]	argon Ar 18 39.948(1)
potassium K 19 39.0983(1)	calcium Ca 20 40.078(4)	scandium Sc 21 44.955 908(5)	titanium Ti 22 47.867(1)	vanadium V 23 50.9415(1)	chromium Cr 24 51.9961(6)	manganese Mn 25 54.938 044(3)	iron Fe 26 55.845(2)	cobalt Co 27 58.933 194(4)	nickel Ni 28 58.6934(4)	copper Cu 29 63.546(3)	zinc Zn 30 65.38(2)	gallium Ga 31 69.723(1)	germanium Ge 32 72.630(8)	arsenic As 33 74.921 595(6)	selenium Se 34 78.971(8)	bromine Br 35 [79.901, 79.907]	krypton Kr 36 83.798(2)
rubidium Rb 37 85.4678(3)	strontium Sr 38 87.62(1)	yttrium Y 39 88.905 84(2)	zirconium Zr 40 91.224(2)	niobium Nb 41 92.906 37(2)	molybdenum Mo 42 95.95(1)	technetium Tc 43	ruthenium Ru 44 101.07(2)	rhodium Rh 45 102.905 50(2)	palladium Pd 46 106.42(1)	silver Ag 47 107.8682(2)	cadmium Cd 48 112.414(4)	indium In 49 114.818(1)	tin Sn 50 118.710(7)	antimony Sb 51 121.760(1)	tellurium Te 52 127.60(3)	iodine I 53 126.904 47(3)	xenon Xe 54 131.293(6)
caesium (cesium) Cs 55 132.905 451 96(6)	barium Ba 56 137.327(7)	57 - 71 lanthanoids	hafnium Hf 72 178.49(2)	tantalum Ta 73 180.947 88(2)	tungsten W 74 183.84(1)	rhenium Re 75 186.207(1)	osmium Os 76 190.23(3)	iridium Ir 77 192.217(3)	platinum Pt 78 195.084(9)	gold Au 79 196.966 569(5)	mercury Hg 80 200.592(3)	thallium Tl 81 [204.382, 204.385]	lead Pb 82 207.2(1)	bismuth Bi 83 208.980 40(1)	polonium Po 84	astatine At 85	radon Rn 86
francium Fr 87	radium Ra 88	89 - 103 actinoids	rutherfordium Rf 104	dubnium Db 105	seaborgium Sg 106	bohrium Bh 107	hassium Hs 108	meitnerium Mt 109	darmstadtium Ds 110	roentgenium Rg 111	copernicium Cn 112	ununtrium Uut 113	flerovium Fl 114	ununpentium Uup 115	livermorium Lv 116	ununseptium Uus 117	ununoctium Uuo 118

lanthanum La 57 138.905 47(7)	cerium Ce 58 140.116(1)	praseodymium Pr 59 140.907 66(2)	neodymium Nd 60 144.242(3)	promethium Pm 61	samarium Sm 62 150.36(2)	europium Eu 63 151.964(1)	gadolinium Gd 64 157.25(3)	terbium Tb 65 158.925 35(2)	dysprosium Dy 66 162.500(1)	holmium Ho 67 164.930 33(2)	erbium Er 68 167.259(3)	thulium Tm 69 168.934 22(2)	ytterbium Yb 70 173.054(5)	lutetium Lu 71 174.9668(1)
actinium Ac 89	thorium Th 90 232.0377(4)	protactinium Pa 91 231.035 88(2)	uranium U 92 238.028 91(3)	neptunium Np 93	plutonium Pu 94	americium Am 95	curium Cm 96	berkelium Bk 97	californium Cf 98	einsteinium Es 99	fermium Fm 100	mendelevium Md 101	nobelium No 102	lawrencium Lr 103