ABSTRACT

Glucose syrup can be produced from raw materials containing starch crops such as cassava, sweet potato, taro yam, corn, sago and many more groups of other yam-yam. Sweet taro plants have a relatively high biomass production of other sweet-sweet. Besides consideration of the use of cassava as raw taro glucose syrup production process is also based on economic considerations. In general, glucose syrup can be used as a raw material of food industry where price is more affordable than white sugar.

Making syrup from taro glucose (yam) uses an enzyme hydrolysis process. In the process comprises three stages, namely pretreatment phase, Phase Gelatinasi (formation of starch slurry), Phase Hydrolysis. Gelatinasi stage of gel formation process where the starch added to the water with a ratio of 1:2 until a slurry, is heated up to 90°C. After it was followed by a hydrolysis step, the first disbursement liquifikasi namely starch gel -amylase enzyme, and this process produces dextrins. causing Then a second saccharification of dextrins which liquifikasi process results in further processing into glucose using glucoamylase. Before commencing the results of the process of saccharification is cooled at a temperature of 60°C liquifikasi also be set from 6.0 pH to 4.5 by the addition of 3% HCl. Furthermore, let stand for two days in order to maximize the process of saccharification and subsequent filtration, evaporation will eventually obtain the glucose syrup with the desired consistency.

Glucose syrup factory was designed in the Regency of Malang, East Java with a production capacity of 9781 tons / year or 29 tons / day and will be incorporated in the year 2013.

Key words : Taro, Glucose Syrup, Hydrolysis Enzymes