

Shelf life of fish species collected from Suva (Fiji) fish market in immediate and delayed iced storage

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The investigation was carried out to evaluate the keeping characteristics of Mullet (*Mugil cephalus*), Emperor (*Lathrinus harak*) and Tilapia (*Oreochromis niloticus*) collected from Suva market in Fiji and stored immediately in ice (1:1) in an insulated box. Another set of experiments were done with the same species but were kept at ambient temperature for four hours and then placed in ice (1:1) in insulated box. Shelf life of fish was studied until the fish were rejected. Parameters assessed were organoleptic (QIM) and biochemical (TVB-N, TMA and pH). Organoleptic results indicated a shelf life of 5-7 days for Mullet and Emperor while shelf life of tilapia remained between 3-5 days. Initial (day 1) organoleptic score in both the experiments indicated that the fish were of high quality (score =10). However, on the 3rd day, organoleptic score abruptly reduced to 5 in Mullet and Emperor but yet remained within the accepted shelf life. While organoleptic score for tilapia reduced to less than 5 on the 5th day confirming the shelf life to remain between 3 to 5 days. TVB-N scored showed a higher concentration on the 0th day for all the species (more than 10 mgN/100g). But, on the 3rd day TVB-N value decreased slightly and then increased progressively till the end of experiment. At rejection time, TVB-N values were low (20 mg n/100g) compared to widely accepted value of 30-40 mgN/100g. TMA and pH value showed a similar pattern. The experiment showed a new trend of shelf life of species being so low (3-5 and 7 days) as compared to other tropical species. Statistical analysis showed that delayed iced species were of better quality and had longer shelf life in comparison to species stored in immediate icing. This trend is again a new finding in species in the Pacific Island Countries as compared to other tropical countries. Further investigation is recommended with larger samples to confirm the results of the present investigation.

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