SEPARATION SCIENCE & ENGINEERING

弱碱性树脂吸附分离丙酮酸的特性研究

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摘要 Uptakes of pyruvic acid for two types of commercially available weakly basic polymer sorbents, D301G and D301R, have been measured over a wide pH range and at various salinities of MgSO4. The results show that the overloading adsorption of pyruvic acid occurs on both weakly basic polymer sorbents, and the overloading models can predict the experimental data of uptake very well. The overloading value for D301G is larger than that for D301R. The adsorption isotherm of pyruvic acid for both polymeric sorbents is greatly affected by the solution pH and MgSO4 concentration in the aqueous phase, and a high recovery efficiency of pyruvic acid from aqueous solution can be obtained at the solution pH around 2.

关键词 pyruvic acid weakly basic polymer sorbents adsorption pH

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Sorption of pyruvic acid with weakly basic polymer sorbents

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Abstract Uptakes of pyruvic acid for two types of commercially available weakly basic polymer sorbents, D301G and D301R, have been measured over a wide pH range and at various salinities of MgSO4. The results show that the overloading adsorption of pyruvic acid occurs on both weakly basic polymer sorbents, and the overloading models can predict the experimental data of uptake very well. The overloading value for D301G is larger than that for D301R. The adsorption isotherm of pyruvic acid for both polymeric sorbents is greatly affected by the solution pH and MgSO4 concentration in the aqueous phase, and a high recovery efficiency of pyruvic acid from aqueous solution can be obtained at the solution pH around 2.

Key words pyruvic acid; weakly basic polymer sorbents; adsorption; pH

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