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Decolorization of the Textile Dyes by Newly Isolated Bacterial Strains

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Eight bacterial strains, which showed color decolorization ability on various azo dyes, were isolated from waste water. The RB5-7 and IC-1 were selected and identified because it showed the best color removal capability. The strains were characterized and identified as a member of *Shewanella* sp. based on sequence analysis of 16S rRNA gene. For color removal, yeast extract could strongly enhance the decolorization efficiency, more than 80% of 50 μ M reactive black 5 could be eliminated within 6 h in anaerobic culture, 90% within 12 h. Even under shaking condition, RB5-7 could eliminate more than 80% of 50 μ M Reactive black 5 within 8 h. RB5-7 also could decolorize other azo dyes including mono azo, diazo and indigoid dye indigo carmine. IC-1 could eliminate more than 90% of 50 μ M Indigo carmine within 9 h in LB medium.

Key words: Decolorization, *Shewanella* sp., reactive black 5, indigo carmine

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Isolation and Characterization of *Pseudomonas otitidis* Strain CV-1
Capable of Decolorizing Triphenylmethane Dye

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A novel bacterial strain capable of decolorizing textile dyes was isolated from wastewater. The bacterial of *Pseudomonas otitidis* CV-1 was characterized and identified based on sequence analysis of 16S rRNA gene. The maximum extent as well as rate of Crystal Violet decolorization was observed when yeast extract was supplemented in the medium. CV-1 could decolorize 20 μ M Crystal violet within 1.5 d in LB medium containing 170 μ g/ml chloramphenicol, and the final rate of decolorization was not affected by shaking or static condition. CV-1 could eliminate various triphenylmethane dyes and mono azo dye Methyl Red.

Key words: Decolorization, *Pseudomonas otitidis* CV-1, triphenylmethane dye