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STUDIES ON *O*- AND *P*-CRESOL ADSORPTION ON ACTIVATED CARBON

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Abstract

The objective of this paper is to examine the use of specific granular activated carbon (GAC) with specific surface of 1376 m^2/g, as an adsorbent in order to remove *o*- and *p*-cresol from their aqueous solutions and to emphasize the influence of ortho and para groups of the substituted benzene on the adsorption process. There were determined the static adsorption capacity, at 25˚C and low p*H* basic, at the same amount of activated carbon (2 g) and varying concentrations of *o*- or *p*-cresol aqueous solutions. The adsorption isotherms for the two cresols on active carbon were represented graphically and from the relative settlement curves could be seen that *p*-cresol is better adsorbed than *o*-cresol. A detailed mathematical analysis of the adsorption experimental data was made with Freundlich and Langmuir models. The adsorption equilibrium data of both cresols on active carbon are better represented by the Langmuir equation than the Freundlich equation.

Key words: activated carbon, adsorption isotherms, Freundlich, Langmuir, *o*- and *p*-cresol

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