

DEVELOPMENT OF MORINGA LEAVES POWDER (*Moringa oleifera*) BISCUITS USING CHICKPEA FLOUR (*Cicer arietinum*) AND OATS FLOUR (*Avena sativa*)



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ABSTRACT

Maintaining a healthy diet is crucial for a long life, but modern society's urbanization and globalization have led to increased consumption of high-calorie fast food, known as junk food. Research on its health consequences has made it easier to avoid, but resources are insufficient. They are varied in flavor and texture and have a wide consumption base. This research will outline the production of nutritious, healthy biscuits from chickpea flour, oats flour, and dried moringa leaves powder to fight malnutrition and chronic diseases.

Five formulations of biscuits were developed with the incorporation of moringa leaves powder (*Moringa oleifera*), chickpea flour (*Cicer arietinum*), and oats flour (*Avena sativa*). Biscuits prepared by incorporation of moringa leaves powder (T₂-20g, T₃- 15g, T₄- 10g, T₅- 5 g,) chickpea flour (T₂ – 40g, T₃ – 45g, T₄ – 45g, T₅ – 50g) and oats flour (T₂ – 40g, T₃ – 40g, T₄ – 45g, T₅ – 45g)with control using wheat flour (T₁- 0g of moringa leaves powder, chickpea flour and oats flour). The sensory evaluation result showed that sample T₄ biscuit (10g moringa leaves powder, 45g chickpea flour, and 45g oats flour) was selected as the best sample, and the physical properties such as diameter, weight, thickness, volume, density, and spread ratio of biscuits, and the proximate analysis such as moisture, protein, fiber, carbohydrate, fat, and ash of biscuits were measured. Also, microbial tests such as Total plate count and yeast and mold tests were carried out to determine the shelf life of biscuits.

The test result revealed that moringa leaves powder biscuits incorporation with chickpeas flour and oats flour is rich in protein (7.85±0.05), fiber (3.02±0.16) than wheat flour biscuit and low level of carbohydrate (85.96±2.16) than wheat flour biscuit. According to results of this research moringa leaves powder biscuits incorporation with chickpeas flour and oats flour can be used as healthy functional food.

Key words:-Moringa leaves powder, Oat flour, Chickpea flour

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