

Effect of bacteriocine Z and sodium acetate on shelf-life of silver carp (*Hypophthalmichthys molitrix*) fillet during refrigerator storage

Abstract

High spoilage ability of fishes has caused preservation of fresh fish quality to be one of notable important issues in fishery industry and for consumers. In this study the effects of Nisin Z (%0.2) (treatment no.1) was considered separately and simultaneous with sodium acetate (2g/100ml) (treatment no.2) on silver carp (*Hypophthalmichthys molitrix*) fillets during refrigerator storage. Fish fillets were vacuum packed and stored in refrigerator at 4°C for 9 days. Microbial parameters (the total viable, psychrotrophic and lactic bacteria counts) and chemical parameters (PV, TBA, TVB-N) and so pH value (all over days), total protein, moisture and ash (in first time) were measured at days of 0, 3, 6 and 9. TVN and TBA levels in treatment no.1 and no.2 significantly ($p < 0.05$) increased during storage period, but did not exceed to allowed limit until 9th day, while the control samples reached this limitation at 4th day. Control samples had higher Psychrotrophic bacteria, lactic and total bacteria count which followed by samples of treatment no.1 and then treatment no.2 in the days of 4, 6 and 9 respectively. Results showed that simultaneous use of sodium acetate and Nisin Z could increase shelf-life of silver carp fillet packed in vacuum bag for 5 days at 4°C.

Key words: Silver carp, Nisin Z, Sodium acetate, Shelf-life, Vacuum packaging



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**The Thesis Submitted for the Degree of Master of Science
(in the field of fisheries)**

**Effect of Bacteriocine Z and Sodium Acetate on Shelf-ife
of Silver Carp Fish Fillet During Refrigerated Storage.**

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April 2010