

# Membrane Technology

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Membrane Technology by Mazrul

# Chapter 6

# Membrane Characterization



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# Exercise 1

- An NF hollow fiber membrane has a water permeability of  $L_p = 8 \text{ L/m}^2 \cdot \text{h} \cdot \text{bar}$ . The external diameter of fiber is 0.1mm and the length of the module is 1m. If the system is run at 10 bar and 25 °C and seawater (NaCl and osmotic pressure of 2 bar) as a feed, how many number of fibres are required in order to achieve permeate flow rate of  $1 \text{ m}^3/\text{day}$ .

