



## Study of Jatropha Oil as Bio-diesel , its characteristics, advantages and comparison with Diesel

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**Introduction :** Biodiesel is an alternative fuel for diesel engines that is produced by chemically combining vegetable oils and animal fats with an alcohol to form alkyl esters. Extensive research and demonstration

projects have shown that it can be used pure or in blends with conventional diesel fuel in unmodified diesel engines. Interest in biodiesel has been expanding recently due to government incentives and high petroleum prices. While the current availability of vegetable oil limits the extent to which biodiesel can replace petroleum to a few percent, new oil crops could allow biodiesel to make a major contribution in the future



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### Need For Alternate Fuels

Bio-fuels are generally considered as offering many properties, including sustainability, reduction of greenhouse gas emission regional development, social structure and agriculture, security of supply The rapid extraction and consumption of fossil fuels have led to a reduction in petroleum reserves. Petroleum based fuels are obtained from limited reserves. These finite reserves are highly concentrated in certain region of the world. Therefore, those countries not having these resources are facing a foreign exchange crisis, mainly due to the import of crude petroleum diesel. Hence it is necessary to look for alternative fuels, which can be produced from materials available within the country. Although vegetable oils can be fuel for diesel engines, but their high viscosities, low volatilities and poor cold flow properties have led to the investigation of its various derivatives. Among the different possible sources, fatty acid methyl esters,

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