What is claimed is:

1. A method of separating a monomeric protein of interest from protein aggregates in a sample by porous member filtration, the method comprising contacting the sample with a porous membrane comprising a cross-linked coating comprising a co-polymer of benzyl acrylamide, acrylamide and N,N'-methylenebisacrylamide, wherein the membrane selectively binds protein aggregates, thereby separating the monomeric protein of interest from the protein aggregates.

2. The method of claim 1 wherein the method is performed at neutral to higher pH of 6 or greater.

3. The method of claim 2 wherein the method is performed in a solution of moderate to high conductivity of 5 mS/cm or greater.

4. The method of claim 1, wherein the lower order protein aggregates are selected from the group consisting of dimers, trimers, and tetramers.

5. The method of claim 1, wherein the aggregates are pentamers and higher.

6. The method of claim 1, wherein the monomeric protein of interest is an antibody.

7. The method of claim 6, wherein the antibody is a monoclonal antibody.

8. The method of claim 1, wherein the monomeric protein of interest is a recombinant protein.

9. The method of claim 1, wherein the monomeric protein of interest is a polyclonal antibody.

10. The method of claim 1, wherein the monomeric protein of interest is further subjected to filtration through a virus-retentive filter.