

Influence of Nutrient Addition On the Bioethanol Yield From Oil Palm Trunk Sap Fermented by *Saccharomyces Cerevisiae*

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ABSTRACT

This paper presents the influence of nutrient addition namely $MgSO_4$, $C_3H_7NO_2$, $(NH_4)_2SO_4$ and Na_2HPO_4 to the bioethanol yield from oil palm trunk saps (OPTS) with fermentation carried out by *Saccharomyces cerevisiae*. The sugar and ethanol contents in the sample were determined using a high-performance liquid chromatography. Nutrient addition has improved the bioethanol yield markedly, with the average yield ranged from 58.50% to 77.12% compared to about 51.08% without nutrient addition. The highest bioethanol yield (81.89%) was achieved by adding $MgSO_4$. The rank of nutrient influence on improving the bioethanol yield was $MgSO_4 > C_3H_7NO_2 > (NH_4)_2SO_4 > Na_2HPO_4$

KEYWORDS: Ethanol; Fermentation; Yeast; Nutrient addition; Oil palm trunk sap

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