

# Importance of biodiesel

[Environment](#), [Nature](#)



**IMPORTANCE OF BIODIESEL** The world's accessible oil reservoirs are gradually depleting due to a burgeoning demand of fossil fuels. Owing to the enormous dependency of transport vehicles running on gasoline engines, the development of bio-gasoline may well reduce the dependence of the fuel market on fossil fuels. Biofuel development has gained the attention of researchers in recent years owing to the rate of depletion of fossil fuels.

Several processes are currently employed in the conventional production of different biofuels: the production of biodiesel is catalytically performed either through the transesterification of triglycerides using alcohol or the deoxygenative ecofining of triglycerides in a nonalcoholic environment; bio-oil is produced by the pyrolysis of biomass; bio-ethanol is produced by the fermentation of sugars obtained from starch or cellulosic based biomass, while bio-gasoline is produced from the catalytic cracking of triglycerides.

The present work investigates the suitability of mesuaferrea (nahar) oil seed as a source of alternative fuel in CI engines. Non-edible straight vegetable oil obtained from mesuaferreaseeds was extracted using a solvent extraction technique. The catalytic cracking mesuaferrea seed oil to biofuel was studied in a microwave reactor with selected catalysts at 500-600°C. The thermo-physical and chemical properties of straight mesuaferrea oil were determined.

The flash point, kinematic viscosity, and density of the straight mesuaferrea oil were found to be much higher than diesel, though the calorific value was found to be lower. The variation in thermo-physical and chemical properties of various blends of straight mesuaferrea oil and diesel were studied after

fraction of biofuel products may be obtained at different temp. The present study also report on the use of nahar oil as a potential source of biodiesel that can be used as a partial substitute for fossil fuels.