Abstract

In energy sector alarming crude oil situation compel us to think many alternative energy sources like nuclear energy , wind ,solar energy etc. amongst these alternative replacement of conventional diesel fuel through each of these tremendous problem hence looking to needs of energy it is very difficult to think of any alternative and select one of these as future source .Hence scientist keep thinking natural generating systems biomass energy was first thought as a potential replaceable source some magnitude of physical control. Biomass is generated in huge mass but is varied nature and characteristics conversion efficiency is also relatively very low.

Under the circumstance scientists have advocated the use of plant energy. Out of these plants some of the selected plants like Jatropha have been tried with some degree of success. Many pilot plant studied have confirmed their utility as biodiesel proved through generating and conversion capacity as a sequential studied another promising having similar feature but better potential then those mentioned above in terms of production capacity ,generation capacity, conversion capacity along with cost benefit ratio appears to be a better option.

Although Simarouba is on trial stage yet its potential appears to be of immense utility to be used as biodiesel. As the topic of the thesis indicates the most important aspect associated is to under take critical analysis of such plant seed through process of optimization which depends upon transesterification that is conversion into fatty oil and then standardization. The standardization can not be complete if blending is not considered. Hence our result indicate that economic consideration compel us to undertake

blending as a useful tool to reduce cost of application and usage as alternative fuel under different situations.

Over analysis through comparative studies and generated studies place it some where near the top. When we write such statement we also understand that we are not ruling out other plants either in combination or combination with diesel.

The prime objective of this research is not only to highlight the application and potentiality of Simarouba but this analysis reinforces the convincing thought that plant energy is the only alternative available as on date which can be controlled in terms of its production, conversion and application as a useful sources of 21^{st} century green energy fuel .