

## **ABSTRACT**

*Crackers is a typical Indonesian food and is very well known by the public. Various types of crackers which there are prawn crackers, onion crackers, crackers and other skin. Prawn crackers are crackers made from tapioca flour dough and shrimp finely flavored spices and flavorings. Crackers cracker shrimp is one of the much-loved by the public because it tastes good. However, many consumers are tkurang can distinguish between good quality shrimp crackers, medium, and ugly. Consumers simply trust the opinions of the sellers that the result itself is not necessarily true and accurate.*

*At this final project classification process keripuk shrimp quality by using color segmentation method Watersheds and K Nearest Neighbor. Watersheds color segmentation is done to classify tingakat existing color on prawn crackers image sharpness gradations based on color. Then the results are used to characterize each class of crackers. K Nearest Neighbor is the classification of an object based on the distance learning data closest to the object (nearest neighbor). With so obtained classification in accordance with the quality prawn crackers.*

*Based on the research that has been done, the resulting image quality prawn cracker 1 has a value > 4500 pixels. While the image quality prawn crackers 2 has a value > 2400 pixels and quality prawn crackers r 3 has a value <2400 pixels. The results obtained by counting the number of extents of colors. The test results obtained value system accuracy of 98.37% from the comparison between systems with merchant and buyer surveys to determine the quality of prawn crackers sidoarjo.*

**Keywords:** *Shrimp Crackers image, segmentation, Watersheds, K Nearest Neighbor (K-NN)*