

PERIODIC TABLE OF ELEMENTS

Chemical Group Block

The Periodic Table of Elements is shown with a yellow box highlighting the 17th column (Group 17), which includes Chlorine (Cl), Fluorine (F), Oxygen (O), Nitrogen (N), Boron (B), Carbon (C), and Helium (He).

	Atomic Number	Name	Symbol	Chemical Group Block	
1	1	H	Hydrogen	Nonmetal	1
2	3	Li	Lithium	Alkali Metal	2
2	4	Be	Beryllium	Alkaline Earth M...	
3	11	Na	Sodium	Alkali Metal	3
3	12	Mg	Magnesium	Alkaline Earth M...	
4	19	K	Potassium	Alkali Metal	4
4	20	Ca	Calcium	Alkaline Earth M...	
4	21	Sc	Scandium	Transition Metal	
4	22	Ti	Titanium	Transition Metal	
4	23	V	Vanadium	Transition Metal	
4	24	Cr	Chromium	Transition Metal	
4	25	Mn	Manganese	Transition Metal	
4	26	Fe	Iron	Transition Metal	
4	27	Co	Cobalt	Transition Metal	
4	28	Ni	Nickel	Transition Metal	
4	29	Cu	Copper	Transition Metal	
4	30	Zn	Zinc	Transition Metal	
4	31	Ga	Gallium	Post-Transition ...	
4	32	Ge	Germanium	Metalloid	
4	33	As	Arsenic	Nonmetal	
4	34	Se	Selenium	Nonmetal	
4	35	Br	Bromine	Halogen	
4	36	Kr	Krypton	Noble Gas	
5	37	Rb	Rubidium	Alkali Metal	5
5	38	Sr	Strontium	Alkaline Earth M...	
5	39	Y	Yttrium	Transition Metal	
5	40	Zr	Zirconium	Transition Metal	
5	41	Nb	Niobium	Transition Metal	
5	42	Mo	Molybdenum	Transition Metal	
5	43	Tc	Technetium		
5	44	Ru	Ruthenium	Transition Metal	
5	45	Rh	Rhodium	Transition Metal	
5	46	Pd	Palladium	Transition Metal	
5	47	Ag	Silver	Transition Metal	
5	48	Cd	Cadmium	Transition Metal	
5	49	In	Indium	Post-Transition ...	
5	50	Sn	Tin	Post-Transition ...	
5	51	Sb	Antimony	Metalloid	
5	52	Te	Tellurium	Nonmetal	
5	53	I	Iodine	Halogen	
5	54	Xe	Xenon	Noble Gas	
6	55	Cs	Cesium	Alkali Metal	6
6	56	Ba	Barium	Alkaline Earth M...	
6	72	Hf	Hafnium	Transition Metal	
6	73	Ta	Tantalum	Transition Metal	
6	74	W	Tungsten	Transition Metal	
6	75	Re	Rhenium	Transition Metal	
6	76	Os	Osmium	Transition Metal	
6	77	Ir	Iridium	Transition Metal	
6	78	Pt	Platinum	Transition Metal	
6	79	Au	Gold	Transition Metal	
6	80	Hg	Mercury	Transition Metal	
6	81	Tl	Thallium	Post-Transition ...	
6	82	Pb	Lead	Post-Transition ...	
6	83	Bi	Bismuth	Post-Transition ...	
6	84	Po	Polonium	Metalloid	
6	85	At	Astatine	Halogen	
6	86	Rn	Radon	Noble Gas	
7	87	Fr	Francium	Alkali Metal	7
7	88	Ra	Radium	Alkaline Earth M...	
7	104	Rf	Rutherfordium	Transition Metal	
7	105	Db	Dubnium	Transition Metal	
7	106	Sg	Seaborgium	Transition Metal	
7	107	Bh	Bohrium	Transition Metal	
7	108	Hs	Hassium	Transition Metal	
7	109	Mt	Meltinerium	Transition Metal	
7	110	Ds	Darmstadtium	Transition Metal	
7	111	Rg	Roentgenium	Transition Metal	
7	112	Cn	Copernicium	Transition Metal	
7	113	Nh	Nihonium	Post-Transition ...	
7	114	Fl	Flerovium	Post-Transition ...	
7	115	Mc	Moscovium	Post-Transition ...	
7	116	Lv	Livermorium	Post-Transition ...	
7	117	Ts	Tennessee	Halogen	
7	118	Og	Oganesson	Noble Gas	
	57	La	Lanthanum	Lanthanide	
	58	Ce	Cerium	Lanthanide	
	59	Pr	Praseodymium	Lanthanide	
	60	Nd	Neodymium	Lanthanide	
	61	Pm	Promethium	Lanthanide	
	62	Sm	Samarium	Lanthanide	
	63	Eu	Europium	Lanthanide	
	64	Gd	Gadolinium	Lanthanide	
	65	Tb	Terbium	Lanthanide	
	66	Dy	Dysprosium	Lanthanide	
	67	Ho	Holmium	Lanthanide	
	68	Er	Erbium	Lanthanide	
	69	Tm	Thulium	Lanthanide	
	70	Yb	Ytterbium	Lanthanide	
	71	Lu	Lutetium	Lanthanide	
	89	Ac	Actinium	Actinide	
	90	Th	Thorium	Actinide	
	91	Pa	Protactinium	Actinide	
	92	U	Uranium	Actinide	
	93	Np	Neptunium	Actinide	
	94	Pu	Plutonium	Actinide	
	95	Am	Americium	Actinide	
	96	Cm	Curium	Actinide	
	97	Bk	Berkelium	Actinide	
	98	Cf	Californium	Actinide	
	99	Es	Einsteinium	Actinide	
	100	Fm	Fermium	Actinide	
	101	Md	Mendelevium	Actinide	
	102	No	Nobelium	Actinide	
	103	Lr	Lawrencium	Actinide	

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PERIODIC TABLE OF ELEMENTS

Atomic Mass

The Periodic Table of Elements displays the following information for each element:

- Atomic Number**: The element's position in the sequence.
- Name**: The common name of the element.
- Symbol**: The standard two-letter symbol for the element.
- Atomic Mass, u**: The element's mass number in atomic mass units.
- Hydrogen**: Hydrogen (H) is highlighted in light blue.
- He**: Helium (He) is highlighted in light blue.
- Chlorine**: Chlorine (Cl) is highlighted in light blue.
- Actinium**: Actinium (Ac) is highlighted in light blue.
- Thorium**: Thorium (Th) is highlighted in light blue.
- Protactinium**: Protactinium (Pa) is highlighted in light blue.
- Uranium**: Uranium (U) is highlighted in light blue.
- Neptunium**: Neptunium (Np) is highlighted in light blue.
- Plutonium**: Plutonium (Pu) is highlighted in light blue.
- Americium**: Americium (Am) is highlighted in light blue.
- Curium**: Curium (Cm) is highlighted in light blue.
- Berkelium**: Berkelium (Bk) is highlighted in light blue.
- Californium**: Californium (Cf) is highlighted in light blue.
- Einsteinium**: Einsteinium (Es) is highlighted in light blue.
- Fermium**: Fermium (Fm) is highlighted in light blue.
- Mendelevium**: Mendelevium (Md) is highlighted in light blue.
- Nobelium**: Nobelium (No) is highlighted in light blue.
- Lawrencium**: Lawrencium (Lr) is highlighted in light blue.

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1	2	18
1 H Hydrogen 1.0080		2 He Helium 4.00260
3 Li Lithium 7.0	4 Be Beryllium 9.012183	
11 Na Sodium 22.9897693	12 Mg Magnesium 24.305	
19 K Potassium 39.0983	20 Ca Calcium 40.08	21 Sc Scandium 44.95591
22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.996
25 Mn Manganese 54.93804	26 Fe Iron 55.84	27 Co Cobalt 58.93319
28 Ni Nickel 58.693	29 Cu Copper 63.55	30 Zn Zinc 65.4
31 Ga Gallium 69.723	32 Ge Germanium 72.63	33 As Arsenic 74.92159
34 Se Selenium 78.97	35 Br Bromine 79.90	36 Kr Krypton 83.80
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.90584
40 Zr Zirconium 91.22	41 Nb Niobium 92.90637	42 Mo Molybdenum 95.95
43 Tc Technetium 96.90636	44 Ru Ruthenium 101.1	45 Rh Rhodium 102.9055
46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.41
49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.760
52 Te Tellurium 127.6	53 I Iodine 126.9045	54 Xe Xenon 131.29
55 Cs Cesium 132.9054520	56 Ba Barium 137.33	72 Hf Hafnium 178.49
73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207
76 Os Osmium 190.2	77 Ir Iridium 192.22	78 Pt Platinum 195.08
79 Au Gold 196.96657	80 Hg Mercury 200.59	81 Tl Thallium 204.383
82 Pb Lead 207	83 Bi Bismuth 208.98040	84 Po Polonium 208.98243
85 At Astatine 209.98715	86 Rn Radon 222.01758	87 Fr Francium 223.01973
88 Ra Radium 226.02541	104 Rf Rutherfordium 267.122	105 Db Dubnium 268.126
106 Sg Seaborgium 269.128	107 Bh Bohrium 270.133	108 Hs Hassium 269.1336
109 Mt Meitnerium 277.154	110 Ds Darmstadtium 282.166	111 Rg Roentgenium 282.169
112 Cn Copernicium 286.179	113 Nh Nihonium 286.182	114 Fl Flerovium 290.192
115 Mc Moscovium 290.196	116 Lv Livermorium 293.205	117 Ts Tennessine 294.211
118 Og Oganesson 295.216		
57 La Lanthanum 138.9055	58 Ce Cerium 140.116	59 Pr Praseodymium 140.90766
60 Nd Neodymium 144.24	61 Pm Promethium 144.91276	62 Sm Samarium 150.4
63 Eu Europium 151.964	64 Gd Gadolinium 157.2	65 Tb Terbium 158.92535
66 Dy Dysprosium 162.500	67 Ho Holmium 164.93033	68 Er Erbium 167.26
69 Tm Thulium 168.93422	70 Yb Ytterbium 173.05	71 Lu Lutetium 174.9668
89 Ac Actinium 227.02775	90 Th Thorium 232.038	91 Pa Protactinium 231.03588
92 U Uranium 238.0289	93 Np Neptunium 237.048172	94 Pu Plutonium 244.06420
95 Am Americium 243.061380	96 Cm Curium 247.07035	97 Bk Berkelium 247.07031
98 Cf Californium 251.07959	99 Es Einsteinium 252.0830	100 Fm Fermium 257.09511
101 Md Mendelevium 258.09843	102 No Nobelium 259.10100	103 Lr Lawrencium 266.120

PERIODIC TABLE OF ELEMENTS

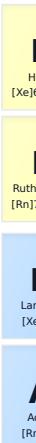
Standard State



	1	Atomic Number																		18
1	1 H Hydrogen Gas																			2 He Helium Gas
2	3 Li Lithium Solid	4 Be Beryllium Solid																		10 Ne Neon Gas
3	11 Na Sodium Solid	12 Mg Magnesium Solid	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Ar	
4	19 K Potassium Solid	20 Ca Calcium Solid	21 Sc Scandium Solid	22 Ti Titanium Solid	23 V Vanadium Solid	24 Cr Chromium Solid	25 Mn Manganese Solid	26 Fe Iron Solid	27 Co Cobalt Solid	28 Ni Nickel Solid	29 Cu Copper Solid	30 Zn Zinc Solid	31 Ga Gallium Solid	32 Ge Germanium Solid	33 As Arsenic Solid	34 Se Selenium Solid	35 Br Bromine Liquid	36 Kr Krypton Gas		
5	37 Rb Rubidium Solid	38 Sr Strontium Solid	39 Y Yttrium Solid	40 Zr Zirconium Solid	41 Nb Niobium Solid	42 Mo Molybdenum Solid	43 Tc Technetium Solid	44 Ru Ruthenium Solid	45 Rh Rhodium Solid	46 Pd Palladium Solid	47 Ag Silver Solid	48 Cd Cadmium Solid	49 In Indium Solid	50 Sn Tin Solid	51 Sb Antimony Solid	52 Te Tellurium Solid	53 I Iodine Solid	54 Xe Xenon Gas		
6	55 Cs Cesium Solid	56 Ba Barium Solid	72 Hf Hafnium Solid	73 Ta Tantalum Solid	74 W Tungsten Solid	75 Re Rhenium Solid	76 Os Osmium Solid	77 Ir Iridium Solid	78 Pt Platinum Solid	79 Au Gold Solid	80 Hg Mercury Liquid	81 Tl Thallium Solid	82 Pb Lead Solid	83 Bi Bismuth Solid	84 Po Polonium Solid	85 At Astatine Solid	86 Rn Radon Gas			
7	87 Fr Francium Solid	88 Ra Radium Solid	104 Rf Rutherfordium Solid	105 Db Dubnium Solid	106 Sg Seaborgium Solid	107 Bh Bohrium Solid	108 Hs Hassium Solid	109 Mt Meitnerium Solid	110 Ds Darmstadtium Solid (Expected)	111 Rg Roentgenium Solid (Expected)	112 Cn Copernicium Solid (Expected)	113 Nh Nihonium Solid (Expected)	114 Fl Flerovium Solid (Expected)	115 Mc Moscovium Solid (Expected)	116 Lv Livermorium Solid (Expected)	117 Ts Tennessine Solid (Expected)	118 Og Oganesson Gas (Expected)			
			57 La Lanthanum Solid	58 Ce Cerium Solid	59 Pr Praseodymium Solid	60 Nd Neodymium Solid	61 Pm Promethium Solid	62 Sm Samarium Solid	63 Eu Europium Solid	64 Gd Gadolinium Solid	65 Tb Terbium Solid	66 Dy Dysprosium Solid	67 Ho Holmium Solid	68 Er Erbium Solid	69 Tm Thulium Solid	70 Yb Ytterbium Solid	71 Lu Lutetium Solid			
			89 Ac Actinium Solid	90 Th Thorium Solid	91 Pa Protactinium Solid	92 U Uranium Solid	93 Np Neptunium Solid	94 Pu Plutonium Solid	95 Am Americium Solid	96 Cm Curium Solid	97 Bk Berkelium Solid	98 Cf Californium Solid	99 Es Einsteinium Solid	100 Fm Fermium Solid	101 Md Mendelevium Solid	102 No Nobelium Solid	103 Lr Lawrencium Solid			

PERIODIC TABLE OF ELEMENTS

Electron Configuration



The Periodic Table of Elements displays the atomic number, name, symbol, and electron configuration for each element. The table is organized into groups and periods, with a legend at the top right.

		Atomic Number																																		
		Name																		Symbol	Electron Configuration															
1	1	17 Cl Chlorine [Ne]3s ² 3p ⁵																																		
2	3	Li Lithium [He]2s ¹	4	Be Beryllium [He]2s ²																			13	14	15	16	17	18								
3	11	Na Sodium [Ne]3s ¹	12	Mg Magnesium [Ne]3s ²	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																
4	19	K Potassium [Ar]4s ¹	20	Ca Calcium [Ar]4s ²	21	Sc Scandium [Ar]4s ² 3d ¹	22	Ti Titanium [Ar]4s ² 3d ²	23	V Vanadium [Ar]4s ² 3d ³	24	Cr Chromium [Ar]3d ⁵ 4s ¹	25	Mn Manganese [Ar]4s ² 3d ⁵	26	Fe Iron [Ar]4s ² 3d ⁶	27	Co Cobalt [Ar]4s ² 3d ⁷	28	Ni Nickel [Ar]4s ² 3d ⁸	29	Cu Copper [Ar]4s ² 3d ¹⁰	30	Zn Zinc [Ar]4s ² 3d ¹⁰	31	Ga Gallium [Ar]4s ² 3d ¹⁰ 4p ¹	32	Ge Germanium [Ar]4s ² 3d ¹⁰ 4p ²	33	As Arsenic [Ar]4s ² 3d ¹⁰ 4p ³	34	Se Selenium [Ar]4s ² 3d ¹⁰ 4p ⁴	35	Br Bromine [Ar]4s ² 3d ¹⁰ p ⁵	36	Kr Krypton [Ar]4s ² 3d ¹⁰ p ⁶
5	37	Rb Rubidium [Kr]5s ¹	38	Sr Strontium [Kr]5s ²	39	Y Yttrium [Kr]5s ² 4d ¹	40	Zr Zirconium [Kr]5s ² 4d ²	41	Nb Niobium [Kr]5s ¹ 4d ⁴	42	Mo Molybdenum [Kr]5s ¹ 4d ⁵	43	Tc Technetium [Kr]5s ² 4d ⁵	44	Ru Ruthenium [Kr]5s ¹ 4d ⁷	45	Rh Rhodium [Kr]5s ¹ 4d ⁸	46	Pd Palladium [Kr]4d ¹⁰	47	Ag Silver [Kr]5s ¹ 4d ¹⁰	48	Cd Cadmium [Kr]5s ² 4d ¹⁰	49	In Indium [Kr]5s ² 4d ¹⁰ 5p ¹	50	Sn Tin [Kr]5s ² 4d ¹⁰ 5p ²	51	Sb Antimony [Kr]5s ² 4d ¹⁰ 5p ³	52	Te Tellurium [Kr]5s ² 4d ¹⁰ 5p ⁴	53	I Iodine [Kr]5s ² 4d ¹⁰ 5p ⁵	54	Xe Xenon [Kr]5s ² 4d ¹⁰ 5p ⁶
6	55	Cs Cesium [Xe]6s ¹	56	Ba Barium [Xe]6s ²	72	Hf Hafnium [Xe]6s ² 4f ¹ 5d ²	73	Ta Tantalum [Xe]6s ² 4f ¹ 5d ³	74	W Tungsten [Xe]6s ² 4f ¹ 5d ⁴	75	Re Rhenium [Xe]6s ² 4f ¹ 5d ⁵	76	Os Osmium [Xe]6s ² 4f ¹ 5d ⁶	77	Ir Iridium [Xe]6s ² 4f ¹ 5d ⁷	78	Pt Platinum [Xe]6s ¹ 4f ¹ 5d ⁹	79	Au Gold [Xe]6s ¹ 4f ¹ 5d ¹⁰	80	Hg Mercury [Xe]6s ² 4f ¹ 5d ¹⁰	81	Tl Thallium [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ¹	82	Pb Lead [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ²	83	Bi Bismuth [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ²	84	Po Polonium [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ²	85	At Astatine [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ²	86	Rn Radon [Xe]6s ² 4f ¹ 5d ¹⁰ 7s ²		
7	87	Fr Francium [Rn]7s ¹	88	Ra Radium [Rn]7s ²	104	Rf Rutherfordium [Rn]7s ² 5f ¹ 6d ²	105	Db Dubnium [Rn]7s ² 5f ¹ 6d ³	106	Sg Seaborgium [Rn]7s ² 5f ¹ 6d ⁴	107	Bh Bohrium [Rn]7s ² 5f ¹ 6d ⁵	108	Hs Hassium [Rn]7s ² 5f ¹ 6d ⁶	109	Mt Meitnerium [Rn]7s ² 5f ¹ 6d ⁷	110	Ds Darmstadtium [Rn]7s ² 5f ¹ 6d ⁸	111	Rg Roentgenium [Rn]7s ² 5f ¹ 6d ⁹	112	Cn Copernicium [Rn]7s ² 5f ¹ 6d ¹⁰	113	Nh Nihonium [Rn]5f ¹ 6d ¹⁰ 7s ²	114	Fl Flerovium [Rn]7s ² 5f ¹ 6d ¹⁰	115	Mc Moscovium [Rn]7s ² 5f ¹ 6d ¹⁰	116	Lv Livermorium [Rn]7s ² 5f ¹ 6d ¹⁰	117	Ts Tennessine [Rn]7s ² 5f ¹ 6d ¹⁰	118	Og Oganesson [Rn]7s ² 5f ¹ 6d ¹⁰		
					57	La Lanthanum [Xe]6s ² 5d ¹	58	Ce Cerium [Xe]6s ² 4f ¹ 5d ¹	59	Pr Praseodymium [Xe]6s ² 4f ¹ 5d ³	60	Nd Neodymium [Xe]6s ² 4f ¹ 5d ⁴	61	Pm Promethium [Xe]6s ² 4f ¹ 5d ⁵	62	Sm Samarium [Xe]6s ² 4f ¹ 5d ⁶	63	Eu Europium [Xe]6s ² 4f ¹ 5d ⁷	64	Gd Gadolinium [Xe]6s ² 4f ¹ 5d ⁸	65	Tb Terbium [Xe]6s ² 4f ¹ 5d ⁹	66	Dy Dysprosium [Xe]6s ² 4f ¹ 5d ¹⁰	67	Ho Holmium [Xe]6s ² 4f ¹ 5d ¹¹	68	Er Erbium [Xe]6s ² 4f ¹ 5d ¹²	69	Tm Thulium [Xe]6s ² 4f ¹ 5d ¹³	70	Yb Ytterbium [Xe]6s ² 4f ¹ 5d ¹⁴	71	Lu Lutetium [Xe]6s ² 4f ¹ 5d ¹⁵		
					89	Ac Actinium [Rn]7s ² 6d ¹	90	Th Thorium [Rn]7s ² 6d ²	91	Pa Protactinium [Rn]7s ² 5f ¹ 6d ¹	92	U Uranium [Rn]7s ² 5f ¹ 6d ¹	93	Np Neptunium [Rn]7s ² 5f ¹ 6d ¹	94	Pu Plutonium [Rn]7s ² 5f ¹	95	Am Americium [Rn]7s ² 5f ¹	96	Cm Curium [Rn]7s ² 5f ¹	97	Bk Berkelium [Rn]7s ² 5f ¹	98	Cf Californium [Rn]7s ² 5f ¹	99	Es Einsteinium [Rn]7s ² 5f ¹	100	Fm Fermium [Rn]5f ¹ 7s ²	101	Md Mendelevium [Rn]5f ¹ 7s ²	102	No Nobelium [Rn]7s ² 5f ¹ 6d ¹	103	Lr Lawrencium [Rn]7s ² 5f ¹ 6d ¹		

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PERIODIC TABLE OF ELEMENTS

Oxidation States

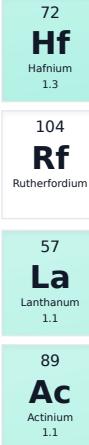
The Periodic Table of Elements displays atomic number, name, symbol, and oxidation states for each element. The oxidation states are indicated by the color of the squares: light red for most elements, teal for hydrogen and fluorine, and light blue for helium and neon.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	H Hydrogen +1, -1												B Boron +3	C Carbon +4, +2, -4	N Nitrogen +5, +4, +3, +2, ...	O Oxygen -2	F Fluorine -1	He Helium 0
2	Li Lithium +1	Be Beryllium +2																Ne Neon 0
3	Na Sodium +1	Mg Magnesium +2											Al Aluminum +3	Si Silicon +4, +2, -4	P Phosphorus +5, +3, -3	S Sulfur +6, +4, -2	Cl Chlorine +7, +5, +1, -1	Ar Argon 0
4	K Potassium +1	Ca Calcium +2	Sc Scandium +3	Ti Titanium +4, +3, +2	V Vanadium +5, +4, +3, +2	Cr Chromium +6, +3, +2	Mn Manganese +7, +4, +3, +2	Fe Iron +3, +2	Co Cobalt +3, +2	Ni Nickel +3, +2	Cu Copper +2, +1	Zn Zinc +2	Ga Gallium +3	Ge Germanium +4, +2	As Arsenic +5, +3, -3	Se Selenium +6, +4, -2	Br Bromine +5, +1, -1	Kr Krypton 0
5	Rb Rubidium +1	Sr Strontium +2	Y Yttrium +3	Zr Zirconium +4	Nb Niobium +5, +3	Mo Molybdenum +6	Tc Technetium +7, +6, +4	Ru Ruthenium +3	Rh Rhodium +3	Pd Palladium +3, +2	Ag Silver +1	Cd Cadmium +2	In Indium +3	Sn Tin +4, +2	Sb Antimony +5, +3, -3	Te Tellurium +6, +4, -2	I Iodine +7, +5, +1, -1	Xe Xenon 0
6	Cs Cesium +1	Ba Barium +2		Hf Hafnium +4	Ta Tantalum +5	W Tungsten +6	Re Rhenium +7, +6, +4	Os Osmium +4, +3	Ir Iridium +4, +3	Pt Platinum +4, +2	Au Gold +3, +1	Hg Mercury +2, +1	Tl Thallium +3, +1	Pb Lead +4, +2	Bi Bismuth +5, +3	Po Polonium +4, +2	At Astatine 7, 5, 3, 1, -1	Rn Radon 0
7	Fr Francium +1	Ra Radium +2		Rf Rutherfordium +4	Db Dubnium 5, 4, 3	Sg Seaborgium 6, 5, 4, 3, 0	Bh Bohrium 7, 5, 4, 3	Hs Hassium 8, 6, 5, 4, 3, 2	Mt Meitnerium 9, 8, 6, 4, 3, 1	Ds Darmstadtium 8, 6, 4, 2, 0	Rg Roentgenium 5, 3, 1, -1	Cn Copernicium 2, 1, 0	Nh Nihonium 3, 1	Fl Flerovium 6, 4, 2, 1, 0	Mc Moscovium 3, 1	Lv Livermorium 4, +2, -2	Ts Tennessine +5, +3, +1, -1	Og Oganesson +6, +4, +2, +1, ...
				La Lanthanum +3	Ce Cerium +4, +3	Pr Praseodymium +3	Nd Neodymium +3	Pm Promethium +3	Sm Samarium +3, +2	Eu Europium +3, +2	Gd Gadolinium +3	Tb Terbium +3	Dy Dysprosium +3	Ho Holmium +3	Er Erbium +3	Tm Thulium +3	Yb Ytterbium +3, +2	Lu Lutetium +3
				Ac Actinium +3	Th Thorium +4	Pa Protactinium +5, +4	U Uranium +6, +5, +4, +3	Np Neptunium +6, +5, +4, +3	Pu Plutonium +6, +5, +4, +3	Am Americium +6, +5, +4, +3	Cm Curium +3	Bk Berkelium +4, +3	Cf Californium +3	Es Einsteinium +3	Fm Fermium +3	Md Mendelevium +3, +2	No Nobelium +3, +2	Lr Lawrencium +3

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PERIODIC TABLE OF ELEMENTS

Electronegativity



The Periodic Table of Elements displays the following information for each element:

- Atomic Number**: The element's position in the sequence of elements.
- Name**: The common name for the element.
- Symbol**: The standard two-letter symbol for the element.
- Electronegativity (Pauling Scale)**: A numerical value indicating the element's ability to attract electrons. Chlorine has the highest electronegativity at 3.16.
- Hydrogen Bonding**: A feature indicating which elements can form hydrogen bonds.
- Density**: The mass per unit volume of the element.
- Melting Point**: The temperature at which the element becomes a liquid.
- Boiling Point**: The temperature at which the element becomes a gas.
- Thermal Conductivity**: The ability of the element to transfer heat.
- Electrical Resistivity**: The opposition to the flow of electric current.
- Thermal Expansion**: The change in size of the element with temperature.
- Standard Reduction Potential**: A measure of the tendency of an element to gain electrons.
- Electron Affinity**: The energy released when an electron is added to a neutral atom.
- Ionization Energy**: The minimum energy required to remove an electron from a neutral atom.
- Electron Configuration**: The arrangement of electrons in atomic orbitals.
- Periodic Trends**: General trends across groups and periods.

Key features of the table include:

- PubChem logo** in the top right corner.
- Heavier elements** (Rutherfordium, Dubnium, Seaborgium, Bohrium, Meitnerium, Darmstadtium, Roentgenium, Copernicium, Nihonium, Flerovium, Moscovium, Livermorium, Tennessine, Oganesson) are located in the bottom left corner.
- Lanthanides** (Lanthanum to Lutetium) and **Actinides** (Actinium to Lawrencium) are listed below the main table.

PERIODIC TABLE OF ELEMENTS

Atomic Radius



The Periodic Table of Elements displays atomic radius data for each element. The table includes the following columns:

- Atomic Number**: The element's position in the periodic table.
- Name**: The element's name.
- Symbol**: The element's symbol.
- Atomic Radius (van der Waals), pm**: The element's van der Waals radius in picometers.

Key data points from the table:

- Hydrogen (H)**: Atomic Number 1, Symbol H, Name Hydrogen, Radius 120 pm.
- Helium (He)**: Atomic Number 2, Symbol He, Name Helium, Radius 140 pm.
- Chlorine (Cl)**: Atomic Number 17, Symbol Cl, Name Chlorine, Radius 175 pm.
- Krypton (Kr)**: Atomic Number 36, Symbol Kr, Name Krypton, Radius 202 pm.
- Radon (Rn)**: Atomic Number 86, Symbol Rn, Name Radon, Radius 220 pm.
- Oganesson (Og)**: Atomic Number 118, Symbol Og, Name Oganesson, Radius 221 pm.
- Lanthanum (La)**: Atomic Number 57, Symbol La, Name Lanthanum, Radius 240 pm.
- Ytterbium (Yb)**: Atomic Number 70, Symbol Yb, Name Ytterbium, Radius 242 pm.
- Lutetium (Lu)**: Atomic Number 71, Symbol Lu, Name Lutetium, Radius 221 pm.
- Actinium (Ac)**: Atomic Number 89, Symbol Ac, Name Actinium, Radius 260 pm.
- Thorium (Th)**: Atomic Number 90, Symbol Th, Name Thorium, Radius 237 pm.
- Protactinium (Pa)**: Atomic Number 91, Symbol Pa, Name Protactinium, Radius 243 pm.
- Uranium (U)**: Atomic Number 92, Symbol U, Name Uranium, Radius 240 pm.
- Neptunium (Np)**: Atomic Number 93, Symbol Np, Name Neptunium, Radius 221 pm.
- Plutonium (Pu)**: Atomic Number 94, Symbol Pu, Name Plutonium, Radius 243 pm.
- Americium (Am)**: Atomic Number 95, Symbol Am, Name Americium, Radius 244 pm.
- Curium (Cm)**: Atomic Number 96, Symbol Cm, Name Curium, Radius 245 pm.
- Berkelium (Bk)**: Atomic Number 97, Symbol Bk, Name Berkelium, Radius 244 pm.
- Californium (Cf)**: Atomic Number 98, Symbol Cf, Name Californium, Radius 245 pm.
- Einsteinium (Es)**: Atomic Number 99, Symbol Es, Name Einsteinium, Radius 245 pm.
- Fermium (Fm)**: Atomic Number 100, Symbol Fm, Name Fermium, Radius 235 pm.
- Mendelevium (Md)**: Atomic Number 101, Symbol Md, Name Mendelevium, Radius 227 pm.
- Nobelium (No)**: Atomic Number 102, Symbol No, Name Nobelium, Radius 221 pm.
- Lawrencium (Lr)**: Atomic Number 103, Symbol Lr, Name Lawrencium, Radius 221 pm.

PERIODIC TABLE OF ELEMENTS

Ionization Energy



	1	Atomic Number																		18																													
1	H Hydrogen 13.598																			He Helium 24.587																													
2	Li Lithium 5.392	Be Beryllium 9.323																		Ne Neon 21.565																													
3	Na Sodium 5.139	Mg Magnesium 7.646																		Ar Argon 15.760																													
4	K Potassium 4.341	Ca Calcium 6.113	Sc Scandium 6.561	Ti Titanium 6.828	V Vanadium 6.746	Cr Chromium 6.767	Mn Manganese 7.434	Fe Iron 7.902	Co Cobalt 7.881	Ni Nickel 7.640	Cu Copper 7.726	Zn Zinc 9.394	Ga Gallium 5.999	Ge Germanium 7.900	As Arsenic 9.815	Se Selenium 9.752	Br Bromine 11.814	Kr Krypton 14.000																															
5	Rb Rubidium 4.177	Sr Strontium 5.695	Y Yttrium 6.217	Zr Zirconium 6.634	Nb Niobium 6.759	Mo Molybdenum 7.092	Tc Technetium 7.28	Ru Ruthenium 7.361	Rh Rhodium 7.459	Pd Palladium 8.337	Ag Silver 7.576	Cd Cadmium 8.994	In Indium 5.786	Sn Tin 7.344	Sb Antimony 8.64	Te Tellurium 9.010	I Iodine 10.451	Xe Xenon 12.130																															
6	Cs Cesium 3.894	Ba Barium 5.212	Hf Hafnium 6.825	Ta Tantalum 7.89	W Tungsten 7.98	Re Rhenium 7.88	Os Osmium 8.7	Ir Iridium 9.1	Pt Platinum 9	Au Gold 9.226	Hg Mercury 10.438	Tl Thallium 6.108	Pb Lead 7.417	Bi Bismuth 7.289	Po Polonium 8.417	At Astatine 9.5	Rn Radon 10.745																																
7	Fr Francium 3.9	Ra Radium 5.279	Rf Rutherfordium 104	Db Dubnium 105	Sg Seaborgium 106	Bh Bohrium 107	Hs Hassium 108	Mt Meitnerium 109	Ds Darmstadtium 110	Rg Roentgenium 111	Cn Copernicium 112	Nh Nihonium 113	Fl Flerovium 114	Mc Moscovium 115	Lv Livermorium 116	Ts Tennessine 117	Og Oganesson 118																																
		La Lanthanum 5.577	Ce Cerium 5.539	Pr Praseodymium 5.464	Nd Neodymium 5.525	Pm Promethium 5.55	Sm Samarium 5.644	Eu Europium 5.670	Gd Gadolinium 6.150	Tb Terbium 5.864	Dy Dysprosium 5.939	Ho Holmium 6.022	Er Erbium 6.108	Tm Thulium 6.184	Yb Ytterbium 6.254	Lu Lutetium 5.426	Ac Actinium 5.17	Th Thorium 6.08	Pa Protactinium 5.89	U Uranium 6.194	Np Neptunium 6.266	Pu Plutonium 6.06	Am Americium 5.993	Cm Curium 6.02	Bk Berkelium 6.23	Cf Californium 6.30	Es Einsteinium 6.42	Fm Fermium 6.50	Md Mendelevium 6.58	No Nobelium 6.65	Lr Lawrencium 103																		
		Ac Actinium 5.17	Th Thorium 6.08	Pa Protactinium 5.89	U Uranium 6.194	Np Neptunium 6.266	Pu Plutonium 6.06	Am Americium 5.993	Cm Curium 6.02	Bk Berkelium 6.23	Cf Californium 6.30	Es Einsteinium 6.42	Fm Fermium 6.50	Md Mendelevium 6.58	No Nobelium 6.65	Lr Lawrencium 103																																	

Atomic Number
Name
Symbol
Ionization Energy, eV

17
Cl
Chlorine
12.968

PERIODIC TABLE OF ELEMENTS

Electron Affinity



1 1 H Hydrogen 0.754	2 3 Li Lithium 0.618	4 Be Beryllium	<p>Atomic Number Symbol Name Electron Affinity, eV</p> <p>17 Cl Chlorine 3.617</p>												2 He Helium				
11 Na Sodium 0.548	12 Mg Magnesium	3 K Potassium 0.501	20 Ca Calcium	21 Sc Scandium 0.188	22 Ti Titanium 0.079	23 V Vanadium 0.525	24 Cr Chromium 0.666	25 Mn Manganese	26 Fe Iron 0.163	27 Co Cobalt 0.661	28 Ni Nickel 1.156	29 Cu Copper 1.228	30 Zn Zinc	31 Ga Gallium 0.3	32 Ge Germanium 1.35	33 As Arsenic 0.81	34 Se Selenium 2.021	35 Br Bromine 3.365	10 Ne Neon
37 Rb Rubidium 0.468	38 Sr Strontium	39 Y Yttrium 0.307	40 Zr Zirconium 0.426	41 Nb Niobium 0.893	42 Mo Molybdenum 0.746	43 Tc Technetium 0.55	44 Ru Ruthenium 1.05	45 Rh Rhodium 1.137	46 Pd Palladium 0.557	47 Ag Silver 1.302	48 Cd Cadmium	49 In Indium 0.3	50 Sn Tin 1.2	51 Sb Antimony 1.07	52 Te Tellurium 1.971	53 I Iodine 3.059	18 Ar Argon		
55 Cs Cesium 0.472	56 Ba Barium	72 Hf Hafnium	73 Ta Tantalum 0.322	74 W Tungsten 0.815	75 Re Rhenium 0.15	76 Os Osmium 1.1	77 Ir Iridium 1.565	78 Pt Platinum 2.128	79 Au Gold 2.309	80 Hg Mercury	81 Tl Thallium 0.2	82 Pb Lead 0.36	83 Bi Bismuth 0.946	84 Po Polonium 1.9	85 At Astatine 2.8	86 Rn Radon			
87 Fr Francium 0.47	88 Ra Radium	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Nh Nihonium	114 Fl Flerovium	115 Mc Moscovium	116 Lv Livermorium	117 Ts Tennessine	118 Og Oganesson			
		57 La Lanthanum 0.5	58 Ce Cerium 0.5	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium			
		89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium			

PERIODIC TABLE OF ELEMENTS

Melting Point

The Periodic Table displays the melting point of each element in Kelvin (K). The table includes the following columns:

- Atomic Number**: The element's position in the periodic table.
- Name**: The element's name.
- Symbol**: The element's symbol.
- Melting Point, K**: The element's melting point in Kelvin.

Key elements highlighted in yellow include Chlorine (Cl), Boron (B), Carbon (C), Nitrogen (N), Oxygen (O), Fluorine (F), Neon (Ne), Aluminum (Al), Silicon (Si), Phosphorus (P), Sulfur (S), Arsenic (As), Selenium (Se), Bromine (Br), Krypton (Kr), Tellurium (Te), Iodine (I), Xenon (Xe), Bismuth (Bi), Polonium (Po), Astatine (At), Radon (Rn), and Oganesson (Og).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	H Hydrogen 13.81	Be Beryllium 1560	Li Lithium 453.65	Mg Magnesium 923	Sc Scandium 1814	Ti Titanium 1941	V Vanadium 2183	Cr Chromium 2180	Mn Manganese 1519	Fe Iron 1811	Co Cobalt 1768	Ni Nickel 1728	Cu Copper 1357.77	Zn Zinc 692.68	Ga Gallium 302.91	Ge Germanium 1211.4	As Arsenic 1090	Se Selenium 493.65	Br Bromine 265.95
2	He Helium 0.95																		
3	Na Sodium 370.95	Mg Magnesium 923																	
4	K Potassium 336.53	Ca Calcium 1115	Sc Scandium 1814	Ti Titanium 1941	V Vanadium 2183	Cr Chromium 2180	Mn Manganese 1519	Fe Iron 1811	Co Cobalt 1768	Ni Nickel 1728	Cu Copper 1357.77	Zn Zinc 692.68	Ga Gallium 302.91	Ge Germanium 1211.4	As Arsenic 1090	Se Selenium 493.65	Br Bromine 265.95	Kr Krypton 115.79	
5	Rb Rubidium 312.46	Sr Strontium 1050	Y Yttrium 1795	Zr Zirconium 2128	Nb Niobium 2750	Mo Molybdenum 2896	Tc Technetium 2430	Ru Ruthenium 2607	Rh Rhodium 2237	Pd Palladium 1828.05	Ag Silver 1234.93	Cd Cadmium 594.22	In Indium 429.75	Sn Tin 505.08	Sb Antimony 903.78	Te Tellurium 722.66	I Iodine 386.85	Xe Xenon 161.36	
6	Cs Cesium 301.59	Ba Barium 1000		Hf Hafnium 2506	Ta Tantalum 3290	W Tungsten 3695	Re Rhenium 3459	Os Osmium 3306	Ir Iridium 2719	Pt Platinum 2041.55	Au Gold 1337.33	Hg Mercury 234.32	Tl Thallium 577	Pb Lead 600.61	Bi Bismuth 544.55	Po Polonium 527	At Astatine 575	Rn Radon 202	
7	Fr Francium 300	Ra Radium 973		Rf Rutherfordium 104	Db Dubnium 105	Sg Seaborgium 106	Bh Bohrium 107	Hs Hassium 108	Mt Meitnerium 109	Ds Darmstadtium 110	Rg Roentgenium 111	Cn Copernicium 112	Nh Nihonium 113	Fl Flerovium 114	Mc Moscovium 115	Lv Livermorium 116	Ts Tennessine 117	Og Oganesson 118	
				La Lanthanum 1191	Ce Cerium 1071	Pr Praseodymium 1204	Nd Neodymium 1294	Pm Promethium 1315	Sm Samarium 1347	Eu Europium 1095	Gd Gadolinium 1586	Tb Terbium 1629	Dy Dysprosium 1685	Ho Holmium 1747	Er Erbium 1802	Tm Thulium 1818	Yb Ytterbium 1092	Lu Lutetium 1936	
				Ac Actinium 1324	Th Thorium 2023	Pa Protactinium 1845	U Uranium 1408	Np Neptunium 917	Pu Plutonium 913	Am Americium 1449	Cm Curium 1618	Bk Berkelium 1323	Cf Californium 1173	Es Einsteinium 1133	Fm Fermium 1800	Md Mendelevium 1100	No Nobelium 1100	Lr Lawrencium 1900	



PERIODIC TABLE OF ELEMENTS

Boiling Point

The Periodic Table of Elements displays boiling points for each element. The values are as follows:

Element	Atomic Number	Symbol	Boiling Point (K)
Hydrogen	1	H	20.28
Lithium	3	Li	1615
Beryllium	4	Be	2744
Sodium	11	Na	1156
Magnesium	12	Mg	1363
Potassium	19	K	1032
Calcium	20	Ca	1757
Scandium	21	Sc	3109
Titanium	22	Ti	3560
Vanadium	23	V	3680
Chromium	24	Cr	2944
Manganese	25	Mn	2334
Iron	26	Fe	3134
Cobalt	27	Co	3200
Nickel	28	Ni	3186
Copper	29	Cu	2835
Zinc	30	Zn	1180
Gallium	31	Ga	2477
Germanium	32	Ge	3106
Arsenic	33	As	887
Selenium	34	Se	958
Bromine	35	Br	331.95
Krypton	36	Kr	119.93
Rubidium	37	Rb	961
Strontium	38	Sr	1655
Yttrium	39	Y	3618
Zirconium	40	Zr	4682
Niobium	41	Nb	5017
Molybdenum	42	Mo	4912
Technetium	43	Tc	4538
Ruthenium	44	Ru	4423
Rhodium	45	Rh	3968
Palladium	46	Pd	3236
Silver	47	Ag	2435
Cadmium	48	Cd	1040
Indium	49	In	2345
Tin	50	Sn	2875
Antimony	51	Sb	1860
Tellurium	52	Te	1261
Iodine	53	I	457.55
Xenon	54	Xe	165.03
Cesium	55	Cs	944
Barium	56	Ba	2170
Hafnium	72	Hf	4876
Tantalum	73	Ta	5731
Tungsten	74	W	5828
Rhenium	75	Re	5869
Osmium	76	Os	5285
Iridium	77	Ir	4701
Platinum	78	Pt	4098
Gold	79	Au	3129
Mercury	80	Hg	629.88
Thallium	81	Tl	1746
Lead	82	Pb	2022
Bismuth	83	Bi	1837
Polonium	84	Po	1235
Astatine	85	At	211.45
Rutherfordium	104	Rf	
Dubnium	105	Db	
Seaborgium	106	Sg	
Bohrium	107	Bh	
Hassium	108	Hs	
Meltinerium	109	Mt	
Darmstadtium	110	Ds	
Roentgenium	111	Rg	
Copernicum	112	Cn	
Nihonium	113	Nh	
Flerovium	114	Fl	
Moscovium	115	Mc	
Livermorium	116	Lv	
Tennesseine	117	Ts	
Oganesson	118	Og	
Lanthanum	57	La	3737
Cerium	58	Ce	3697
Praseodymium	59	Pr	3793
Neodymium	60	Nd	3347
Promethium	61	Pm	3273
Samarium	62	Sm	2067
Europium	63	Eu	1802
Gadolinium	64	Gd	3546
Terbium	65	Tb	3503
Dysprosium	66	Dy	2840
Holmium	67	Ho	2973
Erbium	68	Er	3141
Thulium	69	Tm	2223
Ytterbium	70	Yb	1469
Lutetium	71	Lu	3675
Actinium	89	Ac	3471
Thorium	90	Th	5061
Protactinium	91	Pa	
Uranium	92	U	4404
Neptunium	93	Np	4175
Plutonium	94	Pu	3501
Americium	95	Am	2284
Curium	96	Cm	3400
Berkelium	97	Bk	
Californium	98	Cf	
Einsteinium	99	Es	
Fermium	100	Fm	
Mendelevium	101	Md	
Nobelium	102	No	
Lawrencium	103	Lr	

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PERIODIC TABLE OF ELEMENTS

Density

1	H	2	He
Hydrogen 0.00008988		Helium 0.0001785	
1	Lithium 0.534	2	Beryllium 1.85
3	Li	4	Be
Sodium 0.97		Magnesium 1.74	
11	Na	12	Mg
Potassium 0.89		19	K
Calcium 1.54		20	Ca
Scandium 2.99		21	Sc
Titanium 4.5		22	Ti
Vanadium 6.0		23	V
Chromium 7.15		24	Cr
Manganese 7.3		25	Mn
Iron 7.874		26	Fe
Cobalt 8.86		27	Co
Nickel 8.912		28	Ni
Copper 8.933		29	Cu
Zinc 7.134		30	Zn
Gallium 5.91		31	Ga
Germanium 5.323		32	Ge
Arsenic 5.776		33	As
Selenium 4.809		34	Se
Bromine 3.11		35	Br
Krypton 0.003733		36	Kr
Rubidium 1.53		37	Rb
Strontium 2.64		38	Sr
Yttrium 4.47		39	Y
Zirconium 6.52		40	Zr
Niobium 8.57		41	Nb
Molybdenum 10.2		42	Mo
Technetium 11		43	Tc
Ruthenium 12.1		44	Ru
Rhodium 12.4		45	Rh
Palladium 12.0		46	Pd
Silver 10.501		47	Ag
Cadmium 8.69		48	Cd
In 7.31		49	In
Tin 7.287		50	Sn
Antimony 6.685		51	Sb
Tellurium 6.232		52	Te
Iodine 4.93		53	I
Xenon 0.005887		54	Xe
Cesium 1.93		55	Cs
Barium 3.62		56	Ba
Hafnium 13.3		72	Hf
Tantalum 16.4		73	Ta
Tungsten 19.3		74	W
Rhenium 20.8		75	Re
Osmium 22.57		76	Os
Iridium 22.42		77	Ir
Platinum 21.46		78	Pt
Gold 19.282		79	Au
Mercury 13.5336		80	Hg
Thallium 11.8		81	Tl
Lead 11.342		82	Pb
Bismuth 9.807		83	Bi
Polonium 9.32		84	Po
Astatine 7		85	At
Rutherfordium		104	Rf
Dubnium		105	Db
Seaborgium		106	Sg
Bohrium		107	Bh
Hassium		108	Hs
Meitnerium		109	Mt
Darmstadtium		110	Ds
Roentgenium		111	Rg
Copernicium		112	Cn
Nihonium		113	Nh
Flerovium		114	Fl
Moscovium		115	Mc
Livermorium		116	Lv
Tennessee		117	Ts
Lutetium 9.84		118	Og
Actinium 10.07		57	La
Cerium 6.770		58	Ce
Praseodymium 6.77		59	Pr
Neodymium 7.01		60	Nd
Promethium 7.26		61	Pm
Samarium 7.52		62	Sm
Europium 5.24		63	Eu
Gadolinium 7.90		64	Gd
Terbium 8.23		65	Tb
Dysprosium 8.55		66	Dy
Holmium 8.80		67	Ho
Erbium 9.07		68	Er
Thulium 9.32		69	Tm
Ytterbium 6.90		70	Yb
Lutetium 9.84		71	Lu

PERIODIC TABLE OF ELEMENTS

Year Discovered

1	H	Hydrogen	1766	2	He	Helium	1868		
1	Li	Lithium	1817	2	Be	Beryllium	1798		
2	Na	Sodium	1807	3	Mg	Magnesium	1808		
3	K	Potassium	1807	4	Ca	Calcium	Ancient		
4	Rb	Rubidium	1861	5	Sc	Scandium	1879		
5	Sr	Strontium	1790	6	Ti	Titanium	1791		
6	Cs	Cesium	1860	7	V	Vanadium	1801		
7	Fr	Francium	1939	8	Cr	Chromium	1797		
Atomic Number		9	Mn	Manganese	1774	10	Fe	Iron	Ancient
		11	Co	Cobalt	1735	12	Ni	Nickel	1751
		13	Cu	Copper	Ancient	14	Zn	Zinc	1746
		15	Ga	Gallium	1875	16	Ge	Germanium	1886
		17	Al	Aluminum	Ancient	18	Si	Silicon	1854
		19	Sc	Scandium	1879	19	P	Phosphorus	1669
		20	Ti	Titanium	1791	20	S	Sulfur	Ancient
		21	V	Vanadium	1801	21	Cl	Chlorine	1774
		22	Cr	Chromium	1797	22	Mn	Manganese	1774
		23	Mn	Manganese	1774	24	Fe	Iron	Ancient
Name		25	Co	Cobalt	1735	26	Ni	Nickel	1751
		27	Cu	Copper	Ancient	28	Zn	Zinc	1746
		29	Ga	Gallium	1875	30	Ge	Germanium	1886
		31	Al	Aluminum	Ancient	32	Si	Silicon	1854
		33	Sc	Scandium	1879	34	P	Phosphorus	1669
		35	Ti	Titanium	1791	36	S	Sulfur	Ancient
		37	V	Vanadium	1801	38	Cl	Chlorine	1774
		39	Cr	Chromium	1797	40	Mn	Manganese	1774
		41	Mn	Manganese	1774	42	Fe	Iron	Ancient
		43	Co	Cobalt	1735	44	Ni	Nickel	1751
Symbol		45	Cu	Copper	Ancient	46	Zn	Zinc	1746
		47	Ga	Gallium	1875	48	Ge	Germanium	1886
		49	Al	Aluminum	Ancient	50	Si	Silicon	1854
		51	Sc	Scandium	1879	52	P	Phosphorus	1669
		53	Ti	Titanium	1791	54	S	Sulfur	Ancient
		55	V	Vanadium	1801	56	Cl	Chlorine	1774
		57	Cr	Chromium	1797	58	Mn	Manganese	1774
		59	Mn	Manganese	1774	60	Fe	Iron	Ancient
		61	Co	Cobalt	1735	62	Ni	Nickel	1751
		63	Cu	Copper	Ancient	64	Zn	Zinc	1746
Year Discovered		65	Ga	Gallium	1875	66	Ge	Germanium	1886
		67	Al	Aluminum	Ancient	68	Si	Silicon	1854
		69	Sc	Scandium	1879	70	P	Phosphorus	1669
		71	Ti	Titanium	1791	72	V	Vanadium	1801
		73	Cr	Chromium	1797	74	Mn	Manganese	1774
		75	Mn	Manganese	1774	76	Fe	Iron	Ancient
		77	Co	Cobalt	1735	78	Ni	Nickel	1751
		79	Cu	Copper	Ancient	80	Zn	Zinc	1746
		81	Ga	Gallium	1875	82	Ge	Germanium	1886
		83	Al	Aluminum	Ancient	84	Si	Silicon	1854
13		85	Sc	Scandium	1879	86	P	Phosphorus	1669
		87	Ti	Titanium	1791	88	V	Vanadium	1801
		89	Cr	Chromium	1797	90	Mn	Manganese	1774
		91	Mn	Manganese	1774	92	Fe	Iron	Ancient
		93	Co	Cobalt	1735	94	Ni	Nickel	1751
		95	Cu	Copper	Ancient	96	Zn	Zinc	1746
		97	Ga	Gallium	1875	98	Ge	Germanium	1886
		99	Al	Aluminum	Ancient	100	Si	Silicon	1854
		101	Sc	Scandium	1879	102	P	Phosphorus	1669
		103	Ti	Titanium	1791	104	V	Vanadium	1801
14		105	Cr	Chromium	1797	106	Mn	Manganese	1774
		107	Mn	Manganese	1774	108	Fe	Iron	Ancient
		109	Co	Cobalt	1735	110	Ni	Nickel	1751
		111	Cu	Copper	Ancient	112	Zn	Zinc	1746
		113	Ga	Gallium	1875	114	Ge	Germanium	1886
		115	Al	Aluminum	Ancient	116	Si	Silicon	1854
		117	Sc	Scandium	1879	118	P	Phosphorus	1669
		119	Ti	Titanium	1791	120	V	Vanadium	1801
		121	Cr	Chromium	1797	122	Mn	Manganese	1774
		123	Mn	Manganese	1774	124	Fe	Iron	Ancient
15		125	Co	Cobalt	1735	126	Ni	Nickel	1751
		127	Cu	Copper	Ancient	128	Zn	Zinc	1746
		129	Ga	Gallium	1875	130	Ge	Germanium	1886
		131	Al	Aluminum	Ancient	132	Si	Silicon	1854
		133	Sc	Scandium	1879	134	P	Phosphorus	1669
		135	Ti	Titanium	1791	136	V	Vanadium	1801
		137	Cr	Chromium	1797	138	Mn	Manganese	1774
		139	Mn	Manganese	1774	140	Fe	Iron	Ancient
		141	Co	Cobalt	1735	142	Ni	Nickel	1751
		143	Cu	Copper	Ancient	144	Zn	Zinc	1746
16		145	Ga	Gallium	1875	146	Ge	Germanium	1886
		147	Al	Aluminum	Ancient	148	Si	Silicon	1854
		149	Sc	Scandium	1879	150	P	Phosphorus	1669
		151	Ti	Titanium	1791	152	V	Vanadium	1801
		153	Cr	Chromium	1797	154	Mn	Manganese	1774
		155	Mn	Manganese	1774	156	Fe	Iron	Ancient
		157	Co	Cobalt	1735	158	Ni	Nickel	1751
		159	Cu	Copper	Ancient	160	Zn	Zinc	1746
		161	Ga	Gallium	1875	162	Ge	Germanium	1886
		163	Al	Aluminum	Ancient	164	Si	Silicon	1854
17		165	Sc	Scandium	1879	166	P	Phosphorus	1669
		167	Ti	Titanium	1791	168	V	Vanadium	1801
		169	Cr	Chromium	1797	170	Mn	Manganese	1774
		171	Mn	Manganese	1774	172	Fe	Iron	Ancient
		173	Co	Cobalt	1735	174	Ni	Nickel	1751
		175	Cu	Copper	Ancient	176	Zn	Zinc	1746
		177	Ga	Gallium	1875	178	Ge	Germanium	1886
		179	Al	Aluminum	Ancient	180	Si	Silicon	1854
		181	Sc	Scandium	1879	182	P	Phosphorus	1669
		183	Ti	Titanium	1791	184	V	Vanadium	1801

PERIODIC TABLE OF ELEMENTS



1 1 H Hydrogen	2 3 Li Lithium	4 Be Beryllium	Atomic Number Symbol 17 Cl Chlorine										13 5 B Boron	14 6 C Carbon	15 7 N Nitrogen	16 8 O Oxygen	17 9 F Fluorine	18 10 Ne Neon
2 11 Na Sodium	3 12 Mg Magnesium	4 22 Ti Titanium	5 23 V Vanadium	6 24 Cr Chromium	7 25 Mn Manganese	8 26 Fe Iron	9 27 Co Cobalt	10 28 Ni Nickel	11 29 Cu Copper	12 30 Zn Zinc	13 31 Ga Gallium	14 32 Ge Germanium	15 33 P Phosphorus	16 34 S Sulfur	17 35 Cl Chlorine	18 36 Ar Argon		
4 19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	
5 37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	
6 55 Cs Cesium	56 Ba Barium	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon		
7 87 Fr Francium	88 Ra Radium	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Nh Nihonium	114 Fl Flerovium	115 Mc Moscovium	116 Lv Livermorium	117 Ts Tennessine	118 Og Oganesson		
		57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium		
		89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium		