

## ABSTRACT

### AN EVALUATION OF THE KEEPING QUALITY OF MINCED FISH

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Minced fish provides a means of increasing the utilisation of unfamiliar fish and fish wastes for human consumption and this applies in particular to underdeveloped tropical countries where many fish are underutilized. In view of the high unsaturation of lipids in such mince, their storage quality and nutritional value are critically affected by lipid oxidation. The use of antioxidants to control this undesirable rancidity development, was to a certain extent successful.

The relative effects of butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT) were determined on frozen (-2 C) mince from Mullet (Mugil spp.) and Catfish (Ariopsis spp.).

Thiobarbituric acid value, peroxide value and sensory scores were determined to assess the relative effects of the antioxidants under the above conditions.

The rate of oxidative rancidity development decreased with the addition of these antioxidants. It was found that a 0.02% concentration of BHA (based on the fat content of the fish) and 0.02% of BHA and BHT were the most effective treatments for the catfish (Ariopsis spp.) and Mullet (Mugil spp.) respectively.

This investigation has found that lipid oxidation particularly of polyunsaturated fatty acids in frozen (-2 C) mince can be effectively controlled by 0.02% BHA or a mixture of BHA and BHT at a concentration of 0.02% (based on the fat content of the fish). In particular, addition of 0.02% BHA prevented drastic sensory changes in minced catfish (Ariopsis spp.) for more than 6 weeks and should therefore be of commercial relevance in increasing the utilization of products containing these minced fish species.