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## Expression, solubilization, refolding and final purification of recombinant proteins as expressed in the form of "classical inclusion bodies" in E. coli

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### Abstract

Escherichia coli has been most widely used for production of the recombinant proteins. Over-expression of the recombinant proteins is the mainspring of the inclusion bodies formation. The refolding of these proteins into bioactive forms is cumbersome and partly time-consuming. In the present study, we reviewed and discussed most issues regarding the recovery of "classical inclusion bodies" by focusing on our previous experiences. Performing proper methods of expression, solubilization, refolding and final purification of these proteins, would make it possible to recover higher amounts of pro-teins into the native form with appropriate conformation. Generally, providing mild conditions and proper refolding buffers, would lead to recover more than 40% of inclusion bodies into bioactive and native conformation.

**Keywords:** Inclusion body; mild solubilization; native-like secondary structure; protein refolding; purification; recombinant expression.

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