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Isolation of Collagen from Fish Waste Material- Skin, Bones and Fins of *Thunnus tonggol*

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Abstract

This study investigated isolation of collagen from fish waste materials- skin, bones and fins of *Thunnus tonggol*. Samples were collected from Bandar Abbas factory. Sampling was done from skin, bones and fins of *T. tonggol* at three treatments with three replications. Moreover, humidity, protein, fat and ash were surveyed. Results showed that humidity and protein amount were high in skin and there were significant differences between skin with bones and fins at protein ($p< 0.05$), while there were no significant differences between skin with bones and fins at humidity ($p> 0.05$). The present study showed that amino acid of Glysin was dominant at skin, bones and fins of *T. tonggol*. Results showed that the rate of amino acid of hydroxiproline (collagen indicator) in skin was more than in bones and fins ($p< 0.05$). This means that there are more collagen in *T. tonggol* skin than in bones and fins ($p< 0.05$). Results of the SDS-polyacrylamide gel electrophoresis (SDS- PAGE) showed that there were not significant differences between skin with bones and fins at a pattern of collagen ($p> 0.05$) and all of them had two chains of α_1 and α_2.

Keywords: *Collagen, Skin, Fins, Bone, Thunnus tonggol.*