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Determination and Modelling for Solubility of *o*-Aminobenzamide and Its Mixture in Subcritical 1,1,1,2-tetrafluoroethane

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Highlights

- Solubility of *o*-aminobenzamide and its mixture with *o*-nitrobenzoic acid in subcritical R134a was determined.
- The solubility of *o*-aminobenzamide and its mixture with *o*-nitrobenzoic acid was compared between in binary and ternary system.
- The solubility was correlated with empirical models and obtained satisfactory correlated results.

Abstract: The solubility of *o*-aminobenzamide (*o*-AB) and its mixture with *o*-nitrobenzoic acid (*o*-NBA) in subcritical 1,1,1,2-tetrafluoroethane (R134a) was measured at temperatures of 308, 318, 328 K and pressure range from 5.0 to 15.0 MPa with static method. Then the solubility of *o*-AB and *o*-NBA in subcritical R134a binary and ternary system were compared and investigated from the view of solvent density, solvent polarity, and interaction between solvent and solute. In order to evaluate the effect of co-solute on solubility of solute, enhancement factor (*EF*), separation factor (*SF*), separation efficiency (*SE*), and the solubility enhancement

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