

## **Chemical and organoleptic evaluation of the iced and traditionally processed fresh water fish**

**K. Premakumar**

*Department of Agricultural Chemistry, Faculty of Agriculture, Eastern University, Sri Lanka*

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### **Abstract**

Fresh water fish represents one of the major sources of animal protein in the Eastern Province of Sri Lanka. *Tilapia mosambica* offers good prospects for industrialization among the various fresh water species because of its wide geographical distribution, adaptability, early and rapid reproduction. Hence ice storage constitutes the very often, the only means of preservation of fish. The keeping quality of the fresh water fish *Tilapia mosambica* in ice storage was investigated. Of the chemical evaluations undertaken, TVN values appeared to have some promise as a quality index during iced storage of this fish. Organoleptic evaluation of the raw fish reflected the progressive deterioration during storage. The keeping quality was 12 days. Evisceration under commercial condition did not extend the storage life.

Since the purchase of ice and maintenance of freezing and or chilling equipment is beyond the means of most small fishermen living in the vicinity of fresh water tanks, the unsold catch is preserved by traditional smoking (TS) or traditional solar drying (TD). The disadvantage of this method is high insect infestation or windborne sand, in solar dried and deposition of potentially toxic contaminants generated during smoking. Very little is known about the quality changes which occur during processing. The aim of this study was also to evaluate chemical and organoleptic changes which occur during traditional smoking or solar drying of *Tilapia mosambica*. These changes were compared with fish processed using laboratory drying oven. Fresh (FF), iced (IF), traditionally smoked (TS), traditionally solar dried (TD) and oven dried (OD) *Tilapia mosambica* were assessed for proximate composition and organoleptic changes. Proximate composition of the fish treatment groups were similar, and this increased with decreasing moisture content. From the consumer-type taste panel, a comparison between fish treatment and organoleptic attributes showed obvious differences. The fresh fish always scored highest while traditionally solar dried scored lowest.

*Correspondence :*     *kanagaprem@yahoo.com*