

ABSTRACT

Cheese is food made from milk by utilizing the fermentation process or processed milk which has a savory taste and is generally yellow. In using cheese as a consumption material, it is necessary to pay attention to the quality used. Cheese used is still suitable for consumption or not. Factors that influence the unworthiness of cheese to be consumed usually because it has passed the expiration date. In addition, inappropriate temperatures can also affect the feasibility of cheese quality. The way that is usually done to find out the quality of cheese is still feasible or not to be consumed is to see visually changes in color and texture. But sometimes in ensuring it by trying to taste cheese due to human visual limitations.

In the final task the author makes a study on the detection of cheese quality with image processing techniques to facilitate identification of cheese quality through observation of texture patterns. The author uses the Gabor Wavelet feature extraction method with spatial frequency parameters, filter orientation, standard deviation, and filter ratio. Classification of Learning Vector Quantization (LVQ) with Epoch parameters, Learning rate and minimum error.

Final task research using Android Studio software for the implementation of cheese quality detection application. Implementation is based on a series of testing processes and observations of some 48 test image samples and 8 training image samples taken using digital microscopes. From the research, the system computation time was 20.69 s and the system accuracy was 85.42%. It is expected that the results of the study can facilitate the identification of good quality cheese or not

Keywords: Cheese, Gabor Wavelet, Learning Vector Quantization.