

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELGAUM-590014



A PROJECT REPORT ON

**PRODUCTION OF ETHANOL FROM GENETICALLY
MODIFIED CORN POWDER**

(Sponsored by KSCST)

**Submitted in partial fulfillment of the requirement for the award of the degree of
BACHELOR OF ENGINEERING
IN
BIOTECHNOLOGY**

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ABSTRACT

At present there is a mad rush for the biofuels, homogeneous gasoline and diesel substitute made from crops like corn, soybean and sugarcane. It will make us less dependent on the fuel produced in the Middle East. The best of all is to the cut carbon dioxide emission. Around one fifth of corn harvested in USA is brewed into ethanol.

Maize is an important source of starch. Genetically different form of starch taken for the production of alcohol. High starch content is not suitable for fermentation to alcohol. But starch can be hydrolyzed into monosaccharides and disaccharides by malt treatment and enzymatic treatment. The saccharified corn powder sample is a good medium for yeast growth and hence can be used as raw material for alcohol fermentation.

Fermentation was carried out after assessing the contents of monosaccharide and disaccharide from the hydrolyzed starch. Ethanol fermentation is the biological process by which sugars such as glucose, fructose and sucrose are converted into cellular energy and thereby producing ethanol and carbon dioxide as metabolic waste products.

Percentage of alcohol was assessed by different methods and compared will be carried out to improve biomass production.