

Comparative Study of Chemical, Microbial and Sensory Quality of Fish Fingers Produced From Mince and Surimi of Common Carp (*Cyprinus carpio*)

Abstract

The chemical, microbial and sensorial quality of fish finger made from common carp mince and surimi were compared and also effects of deep frying with sunflower oil and hydrogenated sunflower oil on composition of fish fingers were investigated. There were significant ($p < 0.05$) differences in proximate composition between mince and surimi used for fish finger producing. The process of fish finger making, caused to change to protein, lipid, moisture and ash content from 17.38, 4.58, 76.65 and 4.33 g/100g to 18.71, 2.27, 70.95 and 6.66 g/100g in minced products and from 10.85, 1.98, 83.76 and 1.82 g/100g to 12.22, 1.73, 75.17 and 5.63 g/100g in surimi fish finger products, respectively. It also reduced the total microbial count and total coliforms from 5500 and 110 (cfu/g) to 500 and 40 (cfu/g) in minced products and from 7306 and 140 (cfu/g) to 810 and 43 (cfu/g) in surimi fish finger products, respectively. Frying in sunflower oil significantly increased the lipid contrast significantly decreased the moisture and ash content (in wet weight basis) in both kinds of fish fingers. Significant ($p < 0.05$) reduction was also found in total microbial count and total coliforms after frying. Sensorial test like smell, taste and texture showed the same quality for fish finger made from surimi. About 16 fatty acids were identified in fish fingers. Higher content of Palmitic acid (16:0) and Oleic acid (18:1 n-9) were found in fried samples with both kind of oils. The content of EPA and DHA decreased significantly ($p < 0.05$) after frying. Samples that fried in sunflower oil had more monounsaturated and polyunsaturated fatty acids comparing with hydrogenated sunflower oil fried samples.

Keywords: Fish finger, Mince, Surimi, Fatty acids, Common Carp



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The Thesis
Thesis Submitted for the Degree of Master of Science
(In the Field of Fisheries)

Title
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Microbial and Sensory Quality Fish
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October 2009