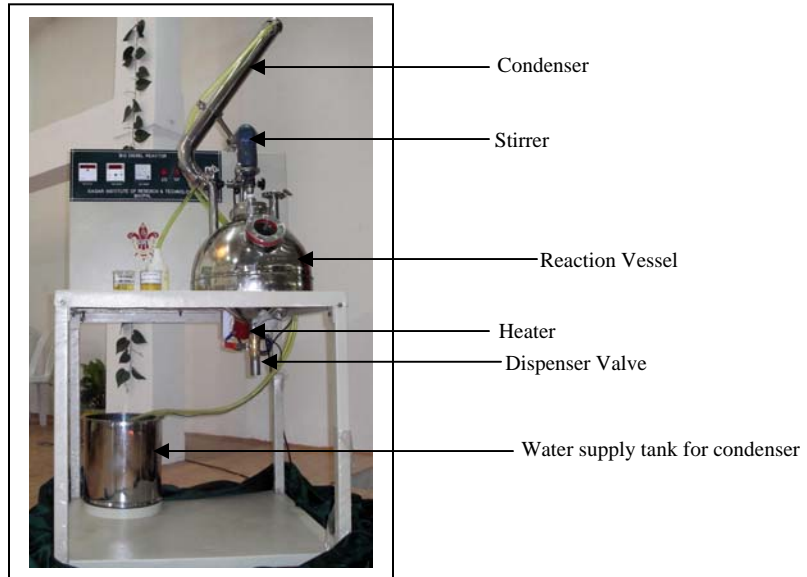


## **Low Cost Bioreactor for Biodiesel Production on Small Scale**

The fossil fuel deposits of the world are decreasing and dependency of common men's life on fossil fuel is increasing day by day. This alarming situation has attracted researchers to develop an alternative energy source to fulfill the need with existing facilities. Various researches and development activities have established Biodiesel as one of the most appropriate candidate for this situation. Biodiesel can be produced from any vegetable oil, but in Indian context production from non-edible oils is the most feasible option. *Jatropha curcas*, *Pongamia pinnata*, Rice Brawn Oil or Waste Vegetable oil are the options available among the producers. Each and every option has its own benefits and limitations for biodiesel production. Some limitations are time bound like Life cycle of *Pongamia*, availability of raw material on large scale of *Jatropha*, rice brawn etc.

Present biodiesel sector is mainly facing problem in getting the raw material on large scale, thus hampering the accessibility and popularity among the village community. Indian village community is facing problem in using fossil fuel as the distribution points are not available at most of the villages then again the transportation of the fuel is costing. Prior planning of use and storage accordingly is also required. This project will give ready solution to both the sectors i.e. Village and biodiesel.

The project has already been completed and successful biodiesel production was demonstrated. The reactor has shown excellent result and the final costing of large scale production will be 60,000=00 only for a capacity of 20 liter per batch. The reactor is mainly made from stainless steel along with condenser. The working platform and support system is made from powder coated steel and for stirrer a forward and reverse movement drill machine is used. Heating is provided from the lower side with an input of 2000 watt and dispenser valve is also at the lower side.



Biodiesel Reactor of 20 lit Capacity  
Developed under SIRT-IEDC Project

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