Liquid-liquid extraction using deep eutectic solvents as an extractant in a mixture of ethanol with aliphatic compounds

사은진, 임희지, 이봉섭[1], 박병흥†
한국교통대학교; [1]경남대학교
(b.h.park@ut.ac.kr†)

Deep eutectic solvents (DESs) formed from quaternary ammonium salts and hydrogen bond donors (HBDs) have been suggested as alternatives to ionic liquids because their physicochemical properties are very similar to those of ionic liquids. Rescently, it was found that DESs could be used as an extraction solvent to resolve deadlocks associated with azeotropic behaviors encountered in traditional distillation process. In this study, ethanol was separated from a mixture of ethanol and aliphatic compounds using DES based on choline chloride at 298 K. Ternary liquid liquid equilibria composition consisting of DES, n-hexane and ethanol were measured and the distributions of ethanol between the two phases were also estimated.