

Abstract

In this study, the production conditions of surimi from Silver carp flesh was optimized by varying washing time (5, 10 and 15 min),, washing number (1, 3 and 5 times) and ratio of water to meat (2: 1, 4: 1 and 6: 1) variables by application of response surface methodology in form of Central Composite Design (CCD) with six replications at the center point using Design Expert software. Accordingly, color, protein content, water holding capacity, yield, pH and textural properties (hardness, adhesiveness, cohesiveness, springiness and gummies) of resultant surimi, was measured. The highest composite design averages were recorded for processing conditions of 4 times washing for 10 min and 2.85; 1 water to meat ratio as the optimum processing conditions. Based on the data were as 76.19 % for Protein content, -7.23 for Redness (*a* value*) , 11.14 for Yellowness (*b* value*), 87.10% for Lightness (*L* value*), 81.6% for whiteness, 24.1N for Hardness, 0.85mj for Adhesiveness, 0.5 for Cohesiveness, 11.25mm for Springiness, 13.3N for Gummies, 88.12% for Water Holding Capacity, 87.99% for Yield and 7.53 for pH. Investigation of R^2 and Lack of fits showed that the models resulting from this study had good fitness and confidence to predict considered responses.

Key words: Silver carp, Response Surface Methodology, Surimi, Texture, Color



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**Optimization of surimi production from
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molitrix*) by application of response
surface methodology**

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