

**Abstract:**

One of the approaches of storing fishery products is to use natural antioxidants. In this study, the antioxidant effect of fennel seeds extract on the quality of fish fingers made of silver carp fillets being stored in 4°C was evaluated. Chemical (TVB-N, TBA, PV and pH), microbial (TVC and PTC) and sensory evaluation were measured at 0, 3, 6, 9, 12 and 15 days of storage time. The results indicated that the amount of volatile nitrogenous bases (TVB-N), thiobarbituric acid (TBA) and the peroxide value (PV) were significantly increased with increasing storage time. This increase was less significant in samples containing 5% of ethanol extract of fennel seeds than control samples and a significant difference ( $p < 0.05$ ) was observed between all of treatments. Results (TVC and PTC) showed that treatments containing fennel seed extract had less microbial loads than control samples ( $p < 0.05$ ). Minimum of bacterial loads equal to 6.26 Log CFU/g were observed in groups which had 5% of fennel seed extract and maximum of bacterial loads equal to 9.14 Log CFU/g were observed in control samples. Thus 5% of fennel seed extract recommended for fish finger that made from silver carp during storage in 4°C.

**Keywords:** *Hypophthalmichthys molitrix*, Fish Finger, Fennel seed, Shelf life



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**Title:**

**Antioxidant effect of *Foeniculum vulgare mill* seed extract on quality of fish  
finger made from Silver carp during storage at 4°C**

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