

### Extraction of Ethanol from Azeotropic Mixtures with Aliphatic Compound by using Deep Eutectic Solvent

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Deep eutectic solvents (DESS) which formed from eutectic mixtures of a quaternary ammonium salt and a hydrogen bonding donor have been suggested as various alternatives to ionic liquids because their physicochemical properties have quite similar those of ionic liquids. These DESSs can be used as an extractant. In this study, DESSs prepared by mixing choline chloride (ChCl) with ethylene glycol or malonic acid were used to separate ethanol from an azeotropic mixture of n-hexane and ethanol at 298 K. The ternary liquid-liquid equilibrium data consisting of DES, n-hexane and ethanol was measured while changing the initial composition and the distributions of ethanol between the phases were also estimated.

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