2nd International Conference on

BIOFUEL & BIOENERGY

March 27-28, 2019 | Paris, France

Production of biodiesel using bioreactant and its utilisation in a di diesel engine

Dilip Kumar Bora
Assam Engineering College, India

In India, with rapid growth in industrialization and fast increasing number of automobiles, the demand for petroleum based fuel is increasing at an accelerating rate. This will ultimately lead to greater scarcity and higher prices, which consequently adverse the economy of the country. For the developing country like India, the fuels of bi-origin can provide a feasible solution to this crisis. The fuels of bio-origin may be alcohol, vegetable oils, biomass and biogas. Some of these fuels can be used directly while others need to be formulated to bring the relevant properties close to conventional fuels. The power used in the agricultural and transportation sectors is essentially based on diesel fuels, it is therefore, essential that alternative to diesel fuels be developed. Development of bio-fuels as an alternative and renewable source of energy for transportation has become critical in the national effort towards maximum self-reliance the corner stone of our energy security strategy. Bio-fuels being environment friendly will help us to conform to stricter emission norms. Biodiesel can serve as a perfect alternative against fossil fuel like diesel. Biodiesel which is based on agricultural products are clean, renewable and is readily available. Biodiesel can be used to run compression ignition (CI) engines used in commercial sector, agricultural sector and domestic purposes. The present study was carried out to visualize the potential of biodiesel produced from non-edible oil using bioalcohol as biorectant in a single cylinder, four stroke, direct injection diesel engine. Experimental results showed that there is a slight increase in brake specific fuel consumption as compared to diesel fuel. Thermal efficiency increased for lower blends of biodiesel and diesel fuel. In addition, it was found that there is a decrease in carbon monoxide in case of biodiesel and its blends.

dilip.bora@gmail.com