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EFFICACY OF MARINE CYANOBACTERIUM *LYNGBYA* SP. 90901 WITH GROUND NUT SHELL IN TEXTILE DYE INDUSTRY EFFLUENT

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ABSTRACT

Marine cyanobacterium *Lyngbya* sp. was selected to check its bioremediation ability in textile dye effluent. Ground nut shell was used as an adsorbent in the current study. The biochemical parameters like Nitrate, Nitrite, EC, TDS, Ammonia, Alkalinity, Calcium, and Magnesium were studied. The parameter analysis was carried at end of 60th day of incubation for the future application of degraded products on plants. 77.55% decolourisation was attained in the treatment of textile effluent with *Lyngbya* sp.

The heavy metals like Zinc, Mercury, Nickel, Cadmium, Chromium and Iron present in textile Effluent was found to be decreased as it was adsorbed on the filament surface of *Lyngbya* sp. The presence of metabolites released during degradation was also analyzed by FTIR.

KEYWORDS: Textile Effluent, *Lyngbya* Sp., Decolourisation, Agricultural Waste, Heavy Metals