

Ice stored *Ompok pabda* and *Oreochromis mossambicus* in relation to their composition, quality and pictorial presentations

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Composition, sensory, biochemical and microbiological quality parameters of ice stored fishes namely; *Ompok pabda* (Indian butter catfish) and *Oreochromis mossambicus* (Mossambique tilapia) have been evaluated as a function of ice storage along with pictorial presentation. Overall appearance of pabda fish changed from bright skin bright skin with clear distinction between dorsal and ventral side to discoloured and burst belly from day one to day 15 in ice storage. In tilapia, bright and dark coloured skin with reddish tinge at the beginning of the storage study turned to creased and whiter skin colour with softened flesh at the end of 17 days in ice storage. Proximate composition of pabda fish showed moisture, crude protein, crude fat and total ash content of 79.84 ± 0.15 , 13.13 ± 0.14 , 1.64 ± 0.67 and $2.04 \pm 0.08\%$ whereas that of tilapia was found to be 78.80 ± 0.09 , 18.32 ± 0.14 , 0.90 ± 0.01 , $3.42 \pm 0.04\%$ respectively on wet weight basis. Increasing trend was observed in biochemical and microbiological quality parameters during ice storage in both the fish species. Projected shelf-life of pabda and tilapia were estimated to be 15 and 17 days respectively as a function of ice storage based on pictorial presentation.

Anthocyanin based freshness indicator for intelligent packaging application

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In the current study, anthocyanin (AC) was extracted from the seed coat of red kidney bean (*Phaseolus vulgaris*) for preparing pH sensitive freshness indicator. Bromocresol purple (BCP) was used as reference indicator. Ginger prawn (*Metapenaeus kutchensis*), an endemic species of the Gulf of Kutch, was collected from Surajbari (Kutch, Gujarat, India). The whole prawns were packed inside nylon-EVOH-polyethylene bags (one group under air and another under vacuum) along with freshness indicators and stored at 4 °C. On 0th day, pH, TMA-N (mg%) and TVB-N (mg%) values of ginger prawn were 5.09, 1.85 and 12.9, respectively. During storage, pH values of aerobically packed prawns (AP) increased and reached a value of 7.8 on 6th day. At the end of 9 days of chilled storage, 8.41 was the pH of vacuum packed sample (VP). Over the period of storage, colour of the freshness indicating dyes changed with increase in pH and volatile base formation. On the day of sensory rejection of samples, BCP was turned from yellow to purple and colour of AC changed from pink to blue-green, revealing its efficiency for freshness prediction, which will enable the consumers to judge the quality of fish.