

# Modeling VOCs Adsorption onto Activated Carbon

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摘要.

## **Abstract**

The activated carbon adsorption process is affected by the characteristics of adsorbent, adsorbate and environmental conditions. In this study, both adsorption and desorption processes are assumed to occur simultaneously and a numerical model was developed with a non-linear driving force in conjunction with the Langmuir model for predicting the overall adsorption process. The numerical model provides both adsorption and desorption rate constants and activation energies. The resultant equilibrium constants are of the same order of magnitude as reported by other studies. Results show that the model could well predict the adsorption isotherms and breakthrough curves under various conditions