

What is claimed is:

1. A method of purifying an antibody from a sample comprising one or more impurities including viral particles, the method comprising the steps of:
 - providing the sample comprising the antibody produced in a host-cell,
 - adjusting a pH of the sample to a range of from about 4.2 to about 8.0,
 - loading the sample to a hydrophobic interaction chromatography (HIC) column, wherein a concentration of the sample is from about 40 g/L to about 200 g/L, and
 - collecting the HIC treated sample.
2. The method of claim 1, wherein a citrate buffer is used to adjust the pH of the sample, wherein a concentration of the citrate buffer is from about 10 mM to about 200 mM.
3. The method of claim 1, wherein a resin of the HIC column is phenyl resin.
4. The method of claim 1, wherein a resin of the HIC column is capto phenyl resin.
5. The method of claim 1, wherein a hydrophobic strength of the HIC column is within a range of from a weak hydrophobic strength to a strong hydrophobic strength.
6. The method of claim 5, wherein the weak hydrophobic strength is achieved using a phenyl resin or an equivalent thereof.
7. The method of claim 5, wherein the strong hydrophobic strength is achieved using a capto phenyl resin or an equivalent thereof.
8. The method of claim 1, wherein the antibody is a monoclonal antibody or a bispecific antibody.
9. The method of claim 1, wherein the antibody has an IgG1 isotype or an IgG4 isotype.
10. The method of claim 1, wherein a flow rate through the HIC column has a linear velocity of about 100 cm/hr to about 300 cm/hr.
11. The method of claim 1 further comprising measuring the presence of viral genomic copies.
12. The method of claim 1 further comprising measuring the presence of viral particles.

13. The method of claim 1 further comprising measuring the presence of both viral genomic copies and viral particles.
14. A method of purifying an antibody from a sample comprising one or more impurities including viral particles, the method comprising the steps of:
- providing the sample comprising the antibody produced in a host-cell,
 - adjusting a pH of the sample to a range of from about 4.2 to about 8.0,
 - loading the sample to a hydrophobic interaction chromatography (HIC) column, wherein a concentration of the sample is from about 40 g/L to about 200 g/L,
 - collecting the HIC treated sample, and
 - measuring the presence of viral genomic copies and/or viral particles in the collected HIC treated sample.
15. The method of claim 14 further comprising optimizing removal of viral genomic copies and/or viral particles by running a D-Optimal design of experiment.
16. The method of claim 14, wherein the D-Optimal design of experiment evaluates the following factors:
- the pH of the sample from about 4.2 to about 8.0,
 - the column loading, wherein the concentration of the sample is from about 40 g/L to about 200 g/L,
 - a linear velocity of a flow rate through the HIC column from about 100 cm/hr to about 300 cm/hr, and
 - a hydrophobic strength of the HIC column from a weak hydrophobic strength to a strong hydrophobic strength.

17. The method of claim 16, wherein the weak hydrophobic strength is achieved using a phenyl resin or an equivalent thereof, wherein the strong hydrophobic strength is achieved using a capto phenyl resin or an equivalent thereof.
18. The method of claim 16, wherein the D-Optimal design of experiment further evaluates an isotype of the antibody.
19. The method of claim 14, wherein the antibody is a monoclonal antibody or a bispecific antibody.
20. A method of purifying an antibody from a sample comprising one or more impurities including viral particles, the method comprising the steps of:
- providing the sample comprising the antibody produced in a host-cell,
 - adding a citrate buffer to the sample,
 - adjusting a pH of the sample to a range of from about 4.2 to about 8.0,
 - loading the sample to a hydrophobic interaction chromatography (HIC) column, wherein a concentration of the sample is from about 40 g/L to about 200 g/L,
 - collecting the HIC treated sample, and
 - measuring the presence of viral genomic copies and/or viral particles in the collected HIC treated sample.
21. The method of claim 20 further comprising optimizing removal of viral genomic copies and/or viral particles by running a D-Optimal design of experiment.
22. The method of claim 21, wherein the D-Optimal design of experiment evaluates the following factors:
- the pH of the sample from about 4.2 to about 8.0,
 - a concentration of the citrate buffer from about 10 mM to about 200 mM,

the column loading, wherein the concentration of the sample is from about 40 g/L to about 200 g/L,

a linear velocity of a flow rate through the HIC column from about 100 cm/hr to about 300 cm/hr, and

a hydrophobic strength of the HIC column from a weak hydrophobic strength to a strong hydrophobic strength.

23. The method of claim 22, wherein the weak hydrophobic strength is achieved using a phenyl resin or an equivalent thereof, wherein the strong hydrophobic strength is achieved using a capto phenyl resin or an equivalent thereof.

24. The method of claim 20, wherein the antibody is a monoclonal antibody or a bispecific antibody.