International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.8, pp 645-655, 2017

Experimental Investigation on Quality Assessment and Pollution Control of Kanampalayam Lake

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Abstract : Waste water treatment is the process of removing existing contaminants from water and to dispose the contaminated water safely or reuse the treated water. The waste water generally contains 99.9% water and0.1% of solid impurities; thus, it has a large potential as a source of water for different purposes such as fish ponds, comfort rooms, cleaning source, among others. Treated water can be used further in the natural environment without adverse ecological impact. This paper describes about an experimental investigation conducted to study the behaviour and parameters of lake water sample of Kannampalayamlake using Nualgi treatment process. Usage of Nualgi liquid for treating the lake water sample will generate plankton which cultivates food in aquaculture products to boost the growth of prawns and fishes, the product promises to be eco-friendly by preventing mass kill of fish and on doing so we can save from global warming to a certain extent. Nualgi is used to grow diatom algae which absorb CO_2 and nutrients by photosynthesis and release Oxygen at the micro plant level. The oxygen released helps aerobic bacteria to breakdown organics in the water into base constituents. The growing diatoms not only produce oxygen but also consume nutrients like nitrates and phosphates, thus removing it from the water body. The basic test was carried out in laboratory for water sample collected from various source point. These test results of combined sample for before treatment and after treatment are compared with standard values for irrigation water. These test result shows that dissolved oxygen in water increase and reduce BOD, COD, Odour and Colour.

Keywords : Nualgi, plankton, diatom algae, photosynthesis process, dissolved oxygen, etc.

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