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Consideration of the effects of salting on profile fatty acids and quality indicators of pike (*Esox lucius*) stored at $4^{\circ}C$

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Abstract

In this study the effect of salting on li*P*id and fatty acids of *P*ike (*Esox lucius*) and its shelf life were studied for 90 days in $4^{\circ}C$ tem*p*erature. The identification of fatty acids *P*rofile from fresh and salted *P*ike were carried out by gaschromatogra*P*hy (GC). Then the changes of fatty acids, Total microbial count, *P*V and TBA were followed at intervals of 0, 30, 60, 90 days. In fresh *P*ike sum of the saturated and unsaturated fatty acids were 34.32 and 18.75 % respectively. The results showed that with salted fish after 90 days of storage, the saturated fatty acids increased to 36.22 ($P>0.05$) and the sum of the unsaturated fatty acids due to oxidation decreased to 18.00%. The salting is not only a proper way to conserve, but also by decreasing the fat of the fish from 1.53 to 1.28 % ($P>0.05$), it will have an effect on preserving fatty acids s*p*ecially omega3 and omega6. In salted fish the amount of *P*V increased from 1.84 meqO_2/kg to 2.10 meqO_2/kg. These results are significant at ($P<0.05$), In salted fish the amount of TBA increased from 0.05 mg/100g to 0.07 mg/100g after 60 days, then started to decrease and finally reached 0.06 mg/100g after 90 days of storage on $4^{\circ}C$ tem*P*erature ($P<0.05$). The total microbial count did decrease from 1.63×10^2 cfu/g to 1.51×10^2 cfu/g ($P>0.05$). This reduction can be due to salting in fish tissues.

***Keywords**:* Pike; Fatty acids; Microbial contamination; Shelf life; Salting.

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