

RESEARCH NOTES

利用膨胀床吸附技术单步纯化分子伴侣—GroEL

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摘要 Expanded bed adsorption (EBA) is an integrative downstream processing technique for the purification of biological substances directly from unclarified feedstock. In this study, molecular chaperone GroEL, an important protein folding helper both in vivo and in vitro, was purified by the single-step EBA technique from the unclarified homogenate of recombinant *E. coli* cells. Compared with packed bed adsorption, the EBA technique provided a single-step approach to yield an electrophoretic purity of GroEL. After the homogenate loading and column washing in the expanded bed mode, the GroEL protein was recovered by stepwise salt-gradient elution in packed-bed or expanded-bed modes, respectively. The expanded-bed elution mode was found as efficient as the packed-bed mode in the purification of GroEL from cell disruptate.

关键词 [expanded bed adsorption](#) [molecular chaperone](#) [GroEL](#) [purification](#)

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Single-step Purification of Molecular Chaperone GroEL by Expanded Bed Chromatography

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Abstract Expanded bed adsorption (EBA) is an integrative downstream processing technique for the purification of biological substances directly from unclarified feedstock. In this study, molecular chaperone GroEL, an important protein folding helper both in vivo and in vitro, was purified by the single-step EBA technique from the unclarified homogenate of recombinant *E. coli* cells. Compared with packed bed adsorption, the EBA technique provided a single-step approach to yield an electrophoretic purity of GroEL. After the homogenate loading and column washing in the expanded bed mode, the GroEL protein was recovered by stepwise salt-gradient elution in packed-bed or expanded-bed modes, respectively. The expanded-bed elution mode was found as efficient as the packed-bed mode in the purification of GroEL from cell disruptate.

Key words [expanded bed adsorption](#); [molecular chaperone](#); [GroEL](#); [purification](#)

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