

Cellulose acetate membrane used in removal of heavy metals from wastewater

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Abstract Membrane technology is an alternative method recently applied to improve the quality of effluents. This research was aimed to study the removal of heavy metals (i.e. Ni²⁺ ions) from wastewater using membrane. The cellulose acetate laboratory made membranes were prepared by the phase inversion method from a ternary system consisting of cellulose acetate, acetone and formamide or water. The filtration experiments were carried out in flat-cell units, and membrane performance was investigated at constant pressures. In the experiments, the synthetic wastewater of nickel (10 mg/ℓ) is used. The flux and retention increase with increasing pressure.

Keywords: cellulose acetate membranes, wastewater filtration, removal of heavy metals
