



DMITRY IVANOVICH MENDELEEV

1834-1907

A great Russian scientist

A world-known chemist

A public leader

A correspondent member
of the Academy of Sciences

ПЕРИОДИЧЕСКАЯ СИСТЕМА ЭЛЕМЕНТОВ Д.И. МЕНДЕЛЕЕВА

ГРУППЫ И ПОДГРУППЫ ЭЛЕМЕНТОВ

Периоды Группы Подгруппы	Группы и подгруппы элементов															
	I		II-VI										VII		VIII	
1	(H)												H			
2	Li	Be											B	C	N	O
3	Na	Mg											Al	Si	P	S
4	K	Ca											Sc	Ti	V	Cr
5	Rb	Sr											Y	Zr	Nb	Mo
6	Cs	Ba											Hf	Ta	W	Re
7	Fr	Ra											Rf	Db	Sg	Bh
													Ru	Rh	Pd	
													Mn	Fe	Co	Ni
													Cu	Zn		
													Kr			
													Tc	Ru	Rh	Pd
													Xe			
													Os	Ir	Pt	
													Hg			
													Tl	Pb		
													Bi	Po	At	
													Th	Pa	U	Np
													Pu	Am	Cm	Bk
													Cf	Es	Fm	Md
													No	Lr		

* L-ряды

** f-ряды

*** d-ряды

**** g-ряды

$5f^{13} 7s^2$ **101**
 (258, 10) **Md**
 менделевий

GREAT SCIENTIST

MATCH THE DATE AND THE EVENT

- 1907 A famous periodic table appeared
- 1859 Mendeleev was born
- 1869 A great scientist died
- 1893 He finished his work on water and alcohol
- 1834 Mendeleev lived and worked in Germany
- 1865 Mendeleev started to develop the principles of metrology

THE PERIODIC TABLE

When did Mendeleev invent the periodic table of chemical elements?

ОПЫТЪ СИСТЕМЫ ЭЛЕМЕНТОВЪ.
ОСНОВАННОЙ НА ВѢСѢ АТОМНОМЪ ВѢСѢ И ХИМИЧЕСКОМЪ СХОДСТВѢ.

		Ti = 50	Zr = 90	? = 180.
		V = 51	Nb = 94	Ta = 182.
		Cr = 52	Mo = 96	W = 186.
		Mn = 55	Rh = 104,4	Pt = 197,4
		Fe = 56	Ru = 104,4	Ir = 198.
		Ni = Co = 59	Pd = 106,4	Os = 199.
H = 1		Cu = 63,4	Ag = 108	Hg = 200.
Be = 9,4	Mg = 24	Zn = 65,2	Cd = 112	
B = 11	Al = 27,4	? = 68	U = 116	Au = 197?
C = 12	Si = 28	? = 70	Sn = 118	
N = 14	P = 31	As = 75	Sb = 122	Bi = 210?
O = 16	S = 32	Se = 79,4	Te = 128?	
F = 19	Cl = 35,5	Br = 80	I = 127	
Li = 7	Na = 23	K = 39	Rb = 85,4	Cs = 133
		Ca = 40	Sr = 87,4	Ba = 137
		? = 45	Ce = 92	Pb = 207.
		?Er = 56	La = 94	
		?Yt = 60	Di = 95	
		?In = 75,4	Th = 118?	

Д. Менделѣевъ

IN 1869

TRUE OR FALSE?

- 1. Each element has 2 cells in the Table.
- 2. There are 7 periods in the Periodic table.
- 3. The Periodic table has 8 groups.
- 4. All the elements are classified as metals and non metals.
- 5. There are 108 chemical elements in the table.

PERIODIC TABLE OF THE ELEMENTS

PERIOD	GROUP		VIII B										GROUP CAS					
	1 IA	2 IIA	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9	10	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1	1 H 1.00794 Hydrogen												10.811 Boron	12.0107 Carbon	14.0067 Nitrogen	15.9994 Oxygen	18.9984032 Fluorine	20.1797 Neon
2	3 Li 6.941 Lithium	4 Be 9.012182 Beryllium											26.9815386 Aluminum	28.0855 Silicon	30.973762 Phosphorus	32.065 Sulfur	35.453 Chlorine	39.948 Argon
3	11 Na 22.989769 Sodium	12 Mg 24.3050 Magnesium											69.723 Gallium	72.64 Germanium	74.92160 Arsenic	78.96 Selenium	79.904 Bromine	83.798 Krypton
4	19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.867 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.92160 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
5	37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc [98] Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.90550 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.710 Tin	51 Sb 121.760 Antimony	52 Te 127.60 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon
6	55 Cs 132.9054519 Cesium	56 Ba 137.327 Barium	57-71 Lanthanides	72 Hf 178.49 Hafnium	73 Ta 180.94788 Tantalum	74 W 183.84 Tungsten	75 Re 186.207 Rhenium	76 Os 190.23 Osmium	77 Ir 192.217 Iridium	78 Pt 195.084 Platinum	79 Au 196.966569 Gold	80 Hg 200.59 Mercury	81 Tl 204.3833 Thallium	82 Pb 207.2 Lead	83 Bi 208.98040 Bismuth	84 Po [209] Polonium	85 At [210] Astatine	86 Rn [222] Radon
7	87 Fr [223] Francium	88 Ra [226] Radium	89-103 Actinides	104 Rf [267] Rutherfordium	105 Db [268] Dubnium	106 Sg [271] Seaborgium	107 Bh [272] Bohrium	108 Hs [270] Hassium	109 Mt [276] Meitnerium	110 Ds [281] Darmstadtium	111 Rg [280] Roentgenium	112 Cn [285] Copernicium	113 Uut [284] Ununtrium	114 Fl [289] Flerovium	115 Uup [288] Ununpentium	116 Lv [293] Livermorium	117 Uus [294] Ununseptium	118 Uuo [294] Ununoctium
			57 La 138.90547 Lanthanum	58 Ce 140.116 Cerium	59 Pr 140.90765 Praseodymium	60 Nd 144.242 Neodymium	61 Pm [145] Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.500 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.9668 Lutetium	
			89 Ac [227] Actinium	90 Th 232.03806 Thorium	91 Pa 231.03588 Protactinium	92 U 238.02891 Uranium	93 Np [237] Neptunium	94 Pu [244] Plutonium	95 Am [243] Americium	96 Cm [247] Curium	97 Bk [247] Berkelium	98 Cf [251] Californium	99 Es [252] Einsteinium	100 Fm [257] Fermium	101 Md [258] Mendelevium	102 No [259] Nobelium	103 Lr [262] Lawrencium	

Color Of The Atomic Shows State Of Matter
at standard conditions: 0 °C and 1 atm.
Black = Solid
Red = Liquid
Blue = Gas
Grey = Unknown

Group IUPAC → 13 IIIA ← Group CAS

Atomic Number → 1 Scan the QR code to learn more

Atomic Symbol → B Border Shows Natural Occurrence

Relative Atomic Mass * → 10.811

Element Name → Boron

Primordial From Decay Synthetic

Some Element Categories In The Periodic Table



WHAT IS IT?

