



Biofuel Production from Microalga *Nannochloropsis oculata* using Dairy Industry Waste Water

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Abstract : In view of ever increasing global requirement for energy, there has been sizeable interest in escalating renewable biologically produced fuel. Today's petroleum fuels are unsustainable because of depleting supplies and the contribution of fuels to the accumulation of carbon dioxide in the atmosphere. We need substitute transportation fuel to prevent carbon dioxide accumulation in the environment. Microalgae are one of the best producing oil crops which converts carbon-dioxide to biofuels as well as involved in bioremediation process. In this present study marine microalga *Nannochloropsis oculata* strain was collected from CMFRI Chennai and cultivated with f/2 medium enriched with dairy industry waste water for cultivation. The lipid extraction was studied using solvent. The functional components in lipids were studied using GC-MS and FT-IR. This study proved to be an efficient tool for useful utilization of Industrial effluents by microalgae nurturing will pave the way for phycoremediation which will pilot to the manufacturing of eco-friendly biofuel.

Keywords: *Nannochloropsis oculata*, GC-MS, FT-IR, Dairy waste water.

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