

## ABSTRACT

*The increasing consumption of animal protein, especially meat does not escape from a variety of problems ,among them is a concern that it contains ham as food ingredients. Lately often appears the case of beef such as counterfeiting security beef with ham. This condition could harm the consumers , especially beef consumers in traditional markets. They do not know how to differentiate beef with ham , the consumers only origin buy meat. In order to protect consumers from these scams ,so it takes tool or system that can help people to recognize the beef and ham*

*In this final project has been carried out research and design of a simulation using the texture feature extraction method Grey Coocurent Level Matrix ( GLCM ) is one of the methods used in analyzing the texture and classification method with Fuzzy Logic*

*In this final project has created a simulation that can classify the image of beef and pork, by using two types of data among others are the database training and test images . Number of training images database is 200 data. The details is 100 images of beef and 100 image of ham . Number of test images is 600, with details of the 200 image of beef and ham , 100 data of image verification meat are lamb and chicken , 100 data of test data with parameter image distance , and 200 images of beef and ham with low brightness is 30lux. Captured image at a distance of 8 cm and the brightness 300lux. In the final project research is conducted has been tested with a test image of beef and ham using  $90^{\circ}$  and  $135^{\circ}$  of gray get accuracy reached 98.5 % .Testing with a distance parameter to get the highest accuracy is 92.5% , in the making distance to the object is 8cm. Testing with low brightness parameters 30 lux at  $0^{\circ}$  and  $135^{\circ}$  GLCM get an accuracy of 46%. Testing with the image verification lamb and chicken obtain accuracy of 37%, the epoch is 20 and  $135^{\circ}$  of gray GLCM get an accuracy 98.5 % with a computation time 4,190s.*

**Keywords : Image Processing , Meat , GLCM , Fuzzy Logic**

