

ENRICHMENT OF BREAD AND BAKERY PRODUCTS WITH BIOLOGICALLY ACTIVE SUBSTANCES

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Annotation: The article explains the theoretical justification of the possibility of using new types of additives obtained from local raw materials in the formation of quality indicators of bread and pasta products enriched with biologically active substances, minerals.

Keywords: bread, pasta, chemical composition, semolina, spinach powder, flaxseed, sesame flour, kunjarasi, proteins, fats, carbohydrates.

Introduction. Today, providing the world's population with high-quality food products with high nutritional value and safety, and developing resource-saving technologies are important tasks. Enriching the basic recipes of bread and pasta products through the use of new types of raw materials and by-products, and developing functional products are of great importance. In the world, there is an increase in the level of demand for bread and pasta products, and scientific research is being conducted to determine the technological properties and composition of bread and pasta products. [1,5,4] In this regard, special attention is paid to improving the technological properties and quality indicators of bread and pasta products using new and modern methods of physicochemical analysis, increasing their physiological and biological nutritional value.

Relevance of the topic: In recent years, our republic has achieved significant progress in modernizing food production, introducing resource-saving technologies based on deep processing of local raw materials, and reducing the share of imported raw materials and food products. The Strategy of Actions for the Further Development of the Republic of Uzbekistan sets out important tasks for “...development of production sectors, modernization and diversification of industry, application of low-cost energy-saving methods in practice, ensuring the nutritional safety of food products, production of competitive and export-oriented products that replace imports”.

In this regard, it is important to significantly increase the range of bread and pasta products, use additional products to improve quality indicators, develop types of products that improve health or reduce the risk of disease, identify effective processing methods, and develop technologies to increase the range of bread and pasta products.[2,7,3]

The purpose of the study is to improve the quality of bread and pasta products using effective additives with mineral substances and expand the range of products, develop types of products that improve health or reduce the risk of disease.

The objectives of the study:

to analyze modern information on the use of plant raw materials and mineral additives in the production of bread and pasta;

to study the chemical composition of plant additives and justify the feasibility of their use in the production of bread and pasta;

to determine the effect of the additives under study on the course of the technological process, the quality and nutritional value of the finished product;

to summarize the results of the study and, based on them, develop technological instructions for industrial production, determine the economic efficiency of the developments.

- the studied products are flaxseed, spinach powder, flaxseed and kernels, sesame flour and kernels, celery, which are not used for full and direct sale, as well as partially

defatted flaxseed and sesame seeds. This product, like flaxseed powder, has an unbalanced composition of proteins, fats and carbohydrates.

The scientific significance of the research results is explained by the theoretical substantiation of the possibilities of using new types of additives obtained from local raw materials in the formation of quality indicators of bread and pasta products enriched with biologically active substances and minerals.[6,8,5]

The practical significance of the research results is to expand the range of bread and pasta products with high nutritional value, develop their recipes and reduce the consumption of high-grade wheat flour and oils for the preparation of bread and pasta products, and improve product quality indicators, enrich them with minerals, biologically active substances, and vitamins.

Conclusion: In conclusion, through the effective use of local raw materials and additives used in them, an assortment of bread and pasta products with high nutritional value is developed.

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