

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI, KARNATAKA - 590018



A Project Report on

“BIO FUEL AVAILABILITY IN AND AROUND DAVANAGERE DISTRICT AND EXTRACTION”

Sponsored By

KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

38TH SERIES OF STUDENT PROJECT PROGRAMME: 2014-2015

Project Proposal Reference No. : 38S0094

By

NAGARAJ B K	(4GM11ME054)
MANORANJAN K BANIKAL	(4GM12ME412)
MANJUNATH	(4GM11ME049)
MAHENDRA M	(4GM09ME020)

**In the partial fulfillment for the award of Degree of Bachelor of Engineering in
Mechanical Engineering of the Visvesvaraya Technological
University, Belagavi during the year 2015.**

Guide

Dr. GANESH D B

Vice Principal

Professor & Head

Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING

GM INSTITUTE OF TECHNOLOGY

DAVANAGERE - 577006

ABSTRACT

In central part of Karnataka the preference given to the biofuel. In this project we have survey the Davangere district and find out of the actual availability of biofuel seeds in and around district. The available biofuel seeds in Davangere are Honge (*Pongamia pinnata*), Jatropa (*Jatropa curcas*), Neem (*Azadirachta indica*), Hippe (*Madhuca indica*), Simarouba (*Simarouba glauca*) and Surahonne (*Calophyllum inophyllum*). The most abundantly available seeds are Jatropa and Honge. In this work we used the pongamia seeds and also find out the potential availability of land for harvesting the plants. By using the suitable Expeller the oil was extracted and using Transestrification method the biodiesel was produced. The Zinc oxide nanoparticles were blended with the biodiesel for the better performance. The experimental test was conducted to find the biodiesel properties of Kinematic viscosity, calorific value, flash and fire point.