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Adsorptionof Cobalamin onto Synthesized Carbon Nanotubes (CNT)

Falah H. Hussein [1,*], Ahmed F. Halbus[1], Firas H. Abdalrazak[1] and Zahraa H.Athab[2]

1.Chemistry Department, College of Science, Babylon University, Hilla, **IRAQ**
2.Chemistry Department, College of Science for woman, Babylon University, Hilla, **IRAQ**

Email: abohasan_hilla@yahoo.com

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ABSTRACT

The adsorption efficiency of synthesized carbon nanotubes at different doses and contact time were investigated .The amount of adsorbed dye increased with the increasing of CNTs dosage and reached a plateau region when the CNTs dosage achieved 0.175g L^{-1}. Equilibrium adsorption data were analyzed by Langmuir and Freundlich isotherm of the results revealed that Langmuir isotherm fitted the experimental results well. Kinetic analyzes were tested using pseudo-first order, pseudo second order and the intraparticle diffusion model. Kinetic studies showed that the adsorption kinetics were more accurately represented by a pseudo second order model.

Keywords: Adsorption, carbon nanotubes, titanium dioxide, cobalamin,kinetics, isotherms.