Optimization of pH, Retention Time, Biomass Dosage in Beads and Beads Density on Textile Dye Effluent Bioremediation using Seagrass, *Cymodocea rotundata* Beads

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Keywords: \bullet $t_1 \bullet \bullet \bullet_2 \bullet_1 t_3 B_{11} \bullet \bullet_1 \bullet_1 t_{2111} ; B_{11} \bullet_1 \bullet_2 t_{111} ; \bullet_{b_2} \bullet_{b_2} ;$

Introduction

Materials and Methods

Collection of seagrass and preparation of biosorbent

P. B., M. t. 15 b. (L.t. 9-51' 48" N; L. 79-7' 15" E). (L.t. 9-51' 48" N; L. 79-7' 15" (14-15). (L.t. 9-51' 15" N; L. 79-7' 15" (14-15). (L.t. 9-51' 15" N; L. 79-7' 15" N; L. 79-7' 15" (14-15). (L.t. 9-51' 15" N; L. 79-7' 15" N;

Characteristics of dye e uent

Spectrophotometer analysis

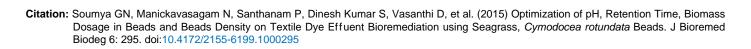
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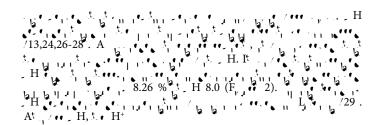
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Page 4 of 5



- dyes by aqueous-fber phase transfer and in situ catalytic oxidation using fbersupported cobalt phthalocyanine. Environ Sci Technol 41: 6240-6245.
- Mahanta D, Madras G, Radhakrishnan S, Patil S (2009) Adsorption and desorption kinetics of anionic dyes on doped polyaniline. J. Phys Chem B 113: 2293-2299.
- 8. Wong Y, Szeto Y, Cheung W, McKay G (2003) Equilibrium studies for acid dye adsorption onto chitosan. Langmuir 19: 7888-7894.
- Fang H, Wenrong H, Yuezhong L (2004) Investigation of isolation and immobilization of a microbial consortium for decoloring of azo dye 4BS. Water Res 38: 3596-3604.
- Couto SR, Sanroman MA, Hofer D, Gubitz GM (2004) Stainless steel sponge: a novel carrier for the immobilization of the white-rot fungus *Trametes hirsuta* for decolorization of textile dyes. Bioresour Technol 95: 67-72.
- Pazarlioglu NK, Urek RO, Ergun F (2005) Biodecolourization of Direct Blue 15 by immobilized Phanerochaete chrysosporium. Process Biochem 40: 1923-1929
- 12. Chen KC, Wu JY, Liou, Hwang SCJ (2003) Decolorization of the textile dyes by newly isolated bacterial strains. J. Biotechnol 101: 57-68.
- Aksu Z, Kilic NK, Ertugrul S, Donmez G (2007) Inhibitory effects of chromium (VI) and Remazol Black B on chromium (VI) and dyestuff removals by Trametes versicolor. Enzyme Microb. Technol 40: 1167-1174.
- Bishoni NR, Pant A, Garima (2004) Biosorption of copper from aqueous solution using algal biomass. J. Sci. Ind. Res 63: 813-816.
- APHA (1998) Standard Methods for Examination of Water and Wastewater.
 (20thedn) American Public Health Association, American Water Works Association, Water Environmental Federation, Washington, D.C.

16