



Chapter

## Characterization of Collagen from the Skins of Three Different Commercially Important Resources

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### ABSTRACT

Collagen is the most abundant biological macromolecules of extracellular matrix where it provides the major structural and mechanical support to tissues. Native collagens from different sources find applications in cosmetics, biomedical and pharmaceutical industries. The skins from cuttlefish, lizardfish and tilapia, collected from the industry were used for the study. Yield of the sample was evaluated as the amount of collagen obtained upon drying to the initial amount of raw material (fish skin) used for extraction, expressed as percentage. The protein pattern was analyzed using sodium dodecyl sulfate poly-acrylamide gel electrophoresis (SDS-PAGE) according to the method of Laemmli. Collagen samples had low moisture contents while protein content ranged from about 73% to 89%. Cuttlefish collagen had a pink colour on account of the pigments present in the raw material. Fish skin collagen has typically two alpha 1, one alpha 2 chains, and a beta component structure that is recognized as type I collagen.