

A Study on Application of Membrane Distillation for Recovery of VFA and Water Reuse

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ABSTRACT

Volatile fatty acid (VFA) is a short-chain fatty acid consisting of no more than six carbon atoms that must be treated because it is toxic and stinking, and at the same time VFA is considered a "Valuable Resources" that can be converted to bioenergy and recycled. The purpose of this study is to obtain reusable treated water by applying Membrane Distillation process (MD) from wastewater containing VFA, separate and concentrate VFA to recover bioenergy convertible VFA. The laboratory scale MD system was operated with the synthetic wastewater adjusted to various pH. Through the experiment, an empirical formula to predict the permeability of VFA through the membrane was derived. In the conference, the observed results will be presented and discussed in detail to share the findings among the participants

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