

# THE POTENTIAL APPLICATION OF SABA BANANA FLOUR IN BAKERY PRODUCTS

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## ABSTRACT

'Saba' banana is a triploid hybrid (ABB) cultivar that is normally marketed as fresh produce and the downstream processing is limited to local dishes or chips. Bananas are rich in potassium and unripe bananas contain high resistant starch that is essential for healthy digestion and has moderate glycaemic index. Processing 'Saba' banana into flour provides a more stable storage form while reducing wastage of unmarketable fruits. The aim of this study was to examine consumers' acceptance of bakery products produced using banana flour. Green (unripe) 'Saba' bananas were obtained from local farmers and developed into banana flour. The bananas were cleaned, peeled, sliced, and dried in a fan-forced oven at 75°C. The drying process was stopped once water activity and moisture content were below 0.5 aw and 10%, respectively. The dried bananas were then ground, sieved manually, and sealed in a plastic bag. The flour was analysed for its nutritional content and used as the main ingredient in bakery products to test for consumers' acceptance. Five bakery products (layered cake, mini cake, biscuit, crepe, *bahulu*) were developed and served during Sabah's state level Farmers Day in 2017. Acceptance of the bakery products was based on a 5-points hedonic scale, where 49 respondents who tested all five products and completed the evaluation form were included in the analysis. The nutritional analysis showed that green 'Saba' banana flour contains energy (367kcal/100g), carbohydrates (87.7g/100g), protein (3.4g/100g), fat (0.3g/100g), and potassium (994mg/100g). The acceptance test showed that 'Saba' banana flour was well accepted (most scored 4 and 5) as an ingredient in bakery products. The mean score of acceptance for crepe, layered cake, biscuit, mini cake, and *bahulu* were  $4.47 \pm 0.92$ ,  $4.43 \pm 0.61$ ,  $4.20 \pm 0.76$ ,  $4.14 \pm 0.82$ , and  $4.02 \pm 0.85$ , respectively. Significant difference ( $p < 0.05$ ) was observed between the five tested products, where the respondents preferred the layered cake and crepe made of 'Saba' banana flour. These results demonstrated the potential of incorporating 'Saba' banana flour as the ingredient in bakery products as a healthier alternative. This healthy replacement meets the demand of consumers who seek health and taste in their food.

Keywords: 'Saba' banana, green banana flour, bakery products