

ABSTRACT

Enzymatic hydrolysis can overcome the problem about the quality of the instant porridge. The process was divided into 3 steps, gelatinization, liquefaction, and saccharification. The glycosidic chain will be broken down by the amylase and turn the starch into a maltose and glucose that gives natural sweetness and better mouthfeel. Hydrolysis really depends on the temperature as the enzyme might be denatured if the temperature was too high. Thus, the author chose 3 different temperatures for the hydrolysis process, 60°C, 65°C, and 70°C. With the aim of the research to see the effect of different temperatures of the enzymatic hydrolysis process, results were then compared with the regular rice in terms of the physicochemical and sensory properties. The physicochemical properties include ash, carbohydrate, fat, protein, total sugar, sodium, and moisture content, as well as viscosity and aW. For the sensory evaluation, DCT was done to determine whether there was a difference between the samples or not and preference ranking tests were done to know the preference of the panelists towards the three different temperatures. In terms of physicochemical properties, a significant difference was found for the total sugar, sodium content, viscosity, and aW. For the sensory properties, all of the samples were significantly different from each other, meaning the panelists could detect the differences between the samples. For the preference ranking test, hydrolyzed rice with treatment of 65°C became the most preferred one, while the 60°C one became the least preferred one due to the taste and texture.

Keywords : Hydrolyzed Rice; Regular Rice; Temperature; Physicochemical; Sensory