

**DEVELOPMENT OF FISH GLUE USING SKIN OF
YELLOW FIN TUNA (*Thunnus albacores*) AND
MAHI- MAHI (*Coryphaenidae hippurus*) AND
CHARACTERIZATION OF FISH GLUE PROPERTIES**

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ABSTRACT

Fish glue is water soluble hydrophilic colloidal proteins derived by controlled hydrolyzation of water insoluble collagen. The yellow fin tuna and Mahi-mahi fish glue was prepared by extracting gelatin from fresh and frozen skin by alkaline pretreatment followed by acid extraction method. Different acid and alkaline concentrations (0.1 %, 0.2 % and 0.4 %) and soaking time (18 hours, 24 hours for YFT and 1 hour, 3 hours for MM fish skin) were used for different fish glue type extraction. The proximate composition of the YFT and MM fish skin were 39.1% moisture, 60.95% crude protein, 10.51% crude fat and 2.4% crude ash and 33.8% moisture, 46.73% crude protein, 5.83% crude fat and 6.7% crude ash respectively.

The physical and chemical properties of the fish glue such as proximate composition, open time, Bonding power, p^H , color, and yield were determined separately based on the changes in concentration and soaking time. The best acid and alkali concentration and soaking time for YFT skin was 0.2 %, 24 hours soaking time. While for MM skin it was 0.4 %, 3 hours soaking time at 60 °C. The variance between glue sample of YFT and MM due to changes of acid and base concentration and soaking time did not show any significant variance except open time ($p < 0.5$). The YFT and MM glue works better on wood tacking and glass tacking purposes.