CLAIMS

1. A trans fat-free palm oil-based liquid coconut milk substitute made from a formulation of ingredients comprising on a weight basis 10 to 70% palm-based oil, 4 to 10% food additives, 0.1 to 1.0 % first emulsifier, 0.1 to 1.0% second emulsifier, 40 to 80% water, and 0.5 to 3.0% stabilizer.

2. A coconut milk substitute according to Claim 1, in which the palm-based oil comprises 20 to 50% on a weight basis of the formulation of ingredients.

3. A trans fat-free palm oil-based liquid coconut milk substitute according to Claim 1 or 2, in which the water comprises 50 to 70% on a weight basis of the formulation of ingredients.

4. A coconut milk substitute according to Claim 1, 2 or 3, further comprising on a weight basis 0.1 to 5.0% flavour.

5. A coconut milk substitute according to any preceding claim, further comprising on a weight basis 0.1 to 1.0% preservative.

6. A coconut milk substitute according to any preceding claim, comprising on a weight basis 0.1 to 5.0% flavour and 0.1 to 1.0% preservative.

7. A coconut milk substitute according to any preceding claim, in which the palm-based oil comprises one or more of: Palm oil, palm kernel oil, Refined, Bleached and Deodorised Palm Oil (RBD PO), Refined, Bleached and Deodorised Palm Olein (RBD POo), Super Olein (POoo), Palm Mid Fraction (PMF), Refined, Bleached and Deodorised Palm Kernel Oil (RBD PKO) and Refined, Bleached and Deodorised Palm Kernel Olein (RBD PKOo).

8. A coconut milk substitute according to any preceding claim, in which the food additives include coating materials in the form of polysaccharides and/or modified carbohydrates.

9. A coconut milk substitute according to any preceding claim, in which the emulsifiers comprise one or more of: sodium caseinate, monoglyceride, diglyceride, maltodextrin, dimodan OT and panodan.

10. A coconut milk substitute according to any preceding claim, in which the stabilizers comprise one or more of: carrageenan, guar gum, acacia gum (gum Arabic), alginates, xanthan gum, starch, tripolyphosphate and sodium caseinate.

11. A coconut milk substitute according to Claim 4 or 6 or any claim as dependent thereon, in which the flavour comprises one or more of: virgin coconut flavour and artificial flavour.

12. A coconut milk substitute according to Claim 5 or 6 or any claim as dependent thereon, in which the preservative comprises one or more of: anti-microbial preservatives and antioxidants.

13. A coconut milk substitute according to Claim 12, in which the anti-microbial preservative comprises one or more of: calcium propionate, sodium nitrate, sodium nitrite, disodium EDTA, sulfites such as sulfur dioxide, sodium bisulfite, potassium hydrogen sulfite and sodium benzoate.

14. A method for preparing a palm oil-based liquid coconut milk substitute according to any preceding claim, comprising premixing a palm-based oily phase with food additives, stabilizer, emulsifiers and water, to form a premix or pre-emulsion followed by homogenizing the premix in two-stages to form an emulsion, and finally pasteurizing the emulsion, cooling and packaging.

15. A method for preparing a palm oil-based liquid coconut milk substitute according to Claim 14, which includes the steps of:

(i) preparing a water phase by mixing a first emulsifier(s), stabilizer, food additives which may include polysaccharides and/or modified carbohydrates together with water by using a mixer machine at the speed of 6000 to 9000 rpm for 5 to 10 minutes;

(ii) preparing an oily phase by mixing the palm-based oil with a second emulsifier(s);

(iii) adding the oily phase of step (ii) slowly and gradually to the water phase prepared in step (i) whilst the aforesaid mixture of two phases is continually mixed and is being heated to 50 to 70°C for 10 to 15 minutes until all ingredients are dissolved to become a premix of the two phases i.e. a pre-emulsion;

(iv) homogenizing the pre-emulsion from step (iii) in a two-stage homogenizer at 30 to 60 MPa to form an emulsion, the emulsion being the palm oil-based liquid coconut milk substitute;

(v) pasteurizing the emulsion of step (iv) at 60 to 85°C for 15 seconds to 5.0 minutes or sterilizing the emulsion at 120 to 135°C for 4 to 5 seconds.

16. A method according to Claim 14, in which the homogenization in step (iv) produces an emulsion with fat globules having an average particle size in a range of 0.1 to 2.0 micron in diameter.

17. A method according to Claim 14, further comprising adding a hydrocolloid to improve the functionality of the coconut milk substitute and as a preservative in a range of 0.1 to 1.0 %.

18. A method according to Claim 14, in which the food additives further comprise artificial flavour and/or virgin coconut flavour.

19. A method according to Claim 14, in which the food additives further comprise antioxidant preservatives in a range of 0.1 to 0.6% to prevent oxidative flavour deterioration and delay rancidity.

20. A method according to Claim 14, in which the food additives further comprise vitamin E as a preservative in a range of 0.01 to 0.1%.

21. A method according to Claim 14, which further comprises fortification with calcium in a range of 0.1 to 1.0%.

22. A method according to Claim 14, in which the palm-based oil comprises one or more of: Palm oil, palm kernel oil, Refined, Bleached and Deodorised Palm Oil (RBD PO), Refined, Bleached and Deodorised Palm Olein (RBD POo), Super Olein (POoo), Palm Mid Fraction (PMF), Refined, Bleached and Deodorised Palm Kernel Oil (RBD PKO) and Refined, Bleached and Deodorised Palm Kernel Olein (RBD PKOo).

23. A method according to Claim 14, in which the emulsifiers comprise one or more of: sodium caseinate, monoglyceride, diglyceride, maltodextrin, dimodan OT and panodan.

24. A method according to Claim 14, in which the stabilizers comprise one or more of: carrageenan, guar gum, acacia gum (gum Arabic), alginates, xanthan gum, starch, tripolyphosphate and sodium caseinate.

25. A method according to Claim 14, in which the palm-based oil is blended with one or more vegetable oils.

26. A method according to Claim 14, in which ratios for blending are 50:50, 60:40, 70:30, 80:20 and 90:10 of the palm-based oil to the vegetable oil.

27. A method according to Claim 25 or 26, in which the vegetable oils comprise one or more of corn oil, soybean oil, rapeseed oil, sunflower oil and peanut oil.

CLAIMS

1. A trans fat-free palm oil-based liquid coconut milk substitute made from a formulation of ingredients comprising on a weight basis 10 to 70% palm-based oil, 4 to 10% food additives, 0.1 to 1.0 % first emulsifier, 0.1 to 1.0% second emulsifier, 50 to 70% water, and 0.5 to 3.0% stabilizer.

2. A coconut milk substitute according to Claim 1, in which the palm-based oil comprises 20 to 50% on a weight basis of the formulation of ingredients.

3. A coconut milk substitute according to Claim 1 or 2, further comprising on a weight basis 0.1 to 5.0% flavour.

4. A coconut milk substitute according to Claim 1, 2 or 3, further comprising on a weight basis 0.1 to 1.0% preservative.

5. A coconut milk substitute according to any preceding claim, comprising on a weight basis 0.1 to 5.0% flavour and 0.1 to 1.0% preservative.

6. A coconut milk substitute according to any preceding claim, in which the palm-based oil comprises one or more of: Palm oil, palm kernel oil, Refined, Bleached and Deodorised Palm Oil (RBD PO), Refined, Bleached and Deodorised Palm Olein (RBD POo), Super Olein (POoo), Palm Mid Fraction (PMF), Refined, Bleached and Deodorised Palm Kernel Oil (RBD PKO) and Refined, Bleached and Deodorised Palm Kernel Olein (RBD PKOo).

7. A coconut milk substitute according to any preceding claim, in which the food additives include coating materials in the form of polysaccharides and/or modified carbohydrates.

8. A coconut milk substitute according to any preceding claim, in which the emulsifiers comprise one or more of: sodium caseinate, monoglyceride, diglyceride and maltodextrin.

9. A coconut milk substitute according to any preceding claim, in which the stabilizers comprise one or more of: carrageenan, guar gum, acacia gum (gum Arabic), alginates, xanthan gum, starch, tripolyphosphate and sodium caseinate.

10. A coconut milk substitute according to Claim 3 or 5 or any claim as dependent thereon, in which the flavour comprises one or more of: virgin coconut flavour and artificial flavour.

11. A coconut milk substitute according to Claim 4 or 5 or any claim as dependent thereon, in which the preservative comprises one or more of: anti-microbial preservatives and antioxidants.

12. A coconut milk substitute according to Claim 11, in which the anti-microbial preservative comprises one or more of: calcium propionate, sodium nitrate, sodium nitrite, disodium EDTA, sulfites such as sulfur dioxide, sodium bisulfite, potassium hydrogen sulfite and sodium benzoate.

13. A method for preparing a palm oil-based liquid coconut milk substitute according to any preceding claim, comprising premixing a palm-based oily phase with food additives, stabilizer, emulsifiers and water, to form a premix or pre-emulsion followed by homogenizing the premix in two-stages to form an emulsion, and finally pasteurizing the emulsion, cooling and packaging.

14. A method for preparing a palm oil-based liquid coconut milk substitute according to Claim 13, which includes the steps of:

(i) preparing a water phase by mixing a first emulsifier(s), stabilizer, food additives which may include polysaccharides and/or modified carbohydrates together with water by using a mixer machine at the speed of 6000 to 9000 rpm for 5 to 10 minutes;

(ii) preparing an oily phase by mixing the palm-based oil with a second emulsifier(s);

(iii) adding the oily phase of step (ii) slowly and gradually to the water phase prepared in step (i) whilst the aforesaid mixture of two phases is continually mixed and is being heated to 50 to 70°C for 10 to 15 minutes until all ingredients are dissolved to become a premix of the two phases i.e. a pre-emulsion;

(iv) homogenizing the pre-emulsion from step (iii) in a two-stage homogenizer at 30 to 60 MPa to form an emulsion, the emulsion being the palm oil-based liquid coconut milk substitute;

(v) pasteurizing the emulsion of step (iv) at 60 to 85°C for 15 seconds to 5.0 minutes or sterilizing the emulsion at 120 to 135°C for 4 to 5 seconds.

15. A method according to Claim 14, in which the homogenization in step (iv) produces an emulsion with fat globules having an average particle size in a range of 0.1 to 2.0 micron in diameter.

16. A method according to Claim 14, further comprising adding a hydrocolloid to improve the functionality of the coconut milk substitute and as a preservative in a range of 0.1 to 1.0 %.

17. A method according to Claim 14, in which the food additives further comprise artificial flavour and/or virgin coconut flavour.

18. A method according to Claim 14, in which the food additives further comprise antioxidant preservatives in a range of 0.1 to 0.6% to prevent oxidative flavour deterioration and delay rancidity.

19. A method according to Claim 14, in which the food additives further comprise vitamin E as a preservative in a range of 0.01 to 0.1%.

20. A method according to Claim 14, which further comprises fortification with calcium in a range of 0.1 to 1.0%.

21. A method according to Claim 14, in which the palm-based oil comprises one or more of: Palm oil, palm kernel oil, Refined, Bleached and Deodorised Palm Oil (RBD PO), Refined, Bleached and Deodorised Palm Olein (RBD POo), Super Olein (POoo), Palm Mid Fraction (PMF), Refined, Bleached and Deodorised Palm Kernel Oil (RBD PKO) and Refined, Bleached and Deodorised Palm Kernel Olein (RBD PKOo).

22. A method according to Claim 14, in which the emulsifiers comprise one or more of: sodium caseinate, monoglyceride, diglyceride and maltodextrin.

23. A method according to Claim 14, in which the stabilizers comprise one or more of: carrageenan, guar gum, acacia gum (gum Arabic), alginates, xanthan gum, starch, tripolyphosphate and sodium caseinate.

24. A method according to Claim 14, in which the palm-based oil is blended with one or more vegetable oils.

25. A method according to Claim 14, in which ratios for blending are 50:50, 60:40, 70:30, 80:20 and 90:10 of the palm-based oil to the vegetable oil.

26. A method according to Claim 24 or 25, in which the vegetable oils comprise one or more of corn oil, soybean oil, rapeseed oil, sunflower oil and peanut oil.