

## **PLEUROTUS OSTREATUS MUSHROOMS – PERSPECTIVE INGREDIENT FOR BAKERY INDUSTRY**

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Ecologically pure basidiomycetes are the source of alimentary protein, essential amino acids, unsaturated fatty acids and polysaccharides. In our country *Pleurotus ostreatus* mushrooms are optimal for cultivation due to their high activity, considerable productivity and adaptable ability.

According to theoretical sources, the content of total nitrogen in *Pleurotus ostreatus* ranges from 1,1 to 4,9 % solids for mushrooms that have grown by extensive way and from 3,6 to 6,1 % solids for mushrooms having grown by intensive way. Protein nitrogen is 64...76 % of the total nitrogen mass fraction. *Pleurotus ostreatus* mushrooms have been found to contain 18 amino acids, including all essential ones. The glutamic and aspartic acids predominate among other amino acids. The content of essential amino acids is 35,9...40,3 % of the total amount. Methionine and cystine are the limiting amino acids of *Pleurotus ostreatus*. At the same time, it is rich in tryptophan and lysine that strongly lack many plant proteins. In addition, these mushrooms contain a significant amount (25...35 %) of free amino acids compared to the other herbal products. The digestibility of mushrooms protein substances depends on the degree of granulation and ranges from 69 to 83 %. It was determined that nitrogenous substances of the mushrooms granulated into powder digest by 80...89 %.

Carbohydrates and cellulose content in the mycothalluses of *Pleurotus ostreatus* ranges from 16,7 to 81,3 and from 5,03 to 14,9 % solids respectively. The carbohydrate complex of *Pleurotus ostreatus* mushrooms mainly consists of simple sugars: glucose, fructose, galactose.

*Pleurotus ostreatus* contains fats amounting 3...6 % solids. The quantity of polyunsaturated fatty acids is up to 67 % of the total lipids amount. The content of mineral substances can reach 10 % solids. *Pleurotus ostreatus* mushrooms are the source of water-soluble and fat-soluble vitamins. These mushrooms contain the significant amount of organic acids and enzymes, aromatic and extractive substances. *Pleurotus ostreatus*, like all mushrooms, is low-caloric and contains no cholesterol. It can adsorb undesirable for our body metabolic products due to its cellulose.

Thus, the unique complex of biologically active substances of *Pleurotus ostreatus* allows to use it as an additional ingredient in bakery industry to create functional bakery products.