

ABSTRACT

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UTILIZATION OF DARK MEAT TUNA FISH PROTEIN CONCENTRATE AS EMULSIFIER IN MAYONNAISE

Thesis, Faculty of Science dan Technology (2018)

(xvi + 78 pages, 21 figures, 9 tables, 15 appendices)

Fish processing industries of tuna produce large by-product namely dark meat. Dark meat is considered as underutilized source of raw material although it is reported to be a good source of protein. Production of FPC is expected to increase the economic value and product diversification of dark meat. The aim of this research was to utilize the dark meat tuna FPC as emulsifier in mayonnaise. Physical characteristic, chemical properties, and organoleptic were performed. From the result, three repetition of defatting determined as the best method in producing FPC. The best FPC had 88.93% protein content, 2.78% fat content, 7.83% moisture content, degree of whiteness value of 74.65%, 9.24% yield, and had met all the quality requirements of type B based on FAO. The best FPC also had 305% water absorption, 460% oil absorption, bulk density of 0.40 g/ml, and lysine 46.70 mg/g protein as the highest essential amino acid. The best formulation from this research was mayonnaise with 60% substitution of FPC as emulsifier. The best mayonnaise had 41500 cp viscosity, 83.08% emulsion stability, pH value of 5.73, L* value of 80.27, a* value of -0.52, and b* value of 18.17. The best mayonnaise also had 16.25% water content, 4.19% protein content, 72.73% fat content, 0.21% ash content, 6.63% carbohydrate content, and 12.75 μm fat globule size.

Keywords : Dark meat, tuna fish, fish protein concentrate, emulsifier, mayonnaise

References : 93 (1981-2017)

ABSTRAK

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PEMANFAATAN KONSENTRAT PROTEIN DAGING MERAH IKAN TUNA SEBAGAI *EMULSIFIER* PADA *MAYONNAISE*

Tugas Akhir, Fakultas Sains dan Teknologi (2018)

(xvi + 78 halaman, 21 gambar, 9 tabel, 15 lampiran)

Daging merah merupakan hasil samping dari produksi tuna yang masih kurang pemanfaatannya walaupun sangat berpotensi sebagai sumber protein pada bahan baku maupun diversifikasi produk. Tujuan dari penelitian ini adalah untuk memanfaatkan konsentrat protein daging merah ikan tuna sebagai *emulsifier* pada pembuatan *mayonnaise*. Analisis dilakukan terhadap karakteristik fisik, kimia, serta uji organoleptik. Dari hasil penelitian, perlakuan tiga kali pengulangan *defatting* ditentukan sebagai metode terbaik dalam pembuatan KPI. KPI terbaik memiliki kadar protein 88.93%, kadar lemak 2.78%, kadar air 7.83%, derajat putih 74.65%, rendemen 9.24%, dan telah memenuhi seluruh persyaratan mutu FAO tipe B. Selain itu, KPI terbaik juga memiliki karakteristik daya serap air 305%, daya serap minyak 460%, serta densitas kamba 0.40 g/ml. Berdasarkan analisis profil asam amino KPI, kandungan asam amino esensial tertinggi yaitu lisin 46.70 mg/g protein dan asam amino non-esensial tertinggi yaitu prolin 136.03 mg/g protein. Formulasi *mayonnaise* terbaik dari hasil penelitian yaitu *mayonnaise* dengan substitusi KPI 60% terhadap kuning telur sebagai *emulsifier*. *Mayonnaise* terbaik memiliki viskositas 41500 cp, stabilitas emulsi 83.08%, pH 5.73, serta nilai L* (*Lightness*) 80.27, a* -0.52, dan b* 18.17. Selain itu, *mayonnaise* terbaik juga memiliki kadar air 16.25%, kadar protein 4.19%, kadar lemak 72.73%, kadar abu 0.21%, kadar karbohidrat 6.63%, serta ukuran globula lemak 12.75 μm .

Kata Kunci : Daging merah, ikan tuna, konsentrat protein ikan, *emulsifier*, *mayonnaise*

Referensi : 93 (1981-2017)