ABSTRACT

Lung sounds are sound that produced by air stream in and out from lung because breath activity. If intensity of breath more increase will cause the increasing of stream air in and out from lung. Lung sounds are used to diagnose psychological and health expecially since stethoscope was invented. Inspection lung sounds were done in patient chest. In time domain and frequency domain there are combination between lung sound with heart sounds and muscle in sound signal when inspect on chest. It can cause diffculty to determine the specific lung sounds as parameter for diagnose patient health condition.

In this thesis, is done the research about the ability of algorithm wavelet filter to reduce heart sound from lung sounds recording. This research is realized by using software named MATLAB 7.0 with criteria work experiment result is measured in form of PSD (power spectral density) and Mean Difference Error .

The result of quantitative analysis shows that process of filtering with using wavelet decomposition packet algorithm PSD (Power Spektral Density) lung sound and sound without heart sound are same and the effective filter at frequency 0-200 Hz. Meanwhile, the qualitative analysis shows that this system is good with the mean value of MOS mean 3.825. Refer to the analysis quantitatively and qualitative, system of wavelet filter have effective to be used to reduce heart sound from lung sound recording.