VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELGAUM

A Project Report on

STUDIES ON IMPROVEMENT OF SELF LIFE OF BIODIESEL

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ABSTRACT

Biodiesel is an alternative to conventional diesel fuel made from renewable resources, such as non-edible vegetable oils. The oil from seeds (e.g., Honge,etc) can be converted to a fuel commonly referred to as "Biodiesel." No engine modifications are required to use biodiesel in place of petroleum-based diesel.Biodiesel can be mixed with petroleum-based diesel in any proportion. This interest is based on a number of properties of biodiesel including the fact that it is produced from a renewable domestic source, its biodegradability and its potential to reduce exhaust emissions. The use of biodiesel resulted in lower emissions of unburned hydrocarbons, carbon monoxide, and particulate matter. Biodiesel also increased catalytic converter efficiency in reducing particulate emissions. Chemical characterization also revealed lower levels of some toxic and reactive hydrocarbon species when biodiesel fuels were used. The fuel consumption in the world particularly in developing countries has been growing at alarming rate. The economic benefits include support to the agriculture sector, tremendous employment opportunities in plantation and processing.

In the present work, biodiesel is produced by both conventional and non-conventional methods to determine and conclude on which method produces a biodiesel with better biodegradability using microorganisms obtained from soil collected from the vicinity of a petrol bunk. Also, effect on biodegradability of the biodiesel is studied by the addition of additives. The oil used in this case is Honge oil.Honge oil is extracted from the seeds of the Honge tree (whose Latin name is PongamiaPinnata) which is grown in all parts of the country. The distinct advantage of using the oil was that it was cheaper and highly economical in the long run.

Keywords: Biodiesel, Honge oil, Biodegradability, Additives