عنوان مقاله:

Research Article: Effects of ascorbic acid and sodium citrate treatments on the sensory quality and lipid stability of fresh snakehead fish (Channa striata) fillets during ۱۴ days chilled storage at ۲-۴ C

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خلاصه مقاله:

Snakehead fish (Channa striata) is one of the most common and important freshwater species in tropical Asia. Lipid oxidation is one of the major deteriorative reactions taking place in fish muscle during processing and storage, affecting the physicochemical properties and limiting the shelf-life of fishery products. The objective of this study was to investigate the effects of antioxidants on lipid stability, sensory quality and physicochemical properties of snakehead fish fillets during chilled storage. The results stipulated that ascorbic acid and sodium citrate treatments significantly interrupted lipid hydrolysis and lipid oxidation progression in the fish muscle, emanating in lower FFA, PV and TBARS values and higher PL content obtained in the treated samples. The samples treated with ascorbic acid and sodium citrate had significantly higher whiteness values and lower yellowish (b*) values compared to the untreated samples throughout the storage period. The development of lipid oxidation was in high correlations with sensory quality (QI and Torry scores). Based on the QIM and Torry scores, the shelf lives of the untreated, ۰.۸۰% sodium citrate treated, ۰.۲۵% ascorbic acid-treated and ۰.۵۰% ascorbic acid-treated samples were of ۱۰ days, ۱۱ days, ۱۳ days and ۱۴ days, respectively.

کلمات کلیدی:

Snakehead fish, Antioxidant, Lipid oxidation, Sensory quality, Chilled storage