

## Removal of some organic dyes by hexane-extracted spent bleaching earth

### ABSTRACT

The removal of some organic dyes from aqueous solution by hexane-extracted spent bleaching earth, a waste material from the palm oil industry, was investigated. It was noted that the material had better affinity for basic than acid dyes. Various parameters affecting the removal process were studied. These were pH, initial dye concentration, sorbent dosage, temperature and agitation rate in the batch process. Experimental data show that both the boundary layer and intraparticle diffusion effect play important roles in the rate of dye removal. Maximum sorption capacities for some basic and acid dyes studied compare favourably with those reported using other low-cost sorbents.

**Keyword:** Acid dyes; Basic dyes; Hexane-extracted spent bleaching earth; Sorption