

Decolorization of the textile dyes by newly isolated bacterial strains

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Abstract

13 species of microbes were isolated from dyeing wastewater collected at Banweol industrial complex. After applying 6 different reactive azo-dye cultures, we could obtain the result that two microbes showed excellent ability for color removal. These microbes seem to grow well in aerobic or anaerobic conditions. The color removal efficiency was especially higher in anaerobic condition. Through culture test, the optimal growth conditions seem to be pH 7.0-8.0 and 30-35°C temperature. More than 90% of Reactive Red 180 was degraded within 5 days with the dye concentration of 100 mg l⁻¹. Nitrogen source such as yeast extract or tryptone could enhance strongly the decolorization efficiency.

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