

## Reactive extraction of succinic acid using a hollow fiber membrane contactor with TOA/1-octanol solution

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Succinic acid, a four carbon dicarboxylic acid, has attracted a great deal of attention for many years because it can be used as a raw material for biodegradable polymer. As an alternative to the petrochemical-based process, the intensive study on organic acid production through the fermentation process is currently proceeding. In this study, we investigated reactive extraction of succinic acid from aqueous solution with tri-n-octylamine(TOA) in 1-octanol. We verified the effect of flow rate, concentration of TOA, initial concentration of succinic acid and pH of aqueous solution on forward extraction and also effect of flow rate and concentration of stripping solution on backward extraction. The effect of TOA concentration on forward extraction was dominant among the various operating variables considered. At the pH above the  $pK_{a1}$  value, extraction performance was significantly reduced and even more above  $pK_{a2}$  approaching zero in extraction performance.