

DEVELOPMENT OF NUTRITIOUS CEREAL BISCUIT USING COMPOSITE FLOUR MIXTURE

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Composite flour could be considered other than pure wheat flour when making biscuits to improve the nutritional quality. Further, locally grown cereals and legumes could be used to produce composite flour as a remedy to reduce wheat flour importation. Therefore, present study was carried out to develop a soft dough biscuit with composite flour and wheat bran. Five types of flour were used as follows; T₁: wheat flour 88.9%, mungbean flour 3.8%, rice flour 2.5%, corn flour 2.6%, millet flour 2.2%; T₂: wheat flour 88.9%, mungbean flour 3.0%, rice flour 3.0%, corn flour 3.0%, millet flour 2.2%; T₃: wheat flour 88.9%, mungbean flour 1.3%, rice flour 3.8%, corn flour 3.8%, millet flour 2.2% and T₄: 100% wheat flour (control). Biscuits were prepared according to the standard method using above flour mixtures and constant amounts of other ingredients. Sensory evaluation was conducted to determine the best treatment with 33 semi trained panelists. Experiment was conducted as a Completely Randomized Design with triplicates to evaluate the physicochemical parameters (thickness, width, spread factor, moisture, pH, crude protein, crude fat and ash) of the developed products. Results revealed that the physicochemical and sensory properties of four treatments were significantly different ($p < 0.05$) compared to control. Treatment 2 (T₂) recorded as the best treatment with 41.50 mm thickness, 35.00 mm width, 8.43 spread factor, 2.0% moisture, 5.2% crude protein, 13.7% crude fat, 0.7% ash and 6.43 pH. Thus, composite flour is suitable to produce biscuits having higher nutritional profile with good sensory attributes. Further studies should be conducted to evaluate the storage stability of the developed product and to select a suitable packaging material.

Keywords: Biscuit, Cereal, Composite flour, Mung bean, Nutritious