

## PENGGUNAN AMILOGLUKOSIDASE *Mucor Javanicus* DALAM PRODUKSI GULA CAIR DENGAN BAHAN DASAR UBI – UBIAN

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### ABSTRACT

*Sugar cane limitazion was found in refined sugar production, so it is needed other alternative in sugar production with various cassava. Taro, sweet potato and cassava as high carbohydrate of various cassava can be used in liquid sugar production by using microbial enzyme. Amiloglucosidase *Mucor javanicus* can degrade various cassava carbohydrate. To know liquid sugar quality of various cassava, the use of amyloglucosidase *Mucor javanicus* in liquid sugar production with various cassava were researched.*

*Observation were conducted with six treatments of amyloglucosidase concentration, that is 0.00% (control); 0.05%; 0.10%; 0.15%; 0.20% and 0.25%. The liquid sugar quality was detected by measuring reduction sugar ("DNS" method), water content (AOAC), total solid (AOAC), pH, colour and amyloglucosidase activity ("Somogy" titration method). Statistical analysis used Complete Randomized Design. The result showed that the highest reduction sugar and amyloglucosidase activity on each sugar were found on liquid sugar 0.20% enzyme ( $p < 0.05$ ). The highest reduction sugar and amyloglucosidase activity, was respectively on taro 323 mg/100 ml and 54.91 unit/100 ml; sweet potato 242 mg/100 ml and 47.27 unit/100 ml; and cassava 188 mg/100 ml and 41.09 unit/100 ml. The lowest total solid or the highest water content between three sugars was on taro liquid sugar 0.20% enzyme, that is 64.97% and 35.03% respectively ( $P < 0.05$ ). PH liquid sugar on three various cassava was on range between 5.78-6.01. The best colour was on taro liquid sugar, that is brown to yellow. From three sugars with different raw material, the best sugar quality was taro liquid sugar with 0.20% enzyme.*

**Key words :** *Mucor javanicus*, amyloglucosidase, liquid sugar, various cassava

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