

ABSTRACT

THE COMPARATIVE STUDY OF THE ADSORPTION CAPACITY OF ATTAPULGITE AGAINST TETRACYCLINE HCL AND ADSORPTION CAPACITY OF ATTAPULGITE AGAINST DOXYCYCLINE HYCLATE BY SPECTROPHOTOMETRY UV-VIS METHOD

Correlation between the value of the logarithm of the number of tetracycline HCl and doxycycline hyclate adsorbed by attapulgit (log x/m) towards the levels after the adsorption. The results of this research obtained regression equation HCl tetracycline against attapulgit $y = 0,51459 x + 0,15712$; ($r = 0,85293$), regression equation doxycycline hyclate against attapulgit $y = 0,17859 x + 0,55999$; ($r = 0,31751$). In this research the maximum wavelength of tetracycline HCl is 356 nm and Doxycycline hyclate is 274 nm. The result optimization process tetracycline HCl in aqueous solutions is 2500,8 ppm concentration and doxycycline hyclate is 2501,4 ppm concentration. For the optimization maximum time by adding attapulgit on the sample, obtained at 120 minutes. The result of this research, attapulgit adsorption capacity of tetracycline HCl have range (28.91 to 59.67) mg/g and the attapulgit adsorption capacity of doxycycline hyclate have range (7.96 to 13.80) mg/g. Attapulgit adsorption capacity to tetracycline HCl is greater than the adsorption capacity of the attapulgit hiklat doxycycline.

Keywords : Adsorption, Tetracycline HCl, Doxycycline Hyclate, Antibiotics, Spectrophotometry UV-Vis, Attapulgit