

The purple corn, gude beans and sago as potential functional food ingredients for analog rice development

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Abstract

The integration of purple corn, gude beans and sago in food product development remains underexplored. Storage life can be enhanced by processing them in to flour. This preliminary study seeks to evaluate the nutritional content and physical characteristics of three food materials. The. research utilized proximate analysis and presented descriptive findings based on the average nutrition composition and physical attributes, analyzed in three repetitions. Proximate analysis encompassed protein content, moisture level, ash content, crude fat, carbohydrate content (by difference), and crude fiber. Additionally, this study examined phenolic compounds in purple corn and gude beans. Physical characterization involved analyzing analog rice profiles and color properties of three foods. The results indicate that purple corn contains a notable amount of anthocyanine (2316.14 mg/100 g) and ferulic acid (186 mg/100 g), while gude beans are rich in amino acid and phenolic (77.92 mg GAE/100 g), with relatively low carbohydrate content (14.53 %). All nutrient compositions were analyzed per 100 g on a dry basis. Color and analog rice profile tests suggest that purple corn outperforms gude beans in these aspects. Despite their differences, both hold promising potential as ingredients for functional food innovations.

Keywords: purple corn, gude beans, sago, analog rice