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Development of instant pasta using composite flour mixture of unripe banana (*Musa acuminata) and* jackfruit seeds (*Artocarpus heterophyllus*)

Jayampathi H.G.N.[1], Kariyawasam K.M.G.M.M.[1*], Fernando G.S.N.[2]

[1]*Department of Biosystems Technology, Uva Wellassa University, Badulle, Sri Lanka*
[2]*Department of Food Science and Technology, University of Ruhuna, Matara, Sri Lanka*

The application of Jackfruit seed powder in convenience foods could boost the commercial value of Jack fruit seeds while also helping to meet the population's protein needs. Green banana is a food of great value with various therapeutic properties. Therefore, the present study was focused on developing an instant pasta using composite flour mixture of green bananas and jackfruit seeds flour. Composite flour mixtures were prepared with different proportions of UGB and JFS (T1: 15% UGB, 5% JFS, 80% wheat w/w; T2: 20% UGB, 10% JFS, 70% wheat w/w; T3: 25% UGB, 15% JFS, 60% wheat w/w; T4: 100% w/w wheat as control). The proximate composition, physicochemical properties, and shelf life of the developed product were analyzed using standard methods, and 30 semi-trained panelists analyzed the sensory attributes by using a 5-point hedonic scale. The T1 showed the best sensory attributes while it demonstrated higher protein (7.56 ± 0.01%) and carbohydrates (67.44 ± 0.01%) and lower fat (16.07 ± 0.00%) and moisture (5.77 ± 0.00) than the control. The texture profile values of T1 were comparable to the control, and values were 1728.0 ± 110.9 g hardness, 3.03 ± 0.65 mJ adhesiveness, 1.37 ± 0.23 mm springiness, 0.34 ± 0.30 cohesiveness, and 897.3 ± 65 g gumminess. The lower water activity (0.78 ± 0.01) and pH (5.86 ± 0.01) conditions than the control suggesting the higher keeping quality of T1. The instant pasta samples in treatment T3 (0.47 ± 0.21%) exhibit significantly higher TSS than treatments T1, T2, and T4. These findings highlight the potential use of these ingredients as valuable nutritional supplements in the cereal industry while maintaining desirable sensory and textural qualities in pasta products.

Keywords: Green banana flour, jackfruit seed flour, sensory analysis, proximate analysis, and physicochemical properties

*Corresponding author: menaka.k@uwu.ac.lk