

# ELECTRONIC NOSE INVESTIGATION OF WHITE BUTTON MUSHROOM (*AGARICUS BISPORUS*) PRESERVED BY COMBINED TREATMENTS

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## **Abstract**

Mushrooms are very valuable raw materials. That's why a lot of preserving methods were used for them during last decades. The traditional is the heat treatment, but it can cause a great loss in the valuable components of the raw materials. Due to this fact and the new claim of the consumers, the minimal processing technologies become more important in the preservation of food.

For preserving the white button mushroom we used high hydrostatic pressure (HHP) and sous-vide technology. The parameters were 55°C, 75°C, 300MPa, 600MPa and their combination. The treated samples were examined with electronic nose. For evaluating the data we used Canonic Discriminant Analysis (CDA).

According to the results of the CDA, the groups of the samples can be differentiated. The preserving treatments result a product with another character. In the case of the simple treatments the bigger dose (75°C, 600MPa) causes greater separation from the raw sample. The difference between the two heat treatments is bigger than the pressure treatments. In the case of the combined treatments, the treatment order does not causes the definite isolation of the sample groups. However, if we use them in the smaller dose, the samples separate more from each other. There is a bigger difference between the heat and the combined treatments than between the pressure and the combined ones.

*Key words: mushroom, HHP, sous-vide, electronic nose*

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