

ABSTRACT

SUBSTITUTION EFFECTS OF MORINGA LEAF FLOUR (*Moringa oleifera*) ON THE SENSORY, PHYSICAL AND CHEMICAL CHARACTERISTICS OF FISH CORK CRACKERS

By

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Crackers are one type of snack that is preferred by most people but contain low nutrients. Fish cork (*Channa striata*) is a type of fish that has a high nutritional content such as containing 25.1% protein, 1.34% fat, 45mg / 100g of vitamin A and 0.04mg / 100g of vitamin B. Moringa leaf flour contains 19.2% dietary fiber, 27.1% protein and is rich in antioxidant compounds. This study aims to determine the effect of the addition of Moringa leaf flour on the sensory, physical and chemical characteristics of fish cork crackers and to determine the best concentration of Moringa leaf flour addition. This study used 6 levels of treatment for the addition of Moringa leaf flour (0%, 0.5%, 1%, 1.5%, 2% and 2.5%). This study was compiled in a Completely Randomized Block Design (CRBD) with 4 replications. The data obtained were tested for similarity with the Barlett test and the data additivity with the Tuckey test. The data were then processed with ANOVA and further tested with the Honestly Significant Difference (HSD) at a level of 5%. The best treatment in this study was fish cork crackers T2 (the addition of Moringa leaf flour 1% has a aroma score of 4.02 (typical of fish), color 4.33 (creamy brown, slightly greenish), texture 4.36 (crispy) and taste 4.13 (savory). Hedonic score of aroma (3.88 (likes), colors 3.86 (likes), textures 4.25 (likes), flavors 4.02 (likes) and overall acceptance 4.05 (likes). The hardness of crackers is 3.31 gf and the development volume of 871.62%. The best cracker had a water content of 10.08% (w/w), ash content of 3.04% (w/w), protein content of 7.81% (w/w), fat content of 5.8% (w/w), carbohydrates of 70.9%, dietary fiber content of 7.59% (w/w) and antioxidant content of 31.57% (w/w). The addition of Moringa leaf flour had a significant effect on the sensory, physical and chemical characteristics of fish cork crackers.

Keywords : characteristic, crackers, fish cork, Moringa leaf flour

ABSTRAK

PENGARUH SUBSTITUSI TEPUNG DAUN KELOR (*Moringa oleifera*) TERHADAP KARAKTERISTIK SENSORI, FISIK DAN KIMIA KERUPUK IKAN GABUS

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Kerupuk merupakan salah satu jenis makanan ringan yang disukai oleh banyak orang tetapi mengandung zat gizi rendah. Ikan gabus (*Channa striata*) merupakan salah satu jenis ikan yang memiliki kandungan gizi tinggi seperti mengandung protein 25,1%, lemak 1,34%, vitamin A 45mg/ 100g dan vitamin B 0,04mg/ 100g. Tepung daun kelor mengandung serat pangan 19,2%, protein 27,1% serta kaya akan senyawa antioksidan. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tepung daun kelor terhadap karakteristik sensori, fisik dan kimia kerupuk ikan gabus serta untuk mengetahui konsentrasi penambahan tepung daun kelor terbaik. Penelitian ini menggunakan 6 taraf perlakuan penambahan tepung daun kelor (0%, 0,5%, 1%, 1,5%, 2% dan 2,5%). Penelitian ini disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 4 kali ulangan. Data yang diperoleh diuji kesamaan ragamnya dengan uji Barlett dan kementerian data diuji Tuckey. Data kemudian dianalisis dengan sidik ragam dan diuji lanjut dengan uji Beda Nyata Jujur (BNJ) pada taraf 5%. Perlakuan terbaik pada penelitian ini yaitu kerupuk ikan gabus T2 (penambahan tepung daun kelor 1% memiliki skor aroma 4,02 (khas ikan), warna 4,33 (coklat krem sedikit kehijauan), tekstur 4,36 (renyah) dan rasa 4,13 (gurih). Skor hedonik aroma (3,88 (suka), warna 3,86 (suka), tekstur 4,25 (suka), rasa 4,02 (suka) dan penerimaan keseluruhan 4,05 (suka). Tingkat kekerasan kerupuk sebesar 3,31 gf dan daya kembang sebesar 871,62%. Uji sifat kimia kerupuk perlakuan terbaik menghasilkan kadar air 10,08% (b/b), kadar abu 3,04% (b/b), kadar protein 7,81% (b/b), kadar lemak 5,8% (b/b), karbohidrat 70,9%, kadar serat pangan 7,59% (b/b) dan kadar antioksidan 31,57% (b/b). Penambahan tepung daun kelor berpengaruh nyata terhadap karakteristik sensori, fisik dan kimia kerupuk ikan gabus.

Kata kunci : ikan gabus, karakteristik, kerupuk, tepung daun kelor