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Measurement of Mass Transfer Coefficients and Their Modelling of Continuous Counter-Current Aqueous Two-Phase System in a Packed Extraction Column

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**摘要** Overall dispersed side volumetric mass transfer coefficients for protein and amino acids were measured in continuous countercurrent PEG4000/KHP aqueous two-phase systems in a 57 mm

I.D. packed extraction column. A model for overall dispersed side volumetric mass transfer coefficients was derived by describing the motion of the drops based upon Navier-Stokes equation combined with the relationship between mass transfer coefficients and the drop velocity. The model provides good predictions and can be successfully used in aqueous two-phase extraction. The average relative deviation between calculated values and experimental data ranges from 8% to 14%.

**关键词** [aqueous two-phase system](#) [continuous countercurrent extraction](#) [mass transfer coefficient](#) [model](#) [packed column](#)

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**Key words** [aqueous two-phase system](#); [continuous countercurrent extraction](#); [mass transfer coefficient](#); [model](#); [packed column](#)

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