

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**



**BELGAUM - 590014**

**“SOLAR INTEGRATED BIODIESEL PRODUCTION UNIT”**

**(Funded by KSCST)**

A project report submitted to Visvesvaraya Technological University in partial fulfillment of the requirement for the award of degree of Bachelor of Engineering in Mechanical Engineering.

Submitted By,

**PAVANA A V**

**4JN10ME063**

**AVINASHA H M**

**4JN10ME024**

**ARUN S KURUBAR**

**4JN10ME021**

**ABHISHEK B M**

**4JN10ME003**

**Under the guidance of**

**Dr. L. K. Sreepathi Ph. D**

Professor, Dept. of Mechanical Engineering,  
JNNCE, Shimoga.



**Department of Mechanical Engineering**

**Jawaharlal Nehru National College of Engineering, Shimoga-577204**

**June 2014**

## **ABSTRACT**

Conventional energy resource is exhaustible in nature. This concern has left for search of an alternative energy resource. Solar energy is an energy resource which is inexhaustible in nature. Solar energy is has been put into use for various applications like cooking, drying, lighting, water heating etc. Solar energy based water is met it purpose for various applications.

In the current project it is proposed to use solar energy as a heating source instead of electrical energy for Biodiesel production unit. The project deals with, fabrication of a 'Solar energy integrated Biodiesel production unit' with evacuated tube solar water heater, ½ HP and 1300LPH pump, Heat exchanger tank, water storage tank.

The experiment was carried out; the various properties of Biodiesel are checked. It was observed that solar energy is utilized to its maximum extent for production of Biodiesel and hence fossil fuel based electrical energy is conserved.