

**Making Cassava Peel Bioethanol Using Saccharomyces Cerevisiae
With The Addition Of Tofu Dregs**
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ABSTRACT

Energy needs are increasing every year, while the availability of energy sources still depends on fossil fuels which are decreasing because they cannot be renewed. Bioethanol is produced from biomass containing starch, sugar or cellulose. One of the raw materials for making bioethanol is cassava, because it has a fairly high starch content of 83.8% and a carbohydrate content of 32-35%. However, cassava is a very important food ingredient. The process of processing cassava/cassava into food produces waste in the form of cassava peel. Cassava peel has a starch content of 36.58%, so it has the potential to be used as raw material for making bioethanol through the fermentation process. The bioethanol fermentation process requires additional nutrients in the form of nitrogen. One of the ingredients that have the potential to produce these nutrients is tofu dregs. Therefore it is necessary to research the manufacture of bioethanol from cassava peels with the addition of nitrogen nutrients from tofu dregs. This study aims to determine the length of fermentation time and variations in the addition of tofu dregs nutrients that can produce the highest ethanol content. The length of time for fermentation was (1,2,3) days and the variation of the nutrient concentration of tofu dregs (0.75, 1, 2,25) %. The average ethanol content produced from the fermentation process is 2.73% to 16.11%. The longer the fermentation time, the higher the bioethanol content produced. The highest ethanol content was obtained at 2 days of fermentation time with variations in the concentration of tofu dregs 0.75%, the bioethanol content produced was 20.22%.

Keywords: Bioethanol, Cassava Peel, Saccharomyces Cerevisiae, Tofu Dregs