

***APPLICATION OF DIGITAL IMAGE PROCESSING FOR
IDENTIFICATION THE FRESHITY OF VANAME SHRIMP***

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ABSTRACT

Vaname Shrimps (Litopenaeus vannamei) is one of fishery product in Indonesia that has a high market demand with the positive trend. Nutrition from the Vaname Shrimp has a very diverse benefit. However, it is often sold not fresh so it affects the benefit of its nutrition. Manual identification process has a lot of weakness to identify the fresh level of vaname shrimps because it has a subjective assessment. The purpose of this research is to develop a digital image processing system that can identify the freshness level of vaname shrimp with good efficiency. The system works by observing the discoloration of shrimps that appear in digital image by Least Square method with RGB as the parameters. The data used are 20 samples of vaname shrimp which are image taken every 1 hour until 12 hours and image taken at the 24th hour so as to obtain 280 images data with a resolution of 1920 x 1080 pixels. And then, the images are processed by the system with Least Square method. The best result of this identification system with the Least Square method has 69% accuracy with the parameters of red and green values.

Key word: Digital Image Processing, Vaname Shrimp, Least Square Method