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### Kinetic Correlation for the Hindered Diffusion of Proteins in a Porous Packing Column\*

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**摘要** Hindered diffusion of proteins in a porous packing plays an important role in protein chromatographic purification. The HETP method was adopted to analyze the influence of axial dispersion, film mass transfer and hindered diffusion in the porous packing employing a size-exclusion chromatography (SEC) process. The retention behavior with eight proteins of different relative molecular mass was experimentally detected with a commercial SEC column. A correlation based on the relative molecular mass of the proteins and the packing porosity was developed and used to predict the effective diffusion coefficient of a protein in the porous packing. The predicted values of effective diffusion coefficient were very consistent with the experimental results with the average error of 8.6%.

**关键词** [protein](#) [effective diffusion coefficient](#) [porous packing](#) [SEC](#)

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**Key words** [protein](#); [effective diffusion coefficient](#); [porous packing](#); [SEC](#)

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