

## Classification of agarwood grades using ANN

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### **ABSTRACT**

Agarwood is an important agricultural product widely used in fragrance industries. It can be found in various parts of ASEAN countries. The price of the Agarwood is determined according to its quality, which is generally decided based on certain grade. This paper proposes an intelligent grading technique for the wood using advanced signal processing of E-nose measurements. Agarwoods from Malaysia and Indonesia are classified into either high or low grade using artificial neural network. Thirty two sensor readings of the E-nose are used as the inputs of the artificial neural network. The experimental results show that the proposed technique, employing feed forward artificial neural network defined by 32-8-1 architecture and trained via Levenberg-Marquardt back propagation (LMBP) algorithm, successfully grade the Agarwood with a 100% classification rate.

### **KEYWORDS**

Agarwood;Classifications;ANN;e-Nose

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