

## عنوان مقاله:

Microfiltration of oily wastewater using PTFE hydrophobic membrane

## محل انتشار:

دهمین کنگره ملی مهندسی شیمی ایران (سال: 1384)

تعداد صفحات اصل مقاله: 11

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## خلاصه مقاله:

In this paper, effect of influential factors on separation of oil from oily wastewater was investigated. PTFE hydrophobic membranes with 0.45  $\mu\text{m}$  pore size was used to run the experiments. Gas oil and distilled water were selected as dispersed phase and continuous phase, respectively. Taguchi experimental design was used to plan a minimum number of experiments. A L9 orthogonal array (Four factors in three levels) was employed to evaluate effect of feed characteristics (gas oil content in feed), operating pressure, operating temperature and feed flow rate on the response (permeate flux and water content in permeate). Preliminary experiments were carried out to identify level of parameters. It was found that increasing flow rate to its upper limit causes permeate flux to increase and it is the most effective parameter on the response. It was also found that, contrary to other microfiltration processes, temperature is a very effective parameter on the response.

## کلمات کلیدی:

oily wastewater, microfiltration, Taguchi experimental design, hydrophobic membrane, PTFE

## لینک ثابت مقاله در پایگاه سیویلیکا:

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