

PERIODIC TABLE of the ELEMENTS



DEPARTMENT OF
SCIENCE AND TECHNOLOGY



VIIIA 18
He
Helium 2
4.00

IA 1
H
Hydrogen 1
1.01

IIA 2
Li
Lithium 3
6.94
Be
Beryllium 4
9.01

IIIA 3
Na
Sodium 11
22.99
Mg
Magnesium 12
24.31

H
Hydrogen
1.01

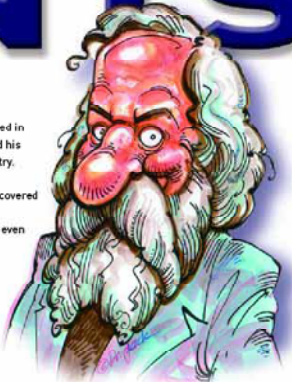
Legend:
 ■ Gas
 ■ Liquid
 ■ Natural solid
 ■ Man-made solid (synthetic)

Labels:
 Symbol
 Element name
 Atomic number
 Atomic mass

DMITRI MENDELEYEV (1834 - 1907)
 The Russian chemist, Dmitri Mendeleev, was the first to observe that if elements were listed in order of atomic mass, they showed regular (periodical) repeating properties. He formulated his discovery in a periodic table of elements, now regarded as the backbone of modern chemistry.

The crowning achievement of Mendeleev's periodic table lay in his prophecy of then, undiscovered elements. In 1869, the year he published his periodic classification, the elements gallium, germanium and scandium were unknown. Mendeleev left spaces for them in his table and even predicted their atomic masses and other chemical properties. Six years later, gallium was discovered and his predictions were found to be accurate. Other discoveries followed and their chemical behaviour matched that predicted by Mendeleev.

This remarkable man, the youngest in a family of 17 children, has left the scientific community with a classification system so powerful that it became the cornerstone in chemistry teaching and the prediction of new elements ever since. In 1955, element 101 was named after him: Md, Mendeleevium.



IVB 4
K
Potassium 19
39.10
Ca
Calcium 20
40.08

VB 5
Sc
Scandium 21
44.96
Ti
Titanium 22
47.88

VIB 6
V
Vanadium 23
50.94
Cr
Chromium 24
52.00
Mn
Manganese 25
54.94

VII B 7
Fe
Iron 26
55.85
Co
Cobalt 27
58.93
Ni
Nickel 28
58.69

VIII 8
Cu
Copper 29
63.55
Zn
Zinc 30
65.39
Ga
Gallium 31
69.72

VIII 9
As
Arsenic 33
74.92
Se
Selenium 34
78.96
Br
Bromine 35
79.90

VIII 10
Kr
Krypton 36
83.80
Ar
Argon 18
39.95

IB 11
Rb
Rubidium 37
85.47
Sr
Strontium 38
87.62

II B 12
Y
Yttrium 39
88.91
Zr
Zirconium 40
91.22
Nb
Niobium 41
92.91

III B 3
Mo
Molybdenum 42
95.94
Tc
Technetium 43
[98]

IV B 4
Ru
Ruthenium 44
101.07
Rh
Rhodium 45
102.91
Pd
Palladium 46
106.42

V B 5
Ag
Silver 47
107.87
Cd
Cadmium 48
112.41
In
Indium 49
114.82

V B 6
Sb
Antimony 51
121.76
Te
Tellurium 52
127.60
I
Iodine 53
126.90

V B 7
Xe
Xenon 54
131.29
Kr
Krypton 36
83.80

VI B 8
Cs
Caesium 55
132.91
Ba
Barium 56
137.33

VII B 9
Hf
Hafnium 72
178.49
Ta
Tantalum 73
180.95
W
Tungsten 74
183.85

VIII 10
Re
Rhenium 75
186.21
Os
Osmium 76
190.23
Ir
Iridium 77
192.22

VIII 11
Au
Gold 79
196.97
Hg
Mercury 80
200.59
Tl
Thallium 81
204.38

VIII 12
Pb
Lead 82
207.20
Bi
Bismuth 83
208.98
Po
Polonium 84
[209]

VIII 13
At
Astatine 85
[210]
Rn
Radon 86
[222]

VIII 14
Rn
Radon 86
[222]

VIII 15
Fr
Francium 87
[223]
Ra
Radium 88
[226]

VIII 16
Rf
Rutherfordium 104
[261]
Db
Dubnium 105
[262]
Sg
Seaborgium 106
[263]

VIII 17
Bh
Bohrium 107
[262]
Hs
Hassium 108
[265]
Mt
Meitnerium 109
[266]

VIII 18
La
Lanthanum 57
138.91
Ce
Cerium 58
140.12
Pr
Praseodymium 59
140.90

VIII 19
Nd
Neodymium 60
144.24
Pm
Promethium 61
[145]
Sm
Samarium 62
150.36

VIII 20
Eu
Europium 63
151.96
Gd
Gadolinium 64
157.25
Tb
Terbium 65
158.92

VIII 21
Dy
Dysprosium 66
162.50
Ho
Holmium 67
164.93
Er
Erbium 68
167.26

VIII 22
Ac
Actinium 89
227.03
Th
Thorium 90
232.04
Pa
Protactinium 91
231.04

VIII 23
U
Uranium 92
238.03
Np
Neptunium 93
237.05
Pu
Plutonium 94
244.06

VIII 24
Am
Americium 95
243.06
Cm
Curium 96
247.07
Bk
Berkelium 97
247.07

VIII 25
Cf
Californium 98
251.08
Es
Einsteinium 99
252.08
Fm
Fermium 100
257.10

VIII 26
Md
Mendelevium 101
258.10
No
Nobelium 102
259.10
Lr
Lawrencium 103
260.10

VIII 27
Lu
Lutetium 71
174.96
Yb
Ytterbium 70
173.04
Tm
Thulium 69
168.93

VIII 28
Lu
Lutetium 71
174.96