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Phenol Removal from Aqueous Solution through Hollow Fiber Membrane Extraction

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摘要 In this work, mass transfer mechanism was studied for 50%TBP(in kerosene)-Phenol-Water as the working system in different hydrophobic microporous hollow fiber modules. The effect of different operating conditions on the removal of phenol was analyzed. Solvent entrainment in this process was detected with MALVERN-2600 laser pellet diameter analyzed equipment. Experimental results indicated the mass transfer coefficient increased as well as the two phase flow rates are raised. With increases in the flow rate of the water phase, the removal ratio of phenol will be decreased. Highly effective removal of phenol could be reached by changing the experimental conditions and the module configuration. The solvent entrainment in the water phase in the membrane extraction process was found to be 5-8% of that in conventional liquid -liquid extraction process. Thus, solvent pollution could be better controlled.

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Phenol Removal from Aqueous Solution through Hollow Fiber Membrane Extraction

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Key words [Hollow Fiber](#); [Extraction](#); [Phenol](#)

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