

ABSTRACT

Drugs is something substance addictive that entry into human body which affects arrangement neural system or brain that has bad impact on the body. Tool testing type of drugs substance that exists is more expensive. Expensive testing equipment for drugs, make tools become limited to use and no all the authorized officer conducts a drug investigation bring tool when worked. Because of that, case drugs in Indonesia that also needs supportive tool to help officer worked. Therefore, a system is needed that can classify the types of narcotics substance to be an alternative testing drugs substance.

In this study, The system has been made consists of three main steps, that is pre-processing, feature extraction, and classification. At the step pre-processing data drugs convert to grayscale. System using Gray Level Co-occurrence Matrix (GLCM) method for extraction characteristic image with classification using Artificial Neural Network Backpropagation (ANN-BP) for testing database images are tested by input data drugs that will be identified.

This final project, aims to identify classify narcotics substance classes and from the types of drugs that can be identified, can be taken to add information about the type, contained, and group of drugs. By using Gray Level Co-occurrence Matrix (GLCM) method and Artificial Neural Network Backpropagation (ANN-BP) the results obtained highest accuracy value is 96,80% with a computing time of 0,0897 seconds. These results are obtained by using parameters of pixel distance, angle direction, quantization level, 7 features extraction Gray Level Co-occurrence Matrix (GLCM), in the classification Artificial Neural Network Backpropagation (ANN-BP) using parameters hidden layer, and iteration (epoch).

Keywords: *Narcotics, Gray Level Co-occurrence Matrix, Artificial Neural Network Backpropagation.*