

A study on characteristics of colloidal liquid aphrons and design of CLA column

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In this study, characteristics of colloidal liquid aphrons (CLAs) was investigated for the predispersed solvent extraction (PDSE) of succinic acid from aqueous solution and CLA column was designed. Tertiary amine, trioctylamine (TOA), was used as extractant and 1-octanol was used as diluent. TOA acts as complexing agents with the succinic acid that facilitates the distribution of succinic acid into organic phase. CLA was prepared aqueous solution with anionic surfactant and TOA/1-octanol mixture that contains nonionic surfactant. In this work, stability of CLA was investigated and effect of PVR (Phase Volume Ratio) on extractability was also investigated. Finally, characteristics of CLAs was applied to PDSE system and CLA column was designed for continuous operation of PDSE.