

**NUTRITIONAL, TEXTURAL AND SENSORY QUALITY OF
BISCUITS SUPPLEMENTED WITH EMBUL BANANA
(*Musa spp.*) AND CANDIED CITRUS PEEL**

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ABSTRACT

Postharvest loss of Embul banana is very high due to its surplus production in Sri Lanka. This work aims towards the development of nutritionally rich biscuit by partial replacement of wheat flour with banana flour and candied citrus peel (*Citrus aurantifolia*). During the preliminary studies the appropriate proportion of wheat flour, banana flour and citrus peel was selected through a sensory evaluation using 9-point hedonic scale by 20 untrained panelists. Considered sensory parameters as appearance, aroma, texture, taste and overall acceptability were evaluated. The final product was prepared using the selected composition of banana and wheat flour 50:50 and 10% citrus peel. Final product was packed in the material 30 Biaxially oriented polypropylene /25 Metalized Cast polypropylene and shelflife was evaluated upto two months. Proximate composition of the final product was determined. Physicochemical properties, sensory properties and microbial properties were determined. Sensory data were analyzed by using Friedman test and physicochemical properties were analyzed using ANOVA test by using MINITAB 17 statistical software. According to the proximate analysis moisture, free fat, ash, crude fibre and crude protein contents were 5.55 % \pm 0.01, 11.18 % \pm 0.43, 1.41 %, \pm 0.20, 1.06 % \pm 0.35 and 0.0002 % \pm 0.00 respectively. Spread ratio of the biscuit is 5. Significant differences were observed in all the sensory properties ($p < 0.05$) except appearance ($p > 0.05$) during the storage period. Ascorbic acid content was significantly reduced ($p = 0.000$) with the storage period. The product was microbiologically safe for consumption up to 2 months period. This study investigated the potential of the development of fruit based biscuits with improved functional and nutritional properties.

Key words: Biscuit, Citrus peel, Embul banana, Value addition