

Organic vs Inorganic

Organic compounds are made from things which were once alive and, therefore, they contain carbon. Inorganic compounds, however, do not contain carbon.

1. Carbon is an essential element in all organic compounds while inorganic compounds may or may not contain carbon.
2. Organic compounds do not dissolve in water but dissolve in organic solvents. Most Inorganic compounds dissolve in water but not in organic solvents.
3. Organic compounds have low melting and boiling points. Inorganic compounds have high melting and boiling points.
4. Organic compounds form covalent bonds while inorganic compounds form ionic/electrovalent bonds.
5. Organic compounds have color and odor while inorganic compounds are usually colorless and odorless.
6. Organic compounds e.g. methane, ethane, acetylene, alcohols etc. Inorganic compounds e.g. carbon dioxide, sulphuric acid, salts etc.

Organic compounds are produced by living things. Inorganic compounds are produced by non-living natural processes or by human intervention in the laboratory.

The presence of carbon determines if a compound is organic or not. All organic compounds have carbon in them.

An organic compound is a compound that requires carbon and hydrogen while an inorganic compound is a compound that can contain any compound or element other than carbon. Organic compounds contain carbon and carbon-carbon bonds.

The most common differentiation to help distinguish between organic and inorganic compounds used to be the fact that organic compounds result from the activity of living beings, whereas inorganic compounds are either the result of natural processes unrelated to any life form or the result of human experimentation in the laboratory.

Directions: Using the information above and from your Biochemistry Booklet Activity, determine which statements classify as Organic and Inorganic. (These will be written in your notes.)

***Living or from living things**

***Soluble in water**

***contains the element carbon**

***(generally) faster reactions**

***contains covalent bonds**

***nonliving**

***not soluble in water**

***contains metal ions**

***small molecules**

***larger molecules**

***(generally) slower reactions**

***contains ionic bonds**

***does not conduct electricity**

***conducts electricity**