

RINGKASAN

Ikan teri jengki (*Stolephorus indicus*) merupakan jenis ikan pelagis yang bernilai gizi tinggi terutama sebagai sumber protein dan kalsium. Ikan teri tergolong dalam bahan pangan mudah rusak karena memiliki kandungan kadar air yang tinggi. Ikan teri memiliki nilai ekonomi yang tinggi, namun pemanfaatannya masih terbatas pada usaha pengeringan secara tradisional atau dikonsumsi langsung. Padahal pengeringan tradisional dapat menghasilkan kualitas produk rendah, mudah terkontaminasi serta terjadi penurunan kadar protein akibat proses pengeringan yang tidak stabil. Peningkatan nilai tambah ikan teri jengki dapat dilakukan melalui diversifikasi produk dalam bentuk tepung ikan guna menjaga kualitas dan memperpanjang umur simpan. Pembuatan tepung ikan teri jengki ini menggunakan metode pengeringan *foam mat drying* dengan perlakuan rasio konsentrasi putih telur dan maltodekstrin serta penggunaan variasi suhu pengeringan. Penelitian ini bertujuan untuk mengetahui pengaruh perlakuan rasio putih telur dan maltodekstrin serta pengaruh variasi suhu pengeringan terhadap sifat fisikokimia dan organoleptik tepung ikan teri jengki, dan mendapatkan kombinasi perlakuan terbaik.

Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) Faktorial. Faktor pertama adalah variasi suhu pengeringan dengan 2 taraf yakni 40°C (S1) dan 50°C (S2). Faktor kedua adalah rasio putih telur dan maltodekstrin dengan 4 taraf yakni 0%:20% (P1), 10%:10% (P2), 15%:5% (P3) dan 20%:0% (P4). Variabel yang diamati berupa variabel fisikokimia diantaranya daya serap air, kelarutan, tingkat kecerahan, densitas kamba, rendemen, kadar air, kadar abu, kadar protein, kadar lemak dan kadar karbohidrat, serta variabel organoleptik yang terdiri dari rasa, warna, aroma dan tekstur. Data variabel fisikokimia dianalisis dengan uji ANOVA dengan uji lanjut menggunakan uji *Duncan Multiple Range Test* pada taraf *error* 5% dan uji *independent T-test*. Sedangkan variabel organoleptik diuji dengan *Friedman test* dan uji lanjut perbandingan ganda pada taraf *error* 5%. Penentuan kombinasi perlakuan terbaik menggunakan uji indeks efektivitas.

Hasil penelitian menunjukkan variasi suhu pengeringan berpengaruh nyata terhadap daya serap air, tingkat kecerahan, kadar air, kadar abu, kadar protein, kadar lemak dan kadar karbohidrat. Sedangkan perlakuan rasio putih telur dan maltodekstrin berpengaruh nyata terhadap daya serap air, kelarutan, densitas kamba, tingkat kecerahan, kadar abu, kadar protein, kadar lemak dan kadar karbohidrat. Kombinasi perlakuan terbaik diperoleh oleh tepung ikan teri jengki perlakuan suhu 50°C dengan rasio putih telur dan maltodekstrin 20%:0% (S2P4) dengan nilai kadar air 7,70%, kadar abu 8,56%, kadar protein 77,80%, kadar lemak 0,93%, kadar karbohidrat 5,02%, nilai daya serap air 2,66 g/g, kelarutan 16,45%, densitas kamba 0,59 g/ml, tingkat kecerahan 71,03 dan rendemen 27,81%, serta karakteristik sensori menghasilkan tepung ikan teri jengki dengan rasa agak gurih, warna abu-abu keputihan, tekstur halus dan aroma khas ikan agak kuat.

SUMMARY

Anchovy (Stolephorus indicus) is a species of pelagic fish with high nutritional content, especially as a source of protein and calcium. Anchovy is classified as a perishable food because it has a high water content. Anchovy has a high economic value, but its utilization is still limited to traditional drying efforts or direct consumption. In fact, traditional drying can produce low product quality, is easily contaminated and there is a decrease in protein content due to an unstable drying process. Increasing the added value of anchovy can be done through product diversification in the form of fishmeal to maintain quality and extend shelf life. The manufacture of anchovy flour uses the Foam mat drying method with the treatment of the ratio of egg white and maltodextrin concentrations and variations in drying temperature. This study aims to determine the effect of the treatment of the ratio of egg white and maltodextrin, the effect of variations in drying temperature and combination of treatments on the physicochemical and organoleptic properties of anchovy flour, and to determine the best combination of treatments.

This study used a Factorial Completely Randomized Design (CRD). The first factor was the variation of drying temperature with 2 levels, namely 40°C (S1) and 50°C (S2). The second factor was the comparison of egg white and maltodextrin concentrations with 4 levels, namely 0%:20% (P1), 10%:10% (P2), 15%:5% (P3) and 20%:0% (P4). The variables observed were physicochemical variables including water absorption, solubility, lightness color, kamba density, yield, water content, ash content, protein content, fat content and carbohydrate content, as well as organoleptic variables consisting of taste, color, aroma and texture. Physicochemical variable data were analyzed using the ANOVA test and further testing with the Duncan Multiple Range Test at an error level of 5% and Independent T-Test. The organoleptic variables were tested with the Friedman test and further multiple comparison tests at an error level of 5%. Determination of the best treatment combination using the effectiveness index method.

The results showed that variations in drying temperature significantly affected water absorption, lightness color, water content, ash content, protein content, fat content and carbohydrate content. The treatment of egg white and maltodextrin ratio significantly affected water absorption, solubility, kamba density, lightness color, ash content, protein content, fat content and carbohydrate content. The best combination of treatments was obtained in anchovy flour treated at a temperature of 50°C with a ratio of egg white and maltodextrin of 20%:0% (S2P4) with a water content of 7.70%, ash content of 8.56%, protein content of 77.80%, fat content of 0.93%, carbohydrate content of 5.02%, water absorption value of 2.66 g/g, solubility of 16.45%, kamba density of 0.59 g/ml, lightness color 71.03 and yield of 27.81%, and sensory characteristics produced anchovy flour with a slightly savory taste, whitish-gray color, smooth texture and a rather strong fish aroma.