



Basic Knowledge and Facts about Chemistry

Chemistry in our Life.

Life is Chemistry. Because **everything around us is chemistry.** The hearing, seeing, tasting, emotions – all involve intricate series of chemical reactions and interactions in your body. **Everything** we smell or touch **involves chemistry** and **chemicals.** We find chemistry in daily life in the foods we eat, the air we breathe, cleaning chemicals, etc... Chemistry is a big part of our everyday life.

What is chemistry?

Chemistry is the science that systematically studies the composition, properties, and activity of organic and inorganic substances and various elementary forms of matter. **Chemical properties** are any of the properties of matter that may only be observed and measured by performing a chemical change or chemical reaction. Chemical properties cannot be determined by touching or viewing a sample. The structure of the sample must be altered for the chemical properties to become apparent. Chemistry is the chemical components of an item.

What is Organic Chemistry?

Organic chemistry is one of several branches of the chemistry that studies the **chemistry of life** and of the chemical reactions related to life.

Organic chemistry is the study of the element **Carbon (C)**. Carbon bonds with pretty much anything it encounters and it bonds with more than one thing at a time. This branch of chemistry was originally limited to compounds produced by living organisms but has been broadened to include human-made substances such as plastics. The range of application of organic compounds is enormous and also includes, but is not limited to, pharmaceuticals, petrochemicals, food & food additives, explosives, paints, and cosmetics.

Examples: soaps, detergents, cleaning products, plastic goods, shampoo, candies, vitamins, wood, coal, asphalt, fuel oil and gasoline. Petroleum is also the raw material for many chemical products, including pharmaceuticals, solvents, fertilizers, pesticides, food. Petroleum can be utilized to begin the process of vinegar making. FDA doesn't require manufacturers to label the vinegar as being derived from a petroleum starter.

What is Inorganic Chemistry?

Inorganic chemistry is the branch of chemistry that concerned with the properties and behavior of inorganic compounds, which include **metals, minerals, and organometallic** compounds. Most inorganic compounds occur as salts. The first important man-made inorganic compound was ammonium nitrite for soil fertilization through the Haber process. **Inorganic** compounds **are used** as catalysts, pigments, coatings, surfactants, medicines, fuels, and more. They often have high melting points and specific high or low electrical conductivity properties, which make them useful for specific purposes. **Inorganic items**, such as **rocks, air, metals, and water** often contain organic matter, too.

Where Is Inorganic Chemistry Used?

Inorganic chemistry is a highly practical science - traditionally, a nation's economy was evaluated by their production of sulfuric acid because it is one of the more important elements used as an **industrial raw material**. The first important man-made inorganic compound was ammonium nitrite for soil fertilization through the Haber process. **Ammonia** is a nitrogen source in fertilizer, and it is one of the major inorganic chemicals used in the production of nylons, fibers, plastics, polyurethanes (used in tough chemical-resistant coatings, adhesives, and foams), hydrazine (used in jet and rocket fuels), and explosives. **Chlorine** is used in the manufacture of polyvinyl chloride (used for pipes, clothing, furniture etc.), agrochemicals (e.g., fertilizer, insecticide, or soil treatment), and pharmaceuticals, as well as chemicals for water treatment and sterilization. **Titanium dioxide** is the naturally occurring oxide of titanium, which is used as a white powder pigment in paints, coatings, plastics, paper, inks, fibers, food, and cosmetics. Titanium dioxide also has good ultraviolet light resistance properties, and there is a growing demand for its use in photocatalysts(Chlorophyll of plants is a typical natural photocatalyst).

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