

Biofuels

Ms. Madhu Mishra, Dept. of Bioscience
Rabindranath Tagore University, Bhopal

Abstract

Today, on the one side, the world is experiencing a fuel crisis, and on the other side, elevated pollution. Forest and agriculture biomass can therefore be used as a tool for the production of biofuels and for sustainable growth. The suitability of biomass relies on several variables such as its chemical composition, accessibility, costs and power needed to generate fuel. Thermochemical, chemical and biochemical methods can be the likely methods of green fuel manufacturing. The fuel produced would surely decrease CO₂ emissions and consume organic waste disposed of from multiple sources and also phytoremediation crop equipment.

Keyword: biofuels, sustainable, phytoremediation, fuel

Introduction

Energy consumption has increased steadily over the last century as the world population has grown many folds and industrialization is also enhancing rapidly[1]. This has enhanced the use and demands of fuel to a tremendously high level and dragged the world into energy crises. Increasing requirements on fossil fuels have threatened human survival with restricted reserve amounts, high costs and environmental effects [2]. Such circumstances have compelled human beings to look to sustainable development and life for alternative fuel [4]. This quest contributes to the production of biofuels. The global warming issue will be addressed in a way that will reduce carbon dioxide concentrations from the use of fossil fuels [5]. Biofuels are one of the more promising fossil fuel replacement as they are renewable and emit fewer greenhouse gasses than petrols [6]. The plant material obtained from the response, in photosynthesis, of CO₂ to air and water and the sun to generate carbohydrates which are the construction blocks of biomass [7]. Biomass in the form of a biomass is a word for all organic matter which comes from crops (including algal, trees and crops). Photosynthesis generally converts to chemical energy stored less than 1 percent of available solar energy. The photosynthesis of the solar power drive is stored in the chemical bonds of the biomass structural elements. When biomass is processed

chemically or biologically effectively to extract energy stored as a chemical connection, wonders in the field of electricity can be created.[8]

Working

Animal and vegetable oils are both appropriate ingredients for biodiesel manufacturing. Facilities of vegetable oils are easily and sufficiently available for the purpose. Biodiesel production includes the transesterification process, in which esters are generated as the consequence of an alcohol, methanol or ethanol response of triglyceride oil groups. The byproduct of glycerol is created, and the response requires an alkaline catalyst.

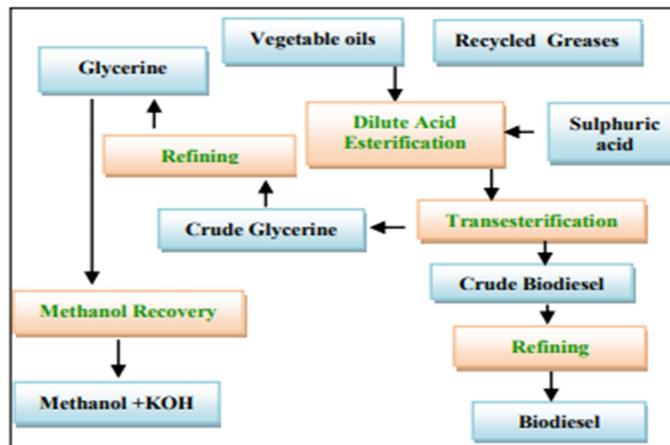


Figure1: Process details

Conclusion

The present analysis has shown that there can be a range of procedures for converting biomass to useful energy types such as bioethanol, syngas, biodiesel, and commodities, but that each method has its own benefits and disadvantages each method has.

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