

THE EFFECT OF DIFFERENT TEMPERATURES ON THE LIQUID EXTRACTION FROM PLEUROTUS OSTREATUS (JACQ.:FR.) KUMM. MUSHROOM

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The extraction of the mushroom liquid with cooking and without added "solvent" is a significant technological innovation, as this step is more economical and is suitable to dissolve water-soluble bioactive compounds, for example, β -glucan. In this study, the effect of low temperature-long time cooking heat treatment on the liquid extraction from edible mushrooms was investigated.

Firstly, the heat treatment was processed with the usage of vacuum-packed sliced mushrooms in a drying cabinet (60, 70, and 90 °C; 24, 48 hours, and 1 week) and the manual filtering was tested. After manual filtration, the pressure cooker and centrifuge were also tested (90 °C, 24 hours). Furthermore, Arduino software was used to study the speed of the mushroom liquid flowing (80, 85, 90 °C, and 15 hours). The average amount of the extract and production loss was calculated.

Based on the results, it can be said that in the case of manual filtering, the percentage (%) of the extracts was between 0.0 (90 °C, 48 hours and 1 week) and 33.6% (60 °C, 48 hours), in contrast to the centrifugation, where this value was between 54.6 and 60.1 (90 °C, 24 hours). According to the Arduino test, 2 hours could be enough for extraction. The usage of a pressure cooker, centrifuge, and Arduino software has shown to be a proper tool for quality control and studying some changes during cooking methods.