

Chemical properties of the main biogenic elements

The main biogenic elements include **carbon, oxygen, hydrogen and nitrogen**. These elements combine to form many diverse molecules. The following table shows the basic representation of elements in the human body per dry weight.^[1]

- Carbon is the main building block of living organisms.
- Oxygen is an important building block of living organisms (contained in alcohols, phenols, aldehydes, ketones and others). It ensures breathing.
- Hydrogen is an important building block of practically all organic compounds. It is present in all tissues of living organisms.
- Nitrogen is part of many substances contained in the body. For all of them, let's name amino acids, which contain at least one amino (-NH₂) and carboxyl (-COOH) group.
- Calcium is significantly involved in the construction of solid parts of the body (teeth, bones). It can also be found in muscles, blood and other body tissues.
- Phosphorus, like calcium, although to a lesser extent, is contained in teeth and bones. It forms an important component of organic molecules – DNA, RNA, energy carriers (ADP, ATP) and is also part of most fats.

Basic representation of elements in the human body per dry weight

Element	Representation	Element	Representation
Carbon	50 %	Potassium	1 %
Oxygen	20 %	Sulfur	0,8 %
Hydrogen	10 %	Sodium	0,4 %
Nitrogen	8,5 %	Chlorine	0,4 %
Calcium	4 %	Magnesium	0,1 %
Phosphorus	2,5 %	Iron	0,01 %
		Manganese	0,001 %
		Iodine	0,00005 %

Other important biogenic elements are calcium, phosphorus, potassium, sulphur, sodium, chlorine, magnesium, iron, manganese and iodine.

Links

Related articles

- Oxygen
- Trace elements

External links

References

1. MURRAY, Robert K. *Harperova biochemie*. 2. vydání. Jinočany : H&H, 2002. 871 s. s. 6. ISBN 80-7319-013-3.

Used literature

- MURRAY, Robert K. *Harperova biochemie*. 2. vydání. Jinočany : H&H, 2002. 871 s. s. 6-7. ISBN 80-7319-013-3.