

Table 2 Standard atomic weights 2005.

[Scaled to $A_r(^{12}\text{C}) = 12$, where ^{12}C is a neutral atom in its nuclear and electronic ground state.]

The atomic weights of many elements are not invariant, but depend on the origin and treatment of the material. The standard values of $A_r(\text{E})$ and the uncertainties (in parentheses, following the last significant figure to which they are attributed) apply to elements of natural terrestrial origin. The footnotes to this table elaborate the types of variation that may occur for individual elements and that may be larger than the listed uncertainties of values of $A_r(\text{E})$. Names of elements with atomic number 112 to 118 are provisional.

Order of atomic number				
Number	Name	Symbol	Atomic weight	Footnotes
1	hydrogen	H	1.007 94(7)	ng m r
2	helium	He	4.002 602(2)	ng r
3	lithium	Li	[6.941(2)] [†]	ng m r
4	beryllium	Be	9.012 182(3)	
5	boron	B	10.811(7)	ng m r
6	carbon	C	12.0107(8)	ng r
7	nitrogen	N	14.0067(2)	ng r
8	oxygen	O	15.9994(3)	ng r
9	fluorine	F	18.998 4032(5)	
10	neon	Ne	20.1797(6)	ng m
11	sodium	Na	22.989 769 28(2)	
12	magnesium	Mg	24.3050(6)	
13	aluminium (aluminum)	Al	26.981 5386(8)	
14	silicon	Si	28.0855(3)	r
15	phosphorus	P	30.973 762(2)	
16	sulfur	S	32.065(5)	ng r
17	chlorine	Cl	35.453(2)	ng m r
18	argon	Ar	39.948(1)	ng r
19	potassium	K	39.0983(1)	
20	calcium	Ca	40.078(4)	ng
21	scandium	Sc	44.955 912(6)	
22	titanium	Ti	47.867(1)	
23	vanadium	V	50.9415(1)	
24	chromium	Cr	51.9961(6)	
25	manganese	Mn	54.938 045(5)	
26	iron	Fe	55.845(2)	
27	cobalt	Co	58.933 195(5)	
28	nickel	Ni	58.6934(2)	
29	copper	Cu	63.546(3)	r
30	zinc	Zn	65.409(4)	
31	gallium	Ga	69.723(1)	
32	germanium	Ge	72.64(1)	
33	arsenic	As	74.921 60(2)	
34	selenium	Se	78.96(3)	r
35	bromine	Br	79.904(1)	
36	krypton	Kr	83.798(2)	ng m
37	rubidium	Rb	85.4678(3)	ng
38	strontium	Sr	87.62(1)	ng r
39	yttrium	Y	88.905 85(2)	

Order of atomic number

Number	Name	Symbol	Atomic weight	Footnotes
40	zirconium	Zr	91.224(2)	ng
41	niobium	Nb	92.906 38(2)	
42	molybdenum	Mo	95.94(2)	ng
43	technetium*	Tc		
44	ruthenium	Ru	101.07(2)	ng
45	rhodium	Rh	102.905 50(2)	
46	palladium	Pd	106.42(1)	ng
47	silver	Ag	107.8682(2)	ng
48	cadmium	Cd	112.411(8)	ng
49	indium	In	114.818(3)	
50	tin	Sn	118.710(7)	ng
51	antimony	Sb	121.760(1)	ng
52	tellurium	Te	127.60(3)	ng
53	iodine	I	126.904 47(3)	
54	xenon	Xe	131.293(6)	ng m
55	caesium (cesium)	Cs	132.905 4519(2)	
56	barium	Ba	137.327(7)	
57	lanthanum	La	138.905 47(7)	ng
58	cerium	Ce	140.116(1)	ng
59	praseodymium	Pr	140.907 65(2)	
60	neodymium	Nd	144.242(3)	ng
61	promethium*	Pm		
62	samarium	Sm	150.36(2)	ng
63	europium	Eu	151.964(1)	ng
64	gadolinium	Gd	157.25(3)	ng
65	terbium	Tb	158.925 35(2)	
66	dysprosium	Dy	162.500(1)	ng
67	holmium	Ho	164.930 32(2)	
68	erbium	Er	167.259(3)	ng
69	thulium	Tm	168.934 21(2)	
70	ytterbium	Yb	173.04(3)	ng
71	lutetium	Lu	174.967(1)	ng
72	hafnium	Hf	178.49(2)	
73	tantalum	Ta	180.947 88(2)	
74	tungsten	W	183.84(1)	
75	rhenium	Re	186.207(1)	
76	osmium	Os	190.23(3)	ng
77	iridium	Ir	192.217(3)	
78	platinum	Pt	195.084(9)	
79	gold	Au	196.966 569(4)	
80	mercury	Hg	200.59(2)	
81	thallium	Tl	204.3833(2)	
82	lead	Pb	207.2(1)	ng r
83	bismuth	Bi	208.980 40(1)	
84	polonium*	Po		
85	astatine*	At		
86	radon*	Rn		
87	francium*	Fr		

Order of atomic number				
Number	Name	Symbol	Atomic weight	Footnotes
88	radium*	Ra		
89	actinium*	Ac		
90	thorium*	Th	232.038 06(2)	g
91	protactinium*	Pa	231.035 88(2)	
92	uranium*	U	238.028 91(3)	g m
93	neptunium*	Np		
94	plutonium*	Pu		
95	americium*	Am		
96	curium*	Cm		
97	berkelium*	Bk		
98	californium*	Cf		
99	einsteinium*	Es		
100	fermium*	Fm		
101	mendelevium*	Md		
102	nobelium*	No		
103	lawrencium*	Lr		
104	rutherfordium*	Rf		
105	dubnium*	Db		
106	seaborgium*	Sg		
107	bohrium*	Bh		
108	hassium*	Hs		
109	meitnerium*	Mt		
110	darmstadtium*	Ds		
111	roentgenium*	Rg		
112	ununbium*	Uub		
113	ununtrium*	Uut		
114	ununquadium*	Uuq		
115	ununpentium*	Uup		
116	ununhexium*	Uuh		
118	ununoctium*	Uuo		

*Element has no stable nuclides. One or more well-known isotopes are given in Table 3 with the appropriate relative atomic mass and half-life. However, three such elements (Th, Pa, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

†Commercially available Li materials have atomic weights that range between 6.939 and 6.996; if a more accurate value is required, it must be determined for the specific material.

g Geological specimens are known in which the element has an isotopic composition outside the limits for normal material. The difference between the atomic weight of the element in such specimens and that given in the table may exceed the stated uncertainty.

m Modified isotopic compositions may be found in commercially available material because it has been subjected to an undisclosed or inadvertent isotopic fractionation. Substantial deviations in atomic weight of the element from that given in the table can occur.

r Range in isotopic composition of normal terrestrial material prevents a more precise $A_r(E)$ being given; the tabulated $A_r(E)$ value and uncertainty should be applicable to normal material.