IMPROVING RECIPE COMPOSITION AND TECHNOLOGY OF BREAD STICKS
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It is possible to improve usefulness of bread sticks due to the making in their recipes the alternative for baking natural ingredients with high nutritional and biological value. We can offer such functional ingredients as basidiomycetes, in particular Pleurotus ostreatus mushrooms that contain significant amount of nutrients.

To enrich recipe composition with more protein was decided to add alimentary casein, which proteins by amino acid composition blend well with flour proteins and Pleurotus ostreatus mushrooms.

With the help of software «Optima» and experimental laboratory baking a new recipe of bread sticks with a balanced chemical composition was designed. The products, which recipe contained Pleurotus ostreatus mushrooms and casein in the amount of 25 % and 7 % to their weight of flour respectively, had high organoleptic, physical and chemical properties. The investigations have shown that in the finished enriched sticks proteins content increases by 50,5…52,5 %, protein’s quality index rises from 0,71 in traditional products to 0,81.

The production of bread sticks requires a complex of specialized equipment (dough sheeting machine, plaits cutting forming machine, etc.). It is offered to improve the technological process of enriched bread sticks production due to the introduction of fermenting-forming aggregate (extruder) that was developed by scientists of our university. In the aggregate cold extrusion processing of the dough at higher pressure, namely its ripening, standing and forming, take place. By the method of mathematical planning of multifactor experiment it was determined that dough with Pleurotus ostreatus mushrooms and casein should knead for 10…11 min. The optimal pressure in the vessel of the fermenting-forming aggregate is 0,2 MPa, the duration of dough ripening under the pressure is 10 min. It was received a mathematical model that adequately describes the influence of technological parameters on the quality of finished products.

KEY WORDS: bread sticks, Pleurotus ostreatus mushrooms, alimentary casein, fermenting-forming aggregate