

Equilibrium study on reactive extraction of malic acid with trioctylamine(TOA)/1-octanol

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In recent years, reactive extraction processes have received increasing attention for recovery of carboxylic acids from aqueous solution. Reactive extraction is the separation process using reaction between extractants and materials extracted. The extractant in the organic phase reacts with material of aqueous phase and reaction complex formed was solubilized into the organic phase.

Malic acid is an important C4 dicarboxylic acid and it was widely used in food, cosmetics, pharmaceutical products and textile industry.

In this study, extraction equilibrium of malic acid with TOA/1-octanol was investigated with the concentration of malic acid in the equilibrium aqueous phase, TOA concentration in the organic phase, and pH level in the aqueous phase.