Accepted Manuscript

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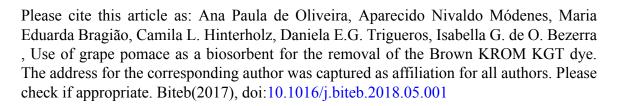
PII: S2589-014X(18)30035-5

DOI: doi:10.1016/j.biteb.2018.05.001

Reference: BITEB 33

To appear in:

Received date: 19 March 2018 Revised date: 2 May 2018 Accepted date: 2 May 2018



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Use of grape pomace as a biosorbent for the removal of the Brown KROM KGT dye

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ABSTRACT

In this paper, the removal capacity of grape pomace was evaluated removing the KROM Brown KGT dye. Initially, batch adsorption tests were conducted to evaluate the operating parameters, which indicated 2.0 as initial pH, particle size between 0.14-1.4 mm and temperature of 25 °C, for initial dye concentration of 100 mg L⁻¹. Based on these operating conditions, kinetic and adsorption equilibrium data were obtained. The resulting equilibrium time was 12 hours. The kinetic model of pseudo first order was the one that best represented the experimental data. The adsorption equilibrium data suggest a process of monolayers, according to the Langmuir model, with a maximum biosorption capacity of $180.2 \pm 3.2 \text{ mg g}^{-1}$. The thermodynamic data suggest a thermodynamically favorable and exothermic process.

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