# Effect of Shear Rate on Characteristics, Performance and Morphology of Polysulfone Blend Membranes

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**ABSTRACT**

Rheological factor such as shear rate during membrane fabrication process has an effect on properties, structures and performance of membranes. Flat sheet asymmetric PSf/CAP blend membranes were prepared using an automatic casting machine at different shear rates in the range of 42.0 to 201.0 $s^{-1}$. Results showed that increasing the shear rate from 42.0 to105 $s^{-1}$ has increased the molecular orientation and thickness which then reduces the water content, porosity and pure water flux of PSf/CAP blend membranes. However, further increasing the shear rate beyond 105 $s^{-1}$ has resulted in an increase in the water content of PSf/CAP blend membranes.

**KEYWORDS**: Morphology, Porosity, PSf/CAP Blend Membrane, Shear Rate, Water Content

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