

**EFFECTS OF DIFFERENT METHODS OF PRESERVATION
ON NUTRITIONAL AND SENSORY QUALITIES OF
MACKEREL (*RASTRELLIGER KANAGURTA*)**



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ABSTRACT

Fish food preservation is of paramount important in the present day due to seasonal glut, scarcity of food and the existence of user far from the resource base. The present study, conducted at the Zoology laboratory, EUSL, investigates the impacts of time and different preservation conditions on the quality and shelf-life of the preserved Mackerel (*Rastrelliger kanagurta*). The quality changes of fish were determined by chemical, microbial analysis and organoleptic evaluation. In this study, special emphasis was given to determine the better preservation method among gut, gutless and cooked condition to preserve at maximum period that fish could be held in the preservation condition. Based on the results obtained in the crude protein level of different preservation conditions, there was significant variation ($p < 0.0$) among different preservation conditions and with the increasing storage time. Protein degradation was very fast in preserved fish at gut and gutless conditions rather than cooked condition. Analysis of mineral content such as content of Sodium, Calcium and Potassium shows there was a significant variation ($p < 0.0$) among these three preservative conditions over the days. Declining trend in mineral content was very high in fish preserved at gut and gutless conditions by the diffusion from the fish flesh due to the physical damage, caused by microbial activity and was very low in fish at cooked condition. There was significant difference in Total Bacterial Count (TBC) ($p < 0.0$) among three preserved conditions. TBC was high in gut and gutless forms than cooked form of preservation. There is significant difference ($p = 0.0$) in sensory characters such as colour, smell, texture, taste, flavour and overall eating quality among three preservative conditions. Cooked condition was preferred by most of the panellists.

Among all the three preservation conditions, it could be concluded that the cooked form of preservative condition was very suitable for Mackerel fish (*Rastrelliger kanakurta*) preservation and it can give better preservation over 40 days.

Key words: Organoleptic evaluation, Preservation, Shelf-life, Total Bacterial Count.

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