

Abstract

The aim of this study is to evaluate the impact of Cumin oil on the quality and shelf life of silver carp fillets during storage at 4 °C. Fillets produced 100 grams of silver carp with values of 0.2, 0.4 and 0.6 percent of treatment's Cumin oil were packed and kept at a temperature of 4 °C. Chemical (TVB-N, TBA, PV and pM), microbial (TVC, PTC) parameters and sensory evaluation were measured on days 0, 3, 6, 9, 12 and 15. The results showed that the amount of volatile nitrogenous bases (TVB-N), thiobarbituric acid (TBA) and the peroxide (PV) increased by increasing the storage time significantly ($P < 0.05$), and in the samples containing 0.2, 0.4, 0.6 percent, Cumin oil was less than the control sample, and a significant difference ($p < 0.05$) was observed between treatments which the least amount of treatment was related to a treatment containing 0.6% of the cumin seed oil. Microbial results (TVC, PTC) showed that treatments with Cumin oil had bacteria load less than the control treatment ($P < 0.05$), and the lowest and highest bacterial load was observed respectively in treatment with 0.6 and 0.2 percent of cumin oil. Also, sensory evaluation results showed a significant difference between the fillets containing Cumin oil (0.2, 0.4 and 0.6 percent) and the control sample ($P < 0.05$), and the degree of acceptability of silver carp fillets' treatments containing cumin oil was higher than control treatment, which among treatments containing cumin seed oil, treatments with 6.0 percent had higher acceptability. Thus, we can conclude that, the best quality and shelf-life were observed in the samples containing 0.6% of Cumin oil.

Key words : Antioxidant , *Cuminum cyminum* ,essential oil, *Hypophthalmichthys molitrix*, Shelf life



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Hypophthalmichthys molitrix fillet
during storage at 4°C**

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