# VISVESVARAYA TECHNOLOGICAL UNIVERSITY
# BELGAUM - 590018

PROJECT WORK REPORT ON

## "INVESTIGATION ON CONVERSION OF FLOWER WASTES INTO BIOETHANOL AND PERFORMANCE EVALUATION ON SINGLE CYLINDER IC ENGINE"

KSCST

**Supported by KSCST and KSBDB under 37th series Student Project Program (Bio-Fuel)**

Submitted in the partial fulfilment of the requirement for the award of

**MASTER OF TECHNOLOGY**

**In**

**THERMAL POWER ENGINEERING**

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2013-2014

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# ABSTRACT

Flowers is generally used for various purposes like in functions, in god worships and in decorative but after that it thrown on landfills and in rivers as a waste and causes the environmental pollution and along with this there is a growing interest worldwide to find out freely available carbohydrate sources for production of bioethanol. In this context, the flower wastes are used to produce bioethanol by saccharomyces cerevisiae in stirrer type fermenter was investigated. The results shows that treated (acid hydrolyzed) sample gives good percentage of ethanol as compared to untreated sample with similar operating conditions (pH - 4.5-5.5, temperature 30±2 $^{\circ}$C, speed – 100 rpm, fermentation period 96 hrs). Also an attempt has been made to find out the suitability of extracted oil as a fuel in CI engine. Experimental work was carried out on single cylinder four stroke diesel engines at rated speed of 1500 rpm and different blends of waste flower oil with diesel were tested at 210 bar injection pressure and evaluated the emission and combustion characteristics of blends.