

Experimental and Theoretical Studies for Removal of Dyes from Industrial Wastewater Using Bioremediation

Authors : Sakshi Batra, Suresh Gupta, Pratik Pande, Navneet Kaur, Lovdeep Kaur

Abstract : The objective of this study is removal of Methylene blue dye or reactive orange-16 from industrial waste water or from soil using bioremediation technique. As huge amount of dyes are releasing from textile industry in water and soil environment during dyeing process. In this study, we focused on removal of Methylene blue dye and Reactive orange dye from industrial soil at different initial concentration of dye. An experiment study was carried out at methylene blue dye or Reactive orange-16 dye at varying concentration of both the dye as 50 ppm, 100ppm, 200 ppm, 300 ppm and 400 ppm. Maximum removal is obtained at 16-20 hours Experiments are carried out for pH, Temperature and MSM composition. The final concentration has been observed by UV-VIS. The two species has been isolated from the Industrial effluent. Finally the product analysis has been done by GC-MS.

Keywords : bioremediation, cultural growth, dyes, environment

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