# FORMULASI TEPUNG UBI JALAR UNGU DAN TEPUNG TAPIOKA SEBAGAI BAHAN PENGISI PEMBUATAN NUGET IKAN TUNA

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## ABSTRAK

Penelitian ini telah dilaksanakan di Laboratorium Eksakta Fakultas Teknologi Pertanian Universitas Kristen Artha Wacana Kupang pada bulan Juni 2026. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan formulasi tepung ubi jalar ungu dan tepung tapioka sebagai bahan pengisi terhadap karakteristik nugget ikan tuna serta menentukan formulasi terbaik yang menghasilkan nugget ikan tuna dengan karakteristik yang dapat diterima oleh panelis. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 3 kali ulangan sehingga diperoleh 12 unit percobaan. Perlakuan yang digunakan terdiri atas P0, P1, P2, dan P3 dengan perbandingan tepung tapioka dan tepung ubi jalar ungu. P0 menggunakan 100 g tepung tapioka tanpa tepung ubi jalar ungu, P1 menggunakan 75 g tepung tapioka dan 25 g tepung ubi jalar ungu, P2 menggunakan 50 g tepung tapioka dan 50 g tepung ubi jalar ungu, sedangkan P3 menggunakan 25 g tepung tapioka dan 75 g tepung ubi jalar ungu. Parameter yang diamati meliputi kadar air serta uji organoleptik terhadap rasa, tekstur, dan warna. Data dianalisis menggunakan Analisis Ragam (ANOVA) pada taraf 5% dan dilanjutkan dengan Uji Beda Nyata Terkecil (BNT) apabila terdapat pengaruh nyata.

Hasil penelitian menunjukkan bahwa formulasi tepung ubi jalar ungu dan tepung tapioka memberikan pengaruh nyata terhadap kadar air, rasa, dan tekstur nugget ikan tuna, tetapi tidak memberikan pengaruh nyata terhadap warna. Kadar air nugget ikan tuna berkisar antara 44,34–46,70%, dengan kadar air terendah terdapat pada P0 sebesar 44,34% dan tertinggi pada P3 sebesar 46,70%. Nilai kesukaan panelis terhadap rasa berkisar antara 3,67–4,47, tekstur berkisar antara 3,60–4,40, dan warna berkisar antara 3,80–4,13. Secara umum, nilai organoleptik tersebut masih berada dalam kategori "suka". Perlakuan terbaik diperoleh pada P1, yaitu formulasi 75 g tepung tapioka dan 25 g tepung ubi jalar ungu, yang menghasilkan kadar air sebesar 44,47%, nilai kesukaan tekstur sebesar 3,87, dan nilai kesukaan warna sebesar 4,13. P1 dipilih sebagai formulasi terbaik karena memberikan karakteristik kadar air yang baik, tekstur dan warna yang disukai panelis, serta dapat menghasilkan nugget ikan tuna dengan tingkat penerimaan yang baik.

**Kata kunci: tepung ubi jalar ungu, tepung tapioka, nugget ikan tuna, kadar air, organoleptik.**

# FORMULATION OF PURPLE SWEET POTATO FLOUR AND TAPIOCA FLOUR AS FILLER IN THE MAKING OF TUNA FISH NUGGET

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## *ABSTRACT*

*This study was conducted at the Exact Sciences Laboratory of the Faculty of Agricultural Technology, Artha Wacana Christian University, Kupang, in June 2026. The research aimed to determine the effect of varying formulations of purple sweet potato flour and tapioca flour—used as fillers—on the characteristics of tuna nuggets, and to identify the best formulation that yielded nuggets with characteristics acceptable to panelists. A Completely Randomized Design (CRD) was employed, involving four treatments and three replications, resulting in 12 experimental units. The treatments (P0, P1, P2, and P3) varied the ratio of tapioca flour to purple sweet potato flour: P0 used 100 g of tapioca flour and no purple sweet potato flour; P1 used 75 g of tapioca flour and 25 g of purple sweet potato flour; P2 used 50 g of tapioca flour and 50 g of purple sweet potato flour; and P3 used 25 g of tapioca flour and 75 g of purple sweet potato flour. Observed parameters included moisture content and organoleptic assessments of taste, texture, and color. Data were analyzed using Analysis of Variance (ANOVA) at the 5% significance level, followed by the Least Significant Difference (LSD) test where significant effects were found.*

*The results indicated that the formulations of purple sweet potato flour and tapioca flour significantly affected the moisture content, taste, and texture of the tuna nuggets, but did not significantly affect color. The moisture content of the tuna nuggets ranged from 44.34% to 46.70%; the lowest content was observed in P0 (44.34%) and the highest in P3 (46.70%). Panelist preference scores ranged from 3.67 to 4.47 for taste, 3.60 to 4.40 for texture, and 3.80 to 4.13 for color. Overall, these organoleptic scores fell within the "like" category. The best treatment was obtained with P1—a formulation of 75 g tapioca flour and 25 g purple sweet potato flour—which yielded a moisture content of 44.47%, a texture preference score of 3.87, and a color preference score of 4.13. P1 was selected as the optimal formulation because it provided favorable moisture content characteristics, a texture and color preferred by panelists, and resulted in tuna nuggets with a high level of consumer acceptance.*

***Keywords: purple sweet potato flour, tapioca flour, tuna nuggets, moisture content, organoleptic.***