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Jackfruit seed flour in biscuit making technology: Analysis on product qualities

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Jackfruit (*Artocarpus heterophyllus* Lam.) is one of the most popular tropical fruit crops grown in Asia. Jackfruit seeds are a good source of dietary fibre, protein and resistant starch. A study was carried out to investigate the feasibility of partially replacing wheat flour with jackfruit seed flour in biscuit making technology. Dried jackfruit seeds were processed into wet milled flour and used to supplement wheat flour, in the percentages of 0, 5, 10, 15, 20 and 25 for biscuit production. The nutritional composition, sensory evaluation and microbiological quality were evaluated. The nutritional qualities such as moisture, ash, protein, fat, fibre, and total soluble carbohydrate of the biscuits were analyzed. When the proportion of the jackfruit seed flour increased from 0-25%, the protein, fibre and ash contents increased from 12.86 to 13.5, 0.82 to 1.95 and 2.90 to 4.36% , respectively whereas the moisture content decreased from 4.95 to 3.20%. The findings of microbial studies showed that no total plate counts were observed in the developed biscuits. The sensory evaluation showed that jackfruit seed flour supplemented biscuits were significantly different ($p<0.05$) from whole wheat biscuits with respect to the sensory attributes such as colour, crispiness, flavour and overall acceptance at all levels of jackfruit seed flour supplementation. In organoleptic assessment, the mean scores for the assessed sensory characters decreased with increase in the jackfruit seed flour blend. From the overall acceptance rating, 20% jackfruit seed flour supplemented biscuits obtained the highest preference compared to other combinations. Based on nutritional and organoleptic qualities, 20% jackfruit seed flour supplemented biscuits can be used for biscuit production with the overall consumer acceptance.

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