

FORMULATION OF INFANT'S WEANING FOOD MIXES USING UNRIPE BANANA AND CEREAL MIX



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ABSTRACT

Weaning foods are crucial for infant nutrition during the transition from milk to semi-solid foods. Unripe banana (*Musa spp.*) is rich in resistant starch, minerals, and bioactive compounds, making it a valuable ingredient for nutrient-enriched infant foods. This study aimed to develop and evaluate weaning food mixes prepared from unripe banana and cereal combinations to improve nutritional value, microbial safety, and sensory acceptability. Four treatments were formulated with varying levels of unripe banana powder: 0% (T₁), 10% (T₂), 20% (T₃), and 30% (T₄), blended with roasted rice flour, green gram flour, finger millet flour, sesame, and cardamom. The formulations were analyzed for nutritional qualities, including moisture, ash, fiber, protein, fat, pH, and titratable acidity, as well as microbial analysis. The study was also evaluated for organoleptic characteristics such as color, texture, flavour, taste, and overall acceptability. The compositional analysis revealed that while the proportion of unripe banana powder increased from 0% to 30%, the ash (2.46 to 3.20%), fibre (3.1 to 4.1%), protein (19.03 to 23.44%), fat (8.77 to 10.0%) pH (6.13 to 6.83%), and titratable acidity (0.070 to 0.083%) were significantly increased among the treatments. Conversely, moisture was decreased significantly from 7.0 to 6.53%. The sensory assessment demonstrated that there was significant difference ($p < 0.05$) among the treatments. The formulation containing 30% unripe banana powder (T₄) achieving the highest acceptability scores in terms of colour, texture, flavour, taste, and overall acceptability. The study concluded that the T₄ formulation, with 30% unripe banana powder, offers the best balance of nutritional, microbial and sensory qualities, making it a promising option for banana based weaning food.

Keywords: Cereal mix, Infant nutrition, Sensory evaluation, Unripe banana, Weaning food.

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