



Purification of industrial effluent by microfiltration and ultrafiltration ceramic membranes: comparative study between commercial and elaborated Tunisian clay membranes

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ABSTRACT

Industrial effluents treatment was investigated using ceramic Microfiltration (MF) and Ultrafiltration (UF) tubular membranes. The comparison of performances between commercial ceramic membranes based on alumina material and elaborated ones based on Tunisian clay material was studied. MF and UF tests applied to cuttlefish effluent treatment were carried out respectively with 0.2 μm and 5 nm commercial membranes and 0.18 μm and 15 nm prepared membranes. The results show that for the two processes, the performances in term of permeate flux and quality of the treated wastewater using clay membranes was a little better than that obtained with commercial one.

Keywords: Commercial membrane; Tunisian clay membrane; Cuttlefish effluent; Ultrafiltration; Microfiltration; Industrial effluents

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