

Chemical Engineering Master's Defense

A Mathematical Model for Pervaporation

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abstract

Pervaporation is a membrane separation technology that has had industrial application and which is the subject of ongoing research. Two major factors are important in judging the quality of a membrane: selectivity and mass transfer. A simple mathematical model has been developed to demonstrate the inter-relationships between support resistance to mass transfer, top layer (zeolite) resistance to mass transfer, the selectivity of the support, and the selectivity of the top layer.

