CLAIMS

What is claimed is:

1. A method of preparing albumin from a solution comprising albumin comprising:
adjusting the protein concentration of the solution to less than about 5%;
adjusting pH of the solution to about pH 5 or less;
adding caprylic acid (octanoic acid) or sodium caprylate;
raising the solution temperature greater than about 20 °C; and
incubating the solution.

2. The method of claim 1, wherein the incubation temperature is 27–30 °C.

3. The method of claim 1, wherein the incubation is for about 30 min to about 120 min.

4. The method of claim 1, wherein the incubation is for at least about 90 min.

5. The method of claim 1, wherein the caprylate concentration is about 10 mM to about 40 mM.

6. The method of claim 1, wherein the caprylate concentration is about 15 mM to about 30 mM.

7. The method of claim 1, wherein the caprylate concentration is about 20 mM.

8. The method of claim 1, wherein the pH is about 3.8 to about 5.

9. The method of claim 1, wherein the pH is about 5.

10. The method of claim 1, further comprising:
filtering the solution;

performing ultrafiltration and diafiltration;

formulating and bulking the solution; and

sterilizing, filling, and pasteurizing the albumin.

11. A method of preparing albumin from a solution comprising albumin:

adjusting the protein concentration of the solution to less than about 5%;

adjusting pH of the solution to about pH 5 or less;

adding caprylic acid (octanoic acid) or sodium caprylate to a concentration of about 20 mM;

raising the solution temperature to about 27–30 °C; and

incubating the solution for at least about 30 min to about 120 min.

12. The method of claim 11, wherein the incubation is for at least about 90 min.

13. The method of claim 11, wherein the pH is about 5.

14. The method of claim 11, further comprising:

filtering the solution;

performing ultrafiltration and diafiltration;

formulating and bulking the solution; and

sterilizing, filling, and pasteurizing the albumin.

15. A method of inactivating viruses in a solution comprising albumin, the method comprising:

adjusting the protein concentration of solution to about 5% protein;

adjusting pH of the solution to less than about 5;

adding caprylic acid (octanoic acid) or sodium caprylate;

raising the solution temperature greater than about 20 °C; and

incubating the solution.

16. The method of claim 15, wherein the viruses are lipid-enveloped viruses.

17. The method of claim 15, wherein the caprylate concentration is about 15 mM to about 30 mM.

18. The method of claim 15, wherein the temperature is about 27–30 °C.

19. The method of claim 15, wherein the incubation is for at least 90 min.

20. The method of claim 15, wherein the caprylate concentration is 20 mM.

21. The method of claim 15, wherein the incubation is 90 min.

22. The method of claim 15, wherein the temperature is 30 °C.

23. The method of claim 16, wherein the viruses are lipid-enveloped viruses infecting humans.

24. A method of inactivating viruses in a solution comprising albumin, the method comprising:
adjusting the protein concentration of solution to about 5% protein;
adjusting pH of the solution to less than about 5;
adding caprylic acid (octanoic acid) or sodium caprylate to a concentration of about 20 mM;
raising the solution temperature to about 27–30 °C; and
incubating the solution for at least 90 min.

25. The method of claim 24, wherein the viruses are lipid-enveloped viruses infecting humans.

26. The method of claim 24, further comprising:

filtering the solution;

performing ultrafiltration and diafiltration;

formulating and bulking the solution; and

sterilizing, filling, and pasteurizing the albumin.

What is claimed is:

1. A method of preparing albumin from a solution comprising albumin, the method comprising:
(i) adjusting the protein concentration of the solution to less than about 5%;
(ii) adding caprylic acid (octanoic acid) or sodium caprylate to the solution obtained in step (i);
(iii) adjusting pH of the solution obtained in step (ii) to about pH 5 or less;
(iv) raising the temperature of the solution obtained in step (iii) to about 27-30° C.; and
(v) incubating the solution obtained in step (iv) for about 30 min to 120 min.

2. The method of claim 1, wherein the incubation is for at least about 90 min.

3. The method of claim 1, wherein the caprylate concentration is about 10 mM to about 40 mM.

4. The method of claim 1, wherein the caprylate concentration is about 15 mM to about 30 mM.

5. The method of claim 1, wherein the caprylate concentration is about 20 mM.

6. The method of claim 1, wherein the pH is about 3.8 to about 5.

7. The method of claim 1, wherein the pH is about 5.

8. The method of claim 1, further comprising:
filtering the solution;
performing ultrafiltration and diafiltration;
formulating and bulking the solution; and

sterilizing, filling, and pasteurizing the albumin.

9. A method of preparing albumin from a solution comprising albumin, the method comprising:
(i) adjusting the protein concentration of the solution to less than about 5%;
(ii) adding caprylic acid (octanoic acid) or sodium caprylate to a concentration of about 20 mM to the solution obtained in step (i);
(iii) adjusting pH of the solution obtained in step (ii) to about pH 5 or less;
(iv) raising the temperature of the solution obtained in step (iii) to about 27-30° C.; and
(v) incubating the solution obtained in step (iv) for at least about 30 min to about 120 min.

10. The method of claim 9, wherein the incubation is for at least about 90 min.

11. The method of claim 9, wherein the pH is about 5.

12. The method of claim 9, further comprising:
filtering the solution;
performing ultrafiltration and diafiltration;
formulating and bulking the solution; and
sterilizing, filling, and pasteurizing the albumin.

13. A method of inactivating viruses in a solution comprising albumin, the method comprising:
(i) adjusting the protein concentration of the solution to less than about 5%;
(ii) adding caprylic acid (octanoic acid) or sodium caprylate to the solution obtained in step (i), wherein the caprylic acid or sodium caprylate concentration is greater than about 20 mM;

(iii) raising the solution temperature of the solution obtained in step (ii) to greater than about 20° C.;

iv) incubating the solution;

v) filtering the solution;

vi) performing ultrafiltration and diafiltration;

vii) formulating and bulking the solution; and

viii) sterilizing, filling, and pasteurizing the albumin.

14. The method of claim 13, wherein the viruses are lipid-enveloped viruses.

15. The method of claim 13, wherein the temperature is about 27-30° C.

16. The method of claim 13, wherein the incubation is for at least 90 min.

17. The method of claim 13, wherein the incubation is 90 min.

18. The method of claim 13, wherein the temperature is 30° C.

19. The method of claim 14, wherein the viruses are lipid-enveloped viruses infecting humans.

20. A method of inactivating viruses in a solution comprising albumin, the method comprising:

(i) adjusting the protein concentration of the solution to less than about 5%;

(ii) adding caprylic acid (octanoic acid) or sodium caprylate to a concentration of about 20 mM to the solution obtained in step (i);

(iii) raising the temperature of the solution obtained in step (ii) to about 27-30° C.;

(iv) incubating the solution for at least 90 min;

(v) filtering the solution;

(vi) performing ultrafiltration and diafiltration;

(vii) formulating and bulking the solution; and

(viii) sterilizing, filling, and pasteurizing the albumin.

21. The method of claim 20, wherein the viruses are lipid-enveloped viruses infecting humans.