

Application of Pulsed Magnetic Field in improving the quality of algal biomass

V Sivasubramanian, V V Subramanian, Leela Priya,T;* and R Murali

Phycospectrum Environmental Research Centre (PERC) and

*Madras Institute of Magnetobiology,

52A, A K Block, 7th Main Road, Anna Nagar, Chennai 600034.

Abstract

Freshwater green alga, *Desmococcus olivaceus* was grown in photo bioreactors (10 L) with a facility to pump the culture through magnetic field. Solenoid coil system was set to a highly homogenous sinusoidal magnetic field of intensity 15mG for a period of 3hrs duration per day for 15days. The submersible pump providing the circulation was kept in operation for a period of 12hrs per day. The motor of the submersible pump contributed to a secondary source of magnetic field exposure (near field) having an intensity of approx. 600mG. Samples were drawn at regular intervals to assess the productivity and biomass quality. Division rate, dry weight, pigments and other biochemical parameters were analyzed. The biomass was also analyzed for its biofuel potential. Improvement of algal biomass by introducing magnetic treatment in large scale cultivation is discussed.

Buy the full article by sending \$28.00 to the following bank account:

Name of Bank	State Bank of India
Branch Name	(01444) Kodambakkam (Chennai)
Name of the Account holder	PHYCOSPECTRUM Inc
Type of Account	SBCHQ-GEN-PUB OTH-NONRURAL-INR
Account Number	30509456677
IFSC/RTGS Code	IFS CODE:SBIN001444
MICR Code	600002022