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**BOOK OF ABSTRACTS**



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**Decolorization of textile dyes and effluents by a selected yeast and preliminary characterization of the product metabolites**

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**Abstract**

Textile industry produces large amounts of effluents that contain a complex mixture of synthetic dyes. These wastewaters can be harmful to the environment, especially if not properly degraded [1,2]. Thus, it is important to complement the traditional treatments, based on chemicals, with the use of alternative biological treatments to potentiate the decolorization of dyes in textile wastewaters. The biological degradation of the synthetic dyes present on the effluents may form various metabolites and their determination is important.

This work aims to assess the decolorization capacity of a selected yeast and characterize, and if possible identify, the metabolites that are formed in the process.

The selected yeast was isolated from textile wastewater and dyes were chosen according to industry representativeness. Simulated effluents with the selected dyes were also tested. Yeast was cultivated in Normal Decolorization Medium (NDM) without yeast extract, supplemented with 25 mg/L of dye or 2.5 g/L of simulated effluent incubated at 25 °C /100 rpm for 48 h. The product of decolorization was then centrifuged for 15 minutes at 5000 rpm and the supernatant was used to characterize the metabolites by HPLC, according to a published method [3].

The selected yeast was able to decolorize both the dyes and effluents efficiently in the conditions tested, with reduction of the peak corresponding to the dyes and formation of metabolites detected by HPLC.

**Bibliography**

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