

# Adsorption of gold-thiourea complex on activated carbon

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The adsorption kinetics of the gold-thiourea complex on activated charcoal was studied.

Experimental runs were made in a batch reactor at constant temperatures and stirred by a magnetic system. Samples were taken at different periods of time and were analyzed for gold in a

Perkin-Elmer Model 360 atomic absorption spectrophotometer. The samples were prepared with synthetic solution of gold with thiourea, sulfuric acid, and iron sulfate with concentrations similar to the ones in the leaching process. The gold adsorbed on activated charcoal was 99% at 20°C. The adsorption behavior was characterized by the Freundlich model at different temperatures (20°C, 35°C and 50°C). Copyright © 1989 Society of Chemical Industry