

## **Abstract**

Among the additives that are used for processing fish, including various salts which are antimicrobial agents to prevent microbial growth and improved retention time is used. The aim of this study was to evaluate the effect of different concentrations of sodium chloride immersion time pretreatment on shelf life of silver carp fillets during refrigerated storage (4 ° C). Fillets in sodium chloride solution at concentrations of 2.5 and 5% for zero, 5 and 10 minutes were immersed and after dehydration, were packed and refrigerated. Physical parameters (drip loss and pH), microbial (PTC and TVC) and chemical (TVB-N, TBA and PV) on days zero, 3, 6, 9, 12, 15 was performed. Drip loss in 5% salt concentration, was much less, to compared with concentration of 2.5% and control. There was no significant difference ( $p \leq 0.05$ ) Between the TVB-N of the Sample in Day Zero. But in the day15, 5minute-5% and 5minutes-2.5% treatments had the lowest levels of TVB-N. PV for the control on day 15 was 13.84 meq/kg while for the treatment of 5 minutes-5% was 9.36 meq/kg. Control group and then the samples were immersed with a time of 10 minutes were the highest PV. TBA index was lowest in 5% salt concentration to compared with 2.5% salt concentration. Bacteriological parameters (PTC and TVC) for treatment of 5% salt concentration was lower than 2.5% salt concentration and 5 minutes-5% Had the best results. Control group at day 9 and treatment of 5minutes-5% at day 12 were spoiled. The salt concentration of 5% compared with 2.5% salt and control better performance By comparing the results of the treatments, the best time and most appropriate concentration was chosen 5 minutes and 5% respectively.

**Keywords:** silver carp, sodium chloride, brining, fat oxidation, microbial assessment



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**Effect of pretreatment of brining time with different  
concentrations of sodium chloride on the shelf life time  
of Silver carp (*Hypophthalmichthys molitrix*) fillet  
during refrigerated storage**

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