



GLOBAL  
EDITION



# Chemistry

SEVENTH EDITION

John E. McMurry • Robert C. Fay • Jill K. Robinson

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## List of the Elements with Their Atomic Symbols and Atomic Weights

<i>Name</i>	<i>Symbol</i>	<i>Atomic Number</i>	<i>Atomic Weight</i>	<i>Name</i>	<i>Symbol</i>	<i>Atomic Number</i>	<i>Atomic Weight</i>
Actinium	Ac	89	(227)*	Manganese	Mn	25	54.938045
Aluminum	Al	13	26.981538	Meitnerium	Mt	109	(276)
Americium	Am	95	(243)	Mendelevium	Md	101	(258)
Antimony	Sb	51	121.760	Mercury	Hg	80	200.59
Argon	Ar	18	39.948	Molybdenum	Mo	42	95.96
Arsenic	As	33	74.92160	Neodymium	Nd	60	144.242
Astatine	At	85	(210)	Neon	Ne	10	20.1797
Barium	Ba	56	137.327	Neptunium	Np	93	(237)
Berkelium	Bk	97	(247)	Nickel	Ni	28	58.6934
Beryllium	Be	4	9.012182	Niobium	Nb	41	92.90638
Bismuth	Bi	83	208.98040	Nitrogen	N	7	14.0067
Bohrium	Bh	107	(272)	Nobelium	No	102	(259)
Boron	B	5	10.811	Osmium	Os	76	190.23
Bromine	Br	35	79.904	Oxygen	O	8	15.9994
Cadmium	Cd	48	112.411	Palladium	Pd	46	106.42
Calcium	Ca	20	40.078	Phosphorus	P	15	30.973762
Californium	Cf	98	(251)	Platinum	Pt	78	195.094
Carbon	C	6	12.0107	Plutonium	Pu	94	(244)
Cerium	Ce	58	140.116	Polonium	Po	84	(209)
Cesium	Cs	55	132.90545	Potassium	K	19	39.0983
Chlorine	Cl	17	35.453	Praseodymium	Pr	59	140.90765
Chromium	Cr	24	51.9961	Promethium	Pm	61	(145)
Cobalt	Co	27	58.933195	Protactinium	Pa	91	231.03588
Copernicium	Cn	112	(285)	Radium	Ra	88	(226)
Copper	Cu	29	63.546	Radon	Rn	86	(222)
Curium	Cm	96	(247)	Rhenium	Re	75	186.207
Darmstadtium	Ds	110	(281)	Rhodium	Rh	45	102.90550
Dubnium	Db	105	(268)	Roentgenium	Rg	111	(280)
Dysprosium	Dy	66	162.500	Rubidium	Rb	37	85.4678
Einsteinium	Es	99	(252)	Ruthenium	Ru	44	101.07
Erbium	Er	68	167.259	Rutherfordium	Rf	104	(265)
Europium	Eu	63	151.964	Samarium	Sm	62	150.36
Fermium	Fm	100	(257)	Scandium	Sc	21	44.955912
Flerovium	Fl	114	(289)	Seaborgium	Sg	106	(271)
Fluorine	F	9	18.998403	Selenium	Se	34	78.96
Francium	Fr	87	(223)	Silicon	Si	14	28.0855
Gadolinium	Gd	64	157.25	Silver	Ag	47	107.8682
Gallium	Ga	31	69.723	Sodium	Na	11	22.989769
Germanium	Ge	32	72.64	Strontium	Sr	38	87.62
Gold	Au	79	196.96657	Sulfur	S	16	32.065
Hafnium	Hf	72	178.49	Tantalum	Ta	73	180.9479
Hassium	Hs	108	(270)	Technetium	Tc	43	(98)
Helium	He	2	4.002602	Tellurium	Te	52	127.60
Holmium	Ho	67	164.93032	Terbium	Tb	65	158.92535
Hydrogen	H	1	1.00794	Thallium	Tl	81	204.3833
Indium	In	49	114.818	Thorium	Th	90	232.0381
Iodine	I	53	126.90447	Thulium	Tm	69	168.93421
Iridium	Ir	77	192.217	Tin	Sn	50	118.710
Iron	Fe	26	55.845	Titanium	Ti	22	47.867
Krypton	Kr	36	83.798	Tungsten	W	74	183.84
Lanthanum	La	57	138.9055	Uranium	U	92	238.02891
Lawrencium	Lr	103	(262)	Vanadium	V	23	50.9415
Lead	Pb	82	207.2	Xenon	Xe	54	131.293
Lithium	Li	3	6.941	Ytterbium	Yb	70	173.054
Livermorium	Lv	116	(293)	Yttrium	Y	39	88.90585
Lutetium	Lu	71	174.9668	Zinc	Zn	30	65.38
Magnesium	Mg	12	24.3050	Zirconium	Zr	40	91.224

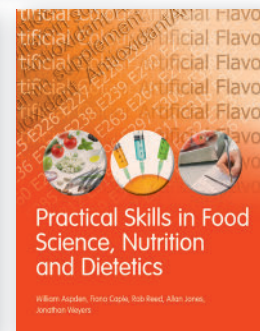
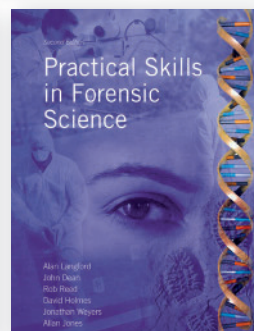
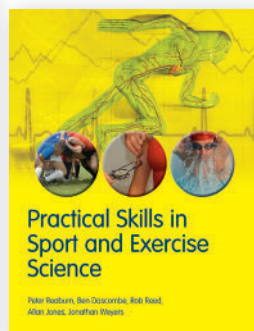
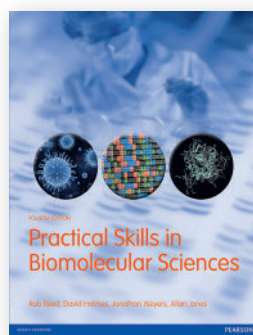
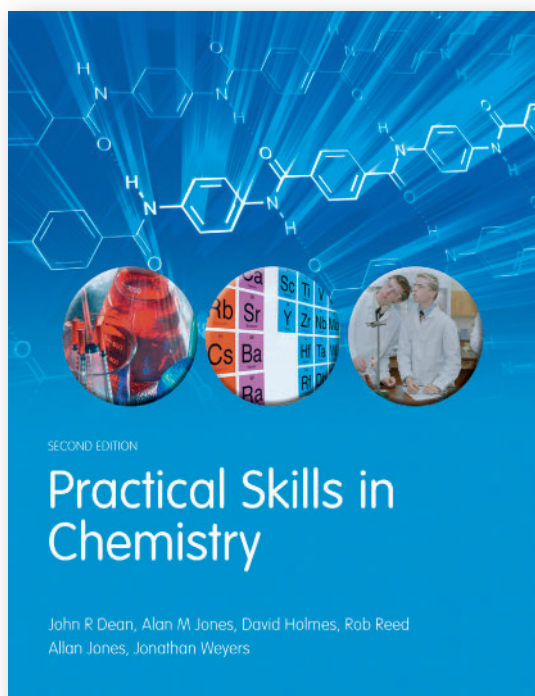
\*Values in parentheses are the mass numbers of the most common or longest lived isotopes of radioactive elements.



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## Periodic Table of the Elements

Main groups

1  
1A

1  
H  
1.00794

2  
2A

3  
Li  
6.941

4  
Be  
9.012182

Transition metals

11  
Na  
22.989769

12  
Mg  
24.3050

3  
3B

4  
4B

5  
5B

6  
6B

7  
7B

8  
8B

9  
8B

10  
8B

11  
1B

12  
2B

19  
K  
39.0983

20  
Ca  
40.078

21  
Sc  
44.955912

22  
Ti  
47.867

23  
V  
50.9415

24  
Cr  
51.9961

25  
Mn  
54.938045

26  
Fe  
55.845

27  
Co  
58.933195

28  
Ni  
58.6934

29  
Cu  
63.546

30  
Zn  
65.38

37  
Rb  
85.4678

38  
Sr  
87.62

39  
Y  
88.90585

40  
Zr  
91.224

41  
Nb  
92.90638

42  
Mo  
95.96

43  
Tc  
(98)

44  
Ru  
101.07

45  
Rh  
102.90550

46  
Pd  
106.42

47  
Ag  
107.8682

48  
Cd  
112.411

55  
Cs  
132.90545

56  
Ba  
137.327

71  
Lu  
174.9668

72  
Hf  
178.49

73  
Ta  
180.9479

74  
W  
183.84

75  
Re  
186.207

76  
Os  
190.23

77  
Ir  
192.217

78  
Pt  
195.094

79  
Au  
196.96657

80  
Hg  
200.59

87  
Fr  
(223)

88  
Ra  
(226)

103  
Lr  
(262)

104  
Rf  
(265)

105  
Db  
(268)

106  
Sg  
(271)

107  
Bh  
(272)

108  
Hs  
(270)

109  
Mt  
(276)

110  
Ds  
(281)

111  
Rg  
(280)

112  
Cn  
(285)

Main groups

13  
3A

14  
4A

15  
5A

16  
6A

17  
7A

5  
B  
10.811

6  
C  
12.0107

7  
N  
14.0067

8  
O  
15.9994

9  
F  
18.998403

10  
Ne  
20.1797

13  
Al  
26.981538

14  
Si  
28.0855

15  
P  
30.973762

16  
S  
32.065

17  
Cl  
35.453

18  
Ar  
39.948

31  
Ga  
69.723

32  
Ge  
72.64

33  
As  
74.92160

34  
Se  
78.96

35  
Br  
79.904

49  
In  
114.818

50  
Sn  
118.710

51  
Sb  
121.760

52  
Te  
127.60

53  
I  
126.90447

81  
Tl  
204.3833

82  
Pb  
207.2

83  
Bi  
208.98040

84  
Po  
(209)

85  
At  
(210)

113<sup>‡</sup>  
FL  
(284)

114  
FL  
(289)

115<sup>‡</sup>  
Lv  
(288)

116  
Lv  
(293)

117<sup>‡</sup>  
Lv  
(292)

118<sup>‡</sup>  
Lv  
(294)

\* Lanthanide series

57 *La 138.9055	58 Ce 140.116	59 Pr 140.90765	60 Nd 144.242	61 Pm (145)	62 Sm 150.36	63 Eu 151.964	64 Gd 157.25	65 Tb 158.92535	66 Dy 162.500	67 Ho 164.93032	68 Er 167.259	69 Tm 168.93421	70 Yb 173.054
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† Actinide series

89 †Ac (227)	90 Th 232.0381	91 Pa 231.03588	92 U 238.02891	93 Np (237)	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)
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‡ Elements 113, 115, 117, and 118 are currently under review by IUPAC

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# Chemistry

SEVENTH EDITION  
GLOBAL EDITION

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