

THE COMPOSITION AND TECHNOLOGY DEVELOPMENT OF THE DIETARY SUPPLEMENT FOR DISLIPIDEMIA TREATMENT

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Introduction. The free radical theory has been known for more than 50 years but only last two decades we can observe great breakthrough in understanding of the role of the free radicals in the pathogenesis of illnesses and positive influence of antioxidants on human's health. Excessive production of free radicals in organism causes developing of oxidative stress. It can damage cell membrane and other structures, such as proteins, lipids, lipoproteins, DNA. There are some mechanism in a cell that can prevent oxidative stress but such abilities are limited. Imbalance between antioxidant capacity and free radicals production is the main reason of oxidative stress. This process plays a major part in the development of chronic and degenerative illness such as cancer, autoimmune disorders, aging, cataract, rheumatoid arthritis, cardiovascular and neurodegenerative diseases.

Aim. Development and justification the composition of dietary supplement with antioxidant activity for treatment dislipidemia with *Pleurotus ostreatus* and *Spirulina platensis*.

Materials and methods. Research of technological properties of crude materials was provided. Technology of extraction and drying were developed. Literature review was made.

Results and discussion. *Spirulina* is a cyanobacteria present in free-floating filaments in the form of an open left-hand helix characterized by cylindrical multicellular trichomes. It is rich in vitamins, minerals, β -carotene, essential fatty acids, and antioxidants. Its consumption has been shown to have cardiovascular positive effects, lowering blood pressure and reducing cholesterol. In our research we improved flow rate of spirulina powder. We compared a row of excipients and found out that sodium croscarmellose is the best.

Pleurotus ostreatus, the oyster mushroom, is increasingly being recognized as an important food product with a significant role in human health and nutrition. It is generally accepted that lowering high plasma cholesterol levels plays a significant role in preventing atherosclerosis. Oyster mushrooms are an ideal dietary substance for the prevention and treatment of hypercholesterolemia due to high content of dietary fiber, sterol, proteins, and microelements. We developed technology of extraction and drying of protein-polysaccharides complex and explored its' properties.

Conclusions. Natural activities of *Spirulina platensis* and *Pleurotus ostreatus* make them good source for creating dietary supplements for treatment dislipidemia. We provided selection of excipients and developed production scheme of *Pleurotus ostreatus* extract. Further research to develop full production scheme have to be provided.

PRODUCTION TECHNOLOGY OF APPLE PECTIN EXTRACT WITH DETOXIFICATION PROPERTIES

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Introduction. Pectin – polysaccharides formed by residues mainly of galacturonic acid, which is obtained by extracting Apple or pumpkin pulp.

Since pectin is natural organic compounds-polysaccharides, and they are contained in various quantities in fruits, vegetables, root crops. The richest in pectin vegetables-beets, carrots, peppers, pumpkins, eggplants, as well as fruits — apples, quince, cherries, plums, pears, citrus. It is able to reduce cholesterol in the body, improve intestinal peristalsis and peripheral blood circulation. But the most valuable