

**Abstract:**

One way to preserve fishery products is the use of essential oils and plant extracts. In this study, the effect of peppermint extract was evaluated on the shelf life of surimi made from silver carp during storage at 4 °C. For this, fish were filleted, washed and minced by meat grinder and then surimi was prepared by washing in three stages (first two stages washed with cold water and last stage with cold water containing 0.3 % salt). Surimi were mixed with peppermint extract 1, 2/5 and 5% w/w. Chemical parameters (pH, TVB-N, PV, TBA) and microbial (TVC, PTC) on days 0, 3, 6, 9, 12, 15 and 18 were measured. The results showed that the amount of ash and protein significantly increased ( $P < 0.05$ ) in group 1 (control), group 2 (surimi containing 1% peppermint extract), group 3 (surimi containing 2.5% peppermint extract), group 4 (surimi containing 5% peppermint extract). Moisture and fat content in all treatments was significantly decreased ( $p < 0.05$ ) after 18 days storage. The pH of the extract was significantly lower than control ( $p < 0.05$ ), but during storage showed a significant increase ( $p < 0.05$ ) in all treatments. Indicators of TVB-N, PV and TBA in treatment 2, 3 and 4 compared to control showed a significant decrease ( $p < 0.05$ ), but during storage a moderate increase was found in all treatments. Microbial test results also confirmed that the Total bacteria count (TVC) and bacteria count (PTC) in the treatments contains extract significant decrease compared to control ( $p < 0.05$ ) have. Based on results, treatments with peppermint extract had better quality compared to control treatment during cold storage (4 °C).

**Key words :** Antioxidant properties, extract, *Mentha piperita* L., *Hypophthalmichthys molitrix*



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## **Title**

**Effect of *Mentha piperita* L. extract on the shelf life of  
*Hypophthalmichthys molitrix* surimi during storage at 4°C**

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