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Isobaric vapor liquid equilibria of binary system ethyl acetate + ethyl benzene + lithium bromide

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Abstract: The isobaric vapor?liquid equilibrium (VLE) behaviors for binary system, ethyl acetate ? ethyl benzene, and ethyl acetate ? ethyl benzene ? LiBr (at saturation) were studied at the local ambient pressure (707 ? 1 mmHg). Equilibrium still was used where both liquid and vapor were continuously circulated. The experimental results showed that salt-free ethyl acetate ? ethyl benzene system does not form an azeotrope point. The experimental results for ethyl acetate ? ethyl benzene system were in a very good agreement with the predicted results using UNIFAC, UNIQUAC, NRTL, and Wilson models. Adding LiBr, as a salt, did show slight effects on the VLE behavior of ethyl acetate ? ethyl benzene system.