

## **ABSTRACT**

### **THE EFFECT OF MORINGA LEAF FLOUR (*Moringa oleifera*) and WHEAT FLOUR FORMULATIONS ON THE PHYSICAL AND SENSORY CHARACTERISTICS OF CATFISH NUGETS (*Pangasius hypophthalmus*)**

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This research aims to determine the effect of Moringa leaf flour and wheat flour formulations on the physical and sensory characteristics of catfish nuggets and determine the best Moringa leaf meal and wheat flour formulations and the chemical characteristics of the best treatment catfish nuggets. This study was prepared in a Complete Group Randomized Design (RAKL), with a single factor of 6 level treatments and 4 replication. The factors used are the formulation of moringa leaf flour and wheat flour, namely P1 (0%: 50%), P2 (10%: 40%), P3 (15%: 35%), P4 (20%: 30%), P5 (25%: 25%), P6 (30%: 20%). The data obtained were tested for similarity of variance with the Barlett test and data similarity with the Tukey test. Furthermore, the data is analyzed by variety analysis to obtain an estimator of error variety and determine the effect of treatment. Then the data was further analyzed using the BNJ test at the level of 5%. The results showed that there was an influence of the formulation of Moringa leaf flour and wheat flour on physical characteristics (hardness, texture and color), moisture content and sensory tests. The P2 treatment showed an increase in protein content by 1.39%, fat content by 3.8%, ash content by 0.13%, antioxidant activity by 25.51%, and crude fiber content by 2.196% compared to P1 nuggets (control). Consumption of 4 pieces of catfish nuggets with Moringa leaf flour 10% can contribute to meeting daily fiber needs as much as 2.2%.

**Keywords :** Catfish nuggets, moringa leaf meal, wheat flour

## ABSTRAK

### **PENGARUH FORMULASI TEPUNG DAUN KELOR (*Moringa oleifera*) DAN TEPUNG TERIGU TERHADAP KARAKTERISTIK FISIK DAN SENSORI NUGET IKAN PATIN (*Pangasius hypophthalmus*)**

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Penelitian ini bertujuan untuk mengetahui pengaruh formulasi tepung daun kelor dan tepung terigu terhadap karakteristik fisik dan sensori nuget ikan patin dan menentukan formulasi tepung daun kelor dan tepung terigu terbaik dan karakteristik kimia nuget ikan patin perlakuan terbaik. Penelitian ini disusun dalam Rancangan Acak Kelompok Lengkap (RAKL), dengan faktor tunggal 6 perlakuan dan 4 ulangan. Faktor yang digunakan yaitu formulasi tepung daun keor dan tepung terigu yaitu P1(0%: 50%), P2 (10%: 40%), P3 (15%: 35%), P4 (20%: 30%), P5 (25%: 25%), P6 (30%: 20%). Data yang diperoleh diuji kesamaan ragamannya dengan uji Barlett dan kemenambahan data dengan uji *Tukey*. Selanjutnya data dianalisis dengan analisis ragam untuk mendapatkan penduga ragam galat dan mengetahui pengaruh perlakuan. Kemudian data dianalisis lebih lanjut dengan menggunakan uji BNJ pada taraf 5%. Hasil penelitian menunjukkan bahwa terdapat pengaruh formulasi tepung daun kelor dan tepung terigu terhadap karakteristik fisik (*hardness*, tekstur dan warna), kadar air dan uji sensori. Perlakuan P2 menunjukkan peningkatan kadar protein sebesar 1,39%, kadar lemak 3,8%, kadar abu 0,13%, aktivitas antioksidan 25,51%, dan kadar serat kasar 2,196% dibandingkan dengan nuget P1 (kontrol). Konsumsi 4 potong nuget ikan patin dengan tepung daun kelor 10% dapat berkontribusi untuk memenuhi kebutuhan serat harian sebanyak 2,2%.

Kata Kunci : Nuget ikan patin, tepung daun kelor, tepung terigu