Excess molar enthalpies, excess molar volumes, and refractive indices for the ternary and constituent binary mixtures of {1,2-dichloropropane + methanol + ethanol} at T=298.15 K and P=101.3 kPa

심효원, 김문갑*
경북대학교
(mg_kim@knu.ac.kr*)

Excess molar properties Q^E (enthalpy, volume, and refractive index) at the temperature of 298.15 K and atmospheric pressure for the ternary mixture {1,2-dichloropropane + methanol + ethanol} and its constituent binary mixtures have been determined over the whole composition range. The experimental values of excess molar properties Q^E were determined using an isothermal microcalorimeter with flow-mixing cell, a digital vibrating-tube densimeter and refractometer, respectively. The experimental binary Q^E data were fitted to Redlich-Kister equation, and Cibulka and Morris equations were employed to correlate the ternary Q^E data. Several empirical equations (Tsao-Smith, Kohler and Radojkovič etc.) for predicting ternary excess enthalpies from constituent binary mixing data have been also examined and compared. The experimental results have been qualitatively discussed in terms of molecular interactions.