

**PRODUCT DEVELOPMENT OF COOKIES  
SUPPLEMENTED WITH JACKFRUIT  
(*Artocarpus heterophyllus* Lam.) SEED  
AS BY-PRODUCT**

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## ABSTRACT

The seeds of the fruit are commonly being disposed. In this study jackfruit seed which is by-product was ground until become flour then was used to make a cookie. The effects on sensory and physical properties and the suitable baking time and temperature of the cookie of this substitution of wheat flour with jackfruit seed flour were examined. Cookie without jackfruit seed flour was used as control. The jackfruit seed flour used was prepared, starting with peeling the seeds, boiling, grinding, drying then milling. Four Quantitative Descriptive Analysis (QDA) and Nine Point Hedonic Scale were used to obtain the sensory attributes and acceptability of the cookies. First QDA was used to test the internal parameter of the jackfruit seed flour to the cookie which involve cookies with different ratios of substitution of jackfruit seed flour (25%, 50%, 75% and 100%) and control cookies. The best formulation from first QDA was then used for further test on external parameter, time and temperature. In this trials, cookies were baked at 3 different temperature which 170°C, 180°C and 190°C for 3 different time; 10, 15, and 20 minutes respectively. Cookie baked at 170°C was tested on second QDA, while cookie baked at 180°C was tested on third QDA whereas cookie baked at 190°C was tested on fourth QDA. As a result from this study, there were significant differences ( $p \leq 0.05$ ) found in the first QDA for all attributes except moisture absorption whereas significant differences ( $p \leq 0.05$ ) found in second until fourth QDA for roughness and hardness attributes. Each formulation from second until fourth QDA was selected for consumer acceptance test based on the QDA result. There were significant difference ( $p \leq 0.05$ ) found among the formulated cookies and commercial cookie for all the attributes. Cookies with 25% jackfruit seed flour baked at 170°C for 20 minutes was involved in physical and chemical analysis and it showed there were higher significant difference ( $p \leq 0.05$ ) for spread factor, water activity, and ash content. Based on hedonic test result, formulation cookie may have potential to be commercialized to the market.

