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

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ABSTRACT

This study was conducted to develop cookies supplemented with jackfruit seed nibs as by-product, to determine the optimum baking time and temperature for the cookie, to assess the sensory attributes and consumer acceptance, lastly to compare the effect of jackfruit seed nibs on the physical properties and proximate analysis of the cookies. In the first stage Quantitative Descriptive Analysis (QDA), the external parameter was tested: 0% (control), 10%, 15%, 20% and 25% jackfruit seed nibs added. Significant differences ($p \leq 0.05$) were found in all sensory attributes except colour and moisture absorption. Formulated cookie with 15% jackfruit seed nibs was selected to be used in the second stage QDA which was conducted with a range of baking temperature (170°C, 180°C and 190°C) and baking time (10, 15 and 20 minutes). Almost all sensory attributes showed significant differences ($p \leq 0.05$). The optimum baking time and temperature of 170°C, 20 minutes; 180°C, 15 minutes and 190°C, 15 minutes were selected and compared with a commercial cookie in the Hedonic test. Significant differences ($p \leq 0.05$) were found in all attributes for the Hedonic test. Formulated cookie with 15% jackfruit seed nibs baked at 170°C for 20 minutes was most preferred by the public. Both formulated and control cookie showed no significant difference ($p > 0.05$) for physical analysis (spread factor and water activity). All proximate analyses showed no significant difference ($p > 0.05$) except for moisture content (2.44%) and crude protein content (6.01%). Other proximate analyses results were: ash content (2.00%); crude fat content (22.11%); total dietary fibre content (5.66%) and carbohydrate content (61.78%). The addition of jackfruit seed nibs into cookies results in a new food product which is acceptable by the consumers.