

**International Energy Journal, Volume 12, Issue 2, June 2011**[HOME](#) | [ABOUT](#) | [USER HOME](#) | [SEARCH](#) | [CURRENT](#) | [ARCHIVES](#)[Home](#) > [Volume 12, Issue 2, June 2011](#) > **Sivalakshmi**

## Combustion, Performance and Emission Characteristics of a Diesel Engine fuelled with Azadirachta indica, Non-edible Oil

*S. Sivalakshmi, T. Balusamy*

### Abstract

*In the present work, experimental tests are carried out to analyze the combustion, performance and emission characteristics of a diesel engine fuelled with neem oil (Azadirachta indica) and its diesel blends (20%, 30% and 50% vol) vis-à-vis diesel at different loads and constant engine speed. The experimental results show that peak cylinder pressure and heat release rate is lower for neat neem oil and its blends than those of diesel fuel. The brake thermal efficiency is lower for neem oil and its diesel blends than that of diesel except NO<sub>2</sub>O blend. It has also been found that there was a decrease in NO<sub>x</sub> emission for neem oil and its diesel blends along with a significant increase in HC, CO and smoke emissions.*

Full Text: Subscribers Only