

LACTOSE FREE YOGURT TECHNOLOGY DEVELOPMENT FOR PERSONALIZED NUTRITION

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Due to the widespread use of antibiotics, the bad ecological situation, fermented milk drinks are gaining more and more popularity. Yoghurts are especially popular among the population. Fermented milk products contain a unique in its kind disaccharide of animal origin lactose, which has the ability to stimulate the development of lactic acid microorganisms that suppress the vital activity of pathogenic microflora in the human intestine, promoting the absorption of calcium, magnesium and phosphorus.

A significant part of the world's population suffers from lactose intolerance, linked to a genetically determined deficiency of the enzyme β -galactose, which is one of the main reasons for the decrease in demand for dairy products among consumers suffering from primary or acquired intolerance to milk sugar.

Lactase deficiency is a variant of fermentopathy caused by the inability to break down lactose, a natural disaccharide contained in dairy products due to a decrease in the activity of the enzyme of parietal digestion in the small intestine - lactase. Lactose intolerance in the gastrointestinal tract of a person suffering from hypo- and alactasia leads to dispersion, diarrhea and other undesirable phenomena. For the successful prevention and treatment of these diseases, it is necessary to reduce or completely eliminate the lactose intake.

A technology for lactose-free milk producing was developed using fermentation technology. On the basis of lactose-free milk, a range of lactose-free yoghurts was developed: of animal and vegetable origin of the following types: natural, fortified and with additives. Flax seeds, sesame seeds and chia seeds, which are rich in vitamins, were used to produce a range of yogurt with additives. To obtain fortified yoghurts, the minerals iron and calcium were used, which prevent the development of anemia and oncological pathologies. Experimental assortment of lactose-free yoghurts was assessed by physicochemical and organoleptic methods. All developed samples meet the standards of technical documentation for this type of food product. The organoleptic characteristics were highly appreciated. Developed lactose-free products are an opportunity for many people to return to a normal healthy diet.

Keywords: intolerance, fermented milk products, lactose free, fermentation technology, healthy diet

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