Title Effects of sodium acetate dip treatment and vacuum-packaging on chemical, microbiological, textural and sensory changes of Pearlspot (*Etroplus suratensis*) during chill storage

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Abstract

The effects of sodium acetate dip treatment, followed by vacuum-packaging, on the shelf life of beheaded, scaled and gutted Pearlspot (*Etroplus suratensis*) during chill storage were examined. Sodium acetate (2%, w/v) solution was used for the dip treatment. Pouches (size: 15 × 22 cm) made of 12μ-polyester laminated with 300 gauge low-density polyethylene were used for packing fish. After packing, all the packs were iced with flake ice in the ratio (1:1) fish: ice in an insulated box and were kept in a cold room maintained at 0–2 °C. The control and the treated packs were analysed periodically for chemical (pH, TBA, TMA, TVB-N), microbiological (total viable count), textural and sensory characteristics. Changes in *Staphylococcus aureus*, *Enterobacteriacea* and *Feacal streptococci* were determined for fresh fish and for fish samples at the time of sensory rejection. Air packed samples were found to have a shelf life of about 8 days; vacuum-packed samples were found to be acceptable up to 10 days, whereas sodium acetate-treated vacuum packed samples were found to be acceptable up to 15 days. Thus, vacuum-packaging, in combination with sodium acetate, was found to delay the spoilage, thereby significantly extending the shelf life of Pearlspot at refrigeration temperatures.