

## WHAT ROLE DOES CHEMISTRY PLAY IN OUR LIFE?

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**Annotation:** Chemistry has firmly entered everyday life since the time of Ancient Egypt. This article explains the huge role of chemistry in human life.

**Keywords:** inorganic chemistry, organic chemistry, ceramics, petrochemistry, perfumery and cosmetics, agricultural chemistry, polymers, elastomers, explosives, pharmaceutical chemistry.

Chemistry is closely related to the daily life of a person. Chemicals are used to produce fabrics, materials (plastics, rubber, alloys), food additives, medicines, detergents, cosmetics and others. Most importantly, chemical compounds are present in food and are involved in the metabolism of the body. Inside every living organism, chemical reactions occur that help digest food, lead an active lifestyle, and communicate. The energy that a person receives with food is also chemistry. In the process of digestion, complex substances are broken down into simpler ones, from which proteins, fats, carbohydrates necessary for the human body are synthesized.

There are various branches of chemical science that study certain areas of application of chemistry. Chemistry plays an important role in industry. With the help of chemistry in industry, various things that are indispensable, and irreplaceable, are made for a person. And these things in themselves are used in people's lives daily and continuously. Unfortunately, many do not know that this is chemistry.

The science of chemicals includes many sections, the list of which is replenished with the development of science as a whole. Branches of the chemical industry:

- **Inorganic chemistry** (Ammonia production, soda production, sulfuric acid production, etc.)
- **Organic chemistry** (Acrylonitrile, phenol, ethylene oxide, carbamide and others)
- **Ceramics** (Silicate production)
- **Petrochemicals** (Benzene, ethylene, styrene)
- **Perfumes and cosmetics** (coumarin, vanillin, camphor)
- **Agrochemistry** (Fertilizers, pesticides, insecticides, herbicides)
- **Polymers** (Polyethylene, Bakelite, Polyester)
- **Elastomers** (Rubber, neoprene, polyurethanes)
- **Explosives** (Nitroglycerin, ammonium nitrate, nitrocellulose)
- **Pharmaceutical Chemistry** (Drugs)

❖ **Food industry.** Food includes chemical compounds of plant and animal origin. Chemical preservatives, stabilizers, dyes are used to improve taste, extend shelf life, and maintain color. For example: vinegar, baking soda, food additives, preservatives, citric acid, esters (flavors).

❖ **Production.** Various household items and materials are made from petroleum products, metals and non-metals. Metal alloys are used for the manufacture of machine bodies, metal parts, tools. Metal coating protects items from damage. Organic compounds are used to make plastics, rubber, threads, solvents, etc. For example: Bronze, cast iron, steel, plastics, rubbers, synthetic fabrics, glues, varnishes, paints.

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❖ **Energy.** Minerals are the main source of fuel. During the processing of oil, gas, coal, various fractions of substances are released, most of which are used to produce gasoline, kerosene, and diesel. Such products include methane, propane, gasoline, kerosene, coal and others.

❖ **Household chemicals.** Sulfate surfactants (surfactants), alkali, enzymes, glycerin are used to produce washing powders, soaps, dishwashing detergent, etc. These substances include soap, cleaning and washing powders, gels.

❖ **Cosmetology.** Cleansers contain glycerin, alkali, enzymes, essential oils. Aerosols use liquefied gases. Sand and soda are the main components of toothpastes. Lipstick is made from wax. Metals, hydrogen are added to hair dye. This section also includes toothpaste, cream, shampoo, hair and nail polish, etc.

❖ **Pharmacy.** All medicines contain chemicals that have a beneficial effect on the human body. These products include: aspirin, ammonia, iodine solution and many medical tablets and solutions. It is difficult to find an object in the surrounding world that is not a product of the creation of chemistry. Home, clothes, care products, medicines and even food have an imprint of chemistry. If you look around and think about what we touch every day in the kitchen, in the bathroom, what is found in our refrigerator or in the city hall? It becomes obvious that a chemist has left his imprint on every object of everyday life. Every day we do things that seem normal at first glance: wash dishes, salt food, use medicinal preparations or hygiene products. In fact, we produce chemical reactions by transforming one substance into another. That is, each of us, to some extent, is a chemist with the ability to transform one substance into another. Chemistry has enormous potential to create unseen materials, increase soil fertility, facilitate a person's work, save time by dressing, feeding, keep them alive and healthy, create coziness and comfort, and change the appearance of a person. It can be seen that chemistry plays a huge role in your life! Without chemistry it is impossible to imagine even one day.

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