ABSTRACT

Cheese is a food produced by separating solid substances in the milk through a process of thickening or coagulation. Cheese contains vitamin A, B, and D, as well as various minerals necessary for our body, such as phosphor and calcium. There is a number of Indonesian people who did not know that once the cheddar cheese is opened, there's a limit where the cheese is edible. Visibly, the quality of cheddar cheese that is no longer edible can not be seen. This problem became the background writer's final task. On the digital image processing system, any image can be analyzed and classified based on the features of the image of the object. To understand the quality of cheese can be done through observed image of cheese for 15 days.

In this Thesis the author discusses how to classify the type of quality of the cheese. There are several methods that can be used for the classification of the quality of the cheese. In this final task the author use Gray Level Co-Occurrence Matrix (GLCM) feature extraction with Support Vector Machine (SVM) classification that begins with the process of pre-pocessing.

The testing is done with testing 48 image of cheese, with the composition of each class has 16 image of very edible cheese, 16 image of edible cheese, and 16 image of not edible cheese. From the testing, the author can obtain the best accuracy of 97.9167% with computational time 0.0286 s using the GLCM method which used feature extraction based on texture and color with two order of parameter (the contrast and homogeneity), direction of 0°, d = 2pixel, kernel polynomial, and the type OAO of multicast.

Keywords**:** *Cheese, Gray Level Co-Occurrence Matrix (GLCM), Support Vector Machine (SVM).*