中国化学工程学报 2002 10 (2): 223-227 ISSN: 1004-616x CN: 44-1063/R

RESEARCH PAPERS

CO_2+共溶剂二元和三元体系的临界性质研究

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 The performance of supercritical fluid (SCF) as a solvent can be greatly affected by addition of anentrainer to the system. In this study, a constant volume visual method is used to measure the critical point ofCO2+n-butyraldehyde, CO2+ i-butyraldehyde and CO2+alcohol binary systems and CO2+entrainer+trisodiumsalt of tri-(m-sulfonphenyl) phosphine
(TPPTS) ternary systems, which provides us good theoretical basis for super-critical extraction and chemical reaction. The relationship between critical point and concentration of the entrainerare discussed. The phase behavior of binary system and that of ternary system are compared. The relationshipbetween the concentration of TPPTS and critical point of binary systems are also discussed.

关键词 critical point supercritical fluid ternary system phase equilibrium tri-(m-sulfonphenyl)phosphine
分类号

DOI:

Study on Critical Properties for CO_2+Cosolvent Binary System and Ternary System

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Received Revised Online Accepted

Abstract The performance of supercritical fluid (SCF) as a solvent can be greatly affected by addition of anentrainer to the system. In this study, a constant volume visual method is used to measure the critical point ofCO2+n-butyraldehyde, CO2+ i-butyraldehyde and CO2+alcohol binary systems and CO2+entrainer+trisodiumsalt of tri-(m-sulfonphenyl)phosphine (TPPTS) ternary systems, which provides us good theoretical basis for super-critical extraction and chemical reaction. The relationship between critical point and concentration of the entrainerare discussed. The phase behavior of binary system and that of ternary system are compared. The relationshipbetween the concentration of TPPTS and critical point of binary systems are also discussed.

Key words critical point; supercritical fluid; ternary system; phase equilibrium; tri-(m-sulfonphenyl)phosphine

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