



Zuraida Ahmad

SAGO

(Metroxylon Rottb)

And Its Applications

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Sago **(*Metroxylan Rottb*)** **and Its Applications**

Editor
Zuraida Ahmad



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Chapter 6

The Effect of Saccharification Process of Sago Starch into Sugars

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Keywords: enzyme, hydrolysis, saccharification, sugars, ethanol

Preview. The enzymatic hydrolysis of sago starch was performed by commercially available α -amylase and glucoamylase. In order to attain a higher sugars yield, optimization study of saccharification process was carried out in the shake flask experiment to investigate the effect of main factors of the hydrolysis process, namely, sago concentration, amount of enzyme and time for the maximum production of sugars. As shown in the analysis of variance (ANOVA) result, the sago concentration, and time have contributed more significant effect than amount of the enzyme on hydrolysis process of sago starch.

Introduction

Due to the scarce resources and increasing environmental concern, replacing the non renewable energy with alternative resources is one of the most studied opportunities nowadays. One way is by utilizing the solar energy in form of biomass to produce ethanol also called as bioethanol [1]. An appropriate blending of ethanol with conventional fuels has proven not only in promoting a cleaner environment but helps balancing the economical value of fuel price [2].

In addition, the selection of best suitable crops for bioethanol is one of the key factors to reduce the overall process cost and main-

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