



ODESSA NATIONAL ACADEMY OF FOOD TECHNOLOGIES

DEVELOPMENT OF TECHNOLOGY OF SUGAR CONFECTIONERY PRODUCTS WITH SYNBIOTIC

Purpose and scope

Creation of new products (marmalade, fondant and marshmallows with synbiotic) for the consumption of people with intestinal microbiocenosis disorder contributes to the expansion of the range of healthy confectionery products.

Key features, the essence of the project

Based on the analysis of the technological and physiological properties of pro- and prebiotics, practical measures have been developed that allowed the production of marmalades, fondant and marshmallows using the synbiotic complex, which, on one hand, will lead to the introduction of physiologically relevant micronutrients into the diets of the population, improvement of consumer properties and digestibility of confectionery products, and on the other – to attraction of consumers' interest to manufactured products and, consequently, increase the profitability of the enterprise.

The technology of manufacturing fondant, jelly marmalade and marshmallows with a synbiotic complex, which consists of probiotics (immobilized cultures of *Bifidobacterium bifidum*) and prebiotics (lactulose), has been developed. Inclusion of developed products into the diet will not so much provide the human body with energy and plastic material, as it will regulate and simulate specific physiological functions aimed at normalizing the intestinal microflora and promote the immunity.

The use of a synbiotic additive in the technology of sugar confectionery will allow not only to increase their physiological value, but also to achieve the following technological effects: improvement of structural and mechanical properties of semi-finished products; improvement of sensory properties of finished products; reduction of the sugar content in the formula by 10%, slowing down the process of "staling" of the products due to the reduction of moisture loss.

Comparison with world analogues, the main advantages of the project

The developed technologies allow to produce sugar confectionery products with anti-dysbiotic properties and can provide a health-improving effect in the presence of dysbiosis.

Intellectual property protection status

3 patents of Ukraine for developed confectionery products have been obtained.

Market demand

The market for the proposed products is wide, since dysbiosis affects about 75...90% of the adult population of Ukraine.

The state of project readiness

Industrial testing of the technology has been conducted at the industrial enterprises. The technology for small-scale production has been developed and the normative documentation has been drafted. The technology is ready for implementation.



Department of normative and technical
support and metrology

Kanatna St. 112, Odessa, Ukraine, 65039
e-mail: nauka@onaft.edu.ua (for O.I. Danylova)
<http://www.onaft.edu.ua>
tel./fax: +38 (048) 724-28-75, +38(048)712-41-30