What is claimed is:

1. A method for detecting two or more variants of at least one host cell protein contaminant of interest in an antibody preparation sample, comprising:

separating protein components of a sample by a physical parameter, including one of isoelectric point, charge, size, molecular weight or a combination thereof, in one or more capillaries using capillary electrophoresis;

immobilizing the protein components of the sample within the one or more capillaries;

contacting the protein components within the one or more capillaries with one or more primary antibodies that specifically bind to the variants of at least one host cell protein contaminant of interest; and

detecting the binding of the one or more primary antibodies, thereby detecting the variants of at least one host cell protein contaminant of interest in an antibody preparation sample.

2. The method of claim 1, further comprising discriminating between the two or more variants of at least one host cell protein contaminant of interest in an antibody preparation sample by the physical parameter.

3. The method of claim 1 or 2, wherein the one or more capillaries comprise a separation matrix.

4. The method of claim 3, wherein the separation matrix comprises carrier ampholytes.

5. The method of claim 4, wherein the physical parameter comprises charge.

6. The method of claim 3, wherein the separation matrix comprises a sieving matrix configured to separate proteins by molecular weight.

7. The method of claim 6, wherein the physical parameter comprises molecular weight.

8. The method of any one of claims 1-7, wherein the one or more primary antibodies are labeled with a detectable label, and wherein detecting the binding of the one or more primary antibodies comprises detecting the detectable label.

9. The method of any one of claims 1-8, wherein detecting the binding of the one or more primary antibodies comprises:

contacting the one or more primary antibodies with a secondary antibody that specifically binds at least one of the one or more the primary antibodies, and wherein the secondary antibody has a detectable label; and

detecting the detectable label.

10. The method of any of claims 1-9, further comprising detecting and/or discriminating between charge or size variants of the at least one host cell protein contaminant of interest.

11. The method of any one of claims 1-10, further comprising determining a relative or absolute amount of the variants of at least one host cell protein contaminant of interest.

12. The method of claim 8, wherein the detectable label comprises a chemiluminescent label, a fluorescent label or a bioluminescent label.

13. The method of any one of claims 1-12, wherein the sample includes an internal standard.

14. The method of any one of claims 1-13, wherein the immobilizing comprises photo-immobilizing, chemically immobilizing, or thermally immobilizing.

15. The method of any one of claims 1-14, wherein the one or more primary antibodies comprise polyclonal antibodies.

16. The method of any one of claims 1-15, wherein the variants of at least one host cell protein contaminant of interest comprise PLBD2, CTSD, TIMP1, Acid Ceramidase (ASAH1), *Lysosomal Acid Lipase (LAL)*, *Annexin*, *Cathepsin B*, *Antileukoproteinase (ALP)*, or a fragment thereof.

17. A method for detecting ~~and/~~or discriminating between two or more variants of at least one host cell protein contaminant of interest in an antibody preparation sample by a physical parameter, including one of isoelectric point, charge, size, molecular weight or a combination thereof, comprising:

separating protein components of a sample by a physical parameter in one or more capillaries using capillary electrophoresis;

immobilizing the protein components of the sample within the one or more capillaries; contacting the protein components within the one or more capillaries with a first primary antibody that specifically binds to first variants of a host cell protein contaminant of interest; detecting the binding of the first primary antibody, thereby detecting the first antibody of interest; contacting the protein components within the one or more capillaries with a second primary antibody that specifically binds to second variants of a host cell protein contaminant of interest; and

detecting the binding of the second primary antibody, thereby detecting the variants of host cell protein contaminants of interest and discriminating between the antibodies in a sample.

18. The method of claim 17, further comprising

contacting the protein components within the one or more capillaries with a third primary antibody that specifically binds to variants of a host cell protein contaminant of interest; and

detecting the binding of the third primary antibody, thereby detecting the third variants of a host cell protein contaminant of interest.

19. The method of claim 18, further comprising

contacting the protein components within the one or more capillaries with one or more additional primary antibodies that specifically bind to one or more additional variants of host cell protein contaminants of interest;

detecting the binding of the one or more additional primary antibodies, thereby detecting the additional variants of host cell protein contaminants of interest.

20. The method of any one of claims 17-19, further comprising discriminating between variants of a host cell protein contaminant of interest in an antibody preparation sample by the physical parameter.

21. The method of any one of claims 17-20, wherein the one or more capillaries comprise a separation matrix.

22. The method of claim 21, wherein the separation matrix comprises carrier ampholytes.

23. The method of claim 22, wherein the physical parameter comprises charge.

24. The method of claim 21, wherein the separation matrix comprises a sieving matrix configured to separate proteins by molecular weight.

25. The method of claim 24, wherein the physical parameter comprises molecular weight.

26. The method of any one of claims 17-25, wherein the primary antibodies are labeled with a detectable label, and wherein detecting the binding of the primary antibodies comprises detecting the detectable label.

27. The method of any one of claims 17-26 wherein detecting the binding of the primary antibodies comprises:

contacting the primary antibodies with a secondary antibody that specifically binds the primary antibodies, and wherein the secondary antibody has a detectable label; and

detecting the detectable label.

28. The method of any one of claims 17-27, further comprising determining a relative or absolute amount of one or more of the variants of host cell protein contaminants of interest.

29. The method of any one of claims 17-28, wherein the detectable label comprises a chemiluminescent label, a fluorescent label or a bioluminescent label.

30. The method of any one of claims 17-29, wherein the sample includes an internal standard.

31. The method of any one of claims 17-30, wherein the immobilizing comprises photo-immobilizing, chemically immobilizing, or thermally immobilizing.

32. The method of any one of claims 17-31, wherein the variants of host cell protein contaminants of interest comprise PLBD2, CTSD, TIMP1, Acid Ceramidase (ASAH1), *Lysosomal Acid Lipase (LAL)*, *Annexin*, *Cathepsin B*, *Antileukoproteinase (ALP)*, or a fragment thereof.