

**PENGARUH VARIASI PERLAKUAN FERMENTASI TEPUNG SAGU
(*METROXYLON SP*) DAN SINGKONG (*MANIHOT UTILISSIMA*)
TERHADAP KADAR BIOETANOL**

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Absrak

Seiring menipisnya sumber energi fosil, maka perlu dicari alternatif bahan bakar pengganti, misalnya bioetanol. Bahan baku bioetanol misalnya ubi kayu. Tepung sagu dan singkong adalah tanaman yang mengandung pati hingga 84-85%. Pemanfaatan tepung sagu dan singkong masih terbatas. Penelitian ini bertujuan memanfaatkan bahan baku tepung sagu dan singkong menjadi etanol dengan menggunakan metode deskriptif dilakukan dengan 3 tahap yaitu; tahap pertama hidrolisis dengan starter NPK 250%, Urea 250%, HCL 100 ml, molase 150 ml, temperatur 60^oC selama 30 menit. Tahap kedua fermentasi dengan ragi tape 25% selama 4 hari, 5 hari, dan 6 hari. Tahap ketiga destilasi alkohol. Hasil pengujian destilasi kadar etanol tertinggi pada spesimen tepung sagu didapatkan 27% fermentasi 6 hari, singkong 45% fermentasi 6 hari, dan mix tepung sagu dan singkong 28% fermentasi 6 hari. Variasi waktu fermentasi berpengaruh secara signifikan terhadap kadar etanol yang dihasilkan.

Kata kunci : Bioetanol, Tepung Sagu dan Singkong, Hidrolisis, Fermentasi, Destilasi.

**THE EFFECT OF VARIATIONS IN THE TREATMENT OF
FERMENTED SAGO FLOUR (METROXYLON SP) AND CASSAVA
(MANIHOT UTILISSIMA) AGAINST BIOETHANOL**

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Abstract

levels As the depletion of fossil energy sources, it is necessary to find alternative fuel substitutes, for example, bioethanol. Bioethanol raw materials such as cassava Sago flour and cassava are plants that contain, starch up to 84-85%. Utilization of sago flour and cassava is still limited. This study aims to utilize the raw material of sago flour and cassava into ethanol by using a descriptive method carried out in 3 stages: the first stage of hydrolysis with a 250% NPK starter, 250% Urea, 100 ml, HCL 150 ml, molase 150 ml, temperature 60° C for 30 minutes. The second stage of fermentation with 25% yeast tape for 4 days. 5 days and 6 days. The third stage is alcohol distillation. Distillation test results of the highest ethanol content in sago flour specimens obtained 27% fermentation for 6 days. cassava 45% fermentation for 6 days, and mix sago flour and cassava 28% ferment for 6 days. Fermentation time variation significantly influences the ethanol content produced

Keywords: Bioethanol, Sago Flour and Cassava, Hydrolysis, Fermentation, Distillation.