

## ABSTRAK

### **PRODUKSI GELATIN KULIT IKAN PATIN (*Pangasius sp*) DENGAN HIDROLISIS ASAM DAN BASA SEBAGAI BAHAN PEMBUATAN MASKER *PEEL OFF***

Gelatin merupakan salah satu zat yang diperoleh dari hidrolisis kolagen dari kulit, jaringan serat putih, dan tulang hewan seperti babi, sapi, ayam dan ikan. Bahan yang berasal dari babi haram hukumnya bagi agama Islam, karena kehalalan suatu gelatin dipengaruhi dari bahan pembuatnya. Ikan patin (*Pangasius sp*) merupakan salah satu bahan alternatif yang dapat digunakan untuk pembuatan gelatin. Salah satu aplikasi gelatin adalah sebagai bahan pembuatan masker *peel off*. Penelitian ini bertujuan untuk mengetahui karakteristik gelatin kulit ikan patin menggunakan hidrolisis asam dan basa, serta karakteristik dari produk gelatin kulit ikan patin pada masker wajah *peel off*. Pada penelitian ini, gelatin diperoleh dengan cara menghidrolisis kulit ikan patin dalam suasana asam dan basa, Hasil hidrolisis disaring dan dikeringkan. Karakterisasi dilakukan berdasarkan SNI 01-3735-1995 meliputi rendemen, uji kadar air, pH, kadar abu, kadar protein dan FTIR, untuk masker dilakukan uji pH, waktu kering, daya sebar dan uji antioksidan. Hasil penelitian menunjukkan bahwa rendemen gelatin asam sebesar 3,82%, kadar air 8,16%, kadar abu 4,66%, pH 2,40 dan kadar protein sebesar 61,32 dengan penampakan gelatin berwarna coklat, amis dan tidak berasa. Rendemen gelatin basa sebesar 9,94%, kadar air 8,72%, kadar abu 2,379%, pH 6,54 dan kadar protein sebesar 82,735 dengan penampakan gelatin berwarna kuning pucat, sedikit amis dan tidak berasa. Dari hasil penelitian, hanya gelatin hidrolisis basa memenuhi kriteria SNI. Aplikasi gelatin hidrolisis basa pada masker *peel off* dengan ekstrak bunga rosela dihasilkan masker berwarna merah tua, berbau khas rosela dengan tekstur cair lengket, pH 5,26, waktu kering selama 15 menit 33 detik, daya sebar sebesar 5 cm dan pengujian DPPH terdapat penurunan % inhibisi dari ekstrak rosela dengan formula masker yaitu 8,9% menjadi 3,1%. Gelatin kulit ikan ini bisa menjadi alternatif bahan kosmetik halal.

***Kata kunci:*** Asam-Basa, FTIR, Gelatin, Ikan Patin, Masker *peel off*

## **ABSTRACT**

### ***PRODUCTION OF PANGASIOUS FISH (*Pangasius sp*) SKIN GELATIN WITH ACID AND BASED HYDROLYSIS FOR MAKING PEEL OFF MASK***

*Gelatin is a substance obtained from the hydrolysis of collagen from the skin, white fiber tissue, and bones of animals such as pigs, cows, chickens and fish. Materials derived from pigs are unlawful for the Islamic religion, because the halalness of a gelatin is influenced by the ingredients it is made of. Pangasius catfish (*Pangasius sp*) is an alternative material that can be used to make gelatin. One of the applications of gelatin is as an ingredient for making peel off masks. The aims of this studies was to determine the characteristics of catfish skin gelatin using acid and alkaline hydrolysis, as well as the characteristics of catfish skin gelatin products in peel off face masks. In this study, gelatin was obtained by hydrolyzing catfish skin in acidic and alkaline conditions. The results of the hydrolysis were filtered and dried. The characterization was carried out based on SNI 01-3735-1995 including yield, test for water content, pH, ash content, protein content and FTIR. For masks, pH, dry time, dispersive power and antioxidant tests were carried out. The results showed that the yield of acidic gelatin was 3,82%, water content 8,16%, ash content 4,66%, pH 2,40 and protein content 61,32 with the appearance of gelatin being brown, fishy and tasteless. The yield of alkaline gelatin was 9,94%, water content 8,72%, ash content 2,379%, pH 6,54 and protein content 82,735 with the appearance of gelatin being pale yellow, slightly fishy and tasteless. From the research results, only alkaline hydrolyzed gelatin met the SNI criteria. The application of alkaline hydrolyzed gelatin to a peel off mask with roselle flower extract produced a dark red mask, roselle's distinctive smell with a sticky liquid texture, pH 5,26, dry time 15 minutes 33 seconds, spreadability of 5 cm and DPPH test showed a % decrease inhibition of roselle extract with a mask formula, namely 8,9% to 3,1%. This fish skin gelatin can be an alternative to halal cosmetic ingredients.*

**Keyword :** *Acid-Base, FTIR, Gelatin, Pangasius sp, Peel off mask*