International Journal on Recent Researches In Science, Engineering & Technology

A Journal Established in early 2000 as National journal and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy. It is an absolutely free (No processing charges, No publishing charges etc) Journal Indexed in JIR, DIIF and SJIF.

Research Paper

Available online at: www.jrrset.com

Chief Editors 1 : Dr. M.Narayana Rao, Ph.D., Rtd. Professor, NIT, Trichy. (Engg.&Technology division)

2 : Dr. N.Sandyarani, Ph.D., Professor, Chennai based Engg.College, (Science division)

ISSN (Print) : 2347-6729
ISSN (Online) : 2348-3105

Volume 2, Issue 11, November 2014

JIR IF : 2.54
DIIF IF :1.46
SJIF IF: 1.329

Comparison Of Performance And Emission Characteristics Of Various Methyl Esters Operated On A Di Ci Engine

Mr.R.Silambarasan[a], Mr.P.Mebin Samuel[b]*, Dr.R.Senthil[c]

[a] Research Scholar, University College of Engineering Villupuram.

[b] PG Student, University College of Engineering Villupuram, Anna University, Chennai.

[c] Dean, University College of Engineering Villupuram, Anna University, Chennai.

Corresponding author: mebin1819@gmail.com

Abstract- The methyl esters of vegetable oils known as biodiesel are becoming increasingly popular because of the low environmental impact and potential as a green alternative fuel for diesel engine and they would not require significant modification of existing engine hardware. Methyl esters of Jatropha (JME), Pongamia (PME) and Mahua (MME) are derived through transesterification process. Experimental investigations have been carried out for methyl esters of different oil in blends with diesel of different proportions. It was observed that a diesel engine runs successfully on a blend 20% biodiesel and 80% diesel fuel without affecting engine performance. Methyl esters from Jatropha, with properties close to diesel, show better performance, combustion and emission characteristics, followed by esters of Pongamia and Mahua. Hence Jatropha blend can be used in existing diesel engines without compromising the engine performance.