

Phase behavior of ternary mixture system of poly(L-lactic acid), trichloromethane and carbon dioxide

*

(hwayongk@snu.ac.kr*)

In this study, the high pressure phase behavior of poly(L-lactic acid) ($M_w = 312,000$), trichloromethane and carbon dioxide ternary mixtures was studied using a variable volume view cell at temperatures ranging from 313.15 K to 353.15 K and pressures of up to 300bar as functions of temperature and the CO₂/trichloromethane mass ratio at poly(L-lactic acid) weight fractions of 1.0, 2.0 and 3.0%. The experimental results were correlated with the hybrid equation of state for the CO₂-polymer system using the van der Waals one-fluid mixing rule with three adjustable binary interaction parameters.