

Development Of Technology for Production of New Types of Curd Products with Components

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Abstract. Dry sun-dried tomatoes are recommended for use in case of a lack of vitamins and microelements in the body. Sun-dried tomatoes contain fiber, which improves the motility of the digestive tract. They are excellent prevention of various vision problems. Sun-dried tomatoes help reduce the risk of blood clots in your blood vessels. This product contains serotonin - the "hormone of happiness".

Keywords; tomatoes, product, blood, problems.

Introduction.

In connection with the growing volumes of milk produced and the modernization of production in the Republic of Belarus, the number of fermented milk products produced is increasing every year and its range is expanding. The main place among fermented milk products is occupied by cottage cheese and curd products, since they have a constant increased consumer demand among buyers.

Modern trends in the production of cottage cheese and curd products in the Republic of Belarus are focused on the creation of functional products, balanced in nutritional and biological value, with increased shelf life. Many curd products have an increased energy value. Due to their delicate consistency, the products are convenient for a number of dietary medicinal nutrition, taking into account the content of fat, sugar, salt in them. Thus, one of the most expedient directions of using cottage cheese is the production of various cottage cheese products, the production process of which is quite simple and economical [1].

The cottage cheese contains 14-17% proteins, up to 18% fat, 2.4-2.8% milk sugar. It is rich in calcium, phosphorus, iron, magnesium - substances necessary for the growth and proper development of a young body. Curd proteins are partially associated with phosphorus and calcium salts. This promotes better digestion in the stomach and intestines.

Curd products are very nutritious because they contain a lot of protein and fat. Amino acids are found in curd. Some types of amino acids are not produced on their own by the human body, they should only be supplied with food (tryptophan, lysine, methionine). These amino acids, which are essential, are responsible for limiting the assimilation of food, their lack leads to a limitation of the assimilation of other amino acids by the human body [2].

Cottage cheese as a source of carbohydrates may not seem like a very valuable product. It contains only a small amount of galactose and milk sugar, but this is its advantage, not a disadvantage, since it will be the number one product in a therapeutic diet for patients, for example, diabetes mellitus [3].

The curd contains a significant amount of minerals (calcium, phosphorus, iron, magnesium, etc.) necessary for the normal functioning of the heart, central nervous system, brain, for bone formation and metabolism in the body.

The benefits of curd products are almost identical to those of fresh curd. So, this product is not subjected to heat treatment, and therefore it retains the same irreplaceable substances that are present in the feedstock [4].

The purpose of this scientific work is the development of technology and recipes for curd products enriched with introduced components (dry sun-dried tomatoes, turmeric, ham, mushrooms) in order to increase the assortment of this group of products, as well as increase their biological value.

In the course of the work, 4 groups of curd products with different concentrations of the introduced components were prepared. The components were selected based on their useful properties and mass consumption.

In the preparation of the curd product of group No. 1, dry sun-dried tomatoes were used as an introduced component.

Dry sun-dried tomatoes are recommended for use in case of a lack of vitamins and microelements in the body. Sun-dried tomatoes contain fiber, which improves the motility of the digestive tract. They are excellent prevention of various vision problems. Sun-dried tomatoes help reduce the risk of blood clots in your blood vessels. This product contains serotonin - the "hormone of happiness" [5].

In the preparation of the curd product of group No. 2, a spice, turmeric, was used as an added component.

Turmeric is a bright orange oriental spice native to India, where it is actively added to a variety of foods and is a powerful natural remedy.

Turmeric contains vitamins K, B, B1, B2, B3, C, and is also rich in calcium, iodine, phosphorus and iron. Thanks to these essential elements, it is an excellent prophylactic agent against senile dementia and Alzheimer's disease [6].

In the preparation of the curd product of group No. 3, ham was used as an added component.

Due to the specific characteristics of the chemical composition, as well as the manufacturing technology, ham has a positive effect on the human body when consumed in moderation. It contains a lot of fat and cholesterol, as well as a number of vitamins and minerals that are vital for human health. As a result, the use of ham stimulates the processes of metabolism and the formation of muscle and bone tissue, reduces nervous excitability, improves the functioning of the gastrointestinal tract, and also increases immunity and has an immunostimulating, antioxidant, anti-inflammatory effect [7].

In the preparation of the curd product of group No. 4, mushrooms - champignons were used as an introduced component.

Champignon contains 88-92% water, valuable proteins, carbohydrates, organic acids, minerals and vitamins: PP (nicotinic acid), E, D, B vitamins, iron, phosphorus, potassium and zinc, useful for the body's immune system.

Champignons also contain special substances that destroy cholesterol plaques. They also contribute to the fight against tumors [8].

Samples of cottage cheese products were made on the basis of cottage cheese prepared using pure cultures of mesophilic lactic acid streptococci using various concentrations of the introduced components: dry sun-dried tomatoes, turmeric, ham, mushrooms.

To select the optimal mass fraction of the introduced components, an expert method for evaluating the organoleptic characteristics of the obtained products was used. The experts were asked to evaluate organoleptic indicators (taste and smell, texture, appearance, color) for 3 samples of curd products of the first, second, third and fourth groups in accordance with a 20-point school. Based on the results of the expert assessment, tasting sheets were drawn up, in which the experts set points for each of the assessed indicators, and on the basis of this, samples were selected from each group that scored the maximum number of points to determine the physicochemical and microbiological indicators.

As a result of the work done, recipes for curd products were selected that have good organoleptic characteristics and are safe in terms of microbiological indicators, and optimal technological parameters for their production were developed.

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