VLE Calculations for the Binary Systems of Acetic Acid, Ethanol, and Ethyl Acetate Using SAFT EOS

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Vapor liquid equilibrium calculations for the binary systems of acetic acid, ethanol, and ethyl acetate using the SAFT EOS were undertaken. The pure and binary interaction parameters were regressed. The performance of the SAFT EOS was compared with those of the SRK EOS and NRTL model. Since the systems considered in this work contain associating components, the prediction capability of the SAFT EOS was superior to that of the SRK EOS and NRTL model. The AAD in system pressure and vapor phase composition for given temperature and liquid phase composition was less than 3%.