



Basic Knowledge and Facts about Chemical Elements

How many Chemical Elements are in Nature?

Dmitri Mendeleev, a Russian professor of chemistry *is the "father" of the periodic table.*

Mendeleev discovered the periodic law and created the periodic table of elements, which he introduced in 1869 in his scientific work. 63 discovered chemical elements were placed out of order based on their accepted atomic weights at the time.. The Mendeleev periodic table of elements diagram is still used today.

As of 2015, there are **118** known **elements**, **98** of which are **natural elements**, mean occur naturally on Earth. 99% of the mass of the human body is made up of just six natural elements: oxygen, carbon, hydrogen, calcium and phosphorus.

Natural Elements by Name and by Symbol

Actinium	Ac	Europium	Eu	Molybdenum	Mo	Scandium	Sc
Aluminium	Al	Fluorine	F	Neodymium	Nd	Selenium	Se
Antimony	Sb	Francium	Fr	Neon	Ne	Silicon	Si
Argon	Ar	Gadolinium	Gd	Nickel	Ni	Silver	Ag
Arsenic	As	Gallium	Ga	Niobium	Nb	Sodium	Na
Astatine	At	Germanium	Ge	Nitrogen	N	Strontium	Sr
Barium	Ba	Gold	Au	Osmium	Os	Sulfur	S
Beryllium	Be	Hafnium	Hf	Oxygen	O	Tantalum	Ta
Bismuth	Bi	Helium	He	Palladium	Pd	Tellurium	Te
Boron	B	Hydrogen	H	Phosphorus	P	Terbium	Tb
Bromine	Br	Indium	In	Platinum	Pt	Thorium	Th
Cadmium	Cd	Iodine	I	Polonium	Po	Thallium	Tl
Calcium	Ca	Iridium	Ir	Potassium	K	Tin	Sn
Carbon	C	Iron	Fe	Promethium	Pm	Titanium	Ti
Cerium	Ce	Krypton	Kr	Protactinium	Pa	Tungsten	W
Cesium	Cs	Lanthanum	La	Radium	Ra	Uranium	U
Chlorine	Cl	Lead	Pb	Radon	Rn	Vanadium	V
Chromium	Cr	Lithium	Li	Rhenium	Re	Xenon	Xe
Cobalt	Co	Lutetium	Lu	Rhodium	Rh	Ytterbium	Yb
Copper	Cu	Magnesium	Mg	Rubidium	Rb	Yttrium	Y
Dysprosium	Dy	Manganese	Mn	Ruthenium	Ru	Zinc	Zn
Erbium	Er	Mercury	Hg	Samarium	Sm	Zirconium	Zr

10 Most Dangerous Natural Chemical Elements

Very few of these **natural elements** are completely harmless and most present some risk in sufficient doses. The risk can be divided in following categories: **toxic, radioactive or highly reactive.**

- 1. Plutonium (Pu)** - highly radioactive and toxic.
- 2. Polonium (Po)** - toxic and radioactive.
- 3. Caesium (Cs)** - super reactive, spontaneously explosive, mildly radioactive and toxic.
- 4. Arsenic (As)** - poisoning, in the small dosage can build up over the time.
- 5. Mercury (Hg)** - poisoning, absorbed through skin, dangerous by ability to build up in the seafood
- 6. Fluorine (F)** - highly poisonous gas, but good for the teeth.
- 7. Beryllium (Be)** - a category 1 carcinogen, it is also very useful in a number of industries.
- 8. Lead (Pb)** - toxic. In high enough doses lead can be lethal.
- 9. Hydrogen (H)** - incredibly flammable gas.
- 10. Chromium (Cr)** - a genotoxic carcinogen.

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