DEVELOPMENT OF A VALUE ADDED CANNED FISH PRODUCT USING ROUGH TRIGGER FISH

(*Canthidermis maculatus*)

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by

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ABSTRACT

Fishes are one of the excellent nutrient sources for human. Fish canning is used as preservation technique to reduce spoilage. Improper continuous supply of mackerel to produce canned fish is the main problem in canned fish production. Objective of this research was to develop a value added canned fish product using Rough Trigger Fish as an alternative to mackerel. Canning was done under commercial conditions in a canned fish processing plant. Trials were carried out to select the best brine concentration and spices added. Another set of trials were conducted to compare the brine and oil filling. Based on the sensory evaluation the, best treatment was selected using the 30 untrained panelists. Taste, color, aroma, texture, mouth feel and overall acceptability were analyzed. The final product was subjected to keeping quality analysis by determining the pH, level of oxidation and microbial contamination. According to the trials, 2.5% (w/v) brine solution was selected as the best brine percentage. Aroma and color did not show any significant difference among the treatments ($p>0.05$) and texture, mouth feel, taste and overall acceptability had significant differences ($p<0.05$). Similarly, 2.5% (w/w) pepper and 0.25% (w/w) cinnamon was selected as the best level of spices to be add in to the final canned fish. According to the sensory data, coconut oil was selected as the best oil to be used. *Salmonella* and *Escherichia coli* were absent in all treatments. pH of the treatments were ranged from 5.79± 0.18 to 6.26±0.18 for 21 days and it were within the acceptable range. Results from TBARS assay showed significantly ($p<0.05$) low oxidation in brine added canned fish than oil immersed canned fish up to 21 days. In conclusion, 2.5% (w/v) brine, 2.5% (w/v) pepper and 0.25% (w/v) cinnamon added canned Rough Trigger Fish can be a good replacer for mackerel canned fish.

Key words: Rough Trigger Fish, Product development, Value addition, Canned fish