PRODUCTION OF BIOETHANOL FROM SORGHUM IN SIMULTANEOUSLY SACCHARIFICATION AND FERMENTATION USING YEAST *Saccharomyces cerevisiae*

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**Abstract**

Enzymatic hydrolysis of starch to result glucose is a better method than chemical hydrolysis, but it needs more time that add many more time also for bioethanol production. Therefore, need to shorten time needed and of the ways is Simultaneously Saccharification and Fermentation (SSF) method.

This research had been done in laboratory scale. Bioethanol production began with the material preparation and be continued with liquefaction use α-amylase.

Based on the result, the optimum condition for the SSF process is 33°C in temperature and glucoamylase 156 unit/gram for 48 hours. This resulted the ethanol content of 9.38%(v/v), productivity 0.15 [gram ethanol].[mL solution.jam]⁻¹, conversion of glucose to ethanol 30% and yield 29.7% gr ethanol/gr sorghum flour.

**Keywords** : SSF, sorghum, fermentation, ethanol, glucoamylase