TABLE OF RELATIVE ATOMIC WEIGHTS, 1961

[*Reprinted, from the Report of the Commission on Atomic Weights* (1961) *in the* Comptes rendus *of the 21st Conference of the International Union of Pure and Applied Chemistry*, 1961, *with acknowledgement to the International Union of Pure and Applied Chemistry and Butterworths, London.*]

BASED ON THE ATOMIC MASS OF $^{12}C = 12$.*

The values for atomic weights given in the Table apply to elements as they exist in nature, without artificial alteration of their isotopic composition, and, further, to natural mixtures that do not include isotopes of radiogenic origin.

Alphabetical order.

Name	Symbol	Atomic No.	Atomic weight
Actinium	Ac	89	—
Aluminium	Al	13	26·9815
Americium	Am	95	—
Antimony	Sb	51	121·75
Argon	Ar	18	39·948
Arsenic	As	33	74·9216
Astatine	At	85	—
Barium	Ba	56	137·34
Berkelium	Bk	97	—
Beryllium	Be	4	9·0122
Bismuth	Bi	83	208·980
Boron	B	5	10·811 †
Bromine	Br	35	79·909 ‡
Cadmium	Cd	48	112·40
Cæsium	Cs	55	132·905
Calcium	Ca	20	40·08
Californium	Cf	98	—
Carbon	C	6	12·01115 †
Cerium	Ce	58	140·12
Chlorine	Cl	17	35·453 ‡
Chromium	Cr	24	51·996 ‡
Cobalt	Co	27	58·9332
Copper	Cu	29	63·54
Curium	Cm	96	—
Dysprosium	Dy	66	162·50
Einsteinium	Es	99	—
Erbium	Er	68	167·26
Europium	Eu	63	151·96
Fermium	Fm	100	—
Fluorine	F	9	18·9984
Francium	Fr	87	—
Gadolinium	Gd	64	157·25
Gallium	Ga	31	69·72
Germanium	Ge	32	72·59
Gold	Au	79	196·967
Hafnium	Hf	72	178·49
Helium	He	2	4·0026
Holmium	Ho	67	164·930
Hydrogen	H	1	1·00797 †
Indium	In	49	114·82
Iodine	I	53	126·9044
Iridium	Ir	77	192·2
Iron	Fe	26	55·847 ‡
Krypton	Kr	36	83·80
Lanthanum	La	57	138·91
Lead	Pb	82	207·19
Lithium	Li	3	6·939
Lutetium	Lu	71	174·97
Magnesium	Mg	12	24·312
Manganese	Mn	25	54·9380
Mendelevium	Md	101	—
Mercury	Hg	80	200·59
Molybdenum	Mo	42	95·94
Neodymium	Nd	60	144·24
Neon	Ne	10	20·183
Neptunium	Np	93	—
Nickel	Ni	28	58·71
Niobium	Nb	41	92·906
Nitrogen	N	7	14·0067
Nobelium	No	102	—
Osmium	Os	76	190·2
Oxygen	O	8	15·9994 †
Palladium	Pd	46	106·4
Phosphorus	P	15	30·9738
Platinum	Pt	78	195·09
Plutonium	Pu	94	—
Polonium	Po	84	—
Potassium	K	19	39·102
Praseodymium	Pr	59	140·907
Promethium	Pm	61	—
Protactinium	Pa	91	—
Radium	Ra	88	—
Radon	Rn	86	—
Rhenium	Re	75	186·2
Rhodium	Rh	45	102·905
Rubidium	Rb	37	85·47
Ruthenium	Ru	44	101·07
Samarium	Sm	62	150·35
Scandium	Sc	21	44·956
Selenium	Se	34	78·96
Silicon	Si	14	28·086 †
Silver	Ag	47	107·870 ‡
Sodium	Na	11	22·9898
Strontium	Sr	38	87·62
Sulphur	S	16	32·064 †
Tantalum	Ta	73	180·948
Technetium	Tc	43	—
Tellurium	Te	52	127·60
Terbium	Tb	65	158·924
Thallium	Tl	81	204·37
Thorium	Th	90	232·038
Thulium	Tm	69	168·934
Tin	Sn	50	118·69
Titanium	Ti	22	47·90
Tungsten	W	74	183·85
Uranium	U	92	238·03
Vanadium	V	23	50·942
Xenon	Xe	54	131·30
Ytterbium	Yb	70	173·04
Yttrium	Y	39	88·905
Zinc	Zn	30	65·37
Zirconium	Zr	40	91·22

* See Whiffen, *Proc. Chem. Soc.*, 1960, 97.

† Atomic weights so designated are known to be variable because of natural variations in isotopic compositior. The observed ranges are:

Hydrogen	±0·00001	Carbon	±0·00005	Silicon	±0·001
Boron	±0·003	Oxygen	±0·0001	Sulphur	±0·003

‡ Atomic weights so designated are believed to have the following experimental uncertainties:

Chlorine	±0·001	Iron	±0·003	Silver	±0·003
Chromium	±0·001	Bromine	±0·002		

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Order of atomic number.

Atomic No.	Name	Symbol	Atomic weight	Atomic No.	Name	Symbol	Atomic weight
1	Hydrogen	H	1·00797 †	52	Tellurium	Te	127·60
2	Helium	He	4·0026	53	Iodine	I	126·9044
				54	Xenon	Xe	131·30
3	Lithium	Li	6·939				
4	Beryllium	Be	9·0122	55	Cæsium	Cs	132·905
5	Boron	B	10·811 †	56	Barium	Ba	137·34
6	Carbon	C	12·01115 †	57	Lanthanum	La	138·91
7	Nitrogen	N	14·0067	58	Cerium	Ce	140·12
8	Oxygen	O	15·9994 †	59	Praseodymium	Pr	140·907
9	Fluorine	F	18·9984	60	Neodymium	Nd	144·24
10	Neon	Ne	20·183	61	Promethium	Pm	—
				62	Samarium	Sm	150·35
11	Sodium	Na	22·9898	63	Europium	Eu	151·96
12	Magnesium	Mg	24·312	64	Gadolinium	Gd	157·25
13	Aluminium	Al	26·9815	65	Terbium	Tb	158·924
14	Silicon	Si	28·086 †	66	Dysprosium	Dy	162·50
15	Phosphorus	P	30·9738	67	Holmium	Ho	164·930
16	Sulphur	S	32·064 †	68	Erbium	Er	167·26
17	Chlorine	Cl	35·453 ‡				
18	Argon	Ar	39·948	69	Thulium	Tm	168·934
				70	Ytterbium	Yb	173·04
19	Potassium	K	39·102	71	Lutetium	Lu	174·97
20	Calcium	Ca	40·08	72	Hafnium	Hf	178·49
21	Scandium	Sc	44·956	73	Tantalum	Ta	180·948
22	Titanium	Ti	47·90	74	Tungsten	W	183·85
23	Vanadium	V	50·942	75	Rhenium	Re	186·2
24	Chromium	Cr	51·996 ‡	76	Osmium	Os	190·2
25	Manganese	Mn	54·9380	77	Iridium	Ir	192·2
26	Iron	Fe	55·847 ‡	78	Platinum	Pt	195·09
27	Cobalt	Co	58·9332	79	Gold	Au	196·967
28	Nickel	Ni	58·71	80	Mercury	Hg	200·59
29	Copper	Cu	63·54	81	Thallium	Tl	204·37
30	Zinc	Zn	65·37	82	Lead	Pb	207·19
31	Gallium	Ga	69·72	83	Bismuth	Bi	208·980
32	Germanium	Ge	72·59	84	Polonium	Po	—
33	Arsenic	As	74·9216	85	Astatine	At	—
34	Selenium	Se	78·96	86	Radon	Rn	—
35	Bromine	Br	79·909 ‡				
36	Krypton	Kr	83·80	87	Francium	Fr	—
				88	Radium	Ra	—
37	Rubidium	Rb	85·47	89	Actinium	Ac	—
38	Strontium	Sr	87·62	90	Thorium	Th	232·038
39	Yttrium	Y	88·905	91	Protactinium	Pa	—
40	Zirconium	Zr	91·22	92	Uranium	U	238·03
41	Niobium	Nb	92·906	93	Neptunium	Np	—
42	Molybdenum	Mo	95·94	94	Plutonium	Pu	—
43	Technetium	Tc	—	95	Americium	Am	—
44	Ruthenium	Ru	101·07	96	Curium	Cm	—
45	Rhodium	Rh	102·905	97	Berkelium	Bk	—
46	Palladium	Pd	106·4	98	Californium	Cf	—
47	Silver	Ag	107·870 ‡	99	Einsteinium	Es	—
48	Cadmium	Cd	112·40	100	Fermium	Fm	—
49	Indium	In	114·82	101	Mendelevium	Md	—
50	Tin	Sn	118·69	102	Nobelium	No	—
51	Antimony	Sb	121·75				

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