ABSTRACT

Clinically, one way that doctors use to diagnose diseases of the respiratory system is a sound analysis of human lungs using a stethoscope. The results of the doctor's diagnosis is highly dependent on the sensitivity of the ear and experience is concerned, the low frequency and amplitude, and the sound patterns that are relatively similar.

At the end of this task, there are nine classes of voice data that is classified human lung *bronchial, bronchovesicular, vesikular, tracheal, asthma, coarse crackle, fine crackle, grunting, and wheeze*, in which each class has a five-voice data. The method used in this thesis is *Linear Predictive Coding* techniques, *Short Time Fourier Transform* for feature extraction, and *Linear Discriminant Analysis* as a classifier.

In the human lung sound classification system using LPC and LDA, the accuracy of the data obtained is equal to 93.33%.This demonstrates that the LDA can be used as a method of classification of human lung sounds with a good level of performance.

Key words   : *bronchial, bronchovesicular, vesikular, tracheal, asthma, coarse crackle, fine crackle, grunting, wheeze, linear predictive coding, short time fourier transform, linear discriminant analysis.*