CHLORIDES ARE THE MOST IMPORTANT SUBSTANCES IN HUMAN LIFE

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Abstract. This article discusses the chloride compound. Their role in human life, in medicine and in industrial pharmacy.

Key words: sodium chloride, calcium chloride, potassium chloride, magnesium chloride, ammonium chloride, chlorhexidine, chlorobutin, antibiotics, chemotherapy drugs

Introduction. Chloride is a chlorine anion that is widely found in nature. It is a constituent of many minerals and is also found in seawater and fresh water. Chloride is also an essential nutrient for humans and animals.

Chloride is the starting material for the production of many chemicals such as chlorine, hydrogen chloride, sodium hypochlorite, zinc chloride, sodium chloride, copper chloride and others. Chlorine is used to produce organochlorine compounds, which are widely used in industry, agriculture and medicine.

Sodium chloride or table salt (NaCl). It is an important seasoning for food. It is also necessary for normal digestion, is involved in the transport of nutrients across cell membranes, in maintaining the acid-base balance in the body and in muscle function, including the heart muscle.

In pharmaceutical production it is one of the most common universal solvents, which is compatible with most medicinal substances. It is used to formulate various forms such as tablets, capsules, syrups and solutions and has antiseptic properties that help protect drugs from bacterial contamination.

For the preservation of drugs, sodium chloride prevents their spoilage by microorganisms. Creates an unfavorable environment for bacterial growth, which helps extend the shelf life of drugs.

Sodium chloride tablets are used to treat hypochloremia, a condition in which there is not enough chloride in the blood. Hypochloremia can be caused by various factors such as diarrhea, vomiting and kidney failure. The tablets help restore normal chloride levels in the blood.

To produce some vaccines, such as the flu and hepatitis B vaccines. These vaccines help protect people from contracting various diseases.

Topical products containing sodium chloride are used to treat skin conditions such as eczema and psoriasis, reduce inflammation and itching, and cleanse the skin. Eczema and psoriasis are chronic skin diseases that are accompanied by inflammation and itching.

Antibiotics. For the production of certain antibiotics such as penicillins and cephalosporins. These antibiotics are effective against a wide range of bacteria.

Chemotherapy drugs. For the production of certain chemotherapy drugs such as cisplatin and doxorubicin. These drugs are used to treat cancer.

In medicine, sodium chloride solutions are used to treat dehydration, restore the body's water-salt balance, and also to wash wounds and other injuries. Isotonic sodium chloride solution (0.9%) is the standard solution for intravenous infusion.

In the food industry it is used as a preservative, to improve the taste and texture of products, food additives such as monosodium glutamate and ascorbic acid, and to give them the desired shape and weight.

The cosmetics industry includes the production of shampoos, soaps, creams and other cosmetics. Its role is to remove impurities, soften the skin and regulate pH.

Hydrogen chloride (HCl). Used in the production of hydrochloric acid, in the production of plastics, synthetic fibers, metal etching, cleaning the surface of vessels, wells from carbonates and other products.

Potassium chloride (KCl). It is an important nutrient for plants and animals. Potassium chloride is used as a fertilizer.

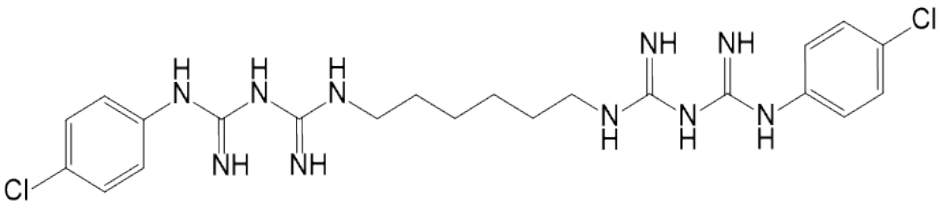
Calcium chloride ($CaCl_2$). It is an important nutrient for plants and animals. Calcium chloride is added to asphalt and various building materials.

Magnesium chloride ($MgCl_2$). It is an important nutrient for plants and animals. Magnesium chloride is used in cement production, as a fire retardant, and in other applications.

Ammonium chloride (NH_4Cl). This is a mineral fertilizer that is used in agriculture, as a stabilizer in food products and in the production of dyes.

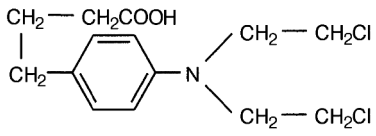
Zinc chloride ($ZnCl_2$). It is an antiseptic that regenerates and heals wounds and other injuries.

Chlorhexidine is one of the most active antiseptic agents that has a rapid, strong bactericidal effect on gram-positive and gram-negative bacteria.



Chlorhexidine is found in such medications as: Anzibel, Sebidine, Sibicort cream, Lizoplak gel, Vitabact eye drops.

Chlorbutin is used for chronic lymphocytic leukemia, lymphocytic and reticulosarcoma, lymphogranulomatosis, multiple myeloma, as well as for ovarian and breast cancer



Conclusion. Chlorides are salts containing chlorine ion. They play an important role in chemical processes, industry and biology. For example: imagine ordinary kitchen salt, which is important in human life. They can have

both positive and negative effects depending on the context and specific compounds.

Thus, chloride is an important substance that is used in many areas of human life. It plays an important role in nutrition, medicine, chemical industry and other fields

References

1. М.Д. Машковский. “Лекарственные средства”. М.: 2012 г. 1216 с.

2. Л. Н. Яхонтов и Р. Г. Глушков. “ Синтетические лекарственные средства”. М.: 1983 г. 272 с.

3. М.А. Клюева. “Лекарственные средства, применяемые в медицинской практике”. М.: 1989 г. 512 с.

4. Д. А. Харкевич.“Фармакология”. М.: 2005- 736 с.