

BIOTECHNOLOGY OF ENRICHING THE FOOD OF PATIENTS WITH VIRAL HEPATITS A

<https://doi.org/10.5281/zenodo.14727881>

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Abstract. *In modern times, with the increase in the population, humanity is facing a number of problems. In particular, one of the biggest problems is the increase in population. The increase in the population on earth increases the demand for food. Food shortages, in turn, lead to the deterioration of human health. Human health is the main factor. Strengthening human health and treating and preventing various diseases are major problems of the whole world.*

Key words. *Population, biologically active food, hepatitis, biotechnology, vitamins, phosphorus, iron and silicon elements*

Relevance of the topic: To study the diet of patients with viral hepatitis, to study the results of the studies, and based on the results, to develop biotechnology of biologically active and nutritionally high-quality foods.

Purpose of the work: To study the biotechnology of improving the composition of food for patients with viral hepatitis, introducing biologically active substances into the food that strengthen the body's immune system, and developing food that helps restore liver cells.

Viral hepatitis is an acute infectious disease characterized by damage to liver cells, signs of general intoxication, yellowing of the skin and mucous membranes, urine that is orange or "beer-like", feces that become liquid (the color of gilvata), and an enlarged liver and sometimes spleen. This disease is seasonal and is widespread mainly in the autumn-winter season in Uzbekistan. Patients with this disease, especially young children, are weak and pale.

In order for the patient to fully recover, he must be provided with a full-fledged dietary diet. Because during the illness, the liver and its cells are damaged, and it is necessary to control that they do not suffer during the digestive process. During this period, it is necessary to completely change the patient's diet, that is, to abandon fatty foods and switch to dietary foods.

The most suitable dietary foods are bread and bakery products. When rye flour is added to wheat flour in the preparation of bread and bakery products, the number of additional substances in its composition increases. In particular, the amount of fatty acids, B vitamins, phosphorus, iron and silicon elements increases even more. It was found that

rye flour, when mixed with wheat flour, has a positive effect on the physicochemical properties of bakery products. Compared with traditional technologies, it reduces the duration of production by 2 times and increases the nutritional value of the product. (1)

Meat products are the main component of the population's diet. The nutritional value of meat products is much higher than other products, and they are the main source of energy for the human body. Enrichment of meat products with iodine element satisfies the body's need for iodine.

Based on mathematical modeling, the optimal doses of iodine for the meat-minced meat system were determined: for iodized animal skin - 10.0% hydrated iodized protein - 10.0% iodine concentrate - 5.0% kras - 12.2; BC - 87.8. A project and a revised technological scheme for the production of meat semi-finished products were developed. The optimal amount of K130 used as an iodine carrier when introduced into the protein of the R1YUM11_S95 substance is 100 ml, which corresponds to 100 µg of iodine, the duration of iodization is 20-22 hours, the amount of bound iodine in the protein is 79.7 µg. It increases by 5-8 times compared to iodized salt products. (2)

The structural scheme of the "Iodine-containing additives" system and its graphic model were developed, indicators characterizing the quality of ID were compiled, single and group indicators were calculated, as well as the optimal selection of IOD was carried out based on modeling in the BTATKPS program, which made it possible to develop the basic principles of the theory of quantitative assessment of quality in solving technological problems related to the use of Id in meat systems in relation to the Id system. (2)

Based on the above work, I am also currently conducting experiments on the enrichment of the composition of various plant cereals. The basis of my experience is that oatmeal and corn flakes are dietary foods for patients with viral hepatitis. Based on the study of its composition, I found that these plant cereals have the following composition.

Oatmeal is very rich in omega-3 fatty acids, folic acid and potassium.

Corn flakes contain vitamins B1, B2, PP, C, D, K, calcium, phosphorus, iron, sodium minerals. Both of these cereals contain element K, which has the property of improving metabolism in the body. In addition, corn contains selenium. The unique property of selenium is that it removes fats from the body faster and relieves the liver. With these properties, these foods benefit the body.

Conclusion:

1. The main purpose of introducing various vitamins and biologically active substances into the diet of patients with viral hepatitis is to increase the body's immunity and resistance to viruses.

2. Improving the functioning of the liver in the body by adding additional vitamins and minerals not found in oat and corn cereals.

3. Further improving the nutritional properties of bread and meat products and studying the process of easy digestion for the body and applying them in practice.

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