

PRODUCTION OF BIODIESEL FROM YELLOW OLEANDER SEEDS (NON-FEED STOCK)

(Under the Student Project Programme of KSCST and sponsored by KSBDB)

Project report

35th Series of Student Project Programme 2011-2012

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2011-2012**

ABSTRACT

In context of climatic changes and soaring prices per barrel of petroleum, the increasing level of consumption of natural fuel resources (oil, gas) and the reduction of their supplies, renewable carbon neutral, transport fuels are needed to displace petroleum derived transport fuel, which contribute to global warming and are of limited availability.

Biodiesel is a promising renewable alternative fuel for diesel. However, its adaptability is limited by its emission levels surpassing the existing emission norms. In this situation, it is essential to search for an economically apt way of reducing the pollutants so as to make biodiesel a viable proposition. Emulsified fuels have more priority in reducing nitrogen oxide and smoke simultaneously than other fuels.

Yellow oleander (*Thevetia peruviana*) is a potential oil seed (63% oil) and good protein source (38%) for live stock feeds. It is highly toxic hence no animals use this so it is considered as non feed stock plant. It has medicinal values.

The present project covers the approach for making yellow oleander (Karabi seeds) biodiesel more economically and competitive with petrodiesel, analysis of its properties and its performance test on single cylinder diesel engine.