

Biodegradation of Textile Azo Dyes by *Phanerochaete chrysosporium*

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Azo dyes are used extensively in the textile and dyestuff industries and effluents from these industrial processes are usually resistant to biological treatment.

Textile azo dyes with bioaccessible groups such as guaiacol and 2,6-dimethoxyphenol, for lignin-degrading fungus as *P. chrysosporium* were synthesised (Fig. 1).

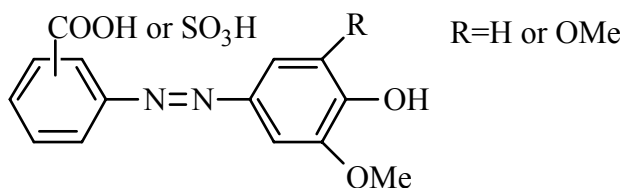


Fig. 1

Some of these dyes were studied in order to compare the biodegradation ability related to their chemical structure, when cultured with *P. chrysosporium*.

The degradation of dyes was followed by UV-Visible spectrophotometric assays studying the degree of decolorization by the decrease of the absorbance in the maximum wavelength of the dye (Fig. 2) or by the possible formation of new products and by biomass production.

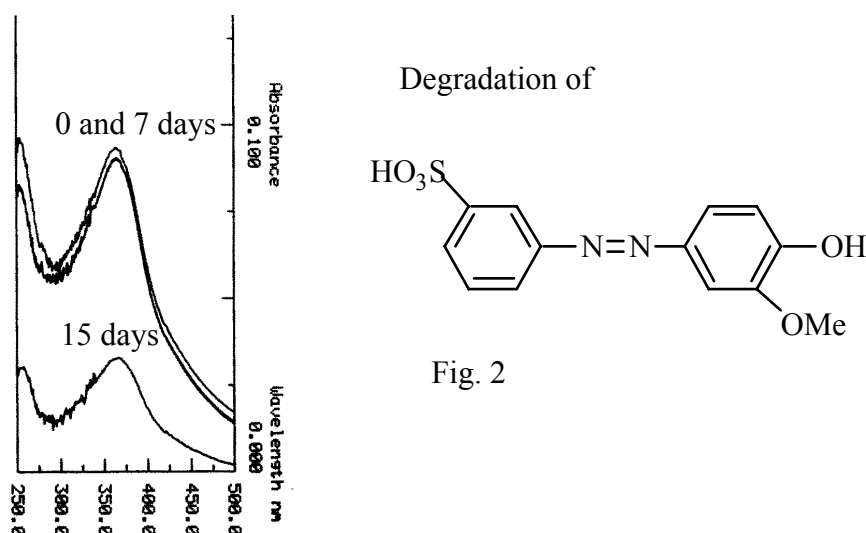


Fig. 2

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