treatment, retain natural cream colour, preserve the natural cream flavour and mouthfeel characteristics (creaminess, mouth-coating, smoothness), maintain functionality such as whipping and resist destabilisation when exposed to temperature fluctuations.

[0009a] In one aspect, the disclosure provides a cream composition comprising:

a) 7.5% to 65% by weight lipid;

b) 0% to 2% by weight protein;

c) 0.01% to 1.0% by weight of one or more emulsifiers;

d) 0.05% to 0.3% by weight of one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC), carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof;

e) 30mmol to 120mmol total cations per litre of cream plasma; and

f) 25mmol to 120mmol total anions per litre of cream plasma.

[0010] In one example, the disclosure provides a cream composition comprising:

a) about 7.5 to about 65% by weight lipid;

b) about 0% to about 2%, preferably about 0.5% to about 1.2% by weight protein per litre of cream plasma;

c) about 0.01% to about 1.0% by weight of one or more emulsifiers;

d) about 0.05% to about 3%, preferably about 0.05% to about 0.3% by weight of one or more thickeners or stabilisers;

e) about 30mM to about 120mM total cations per litre of cream plasma; and

f) about 25mM to about 120mM total anions per litre of cream plasma.

[0011] In another example, the disclosure provides a cream composition comprising:

a) about 7.5 to 65% by weight lipid;

b) about 0% to about 2%, preferably about 0.5% to about 1.2% by weight protein per litre of cream plasma;

c) about 0.01% to about 1.0% by weight of one or more emulsifiers;

d) about 0.05% to about 3%, preferably about 0.05% to about 0.3% by weight of one or more thickeners or stabilisers;

e) about 5 to about 60mM total divalent cations per litre of cream plasma;

f) about 25 to about 60mM total monovalent cations per litre of cream plasma; and

g) about 25 to about 120mM total anions per litre of cream plasma, including about 5 to about 15mM citrate per litre of cream plasma.

[0012] The disclosure provides a method of preparing a cream composition, the method comprising

a) separating a first dairy liquid to obtain a cream base;

b) optionally blending a lipid source such as a high fat dairy liquid into the cream base to form a lipid enriched dairy liquid;

c) blending allowed dairy or non-dairy ingredients including minerals, one or more emulsifiers and one or more thickeners or stabilisers into the cream base or the lipid enriched dairy liquid;

d) homogenising the cream base or the lipid enriched dairy liquid to form a homogenised dairy liquid including the added allowed dairy or non-dairy ingredients; and

e) heating the homogenised dairy liquid including the added allowed dairy or non-dairy ingredients to obtain a cream composition having i) about 7.5% to about 65% by weight lipid; ii) about 0% to about 2% by weight protein per litre of cream plasma; iii) about 0.01% to about 1.0% by weight of one or more emulsifiers; iv) about 0.05% to about 3% by weight of one or more thickeners or stabilisers; v) about 30mM to about 120mM total cations per litre of cream plasma; and vi) about 25mM to about 120mM total anions per litre of cream plasma.

[0012a] In a further aspect, the disclosure provides a method of preparing a cream composition, the method comprising

a) separating a first dairy liquid to obtain a cream base;

b) optionally blending a lipid source such as a high fat dairy liquid into the cream base to form a lipid enriched dairy liquid;

c) blending allowed dairy or non-dairy ingredients including minerals, one or more emulsifiers and one or more thickeners or stabilisers into the cream base or the lipid enriched dairy liquid;

d) homogenising the cream base or the lipid enriched dairy liquid to form a homogenised dairy liquid including the added allowed dairy or non-dairy ingredients; and

e) heating the homogenised dairy liquid including the added allowed dairy or non-dairy ingredients to obtain a cream composition having i) 7.5% to 65% by weight lipid; ii) 0% to 2% by weight protein per litre of cream plasma; iii) 0.01% to 1.0% by weight of one or more emulsifiers; iv) 0.05% to 0.3% by weight of

one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC), carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof; v) 30mmol to 120mmol total cations per litre of cream plasma; and vi) 25mmol to 120mmol total anions per litre of cream plasma.

[0013] In some examples, the method comprises a pasteurisation step at any stage of the process. For example, the first dairy liquid, cream base, lipid enriched dairy liquid, cream base or lipid enriched dairy liquid including the added allowed dairy or non-dairy ingredients, homogenised dairy liquid, or the cream composition may be pasteurised. Preferably, the method comprises pasteurising i) the first dairy liquid prior to step a), or ii) the lipid enriched dairy liquid prior to step c).

[0014] In some examples, the method comprises an additional step of adjusting the pH of the cream base or lipid enriched dairy liquid prior to step d).

[0015] The disclosure provides a method of preparing a cream composition, the method comprising

a) providing a dairy liquid permeate or a simulated milk ultrafiltrate as a dairy liquid base;

b) blending allowed dairy or non-dairy ingredients including one or more emulsifiers and one or more thickeners or stabilisers into the dairy liquid base;

c) blending a lipid source such as a high fat dairy liquid into the dairy liquid base including the added dairy or non-dairy ingredients to form a lipid enriched dairy liquid;

d) homogenising the lipid enriched dairy liquid to form a homogenised lipid enriched dairy liquid;

e) heating the homogenised lipid enriched dairy liquid to obtain a cream composition having i) about 7.5% to about 65% by weight lipid; ii) about 0% to about 2% by weight protein per litre of cream plasma; iii) about 0.01% to about 1.0% by weight of one or more emulsifiers; iv) about 0.05% to about 3% by weight of one or more thickeners or stabilisers; and v) about 30mM to about 120mM total cations per litre of cream plasma; and vi) about 25mM to about 120mM total anions per litre of cream plasma.

[0015a] In a further aspect, disclosure provides a method of preparing a cream composition, the method comprising

a) providing a dairy liquid permeate or a simulated milk ultrafiltrate as a dairy liquid base;

b) blending allowed dairy or non-dairy ingredients including one or more emulsifiers and one or more thickeners or stabilisers into the dairy liquid base;

c) blending a lipid source such as a high fat dairy liquid into the dairy liquid base including the added dairy or non-dairy ingredients to form a lipid enriched dairy liquid;

d) homogenising the lipid enriched dairy liquid to form a homogenised lipid enriched dairy liquid;

e) heating the homogenised lipid enriched dairy liquid to obtain a cream composition having i) 7.5% to 65% by weight lipid; ii) 0% to 2% by weight protein per litre of cream plasma; iii) 0.01% to 1.0% by weight of one or more emulsifiers; iv) 0.05% to 0.3% by weight of one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC),

carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof; and v) 30mmol to 120mmol total cations per litre of cream plasma; and vi) 25mmol to 120mmol total anions per litre of cream plasma.

[0016] In some examples, the method comprises a pasteurisation step at any stage of the process. For example, the dairy liquid base, dairy liquid base including the added allowed dairy or non-dairy ingredients, lipid enriched dairy liquid, homogenised lipid enriched dairy liquid, or the cream composition may be pasteurised. Preferably, the method comprises pasteurising the lipid enriched dairy liquid prior to step d).

[0017] In some examples, the method comprises an additional step of adjusting the pH of the lipid enriched dairy liquid prior to step d).

[0018] The following examples may relate to any of the above examples in any combination.

[0019] In various examples the cream composition may be a coffee cream, whipping cream, half and half, fermented cream, light cream, whipping cream, heavy cream, dry cream, recombined cream, recombined whipping cream, creamer, sour or acidified cream. Preferably, the cream is a UHT cream, for example a UHT whipping cream.

[0020] In various examples the composition may comprise about 10% or above by weight lipid, for example about 25% to about 40% by weight lipid. Preferably, the lipid comprising one or more mammalian milk lipids, more preferably one or more bovine milk lipids, selected from the group consisting of cream, high fat cream, reconstituted cream powder, anhydrous milk fat (AMF), ghee, butter, ß-serum powder, whole milk powder (WMP), high fat milk protein concentrate, or any combination of any two or more thereof. Alternatively, or additionally, the lipid comprises one or more refined and/or hydrogenated

CLAIMS

1. A cream composition comprising

   a) 7.5% to 65% by weight lipid;

   b) 0% to 2% by weight protein;

   c) 0.01% to 1.0% by weight of one or more emulsifiers;

   d) 0.05% to 0.3% by weight of one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC), carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof;

   e) 30 mmol to 120 mmol total cations per litre of cream plasma; and

   f) 25 mmol to 120 mmol total anions per litre of cream plasma.

2. A composition of claim 1, wherein the composition comprises 7.5 to 40% by weight lipid.

3. A composition of claim 1 or claim 2, wherein the lipid comprises cream, high fat cream, reconstituted cream powder, anhydrous milk fat (AMF), refined and/or hydrogenated vegetable fat sources consisting of palm, palm kernel, coconut, soybean, rapeseed, cottonseed, sunflower seed, corn, safflower seed, rice bran oil, sesame oil, olive oil and fractions thereof, or any combination of any two or more thereof.

4. A composition of any one of the preceding claims, wherein the composition comprises 0 to 1.2% by weight protein, preferably 0 to 0.5% protein.

5. A composition of any one of the preceding claims, wherein the protein comprises milk, skim milk, cream, whole milk, acid whey, sweet whey, whole milk powder (WMP), skim milk powder (SMP), buttermilk powder (BMP), acid whey powder, sweet whey powder, caseinate, sodium caseinate, calcium caseinate, whey protein concentrate (WPC), whey protein isolate (WPI), milk protein isolate (MPI), milk protein concentrate (MPC), modified MPC derivatives, micellar casein, soy, egg or pea protein, or any combination of any two or more thereof.

6. A composition of any one of the preceding claims, wherein the one or more emulsifiers are selected from the group consisting of protein, phospholipid from milkfat globule membrane, buttermilk powder, β-serum powder, lecithin, mono and diglycerides, distilled monoglycerides, acid esters of mono-diglycerides including lactic, citric, acetic, diacetyltartaric and tartaric, polysorbates, sorbitan esters of fatty acids, sucrose esters, polyglycerol esters of fatty acids, propylene glycol esters of fatty acids, sodium or calcium stearoyl lactylate, or any combination of any two or more thereof.

7. A composition of any one of the preceding claims, wherein the composition comprises 0.05% to 0.3% by weight of one or more emulsifiers.

8. A composition of any one of the preceding claims, wherein the one or more emulsifiers comprise two or more of lecithin, mono and diglycerides, polysorbates, sucrose esters, and propylene glycol esters of fatty acids.

9. A composition of any one of the preceding claims, wherein the one or more thickeners or stabilisers comprise xanthan, carrageenan, and guar gum.

10. A composition of any one of the preceding claims, wherein the composition comprises 40 to 60mmol monovalent cations per litre of cream plasma.

11. A composition of any one of the preceding claims, wherein the composition comprises 5 to 20mmol divalent cations per litre of cream plasma.

12. A composition of any one of the claims 1 to 10, wherein the composition comprises 30 to 60 mmol divalent cations per litre of cream plasma.

13. A composition of any one of the preceding claims, wherein the composition comprises 25 to 70 mmol total anions per litre of cream plasma.

14. A composition of any one of the preceding claims, further comprising 0.001 to 6% of a sweetener.

15. A composition of claim 14, wherein the sweetener is a natural or artificial sweetener, preferably wherein the sweetener is lactose.

16. A composition of any one of the preceding claims further comprising a buffering or chelating salt.

17. A composition of any one of the preceding claims further comprising a buffering or chelating salt comprising sodium or potassium polyphosphate.

18. A method of preparing a cream composition, the method comprising

a) separating a first dairy liquid to obtain a cream base;

b) optionally blending a lipid source such as a high fat dairy liquid into the cream base to form a lipid enriched dairy liquid;

c) blending allowed dairy or non-dairy ingredients including minerals, one or more emulsifiers and one or more thickeners or stabilisers into the cream base or the lipid enriched dairy liquid;

d) homogenising the cream base or the lipid enriched dairy liquid to form a homogenised dairy liquid including the added allowed dairy or non-dairy ingredients; and

e) heating the homogenised dairy liquid including the added allowed dairy or non-dairy ingredients to obtain a cream composition having i) 7.5% to 65% by weight lipid; ii) 0% to 2% by weight protein per litre of cream plasma; iii) 0.01% to 1.0% by weight of one or more emulsifiers; iv) 0.05% to 0.3% by weight of one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC), carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof; v) 30mmol to 120mmol total cations per litre of cream plasma; and vi) 25mmol to 120mmol total anions per litre of cream plasma.

19. A method of preparing a cream composition, the method comprising

a) providing a dairy liquid permeate or a simulated milk ultrafiltrate as a dairy liquid base;

b) blending allowed dairy or non-dairy ingredients including one or more emulsifiers and one or more thickeners or stabilisers into the dairy liquid base;

c) blending a lipid source such as a high fat dairy liquid into the dairy liquid base including the added dairy or non-dairy ingredients to form a lipid enriched dairy liquid;

d) homogenising the lipid enriched dairy liquid to form a homogenised lipid enriched dairy liquid;

e) heating the homogenised lipid enriched dairy liquid to obtain a cream composition having i) 7.5% to 65% by weight lipid; ii) 0% to 2% by weight protein per litre of cream plasma; iii) 0.01% to 1.0% by weight of one or more emulsifiers; iv) 0.05% to 0.3% by weight of one or more thickeners or stabilisers, wherein the one or more thickeners or stabilisers are selected from the group consisting of carrageenan, guar gum, locust bean gum, Tara gum, gellan gum, xanthan gum, acacia gum, microcrystalline cellulose (MCC), carboxymethyl cellulose (CMC), propylene glycol alginate, sodium alginate, pectin, gelatin, starch or starch derivatives, or citrus fibre, or any combination of any two or more thereof; and v) 30mmol to 120mmol total cations per litre of cream plasma; and vi) 25mmol to 120mmol total anions per litre of cream plasma.

20. A method as claimed in claim 18 or claim 19, further comprising a pasteurisation step, preferably prior to step d).

21. A method as claimed in any one of claims 18 to 20, wherein the method comprises an additional step of adjusting the pH of the lipid enriched dairy liquid prior to step d).