

Bioremediation of chrome-sludge from an electroplating industry using the micro alga *Desmococcus olivaceus* – A pilot study

V Sivasubramanian, V V Subramanian and M Muthukumaran

Vivekananda Institute of Algal Technology (VIAT), RKM Vivekananda College, Chennai 600004

Email: vsivasubramanian@gmail.com

Abstract

With the increasing environmental problems around the world, algae have been found to be effective organisms for bioremediation. Phycoremediation of effluent and sludge using algae, is a novel technique when applied to aqueous pollution. However, the development of more efficient nutrient and sludge removal algal systems requires further research in key areas. Algae growth rate controls directly and indirectly the nitrogen, phosphorus and heavy metals removal efficiency. Thus, maximum algae productivity is required for effective nutrient removal and must be considered as a key area of research. The micro alga, *Desmococcus olivaceus* (Persoon et Acharius) J.R. Laundon VIAT029 was employed in the present investigation in treating chrome-sludge of electroplating industry using open pond. The physico-chemical parameters were monitored. Phycoremediation could effectively reduce TDS, TSS, free ammonia, nitrate, phosphate and chromium very effectively.

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