

## DEVELOPMENT AND QUALITY EVALUATION OF JACKFRUIT INCORPORATED FROZEN YOGHURT

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Frozen yoghurt can be regarded as a healthy and unique dessert having properties of both yoghurt and ice cream. The health benefits of frozen yoghurt can be improved by incorporating different fruit pulps. The objective of this study was to develop and evaluate frozen yoghurt with jackfruit (*Artocarpus heterophyllus*). Three frozen yoghurts were developed using 10, 15, and 20% of jack fruit pulp (w/w) and plain frozen yoghurt was used as the control. They were evaluated for colour, aroma, texture, taste, meltability, and overall acceptability using nine-point hedonic scale. Then the developed yoghurt formulations along with the control were analysed for moisture, protein, fat, fibre, ash, and total solids content. Shelf-life was tested by measuring the titratable acidity (TA), pH, coliform, yeast and mould, and total plate count during six weeks of storage at -20°C. The yoghurt formulation containing 15% of jackfruit pulp received the highest scores for all the sensory properties tested and it was recorded as the best in overall acceptability. The proximate composition of this formulation was 69.13 ± 1.12% moisture, 5.84 ± 0.12% protein, 3.59 ± 0.39% fat, 9.83 ± 0.98% fibre, 2.55 ± 0.26% ash, and 30.87 ± 1.12% total solids. Moreover, incorporation of 15% jackfruit pulp significantly improved the protein, fibre, and ash content while significantly lowered the fat content of the frozen yoghurt ( $p < 0.05$ ). Gradual increase in total plate count and TA while decreased pH during the storage showed potential growth of microorganisms in the yoghurts. However, total plate count of the jackfruit pulp incorporated frozen yoghurts was less than that of the control and yeast and mould and coliform were not detected. Therefore, it can be concluded that physicochemical, microbiological, and sensory properties of frozen yoghurt improved significantly by adding jackfruit pulp at rate of 15% hence, it can be introduced as a value added healthy dairy product.

**Keywords:** Frozen yoghurt, Jackfruit, Quality evaluation