World Academy of Science, Engineering and Technology
International Journal of Nutrition and Food Engineering
Vol:12, No:06, 2018

Characteristics of Edible Film Made from Skin and Bone Fish Gelatin, Spotted Oceanic Triggerfish (Canthidermis maculata) and Tilapia Fish (Oreochromis niloticus)

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Abstract : Edible films can increase the shelf life of various food products by acting as water, oxygen, and lipid barrier. Fish gelatin as a film-forming agent has unique characteristics but varies depending on fish species. The purpose of this research is to characterize edible film made using skin and bone fish gelatin with the addition of plasticizer. Gelatin of spotted oceanic triggerfish (Canthidermis maculata) and tilapia (Oreochromis niloticus) were used. Glycerol and sorbitol with concentration of 0.25 and 0.5 % were added as a plasticizer. Spotted oceanic triggerfish gelatin with sorbitol resulted film with higher tensile strength and oxygen permeability, whereas tilapia gelatin with glycerol produced an edible film with higher elongation and water vapor permeability. The edible film made of spotted oceanic triggerfish gelatin and 0.25% sorbitol had the best characteristics.

Keywords : edible film, fish gelatin , glycerol, sorbitol
Conference Title : ICFSN 2018 : International Conference on Food Science and Nutrition
Conference Location : London, United Kingdom
Conference Dates : June 28-29, 2018