



E-466 AS A STABILIZER IN THE PHARMACEUTICAL FIELD AND THE RESULTS AND ANALYSIS OF APPLICATION AS A PLASIFFER IN MANY SECTORS OF THE ECONOMY

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Abstract

These definitions are related to the water permeability of the innovative product. Innovative product E-466 is used as strength regulators in the production of sweets 1-3g / kg, ice cream and jelly 2-8g / kg, E-466 5-20g / kg in shell for meat, fish, confectionery, nuts. The E-466 can bind water from 1 part to 120-140 parts. This supplement is especially meaty and its use in fish processing is important.

Keywords: alkali sediment, suffocation, ash content, moisture, cellulose, concentration, banana cellulose, extraction process, basic substance content, cotton lint, polymerization rate, pentosan, parameter, optimal conditions, destruction.

Additive E 466 is the most common cellulose ether.

More than 25% of the total mass of the produced product goes to the needs of the food industry. The substance belongs to ballast and does not bring benefits to the body, as well as tangible harm. An aqueous solution of a substance is a viscous sticky liquid, the degree of viscosity of which directly depends on the number of substituted hydroxyl groups in the cellulose molecule. The substitution index for food CMC should be in the range of 0.65–0.95 units.

This makes it possible to obtain solutions of medium and high viscosity, providing the desired consistency of food products, increasing their organoleptic and taste properties. According to the chemical structure, carboxymethyl cellulose is a polyelectrolyte, a simple ionic ether of cellulose and a halocarboxylic acid. The way to obtain the E 466 additive is based on the chemical reaction of the interaction of monochloroacetic acid with a specially prepared alkyl cellulose.

Carboxymethylcellulose does not decompose under the influence of bright light and is insoluble in vegetable and animal fats.





It is known that if the technical process is not followed (e.g. when the dose is exceeded), carboxymethylcellulose (food supplement E-466) can lead to digestive disorders. There are no official scientific data on toxicity when used in the cosmetics industry. Studies in some animals have shown that carboxymethylcellulose raises cholesterol levels and there is unconfirmed evidence that it can cause tumors and cancer [1-12]. The food supplement E-466 is used as a strength stabilizer, thickener, capsule. The main feature of carboxymethylcellulose is its ability to form a highly viscous colloidal solution that does not lose its properties over a long period of time. As a thickener in the production of ice-cream, cottage cheese mass, mayonnaise; as a consistency regulator in sweets, jellies, creams and pastes; Used in shells for fish, meat, confectionery.

Analytical stages of the use of E-466 as a stabilizer in various industry networks. Stabilizers are mainly designed to reduce the filtration and stickiness of drilling fluid. These are organic compounds that have high hydrophilicity and high solubility in water. Cellulose-based stabilizers - reagents (carboxymethylcellulose, carbaminol, carbophene), lignosulfonates, lignin, polyphenols, acrylic polymers, biopolymers, sodium and potassium salts of humic acids, starch (technical starch, known modified starch). It is known that carboxymethylcellulose (KMTs) with any degree of polymerization retains its protective properties at temperatures between 130-160 °C. It is known from the literature that the physicochemical properties of KMTs (E-466) vary depending on its chain length and degree of exchange. It is soluble in water and alkalis, moderately soluble in acids, glycerin. Insoluble in organic solvents. Its laxative effect can be observed from a dose of 5 gr. Hygienic standards are not limited to DSP for KMTs (carboxymethylcellulose) (E-466). Risks according to GN-98: PDK is 10 mg / m³ in workplace air, hazard class 3, and KMTs (carboxymethylcellulose) (E-466) have been approved as a strength regulator in 8 food standards:

- canned sardines up to 20 g / kg;
- canned mackerel up to 2.5 g / kg;
- meat products up to 15 g / kg;
- mayonnaise up to 1 g / kg;
- certain types of margarine up to 10 g/kg;
- processed cheeses (fused) up to 5 g / kg;
- fragrant yogurt, etc. up to 5 g / kg;
- soups-broth up to 4 g / kg;

KMTs (carboxymethylcellulose) (E-466) - TI (p. P. 3.1.8,3.6.58,3.16.53 SanPiN 2.3), which belongs to the quality control of TI in pasteurized cream, and other food





products, such as consistency stabilizer, thickening texture, binder 2.1293-03) is used strictly in accordance with the requirements.

Innovative product 1-3 g/kg, ice cream as strength regulators in the production of sweets from E-466 and 2-8 g/kg in jelly, E-466 5-20 g/kg in shell for meat, fish, confectionery, nuts. These definitions are related to the water permeability of the innovative product. The E-466 can bind water from 1 part to 120-140 parts. The use of this supplement is especially important in the processing of meat and fish.

Taking into account the above in the table below, as a result of the study, the composition-recipe of E-466 products synthesized from local raw materials, which can be used in various sectors of the economy, was developed and recommended.

E-466 product synthesized from local raw materials is a recipe that can be used in various sectors of the economy

TABLE-1

No	Industry networks	Available content, g / kg	Recommended content, g / kg	E-466 brand	Tc 22235949-003:2015
1	Mayonnaise	20	18	70/600-0	3,9
2	Meat products	15	12	85/700-C-O	78
3	Fragrant yogurt and others	5	4,8	85/700-C-O	82
4	Soups-broth	4	3,7	70/600-0	99,0
5	Processed cheeses (melted).	5	5,4	70/600-0	3,9
6	Certain types of margarines	10	11,2	70/600-0	78

A study of the use of E-466 as a placeholder in many sectors of the economy. Plasticizers are elastic in the composition of polymeric materials during processing and use or substances introduced to give (or increase) plasticity. Plasticizers facilitate the dispersion of ingredients, reduce the processing temperature of the compositions improves the cold resistance of polymers but sometimes worsens their heat resistance. Some plasticizers, on the other hand, can increase fire, light, and heat resistance.

KMTs (carboxymethylcellulose) are used as a thickening agent for emulsion paints, act as a plasticizer, and powder paints delay setting time as an auxiliary agent for leveling compounds, cement mortars. It is also used in the manufacture of adhesives for wallpaper.



KMTs (carboxymethylcellulose) (E-466) - in the food industry as a plasticizer, thickener, and resorbent, mainly as a viscosity modifier or thickener and as an emulsion stabilizer in various products, toothpaste, diet pills, water-based paints and is widely used as an ingredient in many non-food products, such as various paper products.

In addition, KMTs (carboxymethylcellulose) (E-466) are widely used in medicine, cosmetology, as well as in the chemical industry. There are no data on the harmful effects of this substance on the body and therefore it is considered safe.

In conclusion to this chapter, it can be noted that the innovative technology product obtained on the basis of research results - from E-466 as a stabilizer in the pharmaceutical industry as well as research and analysis of its use as a placeholder in many sectors of the economy. In particular, the analytical stages of the use of E-466 as a stabilizer in various industries were studied.

Innovative product E-466 is used as strength regulators in the production of sweets 1-3g / kg, ice-cream and jelly 2-8g / kg, E-466 5-20g / kg in shell for meat, fish, confectionery, nuts. These definitions are related to the water permeability of the innovative product. The E-466 can bind water from 1 part to 120-140 parts. The use of this supplement is especially important in the processing of meat and fish.

Taking into account the above in the table below, as a result of the study, the composition-recipe of E-466 products synthesized from local raw materials, which can be used in various sectors of the economy, was developed and recommended. In addition, recommendations were made based on the results of research on the use of E-466 as a plasifier in many sectors of the economy.

KMTs (carboxymethylcellulose) (E-466) are a plasticizer, thickener, and resorbent in the food industry, primarily as a viscosity modifier or thickener and toothpaste, diet pills, water-based paints, detergents as emulsion stabilizers in various products and is widely used as an ingredient in many non-food products, such as various paper products. In addition, KMTs (carboxymethylcellulose) (E-466) are widely used in medicine, cosmetology, as well as in the chemical industry. There are no data on the harmful effects of this substance on the body and therefore it is considered safe.

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