

## **ABSTRACT**

Epilepsi is one of the diseases caused by the presence of a central nervous system disorders, forms of deviance electrical activity in the human brain. Forms of electrical activity can be seen and recorded by using a device called electroencephalograph (EEG). Record the results in the form of EEG brainwave chart is an invaluable tool in the diagnosis of neurological specialists deviation lies electrical activity in patients with epilepsi. But in reading the record of the EEG, the knowledge and the habit greatly from that of the neurologist is needed. So that the record of the EEG readings will be subjective because not everyone can understand and do. Therefore, this study will be conducted pengkarakterisasin FFT spectrum analysis in comparing brain wave epilepsi and normal.

The characterization of brain waves using a SPTool on MATLAB software. Sample data used was recorded EEG data from some patients with epilepsi and normal obtained from RSCM Jakarta clinic.

FFT spectrum analysis of the results showed a different pattern in each state, the formation of a triangle pattern for the state of epilepsi and square to the normal state at the channel T3 and O1. While the frequency value that appears most frequently is located within the range of values of the same frequency, which is in the range frequency gamma, alpha, and delta for each state.

**Keywords:** EEG, epilepsi, frequency and FFT spectrum