

DEVELOPMENT OF NUTRITIOUS BAR ENRICHED WITH RICE FLAKES AND MORINGA LEAF POWDER

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Abstract

The present study intended to design a healthy bar enhanced with rice flakes and moringa leaf powder. Formulations were created using the ratio based on a preliminary trial of moringa leaf powder and rice flakes T1 (0:35), T2 (6:29), T3 (10:25), T4 (14:21), and T5 (18:17), respectively. Other than the major ingredients, the Nutri Bar was produced using date paste (38%) and honey (8%) as a binding agent and natural sweeteners, chopped pumpkin seeds (3%), peanuts (10%), raisins (3%), and powdered jaggery (2%). To enhance the flavour vanilla essence (1%) was used. These ingredients provide excellent sources of carbohydrates, protein, fat, fiber, energy, and minerals. Nutri Bar was kept at room temperature of 25±5 °C and RH 95%. The Completely Randomized Design was employed and means separation was done with Tukey Pairwise Comparisons in Minitab 19 software. Physical qualities, sensory attributes, and nutritional composition such as moisture, ash, protein, fat, calories, fiber, and iron content were investigated for Nutri Bar. Physical investigation of the Nutri Bar results revealed that length and width were observed with no significant variation ($p>0.05$). However, there was a substantial variation in the height and weight of the Nutri Bars between treatments due to the adding different concentrations of moringa leaf powder and rice flakes. Nutritious bars were tested organoleptically using a sensory test. Results of sensory evaluation suggested that T4 and T5 had a greater preference for overall acceptability and were selected for further study. Nutritional composition data demonstrated a significant difference ($p<0.05$) between treatments for moisture content, ash, protein, fat, calories, fiber, and iron content of the Nutri Bar. Finally, it could be stated that moringa leaf powder can be utilized for nutrient bar manufacturing and this product is good for all age groups and malnourished persons.

Keywords: Moringa leaf powder, Nutritious bar, Nutritional value, Rice flakes, Sensory evaluation

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