

**PENGEMBANGAN PRODUK TEPUNG BAKSO
IKAN TONGKOL (*Euthynnus affinis*) INSTAN
DENGAN PENAMBAHAN SODIUM
TRIPOLIFOSFAT DAN KARAGENAN**



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PENGEMBANGAN PRODUK TEPUNG BAKSO IKAN TONGKOL (*Euthynnus affinis*) INSTAN dengan PENAMBAHAN SODIUM TRIPOLIFOSFAT dan KARAGENAN

Arini Alva Mawaddah, Fauzan Azima, Kesuma Sayuti

ABSTRAK

Bakso hasil dari tepung bakso instan memiliki tekstur yang belum optimal. Oleh karena itu, penelitian ini mengembangkan tepung bakso ikan tongkol (*Euthynnus affinis*) instan dengan penambahan sodium tripolifosfat (STPP) dan karagenan. Penelitian ini bertujuan untuk mengetahui pengaruh interaksi maupun pengaruh tunggal kedua bahan tersebut terhadap karakteristik mutu tepung bakso ikan tongkol instan dan bakso hasil rehidrasi, sekaligus menentukan konsentrasi optimal berdasarkan karakteristik kimia, fisik, mikrobiologi dan sensori produk yang dihasilkan. Penelitian menggunakan Rancangan Acak Lengkap Faktorial (RALF) 3×3 dianalisis menggunakan *two-way* ANOVA dan uji lanjut DNMRT taraf 5%, dan uji hedonik oleh 25 panelis semi-terlatih. Interaksi STPP dan karagenan berpengaruh nyata terhadap kadar protein dan cohesiveness produk. STPP secara tunggal meningkatkan daya serap air ($S_3=1,04$ ml/g) dan kekuatan gelasi ($S_3=14,41$ N/cm²) tepung bakso instan namun menurunkan elastisitas bakso hasil rehidrasi seiring dengan peningkatan konsentrasinya ($S_1=13,42$ mm), sedangkan karagenan meningkatkan kadar abu ($K_3=9,23\%$) dan rendemen ($K_3=43,82\%$). Berdasarkan hasil penelitian perlakuan 3K1 dengan kombinasi STPP 0,3% dan karagenan 1% merupakan perlakuan terbaik pada semua parameter uji didukung penerimaan sensori aroma 6,88 (agak suka), rasa 6,24 (agak suka), tekstur 6,24 (agak suka), dan tingkat kekenyalan 5,64 (sedang), dan keamanan mikrobiologi yang memenuhi SNI 7266:2017, serta nilai kekerasannya mendekati nilai kekerasan bakso ikan komersial (10,72 N).

Kata kunci: bakso ikan; ikan tongkol; karagenan; sodium tripolifosfat; tepung instan

THE DEVELOPMENT of INSTANT KAWAKAWA (*Euthynnus affinis*) MEATBALL FLOUR with THE ADDITION of SODIUM TRIPOLYPHOSPHATE and CARRAGEENAN

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ABSTRACT

The utilization of instant meatball flour in the fabrication of meatballs has been found to yield a texture that does not meet the desired standards. Therefore, the objective of this study was to develop instant kawakawa (*Euthynnus affinis*) meatball flour with the addition of sodium tripolyphosphate (STPP) and carrageenan. The objective of this study is to ascertain the impact of interaction and the individual impact of the two ingredients on the quality characteristics of instant kawakawa meatballs and rehydrated meatballs. Additionally, the study seeks to ascertain the optimal concentration based on the chemical, physical, microbiological, and sensory characteristics of the product produced. The study utilized the 3x3 Factorial Complete Random Design (RALF) and was subjected to analysis through two-way ANOVA and 5% DNMR follow-up test, as well as a hedonic test administered by 25 semi-trained panelists. The interaction of STPP and carrageenan has a significant effect on the protein content and cohesiveness of the product. STPP demonstrated a marked effect on the physical properties of meatballs. Specifically, it enhanced water absorption ($S_3=1.04$ ml/g) and gelation strength ($S_3=14.41$ N/cm²) of instant meatballs. However, this agent concomitantly reduced the elasticity of rehydrated meatballs and increased their concentration ($S_1=13.42$ mm). In contrast, carrageenan exerted a contrasting effect, increasing ash content ($K_3=9.23\%$) and yield ($K_3=43.82\%$). The findings of the study indicate that the treatment of S3K1 with a combination of STPP 0.3% and carrageenan 1% is the most effective treatment for all test parameters. This conclusion is supported by sensory reception of aroma 6.88 (somewhat liked), taste 6.24 (somewhat liked), texture 6.24 (somewhat liked), and elasticity level 5.64 (medium), as well as microbiological safety that meets SNI 7266:2017. Additionally, the hardness value is close to the hardness value of commercial fish meatballs (10.72 N).

Keywords: carrageenan; fish meatballs;; instant flour; kawakawa; sodium tripolyphosphate