

### Refolding of fusion ferritin using gel filtration chromatography

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Fusion ferritin( $F_H + F_L$ ), an iron-binding protein, was purified from recombinant E. coli by two-step sonications with urea. Unfolded ferritin was refolded by gel filtration chromatography with various concentration of urea. 50 mM Na-phosphate(pH 7.4) buffers with 2 M to 6 M urea were used in GFC. Objective was to characterize the structure change with urea concentration. Molecular weight was determined using GF-HPLC and RP-HPLC was used to quantify the unfolded and refolded proteins. Also the activity of ferritin was confirmed by iron-uptake reaction.