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РОЗДІЛ 5

ТЕХНОЛОГІЧНІ АСПЕКТИ ВИРОБНИЦТВА ХАРЧОВИХ ПРОДУКТІВ ЛІКУВАЛЬНО-ОЗДОРОВЧОГО НАПРЯМКУ

and animal origin used in food technology. In today's world the rapid development of biotechnology, scientific discoveries in the field of enzymology made enzymes the most active participants in many food technologies. The using of enzymes allows significantly accelerate processes, increase the output of finished products, improve quality, save valuable raw materials. Ferments are also play an important role in food industry. Fruit juices are defecated by its help, produce lactose milk, soften the meat. One of the important aspects of biotechnology is the improvement of industrial strains of microorganisms, which will open a new improved, products in the food industry. The prospects of using biotechnological products in the food industry are significant, due to increasing the content of nutrients that will give a significant change in the industry.

The methods for large-scale production are major in biotechnology food industry. Until recently, biotechnology was used in the food industry to improve the processes and a skillful use of microorganisms, but future belongs to a genetic study on the creation of more productive strains for specific needs, implementation of new methods in fermentation technology.

Thus, the current level of development of food technology for achieving effective results provides a comprehensive interdisciplinary approach, so getting food development of a new generation requires a combination of knowledge of food chemistry and biotechnology. Targeted use of special strains of microorganisms in the production of functional foods offers great opportunities.

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ENHANCEMENT BIOLOGICAL ACTIVITY OF MEAT PATE «DIETARY» WITH ONION'S TUNIC ANTIOXIDANTS

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Currently, pate products of various animal and vegetable origin raw materials are very popular in the world, including Ukraine. Enrichment of pate products with biologically active substances having antioxidant properties and providing them with prophylactic purpose is undeniable topical issue.

Onion tunic, which biologically active compounds have complex effect on human body, are functional ingredients of a great interest. Onion tunic contain over 4 % of such antioxidant as quercetine, which is highly beneficial to the human body, as it has anti-allergy, antihistamine properties and prevent cardiovascular diseases.

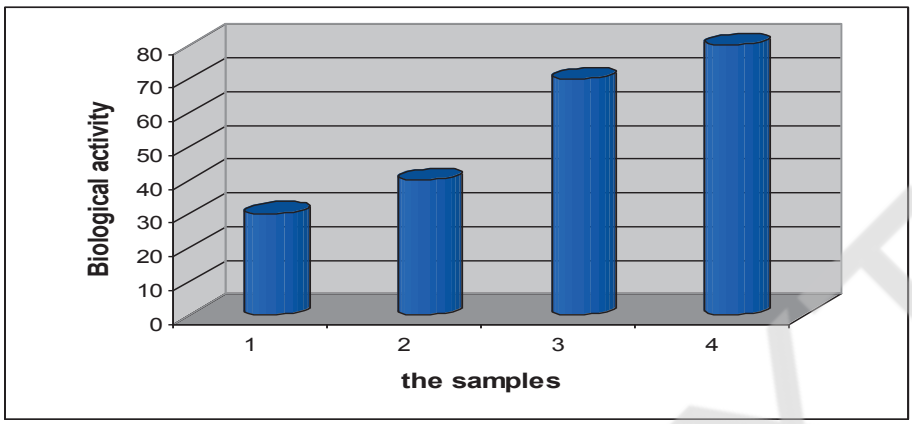
The objective of the study was to improve the formulation of the pate "Dietary" by enriching it with the antioxidants of onion tunic.

The objects of the study were onion tunic of the varieties: (Állium cépa), (Gagea lutea), (Allium atroviolaceum), pate «Dietary».

At the first phase of the study, biological activity of different varieties of onion tunic differing by chemical content of biologically active substances and tunic color: white, yellow and purple was found. It was determined that the tunic have high biological activity as the rate of electron transfer with the system $NAD \cdot H_2 - K_3Fe(CN)_6$ increases by 10-250 times in case of their presence, confirming the presence of the antioxidant action in the plant.

At the second stage of the studies, the possibilities to use onion tunic to increase antioxidant status of meat pate «Dietary» were studied, their content in the product were deter-

mined by the emergence of synergetic and antagonistic effects. The samples with high biological activity and the best sensitive features were selected (Pic. 1).



1 – pate, pate + 2 white onion tunic (Állium cépa), 3 – + pate with yellow onion tunic (Gagea lutea), 4 – pate + purple onion tunic (Allium atroviolaceum)

Pic. 1 – Biological activity of ordinary pate and pate with onion tunic

It was determined that the pate with added oniontunic of the varieties: Állium cépa, Gagea lutea and Allium atroviolaceum have biological activity by 1.33, 2.33, 2.66 times more than an ordinary pate, respectively.

Therefore, based on the data received we can conclude that the introduction of onion tunic to the formula of pate «Dietary» increases its biological value and provides an opportunity to expand the range of «healthy» food with high biological value.

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METHOD FOR PRODUCING OF FOOD COLORANT

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World market of natural colorant for food industry has grown on 29 % and continue to increase. Plenty of food industry branches are interested in using of natural colorants in production. People prefer more organic products.

A plant Hibiscus Sabdariffa L. is source of anthocyanins (plant pigment), which are perfect for food colorant industry. At the same time extraction process from plants is a quite simple and could be used for wide production. The fact is extraordinary important for producers. A colorant like that helps to increase made production quality due to using of natural ingredients and helps to reduce production cost.

For giving the product pleasing features often use synthetic and natural colorants. Unfortunately, for last years people have chosen synthetic colorants in our country and abroad. The kind of colorant paints products in stable color and has low price.

But we have reliable information about mutagenic and cancerogenic characteristics of these colorants. People have adapted for natural colorant during Evolution. The colorants were extracted from fruit, vegetables, berries and plant roots. Natural colorants have coloring

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