

ABSTRACT**COMPARISON OF ADSORPTION CAPACITY OF
ACTIVATED CARBON AND ATTAPULGITE TO
CHLORAMPHENICOL AND THIAMPHENICOL**

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For the treatment diarrhea, adsorbent – antibiotic combinations is usually given. Activated carbon and attapulgite, which are used to adsorb the toxins. Adsorbents adsorb nonspecifically not only toxins but also nutrients, water and even drugs so antibiotics are also possibly adsorbed. The purpose of this is to know the adsorption capacity of activated carbon to chloramphenicol and thiamphenicol and attapulgite compared to chloramphenicol and thiamphenicol. The adsorption capacity was calculated using the empirical value from Freundlich isotherms at 32°C. Determination of antibiotic levels before and after adsorption was performed by the UV-Vis spectrophotometry method on maximum wavelength 275 nm for chloramphenicol and 222 nm for thiamphenicol.

The results showed that the k value for activated carbon to chloramphenicol and thiamphenicol are 12,41 and 10,76 respectively, and the k value for attapulgite to chloramphenicol and thiamphenicol are 10,96 and 12,67. Adsorption capacity of activated carbon to chloramphenicol is greater than of activated carbon to thiamphenicol, mean while attapulgite to thiamphenicol is greater than the attapulgite to chloramphenicol. It can be concluded that at 32°C, activated carbon and attapulgite adsorb chloramphenicol and thiamphenicol so it has to be given with the time interval separately

Keywords : Adsorption, Activated Carbon, Attapulgite, Chloramphenicol, Thiamphenicol, UV-Vis Spectrophotometry