

## ABSTRACT

*Nowadays, cheese is a food commonly consumed by Indonesia society. The cheese known as complement of the processed food that is very delicious. Besides the delicious taste, cheese has a fairly high protein. And that's the reason why the cheese is widely used as a topping for many foods or eaten for snack. However, the cheese that the packaging has been opened and stored for days on the open space can lead to a decrease in quality. The quality of this one can be seen and observed from the segmentation of color and the texture of the cheese. However, if conducted observations are visible, the results obtained will be subjective so the existence of a difference perspective caused by several factors such as light and the difference in the ability of the vision of the person.*

*In this Final Task, the author discusses about the technique to classify the quality of cheese based on segmentation of color and texture of cheddar cheese by using digital image processing. As we know the development of technology in the field of digital image processing has been very rapid, precisely the technique of pattern recognition of a digital image. There are several methods that can be used to detect the quality of the cheese. In this final Task authors use methods of the Discrete Wavelet Transform (DWT) and the classification of Support Vector Machine (SVM).*

*This final task research results obtained the best accuracy value of 97.9167% and computational time 0.0702 s extraction characteristics based on texture and color to the method with the parameter order one DWT (Mean, standard deviation, Variance, Kurtosis and) sub-band LL, wavelet decomposition level 1, type of multiclass kernel polynomial and OAO on SVM. Expected with the capabilities of this system, can help consumers cheddar cheese. So it can be used as a standard of accuracy in the measurement of the quality of the cheese is very edible cheese, edible cheese and not edible cheese.*

***Keywords: Cheese, Discrete Wavelet Transform (DWT), Support Vector Machine (SVM)***