

## ***ABSTRACT***

*Teak is one type of wood that is much in demand because it is strong, durable, easy to work with, and has a unique and elegant pattern. Teak wood is used as a raw material for home furnishings such as chairs, tables, cabinets, and others. But there are still many furniture entrepreneurs who mistakenly determine the quality of teak wood. Resulting in lack of teak wood quality used as raw material in making furniture home.*

*The method used by the authors to determine the quality of teak wood is Discrete Cosine Transform (DCT) as a feature extraction and Learning Vector Quantization (LVQ) as its classification. The authors chose to use the Discrete Cosine Transform method as a feature extraction because it has the advantage that the compute time on the DCT-2D extraction does not depend on the number of features that are extracted, whereas for author classifications using Learning Vector Quantization because it has the advantage of a small error value compared to artificial neural networks such as Backpropagation and Self-Organizing Maps (SOM).*

*This study tested 144 images. From the test results obtained the best accuracy of 91.67% and computation time 38.12 seconds by using the feature extraction of Discrete Cosine Transform feature in block size 256, the statistical characteristics mean and variance. The classification uses the Learning Vector Quantization with hidden layers 35 and epoch 300.*

***Keywords:*** *Teak Wood, Discrete Cosine Transform, Learning Vector Quantization.*