***Performance of Bioethanol Fermentation Process from Reed Grass (Imperata Cylindrica) with Variation in Yeast Concentration (Saccharomyces Cerevisiae)***

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# *ABSTRACT*

*The demand for fuel oil is increasing while fossil fuels are getting smaller. Reed grass (Imperata Cylindrica) has the potential to be utilized as a raw materials for bioethanol that has a high enough selulosa content. This research aims to studyi to effect of variations of yeast consentration (Saccharomyces cerevisiae) on the fermentation process of bioethanol. This research went through the delignification stage using 10% NaOH, hydrolysis using 10% $H_2SO_4$, fermentation with yeast variations of 1%, 1,5% ,2% for 9 days, and simple distillation at 90°C for 5 hours. Parameters observed included brix, ethanol, and yield.Yeast concentration 2% results in the fastest brix decreased from 18% to 4-6%. The results showed best treatment was obtained at a yeast concentration 2% with ethanol levels of 20,01% and yield 16,88%.*

***Keywords :*** *bioethanol, fermentation, reed grass, saccharomyces cerevisiae*