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ТЕХНОЛОГІЧНІ АСПЕКТИ ВИРОБНИЦТВА ХАРЧОВИХ ПРОДУКТІВ ЛІКУВАЛЬНО-ОЗДОРОВЧОГО НАПРЯМКУ

However, it is alkali soluble biopolymer. Only 26.0 % of the sample weight dissolves in water. In order to increase its solubility in water, xylan was treated with a number of the widely used in industry enzymes that have endo-xylanase activity. It is determined that the maximum amount of reducing substances is 8.0 and 10.6 % with enzyme-substrate ratio of 1:50 and 1:100 respectively. In other words the average degree of polymerization of enzymatic hydrolysis products of xylan is about 12 and 10 respectively. This is accompanied by the formation of products that are almost completely soluble in water. Reducing the amount of enzyme in the reaction medium contributed to increasing the degree of polymerization of hydrolysis products in the same period of time. Reducing the hydromodulus to 10 also leads to decreasing the amount of reducing substances that is 28 – 35 %. And correspondingly the average degree of polymerization of obtained carbohydrates increases. But in these cases the clarity of the solution is significantly reduced. The solubility of the resulting products in water is 64 – 71 %. Among the considered enzymes the best result is obtained by using Vilzim preparation. Its activity is 90,000 U/g. Moreover, unlike most of the others this enzyme is completely water-soluble. The process of the limited hydrolysis lasts 1.5-5.0 hours depending on what amount of the reducing substances is needed.

The resulting product of the limited enzymatic hydrolysis of xylan can be added into the drinks, juices, instead of water in the manufacture of confectionery.

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THE DEVELOPMENT OF NEW BIOTECHNOLOGIES AND BIOPREPARATIONS IN FOOD PROCESSING INDUSTRY

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In the modern food industry a clear tendency appears to seek and develop innovative technological solutions for production, characterized by a high level of quality, environmental, biological security, and functionality. The main priorities are naturalness, health benefits, biological value and ecological purity of products. The main tasks for solving these problems is to minimize the use of synthetic food additives and ingredients for preservation of quality characteristics. Biotechnology is a branch of knowledge aimed at the development and implementation of methods to satisfy human needs through natural or genetically modified biological objects (viruses, microorganisms, animal and plant cells, animal organisms, etc.). An important branch of biotechnology is food biotechnology, aimed at solving the food shortages, improving quality and developing new food products using biotechnological methods and techniques, exploring biotechnological potential of animal raw materials and food additives.

Biotechnological approaches allow to develop innovative technologies of environmentally friendly, safe products. One of the tasks is the issue of control quality at various stages of production, from raw materials to finished products. The task of quality control services is to determine the presence of microbiological and chemical contaminants. The most relevant and promising for the food industry is the using of bacterial and enzyme preparations of different technological direction. An important task of the food industry is the development of complex processing of raw materials and waste products of food industry and improve the efficiency of processing. Using enzymes is possible to reduce consumption of raw materials of vegetable

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.

Supervisor – assistant, Untila M.P.

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-

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