Comparison of adsorption equilibrium of two compounds on C_{18} columns

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Comparisons of glycyrrhizic acid and liquiritin adsorption isotherm on C_{18} columns, and then the competitive adsorption of the two compounds were investigated. By a linear and nonlinear regression analysis, the experimental parameters in the equilibrium isotherms were estimated. The adsorption equilibrium data were correlated into the linear, Langmuir, Competitive Langmuir, Freundlich, and Langmuir–Freundlich isotherm models, respectively. The results showed that the Competitive Langmuir isotherm model was more comfortable than other models for the competitive adsorption of the two compounds. From the Competitive Langmuir isotherm model, the influence of adsorption between the two compounds was obtained.