

Adsorption of metal ions, Cu(II), Co(II) and Ni(II) in single, binary and ternary systems by activated carbon was studied. Adsorption equilibrium isotherms after fixed contact time, 12 hours, were investigated at various temperatures and pHs. It was found that the capacities of adsorption of these ions increased with decreasing temperature or increasing pH. The results indicated that both Langmuir and Freundlich isotherms could be used to fit the data. The data for Cu(II) adsorption were fitted better by Langmuir plots whereas the Freundlich model fit the data for Co(II) and Ni(II) adsorption better. Adsorption in the binary and ternary systems showed in competitive adsorption effects.