ABSTRACT

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UTILIZATION OF COMBINATION SODIUM ACETATE AND SODIUM CITRATE FOR PRESERVE THE QUALITY OF FILLET CATFISH (Pangasius nieuwenhuisi)
(xiv + 100 pages: 15 figures, 3 tables, and 11 appendices)

This study was carried out to evaluate the sensory, microbiological and physicochemical changes in the quality of fillets catfish (Pangasius nieuwenhuisi) which was immersed into the combination of sodium acetate and sodium citrate (1:1) with different concentration. Concentration of 2.5%, 5% and 7.5% could keep the organoleptic value of up to 12 days of storage when compared with controls of eight days of storage. The three concentrations did not give significant different (P > 0.05) in terms of maintaining the organoleptic properties of texture (5.35; 4.60; 4.95), odor (4.30; 4.00; 4.20), color (5.85; 5.80; 5.7) and mucus (7.20; 7.40; 7.20) at the end of the storage period (15 days). However, those concentrations were significantly better compare to control (0%) (2.60; 1.50; 4.10; 4.85). The use of a combination of sodium acetate and sodium citrate (1:1) at a concentration of 2.5% and 5% were effective in suppressing the growth of bacteria and inhibiting TVB-N and TMA forming (P < 0.05). Sodium acetate and citrate combination (2.5% and 5%) did not affect (P > 0.05) pH, total discoloration, gel strength and water holding capacity of catfish fillets. The best concentration of sodium acetate and sodium citrate (1:1) was 2.5%. Therefore, this treatment could be considered as a generally recognize as safe preservative and can be used to maintain the quality of catfish fillets storage at low temperature (4°C).

Keywords: Pangasius nieuwenhuisi, sodium acetate, sodium citrate, fish preservation, chilling.