

Potentials of sewage water treatment plant, surat by using rhizofiltration technique

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Sewage water is one of the sources that are responsible for many epidemic diseases. Bioremediation is green technique that reduces contaminates & nutrient from sewage water. The sewage under the influence of Eichhornia & Pistia species for twenty days shows significant changes in the concentration of impurities. The change was observed by Physico-chemical, Nutrients, Microbial Factors & Solid analysis with different interval of days. The percentage of nutrients and other parameters absorbed by Eichhornia was better than Pistia. The level of impurities was reduced in remarkable amounts by activated charcoal & alum treatment.

Keywords: Sewage, Bioremediation, Eichhornia, chemical analysis, charcoal.

Biography

Vikaskumar Shukla has been pursuing his M. Sc. (Organic Chemistry) in the Department of Chemistry of Uka Tarsadia University, Bardoli. He is working as a Research Student in the project titled, "Synthesis & application of carbon black obtained from pyrolysis of scrap rubber" under the guidance of Mr. Pundlik Ware (Asst. Prof) at Department of chemistry, Uka Tarsadia University. He has attended the state level seminar on 'Recent Trends and challenges in Dyestuff Industries' in Gujarat.

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Isolation, identification, characterization and antibiogram of *Pasteurella multocida* isolated from pigs in mizoram with special reference to progressive atrophic rhinitis

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Progressive atrophic rhinitis caused by toxin producing *Pasteurella multocida* in swine causes considerable economic losses to the pig rearing industry throughout the world. Four hundred nasal swabs were collected from 6 different districts of Mizoram. All the samples were processed detection and isolation *P. multocida* by PCR and traditional bacteriological assays. Isolated organisms were subjected for multiplex PCR for capsular typing, screened for *toxA* gene and characterized by RAPD-PCR. Isolates were also tested for their antimicrobial sensitivity profile by disc-diffusion method. A total of 21 nasal swabs were found to be positive by *P. multocida* species specific PCR (PM-PCR) with an amplicon of 460 bp, of which 15 (3.75%) *P. multocida* could be isolated. All the isolates were grouped under capsular type A (n=9) and D (n=6) by multiplex PCR. In detection of *toxA* gene, all the isolates were found to be negative by specific PCR, indicating the isolates as non-toxigenic. All the isolates under similar capsular type provided a unique banding pattern by RAPD-PCR, whereas no discrimination was observed between serotypes. Antibiotic sensitivity assay indicated that majority of the isolates were 100% sensitive against the antimicrobials used. *P. multocida* is prevalent in the nasal swabs of pigs in Mizoram. PM-PCR could be a suitable technique for rapid and specific detection of *P. multocida* in compare to traditional bacteriological methods. Isolation of *P. multocida* by mice inoculation may improve the result. Capsular typing using multiplex-PCR further reduced the time for type specific identification of *P. multocida*.

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