WHAT IS CLAIMED IS:

1. A sterilized liquid protein supplement comprising more than 10 grams of protein per 100 mL of supplement, wherein at least ~~a portion~~ 35% by weight of the protein is ~~extensively~~ hydrolyzed casein having a degree of hydrolysis of at least 20%, and wherein the sterilized liquid protein supplement has a pH of from about 5.0 to about 8.0.

2. The sterilized liquid protein supplement of claim 1, which comprises ~~comprising~~ from about 17 grams to about 24 grams of protein per 100 mL of supplement.

3. The sterilized liquid protein supplement of claim 1, which comprises ~~comprising~~ from about 20 grams to about 23.5 grams of protein per 100 mL of supplement.

4. The sterilized liquid protein supplement of claim 1, wherein the protein is 100% by weight ~~total protein component, extensively~~ hydrolyzed casein.

5. The sterilized liquid protein supplement of claim 1, wherein the protein is at least 50% by weight ~~total protein component,~~ free amino acids, dipeptides, and tripeptides.

6. The sterilized liquid protein supplement of claim 1, which comprises ~~comprising a solids content of~~ from about 10% by weight to about 50% by weight of solids.

7. The sterilized liquid protein supplement of claim 6, which comprises ~~comprising an insoluble solids content of~~ less than 5 grams of insoluble solids per 100 grams of the sterilized liquid protein supplement.

8. The sterilized liquid protein supplement of claim 1, which ~~wherein the sterilized liquid protein supplement is substantially free of~~ comprises less than 1% by weight collagen.

9. The sterilized liquid protein supplement of claim 1, which ~~wherein the sterilized liquid protein supplement is substantially free of~~ comprises less than 5% by weight of carbohydrate and fat.

10. A sterilized liquid protein supplement comprising more than 10 grams of ~~extensively~~ hydrolyzed casein per 100 mL of supplement, wherein the hydrolyzed casein has a degree of hydrolysis of at least 20% and the supplement~~, and wherein the sterilized liquid protein supplement is substantially free~~ comprises less than 1% by weight of collagen.

11. The sterilized liquid protein supplement of claim 10, which ~~wherein the sterilized liquid protein supplement~~ comprises from about 20 grams to about 23.5 grams of~~extensively~~ hydrolyzed casein per 100 mL of supplement.

12. The sterilized liquid protein supplement of claim 10, which comprises ~~comprising a solids content of~~ from about 10% by weight to about 50% by weight of solids.

13. The sterilized liquid protein supplement of claim 12, which comprises ~~comprising an insoluble solids content of~~ from about 0.5 grams to less than 5 grams of insoluble solids per 100 grams of the sterilized liquid protein supplement.

14. The sterilized liquid protein supplement of claim 10, which ~~wherein the sterilized liquid protein supplement~~ has a pH of from about 5.0 to about 8.0.

15. The sterilized liquid protein supplement of claim 10, which ~~wherein the sterilized liquid protein supplement is substantially free~~ comprises less than 5% by weight of carbohydrate and fat.

16. ~~A~~ The sterilized ~~clear~~ liquid protein supplement of any one of claims 1-15, wherein the sterilized liquid protein supplement is clear ~~comprising more than 10 grams protein per 100 mL, wherein at least a portion of the protein is extensively hydrolyzed casein, and wherein the sterilized liquid protein supplement has a pH of from about 5.0 to about 8.0.~~

~~17. The sterilized clear liquid protein supplement of claim 16, wherein the sterilized liquid protein supplement comprises from about 20 grams to about 23.5 grams protein per 100 mL.~~

~~18. The sterilized clear liquid protein supplement of claim 16, wherein the protein is 100% by weight total protein component, extensively hydrolyzed casein.~~

~~19. The sterilized clear liquid protein supplement of claim 16, wherein the protein is at least 50% by weight total protein component, free amino acids, dipeptides, and tripeptides.~~

17~~20~~. The sterilized clear liquid protein supplement of claim 16, which ~~wherein the sterilized liquid protein supplement~~ has a pH of from about 5.5 to about 7.0.

~~21. The sterilized clear liquid protein supplement of claim 16, wherein the sterilized liquid protein supplement is substantially free of collagen.~~

~~22. A sterilized clear liquid protein supplement comprising more than 10 grams extensively hydrolyzed casein per 100 mL, and wherein the liquid protein supplement is substantially free of collagen and has a pH of from about 5.0 to about 8.0.~~

~~23. The sterilized clear liquid protein supplement of claim 22, wherein the sterilized liquid protein supplement comprises from about 20 grams to about 23.5 grams extensively hydrolyzed casein per 100 mL.~~

~~24. The sterilized clear liquid protein supplement of claim 22 comprising a solids content of from about 10% by weight to about 50% by weight.~~

18~~25~~. A method of manufacturing a liquid protein supplement, the method comprising:

suspending a protein in an aqueous solution using agitation to form a protein suspension mixture, wherein ~~at least a portion~~ 35% weight of the protein is ~~extensively~~ hydrolyzed casein having a degree of hydrolysis of at least 20%, and wherein the protein suspension mixture has a protein concentration of greater than 30% by weight of the protein suspension mixture;

diluting the protein suspension mixture with water to form a diluted mixture having a protein concentration of from about 25% to about 30% by weight of the diluted mixture;

heating the diluted mixture with agitation to a temperature of from about 150°F (65.6°C) to about 210°F (98.9°C);

emulsifying the heated mixture at ~~from 0~~ up to about 500 psig (34.5 bar);

heating the emulsified mixture at a first temperature of from about 240°F (115.6°C) to about 260°F (126.6°C);

further heating the emulsified mixture at a second temperature of from about 275°F (135°C) to about 305°F (151.7°C) and holding the heated emulsified mixture at the second temperature for a period of from about 1 second to about 5 seconds;

cooling the further heated emulsified mixture to a temperature of from about 150°F (65.6°C) to about 200°F (93.3°C);

homogenizing the cooled mixture at ~~from 0~~ up to about 500 psig (34.5 bar) and holding the homogenized cooled mixture at the temperature of from about 150°F (65.6°C) to about 200°F (93.3°C) for a period of from about 10 seconds to about 20 seconds;

further cooling the homogenized mixture to a temperature of less than about 100°F (37.8°C); and

diluting the further cooled homogenized mixture with water to form a cooled homogenized mixture comprising more than 10 grams of protein per 100 mL of diluted homogenized mixture.

19~~26~~. The method of claim 18~~25~~, wherein the protein suspension mixture has a protein concentration of from about 35% to about 57% by weight of the protein suspension mixture, and after dilution, the diluted mixture has a protein concentration of about 27.5% by weight.

20~~27~~. The method of claim 18~~25~~, wherein suspending the protein ~~is suspended~~ occurs at a temperature of from about 120°F (48-9°C) to about 180°F (82.2°C).

2128. The method of claim 18~~25~~, wherein the heated emulsified mixture is cooled in a two-step cooling process, wherein a first cooling step comprises cooling the heated emulsified mixture to a first temperature of from about 225°F (107.2°C) to about 265°F (129.4°C) and a second cooling step comprises cooling the heated emulsified mixture to a temperature of from about 150°F (65.6°C) to about 200°F (93.3°C).

22~~29~~. The method of claim 18~~25~~, wherein the cooled homogenized mixture is diluted with water to form a cooled homogenized mixture comprising from ~~about~~ 20 grams to ~~about~~ 23.5 grams of protein per 100 mL of diluted homogenized mixture.

23~~30~~. A method of fortifying breast milk comprising mixing a sterilized liquid protein supplement according to any one of claims 1-15with breast milk~~, the liquid protein supplement comprising more than 10 grams protein per 100 mL, wherein at least a portion of the protein is extensively hydrolyzed casein, wherein the liquid protein supplement has a pH of from about 5.0 to about 8.0~~.

2431. The method of claim 2330, wherein about 1 mL to about 5 mL of sterilized liquid protein supplement is added per 100 mL of breast milk ~~or preterm formula~~.

2532. A method of fortifying infant formula comprising mixing a sterilized liquid protein supplement according to any one of claims 1-15 with infant formula~~, the liquid protein supplement comprising more than 10 grams protein per 100 mL, wherein at least a portion of the protein is extensively hydrolyzed casein, wherein the liquid protein supplement has a pH of from about 5.0 to about 8.0~~.

2633. The method of claim 2532, wherein about 1 mL to about 5 mL of sterilized liquid protein supplement is added per 100 mL of infant formula.