

## **ABSTRACT**

Teak is a kind of tree that produces a high quality wood. Big tree, straight stem and its growth can reach 30-40 meters high. Big leaf, which often used as a material for creating a household appliances, such as tables, chairs, doors and many other. But, many people can't distinguish the types of the teak wood, which makes them using it without knowing its qualities and characteristics of many types of teak wood.

That problem encourage the research to detect many types of teak wood by using Back Propagation Method for classifying and Discrete Wavelet Transform (DWT) for properties extraction. The proposed system can characterize teak wood based on its color, characteristic and age.

In this research,teak wood divided beased a quality and for characterize using texture,parameter used are epoch and goal,with highest accuracy 80% using LL filter,7-level decomposition,15 data training,60 data testing,2 hidden layer 10 and 5,and with MSE 0,0027287 and 48 data correction

**KEYWORD: Teak,Backpropagation,Discrete Wavelet Transform**