

FEATURES OF DRYING PROCESS OF ARTIFICIALLY CULTIVATED MUSHROOMS

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This paper describes the analysis of drying and taste additives influence on the changes of chemical composition and quality parameters of *Pleurotus Ostreatus* and *Agaricus bisporus* mushrooms and their ready-to-cook mushroom foods.

The optimum mode of drying of *Pleurotus Ostreatus* and *Agaricus bisporus* mushrooms has been determined. Using the taste additives salt and citric acid in the hydrothermal treatment has an effect on the drying process of ready-to-cook mushroom foods. The combined use of above-mentioned additives intensifies the processing time.

We tested and scientifically motivated the impact of drying on the protein substances changes (nitrogen form, albumin/globulin/prolamine/glutelin concentration, essential and nonessential amino acids contents) and carbohydrates changes (contents of glycogen, dextrans, reducing substances and cellulose) of ready-to-cook mushroom foods. The glycogen losses during drying in *Pleurotus Ostreatus* are 62.0 %, *Agaricus bisporus* – 71.3 %. The amount of protein losses in *Pleurotus Ostreatus* are 4.5 %, *Agaricus bisporus* – 4.9 %.

Experimental researches of the swelling process of artificially cultivated edible mushrooms such as *Pleurotus Ostreatus* and *Agaricus bisporus* at different temperatures of the solvent have been done. The influence of drying on swelling kinetics of mushrooms has been studied.

The best swelling degrees of fresh oyster mushrooms are observed at compatibility with water at 18 °C. Fresh champignon mushrooms at the temperatures of solvent 18 °C and 55 °C have practically identical maximal swelling degrees. Dried oyster mushrooms swell better in water at 55 °C, and the greatest swelling coefficient of dried champignon mushrooms rises the level at compatibility with water at 18 °C.

The obtained scientific results are recommended to use for development of technologies and food preparation methods of products made using artificially cultivated edible mushrooms *Pleurotus Ostreatus* and *Agaricus bisporus*.

KEY WORDS: *Pleurotus Ostreatus*, *Agaricus bisporus*, mushroom products, drying, swelling.