Desalination and Water Treatment
www.deswater.com

24 (2010) 321–326
December

1944-3994/1944-3986
doi: 10.5004/dwt.2010.1461

Adsorption of glyphosate onto activated carbon derived from waste newspaper

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Received 21 December 2009; accepted 20 March 2010

A B S T R A C T

This paper investigates the ability of activated carbon derived from waste newspaper (WNAC) to remove pesticide glyphosate from aqueous solution. The influence of initial pH was first studied. It was found that the WNAC presented the highest uptake capacity at pH 2.5. Adsorption isotherm models such as Langmuir, Freundlich and Redlich-Peterson were used to describe the adsorption of glyphosate by WNAC. The results show that the Langmuir adsorption isotherm model best fits the experimental data. The maximum adsorption capacity of WNAC is found to be 48.4 mg/g.

Keywords: Pesticide; Glyphosate; Adsorption; Waste newspaper activated carbon

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