

EVALUATION OF FORTIFIED PORRIDGE POWDER WITH JACKFRUIT SEED FLOUR AND FINGER MILLET FLOUR

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ABSTRACT

Finger millet (*Eleusine coracana*) is a nutrient-dense cereal grain widely used to improve dietary quality, while jackfruit (*Artocarpus heterophyllus*) seeds are an underutilized resource with potential value in developing functional food products. This study aimed to formulate and evaluate porridge powder blends developed by incorporating jackfruit seed flour and finger millet flour at five different ratios: 0:100% (T₁), 10:90% (T₂), 20:80% (T₃), 30:70% (T₄), and 40:60% (T₅) respectively. Physico-chemical properties including pH, bulk density, water absorption capacity, and total soluble solids were analyzed for all treatments. Proximate analysis was done and sensory evaluation was conducted using a seven-point hedonic scale to determine consumer acceptance based on color, taste, flavor, texture, and overall acceptability. Results showed that from T₁ to T₅; there was a gradual decrease in pH (5.83 to 5.59) and total soluble solids (2.29 to 1.83°Brix) with increasing jackfruit seed flour content, while bulk density (0.71 to 0.77 g/cm³) showed a gradual increase and water absorption capacity (1.09 to 2.16 g/g) also increased. The proximate composition of T₁ (control) showed moisture 6.71%, protein 9.08%, fat 11.09%, fiber 0.24%, and ash 2.40%, whereas T₄ (best treatment of sensory evaluation) contained moisture 7.46%, protein 15.02%, fat 8.89%, fiber 0.43%, ash 2.56%. Sensory evaluation revealed that T₄ was the most preferred formulation, achieving the highest overall acceptability. The study concludes that incorporating jackfruit seed flour up to 20% enhances functional properties and consumer acceptability in porridge powder formulations.

Keywords: Jackfruit seed flour, Physico-chemical properties, Porridge powder, Proximate composition, Sensory evaluation.

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