EuroSciCon

10th Edition of International Conference on

Biofuels and Bioenergy

March 04-05, 2019
Barcelona, Spain

Arch Chem Res 2019, Volume 3
DOI: 10.21767/2572-4657-C1-015

Removal of nutrients by marine microalga *T. indica* from dairy wastewater (DW) and higher lipid production for biofuel feedstock

Amit and **Uttam Kumar Ghosh**

Indian Institute of Technology, Roorkee, India

The aim of this study is to identify microalgal species for higher algal biomass production to achieve sustainable biofuel production and simultaneous nutrients removal from the wastewater used as cultivation medium. *T. indica*, was cultivated in dairy wastewater in different concentration of DW. The maximum biomass concentration of 0.62 g L^{-1} was achieved for *T. indica*. *T. indica* removed 72.7% nitrate, 63.97% phosphate and 78.96% ammoniacal nitrogen in 100% of DW. The maximum lipid productivity of 18.44 $mgL^{-1}d^{-1}$ was achieved in DW. *T. indica* shows the presence of palmitic acid, pentadecylic acid, linoleic acid, eicosanoic acid and oleic acid. This research work showed that *T. indica* is predominant microalga for higher biomass production for bioenergy generation and removal of nutrients from dairy wastewater.

amitiitr14@gmail.com