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Збірник містить матеріали наукових досліджень студентів, аспірантів і молодих учених України та зарубіжжя, відзначених на регіональному, загальнодержавному та міжнародному рівнях. Висвітлено широке коло питань за напрямками гуманітарних, суспільних, економічних, природничих і технічних наук.

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TECHNOLOGY OF NUT-BASED SAUCE WITH BALANCED FATTY ACID COMPOSITION

The food and restaurant industries permanently face the tasks to expand the range of food and culinary products and provide the population with high-quality and wholesome foods. Thus, the range of certain types of liquid seasonings for dishes, especially peanut-based sauces, implemented in catering establishment is limited. Development of new recipes of balanced sauces based on physiological needs, consumption rates and the ratio of major nutrients, including polyunsaturated fatty acids, is one of the most promising problems nowadays.

A significant segment of the food with complex recipe composition in the ordinary people diet is characterized by high organoleptic and nutritional values. It stipulates the further development towards the design of multicomponent food and culinary products. Development of technology for production of high-quality culinary dishes and products is possible providing systematic approach to solving problems.

Expanding the range of sauces and balancing nutrient composition of liquid seasonings for dishes by mathematical modeling complicate the technological process on condition of high-quality finished product formation. Development of technology for producing new types of liquid seasonings from nuts involves the formation of such consumer characteristics like appearance, texture, flavor and other quality indicators. Nut-based sauces prepared according to the traditional recipes are characterized by unbalanced structure, vague taste and texture but the technological process of their production does not require special treatment. Polycomponent composition substantially affect the change in the texture of food products which determines the necessity of the process adjustment.

The subjects of the research were nut-based sauces. Modeling of the sauce recipe with a balanced composition of fatty acids was performed using the add-

in “Solver” in Microsoft Excel processor. The main rheological parameters of the sauces were determined using such equipment as rotational viscometer VA-1 and Bostwick consistometer. Determining the number of physical, chemical and organoleptic characteristics of the sauces was performed by conventional methods.

The choice of raw materials was substantiated and sauce recipe with a balanced composition of polyunsaturated fatty acids was developed on the basis of linear programming. According to the research of basic rheological and physico-chemical quality indicators technological modes and conditions of sauce production were recommended. Tasting assessment showed improvement of organoleptic indicators of the developed product compared with sauce-analogue.

A technology of the nut-based sauce with balanced composition of polyunsaturated fatty acids was developed. Fatty acid composition of the produced sauce was analyzed and it was found that the consumption of the recommended servings of product satisfies omega-6 and omega-3 PUFA need by 55 %.