

**THE EFFECT OF FERMENTATION TIME IN BIOETHANOL  
PRODUCTION FROM RICE STRAW ASSISTED WITH CRUDE  
EXTRACT BUTTON MUSHROOM (*Agaricus bisporus*) CELLULASE  
ENZYME USING SIMULTANEOUS SACCHARIFICATION  
FERMENTATION (SSF) METHOD**

**ABSTRACT**

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It has been done production of bioethanol from rice straw assisted by cellulase enzyme from button mushroom extract (*Agaricus bisporus*) using the Simultaneous Saccharification and Fermentation method based on the variation of fermentation time. The study aims to determine the optimum fermentation time of rice straw through bioethanol content indicators produced. Bioethanol fermented is tested qualitatively using gas chromatography. The bioethanol contents produced were determined using a UV-Vis spectrophotometer.

The results showed that bioethanol content on day 1; 3 and 5 days are 0,3182%; 0,3279% and 0,4860% (v/v), respectively. The optimum fermentation time of bioethanol production in this study is 3 days with a content of 0,4860% (v/v).

**Keywords:** Bioethanol, fermentation, rice straw, button mushroom (*Agaricus bisporus*), SSF