WHAT WE CLAIM IS:

1. A milk-based composition

characterised in that the composition includes:

- a skimmed milk source
- less than 0.5% w/w fat; and
- a milk-derived, denatured retentate;

and wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 10:90 to 90:10.

2. The composition as claimed in claim 1 wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 30:70 to 70:30.

3. The composition as claimed in claim 1 wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 40:60 to 60:40.

4. The composition as claimed in claim 1 wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 45:55 to 55:45.

5. The composition as claimed in claim 1 wherein the final composition incudes a ratio of denatured to un-denatured protein of approximately 50:50.

6. The composition as claimed in any of the above claims wherein the final composition only contains milk-based components.

7. The composition as claimed in any one of the above claims wherein the final composition has a fat content below 0.3% w/w.

8. The composition as claimed in any one of the above claims wherein the milk-derived retentate is ultra-filtrated.

9. The composition as claimed in any one of the above claims wherein the milk-derived retentate is heat denatured.

10. The composition as claimed in any one of the above claims wherein the milk-derived

denatured retentate contributes at least 10% w/w of overall protein to the composition.

11. The composition as claimed in any one of the above claims wherein the milk-based retentate contributes approximately between 10 to 90 % w/w of the overall protein to the composition.

12. The composition as claimed in any one of the above claims wherein the milk-based retentate contributes approximately between 30 to 70% w/w of the overall protein to the composition.

13. The composition as claimed in any one of the above claims wherein the milk-derived retentate contributes approximately between 40 to 60% w/w of the overall protein to the composition.

14. The composition as claimed in any one of the above claims wherein the composition is configured to include a total solid content of between about 9 % w/w to about 12 % w/w.

15. The composition as claimed in any one of the above claims wherein the composition includes a total solid content of approximately 10.5% w/w.

16. The composition as claimed in any one of the above claims wherein the composition is substantially void of phospholipid.

17. The composition as claimed in any one of the above claims wherein the composition includes at least 1% w/w protein.

18. The composition as claimed in any one of the above claims wherein the composition includes between about 1 to 10% w/w protein.

19. The composition as claimed in any one of the above claims wherein the composition includes about 3 to 8 % w/w protein.

20. The composition as claimed in any one of the above claims wherein the composition includes about 3.5 to 6 % w/w protein.

21. The composition as claimed in any one of the above claims wherein the composition includes about 5.7% w/w protein.

22. The composition as claimed in any one of the above claims wherein the composition is in the form of an aerated milk-based beverage.

23. The composition as claimed in any one of claims 1 to 22 wherein the composition is selected from the group consisting of
a hot or cold aerated beverage
a milk shake,
coffee based beverage
a ready to drink (RTD) beverage that can be aerated by shaking before drinking in the bottle itself or in a closed container;
a beverage prepared from a powder form
a smoothie
a ready to eat dessert
a composition prepared from a capsule for coffee or beverage machines, as powder or liquid source of milk
a cold cappuccino
a blend with a juice
a fortified beverage with functional ingredients
a carbonated beverage
a frozen beverage
a beverage added/flushed with liquid nitrogen,
any culinary or food usage, or combination thereof.

24. The composition as claimed in any one of the claims 1 to 21 wherein the composition is in the form of a non-aerated milk based beverage.

25. A use of a milk-derived, denatured retentate to prepare an aerated or un-aerated milk-based composition or beverage with less than 0.5% w/w fat, wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 10:90 to 90:10.

26. A use of a milk derived, denatured retentate as claimed in claim 25 to form

microbubbles in an aerated skimmed milk composition, wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 10:90 to 90:10.

27. A food or beverage containing a milk-based composition, the composition including the combination of a skimmed milk and milk derived, denatured retentate, wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 10:90 to 90:10.

28. A method of manufacturing a milk-derived, denatured retentate for use in preparing a milk based composition
characterised by the steps of
denaturing a milk derived retentate at 60-95°C for a duration of 5-120 minutes;
adding the denatured retentate to a skimmed milk source to produce a final milk-based composition,
wherein the final composition incudes a ratio of denatured to un-denatured protein in the range of between about 10:90 to 90:10.

29. The method as claimed in claim 28 wherein step a) includes denaturing the milk derived retentate at 85-90°C for a duration of 70-90 minutes.

30 A method of manufacturing an aerated beverage using a composition as claimed in any one of claims 1 to 21
characterised by the step of:
introducing entrapped bubbles into the beverage.

31. The method as claimed in claim 30 wherein step a) is performed by whisking the composition between 9000 to 13,000 rpm.