

Carbonized spent bleaching earth as a sorbent for some organic dyes

ABSTRACT

The potential of carbonized spent bleaching earth (CSBE) to remove/reduce acid and basic dyes in aqueous solution was investigated. Results show that CSBE was more effective in removing basic dyes. Parameters like pH, initial concentration, agitation rate, contact time and temperature which affect the sorption process were studied. As determined from Langmuir isotherms the maximum sorption capacities of CSBE for Basic Blue 3 and Methylene Blue were 102.6 and 94.5 mg/g respectively. Hence CSBE could be a useful sorbent in the treatment of basic dyes in wastewater.

Keyword: Basic dyes; Carbonized spent bleaching earth; Sorption