

**THE EFFECT OF WHEAT FLOUR SUBSTITUTION WITH YELLOW CORN FLOUR ON  
β-CAROTENE CONTENT AND ORGANOLEPTIC PROPERTIES OF SEABASS FISH NUGGETS  
(*Lates calcalifer*)**

**Fadhlor Rahman<sup>1)</sup>, Ahmad Alamsyah<sup>2)</sup> and Rini Nofrida<sup>2)</sup>**

<sup>1)</sup>*Students of the Faculty of Food Technology and Agroindustry, University of Mataram, West Nusa Tenggara*

<sup>2)</sup>*Teaching Staff of the Faculty of Technology Food and Agroindustry, University of Mataram, West Nusa Tenggara*

**ABSTRACT**

*Fish nuggets are one of the processed foods made from fish that have a delicious taste. The various shapes make fish nuggets can arouse appetite. This study aimed to determine the best substitution of wheat flour with yellow corn flour on the levels of β-carotene and organoleptic properties of fish nuggets. This study used a completely randomized design (CRD) with a single factor experiment, namely wheat flour and yellow corn flour (P) consisting of 6 treatments (P1 (85%: 15%), P2 (80%: 20%), P3 (75 % : 25%), P4 (70% : 30%), P5 (65% : 35%), and P6 (60% : 40%) with 3 replications so that 18 experimental units were obtained. The parameters tested were levels of β-carotene, water content, protein content, and organoleptic tests including aroma, taste, and texture. The observed data were analyzed for variance with a 5% significance level using the Co-Stat software. If there is a significant difference, further testing is carried out with the Honest Significant Difference (BNJ) test. The results showed that the substitution treatment of wheat flour with yellow corn flour had a significantly different effect on β-carotene content, water content, protein content, organoleptic texture (scoring). Treatment of substitution of wheat flour with yellow corn flour P6 (60%: 40%) is the best treatment according to the research hypothesis resulting in β-carotene content of 578,18 μg/g, water content of 41,42%, and protein content of 10,25%, and all organoleptic parameters including aroma, texture, and taste were acceptable to the panelists based on the hedonic test with a preference level of slightly to like.*

**Keywords:** *β-carotene, fish nuget, organoleptic, wheat flour, yellow corn flour.*

**ABSTRAK**

Nugget ikan merupakan salah satu olahan makanan berbahan baku ikan yang memiliki rasa yang enak. Bentuk yang beraneka ragam membuat nugget ikan dapat membangkitkan selera makan. Penelitian ini bertujuan untuk menentukan substitusi tepung terigu dengan tepung jagung kuning yang terbaik terhadap kadar β-karoten dan sifat organoleptik pada nugget ikan. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan percobaan faktor tunggal yaitu tepung terigu dan tepung jagung kuning (P) yang terdiri dari 6 perlakuan (P1 (85% : 15%), P2 (80% : 20%), P3 (75% : 25%), P4 (70% : 30%), P5 (65% : 35%), dan P6 (60% : 40%) dengan 3 kali ulangan sehingga diperoleh 18 unit percobaan. Parameter yang diuji adalah kadar β-karoten, kadar air, kadar protein, dan uji organoleptik meliputi aroma, rasa, dan tekstur. Data hasil pengamatan dianalisis keragaman dengan taraf nyata 5% dengan menggunakan *software* Co-Stat. Apabila terdapat beda nyata, dilakukan uji lanjut dengan uji Beda Nyata Jujur (BNJ). Hasil penelitian menunjukkan perlakuan substitusi tepung terigu dengan tepung jagung kuning memberikan pengaruh yang berbeda nyata terhadap kadar β-karoten, kadar air, kadar protein, organoleptik tekstur (skoring). Perlakuan substitusi tepung terigu dengan tepung jagung kuning P6 (60% : 40%) merupakan perlakuan terbaik sesuai dengan hipotesis penelitian menghasilkan kadar β-karoten sebesar 578,18 μg/g, kadar air sebesar 41,42%, dan kadar protein sebesar 10,25%, serta seluruh parameter organoleptik meliputi aroma, tekstur, dan rasa dapat diterima oleh panelis berdasarkan uji hedonik dengan tingkat kesukaan agak suka sampai suka.

**Kata Kunci:** β-karoten, nugget ikan, organoleptik, tepung terigu, tepung jagung kuning.