

Technological properties of cultivated *Pleurotus ostreatus* mushrooms and their influence on the choice of culinary processing methods

Nina Myachikova*

Belgorod State National Research University, 308015, Belgorod, Russia

Abstract. *Pleurotus Ostreatus* mushrooms are used as raw materials for public catering establishments. Features of the technological properties of this mushrooms affect the composition of operations and their parameters during mechanical processing and the choice of methods and features of thermal processing. Taking into account the peculiarities of the growth of this mushrooms and their morphological structure, a scheme of mechanical processing is presented. The duration and weight loss were determined for various methods of heat treatment. It was found that the weight loss during heat treatment decreases with an increase in the dry matter content. There is an inverse relationship between the content of bound water and the loss of mass: with an increase in the proportion of bound water, the mass loss during heat treatment decreases. It means that the weight loss during heat treatment of mushrooms is due to the loss of free water. Therefore when assessing the quality of raw materials at the stage of incoming control, it is necessary to control the content of dry matter in mushrooms, and take this indicator into account when developing formulations and establishing technological parameters, namely, losses during heat treatment.

Keywords: *Pleurotus Ostreatus*, technological properties of this mushrooms, culinary processing.

1 Introduction

Cultivated mushrooms *Pleurotus Ostreatus* is currently one of the most abundant mushrooms in the world, grown on many continents [1-3]. It is now the third highest in quantity of commercially produced mushroom in the world due to its high nutritional values. *Pleurotus Ostreatus* is a valuable mushroom of dietary importance. It is rich in primary and secondary metabolites and chemical elements of physiological significance. This type of mushroom contains vitamins: C, niacin, riboflavin, thiamin, B₁₂, oleic and linolenic acids, essential amino acids, as well as a number of other substances useful for the body. Due to its wide spectrum of biological activities, *P. ostreatus* is considered a medicinal mushroom. Fruiting bodies and extracts of *P. ostreatus* have found applications in the treatment of civilization – related diseases, especially diabetes, arteriosclerosis and cancer[4-5].

* Corresponding author: myachikova@bsu.edu.ru

