

ABSTRAK

Produksi kolagen dalam negeri masih belum optimal, pada tahun 2003 Indonesia masih mengimpor kolagen sebanyak 6200 ton, selain itu Kolagen sebagian besar berasal dari hewan mamalia seperti sapi dan babi yang dimana beresiko penyebaran penyakit hewan menular. Tujuan dari penelitian ini yaitu mengetahui perbedaan hasil rendemen tiap variasi kelompok kolagen limbah sisik ikan bandeng (*Chanos chanos*), dan karakterisasi profil protein. Hasil uji statistik Kruskal Wallis untuk seluruh kelompok perlakuan menunjukkan nilai uji kolagen tidak berbeda signifikan ($p > 0,05$) pada setiap kelompok perlakuan. Hasil analisis proksimat meliputi pengujian kadar air, kadar abu, kadar lemak, dan kadar protein telah memenuhi persyaratan Kolagen Badan Standarisasi Nasional. Hasil karakterisasi profil protein kolagen menunjukkan bahwa tampak *band* kolagen pada hasil SDS PAGE dengan konsentrasi gel 20 %. Kesimpulan dari penelitian ini yaitu rendemen peptida kolagen terbesar pada kelompok kombinasi asam asetat 1M dan pepsin 1,5%, hasil pengujian SDS PAGE menunjukkan berat molekul 100 kDa serta memenuhi syarat uji proksimat.

Kata Kunci : kolagen, sisik ikan, rendemen, SDS PAGE



ABSTRACT

*Collagen production in the country is still not optimal, in 2003 Indonesia still imported collagen as much as 6200 tons, besides that collagen is mostly derived from mammals such as cows and pigs which are at risk of spreading infectious animal diseases. The purpose of this study was to determine the difference in yields of each group variation of milkfish scales waste collagen (*Chanos chanos*), and characterization of protein profiles. The results of the Kruskal Wallis statistical test for all treatment groups showed that the collagen test values were not significantly different ($p > 0.05$) in each treatment group. The results of proximate analysis include testing water content, ash content, fat content, and protein content have met the requirements of the National Standardization Agency Collagen. The results of collagen protein profile characterization showed that collagen bands were visible in the SDS PAGE results with 20% gel concentration. The conclusion of this study is that the yield of collagen peptides is the largest in the combination group of 1M acetic acid and 1.5% pepsin, the results of SDS PAGE testing show a molecular weight of 100 kDa and meet the requirements of the proximate test.*

Keywords : collagen, fish scales, yield, SDS PAGE,

