INFLUENCE OF CONCENTRATION VARIATION TO ADSORPTION OF RHODAMINE B DYE BY MODIFIED PEANUT SHELL

ABSTRACT

Budi Hartono
NIM 14 612 009

Minimizing the impact of the danger of synthetic dyes Rhodamine B using peanut shells which the term modified surfactant becomes bio-sorbent. The basic ingredients of Peanut Skin are Adsorbents made as Non-Modified Adsorbents (ATMs), Modified Adsorbents (AM) by Sodium Dodecyl Sulfate, (AM) and Adsorbent Ash (AA). Modification Adsorbent (AM) shows an increase and efficiency of Rhodamine B compared to ATM and AA, with the provision that 0.00025% SDS can increase adsorption capacity and adsorption stability. This was obtained from the data in the form of UV-Vis spectrophotometer adsorbance from Rhodamine B solution, FTIR data results, and functions to find out the area, the total pore of the adsorbent.

Applying Adsorption to the flow method, and finding adsorption percentages of 98 % for AM, 87 % for ATM, and 5 % for AA. Applying adsorption from adsorbent ash is not optimal to reflect Rhodamin B color, then AA is not for the next payment procedure. Adsorbent stability and efficiency with relation to batches, the optimal Adsorp results obtained at rhodamine B concentration of 5 ppm maximum absorbed by 97.82% by modification adsorbent. ATM and AM race on the langmuir adsorption isotherm system. The Boehm titration results indicate that the surface of the adsorbent is more acidic.

Key Word: Adsorption, Bio-Sorbent, Adsorption Isotherm, Rhodamine B