

Protein Precipitation from Detergent-containing Samples

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Materials and Reagents

1. Methanol
2. Chloroform

Equipment

1. Centrifuges

Procedure

For 100 μ l of sample:

1. Add 300 μ l of methanol to the protein sample and mix.
2. Add 100 μ l of chloroform and mix. Mixing yields a single phase.
3. Add 200 μ l of water and mix vigorously. Initiation of phase separation.
4. Centrifuge at 10,000 $\times g$ for 2 min. Precipitated proteins are at the interface.
5. Remove upper aqueous methanol phase.
6. Add 300 μ l of methanol to the bottom phase and mix. Mixing yields a single phase.
7. Centrifuge at 10,000 $\times g$ for 1 min.
8. Air-dry the protein pellet with the tube inverted.

References

1. Whitelegge, J. P., le Coutre, J., Lee, J. C., Engel, C. K., Prive, G. G., Faull, K. F. and Kaback, H. R. (1999). [Toward the bilayer proteome, electrospray ionization-mass spectrometry of large, intact transmembrane proteins.](#) *Proc Natl Acad Sci U S A* 96(19): 10695-10698.