

Comparison of Liquid-Liquid Equilibrium data for Acetic acid + Water + 1-decanol at several temperatures

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Liquid-liquid equilibrium(LLE) data has been measured for water + acetic acid + 1-decanol ternary system at 298.15K, 308.15 and 318.15K under atmospheric pressure. Complete phase diagrams were obtained by evaluating the solubility and tie-line results for each ternary mixture. For measuring the binodal solubility curve data, the cloud point method was used. To verify the consistency of tie-line data, Othmer-Tobias and Hand plots method were used. The separation factors and distribution coefficient were evaluated from the liquid-liquid equilibria (LLE) data. To correlate the liquid-liquid equilibria experimental data, NRTL model was used. To comparison the efficiency of two solvents, separation factors and distribution coefficient were compared at each temperature.