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The bio-material as sorbent for 2,4-Dichlorophenoxyacetic acid removal from aqueous solution

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ABSTRACT

Abstract:*The purpose of this study is to focus on the elimination of organic pollutant 2,4-D pesticide from water by using an activated carbon resulting from date pits was prepared, first, by pyrolysis at 700 °Cunder 100 cm^3 min-1 nitrogen flows for 2h and then, activated under N_2/H_2O at 700 °C for 3h. The activated carbon obtained were characterized using Infrared Spectroscopy (FT-IR), Thermogravimetric analysis (TGA), Scanning electron microscopy (SEM). This activated carbon was realized on adsorption of pesticide acid (2,4-D), the obtained adsorption capacity was 56,03 mg/g at ambient temperature T=20°C and 24 h equilibrium contact time. The Langmuir and Freundlich isotherm models were applied for this study. The isotherm data could be well described by Langmuir equation.*