

## Adsorption Equilibrium, Kinetic and Thermodynamic Parameter Studies of Reactive Blue 4 Using Activated Carbon

허인정, 이종집<sup>1,†</sup>

공주대학교; <sup>1</sup>공주대학교 화학공학부

(jjlee@kongju.ac.kr<sup>†</sup>)

Adsorption characteristics of Reactive Blue 4 dye using activated carbon were investigated by using adsorbent amount, pH, initial concentration, contact time and temperature as adsorption variables. Adsorption equilibrium data were analyzed using Langmuir, Freundlich isotherm, Langmuir isotherm showed the best agreement. As a result of applying the adsorption rate experimental data to the pseudo first - order kinetics equation and the second - order kinetics equation, kinetic experiments have been well described by a pseudo - second order kinetics equation. Activation energy (0.0854 kJ / mol) and enthalpy (31.148 kJ / mol) indicate that the adsorption process is physical adsorption and endothermic.