

Documents

Ashraf, M.W.

Removal of methylene blue dye from wastewater by using supported liquid membrane technology

(2016) *Polish Journal of Chemical Technology*, 18 (2), pp. 26-30. Cited 2 times.

Abstract

The present work describes the application of Supported Liquid Membrane (SLM) technology towards the removal and recovery of a cationic dye (Methylene Blue) from aqueous solutions. Natural and non-toxic vegetable oils have been impregnated on microporous polymeric films of polyvinylidene fluoride (PVDF) to constitute a liquid membrane. Different parameters affecting the transport, like pH of feed solution, acid concentration in the strip solution, initial dye concentration, oil types and stirring speeds have been investigated. Highest value of flux (1.7×10^{-5} mg/cm²/sec) for methylene blue dye was achieved with sunflower oil impregnated on the PVDF support, with pH maintained at 12 in the feed solution and 0.3 M hydrochloric acid concentration in the strip solution. It took 6 hours to transport maximum amount of dye under optimum conditions. © 2016 Muhammad Waqar Ashraf.

2-s2.0-84978417815

Document Type: Article

Publication Stage: Final

Source: Scopus

Access Type: Open Access