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Production of Biofertilizer from Industrial Waste Water by Microalgal Treatment

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Abstract: *Due to rapid industrialization and the depletion of non-renewable fossil fuels, alternative feasible renewable alternatives are being sought to supply rising energy demand while reducing carbon dioxide emissions. Microalgae cultivation has the to meet these criteria in today's world energy strategy, which is centred on cost-effective and environmentally friendly alternatives. Microalgae has been discovered as a promising and long-term solution for wastewater treatment and the generation of valuable products. Microalgae, which have a short life cycle, a rapid growth rate, and a high CO2 usage efficiency, are one of the most feasible renewable resource technologies for producing biomass from wastewater nutrients. Technology and cost are now the key issues limiting industrial-scale use, which necessitates an optimum downstream process to reduce manufacturing costs. These issues have become feasible and economically viable thanks to the utilisation of microalgae for wastewater treatment and biofuel generation at the same time. The efficacy of microalgae for the removal of ammonia, phosphorus, and heavy metals, as well as the creation of biofuel and biofertilizer, is examined. It also aims to concentrate on current breakthroughs in wastewater microalgae growth, as well as the response of microalgae to various stimuli and their implications on the quality and quantity of high-value products.*

Keywords: Waste Water, Treatment Methods, Nutrients, Bio Fertilizer, Environment, Effluents, Microorganisms

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