

Adsorption efficiency of garcinia mangostana linn. (GML) shells based activated carbon

Abstract

The objective of this study is to investigate the adsorption efficiency of Garnia Mangostana Linn. (GML) shells based activated carbon using two synthetic dyes which are methylene blue and acid orange 7. The parameters which were studied in batch mode are the effect of contact time, initial dyes concentration, particle size, adsorbent dosage and temperature. Scanning Electron Microscope (SEM) was used to determine the physical characterization of GML. Base on the percentage removal results, the basic dye (Methylene blue) depicts better performance if compared to the acid dye (Acid orange 7) with approximately 90% of the best percentage removal of Methylene blue

Keywords

Acid orange 7; Activated carbon; Adsorption; Garcinia mangostana linn; Methylene blue