



## MARSHMALLOW AND JELLY PRODUCTS WITH REDUCED SUGAR CONTENT

### Purpose and scope

The improving of the quality and expanding the assortment of jelly products based on different gel-forming agents through the use of starch syrups, fructose and polydextrose has been substantiated.

### Main characteristics and the development essence

Taking into account the substantial value of sugar in the process of structure formation of the jelly masses, the carbohydrate profile, technological properties of various starch syrups and jelly recipes have been analyzed, which allowed substantiating the selection of syrups for usage in the production of marmalade on pectin and agar. Based on rheological studies of complex structural and mechanical properties of jelly and foam masses for two-layer jelly, in order to adjust the structure of finished products, it is recommended to use polydextrose when replacement more than 50% of sugar with starch syrup or fructose. Amount of polydextrose that ensures the required strength of marmalade jelly depends on the ratio of carbohydrates in jelly marmalade and the type of gel-forming agents.

The usage of starch syrup combined with polydextrose as well as fructose with polydextrose promotes better preservation of quality of the two-layer jelly throughout the term of standard shelf life and deceleration of saccharification during storage.

### Comparison with the world's analogues, the main development advantages

The use of the proposed ingredients allows to lower the cost of products, slow down the process of their soak during storage, as well as expand the assortment of sugar-free marmalade with prebiotic properties and reduced glycemic index

### The intellectual property protection status

6 patents have been obtained for different types of marshmallow and jelly products.

### Demand in the market

Expansion of the raw-material sources for the production of jelly, improving of the quality of products during storage, as well as the expansion of the range of dietetic jelly products, with high content of fibers and low glycemic index.

### The readiness for development status

The project of regulatory documentation for new types of products is developed, their industrial testing and application of the research parties were held

