

Abstract

Nowadays, the increasing oil consumption throughout the world induces crucial economical, security and environmental problems. As a result, intensive researches are undertaken to find appropriate substitution to fossil fuels. We focus in this study on the investigation of using eucalyptus biodiesel as fuel in diesel engine. A single cylinder air-cooled, DI diesel engine, was used to test eucalyptus biodiesel and its blends with diesel fuel in various ratios at several engine loads. Performance and exhaust emissions are evaluated for different operating conditions. Results show that neat eucalyptus biodiesel and its blends present significant reduction of exhaust emissions especially at high loads with equivalent performances to those of diesel fuel.