ISSN (ONLINE) : 2395-695X
ISSN (PRINT) : 2395-695X
Available online at www.ijarbest.com

International Journal of Advanced Research in Biology, Engineering, Science and Technology (IJARBEST)
Vol. 2, Special Issue 8, February 2016 in association with
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY, VIRUDHUNAGAR
DEPARTMENT OF BIOTECHNOLOGY
ORGANIZES
DBT, NEW DELHI SPONSORED NATIONAL LEVEL CONFERENCE ON CONTEMPORARY TRENDS IN BIOENERGY AND GREEN TECHNOLOGY: CHALLENGES AND OPPORTUNITIES [ORA-2016]
(25-26TH FEBRUARY 2016)

CONTEMPORARY TECH TO SEQUESTRATE CO2 AND PRODUCTION OF BIOFUEL USING MICROALGAE

P.GOWSALYA[1], S.MANIKANDAN[1], P.SWATHIPRIYA[1], AND Dr.S.VENKATESH[2]

[1]II B.TECH BIOTECHNOLOGY, ANNA UNIVERSITY-BIT CAMPUS,TIRUCHI-620024

[2]VISITING FACULTY, DEPARTMENT OF BIOTECHNOLOGY,ANNA UNIVERSITY-BIT CAMPUS,TRICHY-620024

CORRESPONDING AUTHORS: manubonaparte@gmail.com and venkatesh.au@gmail.com

ABSTRACT

The major life threatening issues of the present scenario are the environmental pollution and fuel deficiency. The potential of micro-algae to sequestrate CO2 permanently and to produce biofuel is exploited here. The species like Chlorococcum littorale and Euglena gracilis can grow under high percentage concentration of CO2. Coal fueled power stations produce large amounts of CO2 as well as other harmful gases. Concentrated CO2 from such power stations is fed to microalgae which remove the carbon and release pure oxygen via photosynthesis. The supremacy is that the outbursting thirst of algae can be pacified using sea water. Algal biomass obtained, is used as raw material and fermented in a digester to produce bio gas. Some combustion products such as NOx or SOx can also be effectively used as nutrients for microalgae. Thus decreasing the content of harmful gases in the atmospher, the resulting biogas can be used as green fuel. This can be also used in places such as industrialised areas and densely populated cities. Thus it acts against global warming twice, first by absorbing CO2 and second by preventing further emission of CO2 by the production of eco-friendly fuel. Though it requires high cost of implantation,s it can be coped up with its high valued products. It is being implemented in various countries and the challenges are held to be overcome. On discussing the challenges and opportunities in this dual purpose project, the feasibillity is of considerable amount.

KEYWORDS: *CO2sequestration; microalgae; Biofuel*