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INVESTIGATION ON ALGAL BIOMASS PROGRESSION IN POLLUTED POND WATER-THE WAY FORWARD

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Abstract

Municipal wastewater treatment is a global issue and an expensive process. Treatment of the wastewater using algal growth is a cost-effective approach, because of easy propagation of algae in wastewaters through utilization of most of the nutrients and in turn reduces the pollution load. As a preliminary research work, laboratory scale studies were done using native algal species collected from particular sources. They were grown in different pond waters to observe the biomass development in comparison to their growth in their original source pond water. Results showed that algal biomass was highest in the pond water, from which the algal sample was obtained followed by other pond water samples, artificial media and control. Biomass showed positive correlations with improvement in water quality parameters and a stationary phase was observed in the later stages of growth. The study also supports the use of native algal species for treatment of wastewaters. Excessive algal growth in water bodies is a serious environmental issue, however in a long-term perspective this biomass can also be harnessed for various other end uses along with wastewater treatment.

Keywords: biomass, pollutant removal, waste reduction, wastewater, water quality

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