CLAIMS

1. An emulsion composition comprising one or more oils and water; wherein the emulsion composition comprises from 0.1% to 7.5% of karitene by total weight of water and the one or more oils present in the emulsion composition; and wherein the emulsion composition comprises at least 1.0% of karitene by weight of the total amount of the one or more oils present in the emulsion composition.

2. An emulsion composition according to Claim 1, wherein the emulsion composition comprises karitene in an amount of from 1.0% to 10.0%; preferably from 1.5% to 7.5% (including 2.0% to 6.0%); and more preferably from 2.0% to 5.0% (including 3.0% to 5.0% and 4.0% to 5.0%) by weight of the total amount of the one or more oils present in the emulsion composition.

3. An emulsion composition according to any preceding claim, wherein the emulsion composition comprises karitene in an amount of from 0.1% to 5% by total weight of water and the one or more oils present in the emulsion composition; preferably wherein the emulsion composition comprises karitene in an amount of from 0.5% to 5% (such as 1.5% to 3.5%) by total weight of water and the one or more oils present in the emulsion composition.

4. An emulsion composition according to any preceding claim, wherein the one or more oils are present in the emulsion composition in a total amount of from 1% to 99% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 1% to 99% by weight of the total amount of water and oil present in the emulsion composition; preferably wherein the one or more oils are present in the emulsion composition in a total amount of from 10% to 90% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 10% to 90% by weight of the total amount of water and oil present in the emulsion composition; more preferably wherein the one or more oils are present in the emulsion composition in a total amount of from 15% to 90% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 10% to 85% by weight of the total amount of water and oil present in the emulsion composition.

5. An emulsion composition according to any preceding claim, wherein the one or more oils are present in the emulsion composition in a total amount of from 50% to 99%

by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 1% to 50% by weight of the total amount of water and oil present in the emulsion composition; preferably wherein the one or more oils are present in the emulsion composition in a total amount of from 70% to 99% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 1% to 30% by weight of the total amount of water and oil present in the emulsion composition, preferably

wherein the emulsion composition is a water-in-oil emulsion.

6. An emulsion composition according to any of Claims 1 to 4, wherein the one or more oils are present in the emulsion composition in a total amount of from 1% to 70% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 30% to 99% by weight of the total amount of water and oil present in the emulsion composition; preferably wherein the one or more oils are present in the emulsion composition in a total amount of from 1% to 60% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 40% to 99% by weight of the total amount of water and oil present in the emulsion composition; or

wherein the one or more oils are present in the emulsion composition in a total amount of from 1% to 45% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 55% to 99% by weight of the total amount of water and oil present in the emulsion composition; preferably wherein the one or more oils are present in the emulsion composition in a total amount of from 5% to 30% by weight of the total amount of water and oil present in the emulsion composition; and wherein the water is present in the emulsion composition in an amount of from 70% to 95% by weight of the total amount of water and oil present in the emulsion composition,

optionally wherein the emulsion composition is an oil-in-water emulsion composition.

7. An emulsion composition according to any preceding claim, wherein the one or more oils comprise one or more plant-derived triglyceride oils, one or more animal-derived triglyceride oils, or a combination thereof, preferably

the one or more oils comprise one or more plant-derived triglyceride oils, such as

wherein the one or more oils comprise high oleic sunflower oil, sunflower oil, rapeseed oil, high oleic rapeseed oil, soybean oil, linseed oil, olive oil, corn oil, cottonseed oil, groundnut oil, safflower oil, high oleic safflower oil, peanut oil, rice oil, camelina oil, sesame oil, walnut oil, palm fat, coconut fat, shea butter, cocoa butter, allanblackia fat, kokum fat, mango kernel fat, sal fat, illipe butter, palm kernel fat, babassu fat, any fractions thereof, any interesterified forms thereof, or any combinations thereof, preferably

wherein the one or more oils comprise palm fat, coconut fat, shea butter, cocoa butter, allanblackia fat, kokum fat, mango kernel fat, sal fat, illipe butter, palm kernel fat, babassu fat, any fractions thereof, any interesterified forms thereof, or any combinations thereof, more preferably

wherein the one or more oils comprise shea butter, any fractions thereof, any interesterified forms thereof, or any combinations thereof.

8. An emulsion composition according to any preceding claim, wherein the one or more oils comprise shea olein, preferably

wherein the one or more oils comprise SOS triglycerides in an amount of from 0.1% to 25% by weight; preferably from 0.5% to 15% by weight; and more preferably from 1% to 10% by weight of the total amount of the one or more oils present in the emulsion composition.

9. An emulsion according to any preceding claims, wherein the emulsion composition further comprises one or more additional emulsifiers such as food grade emulsifiers, for example, such emulsifiers include lecithin (such as egg lecithin), mono- and diglycerides, polysorbates and hydrocolloids such as guar gum, gellan gum and carrageenan.

10. A food product comprising an emulsion comprising one or more oils and water; wherein the food product comprises karitene in an amount of from 0.1% to 7.5% by weight of the food product; and wherein the food product comprises at least 1.0% of karitene by weight of the total amount of the one or more oils present in the food product, preferably

wherein the food product comprises karitene in an amount of from 0.1% to 5.0% by weight of the food product; preferably wherein the food product comprises karitene in an amount of from 0.2% to 5.0% (such as 1.5% to 3.5%) by weight of the food product; and more preferably wherein the food product comprises karitene in an amount of from 0.2% to 3.0% by weight of the food product,

optionally wherein the emulsion is an emulsion composition as defined in any one or more of Claims 1 to 9.

11. A food product according to Claim 10, wherein the food product is a meat analogue food product; a meat food product; a confectionary food product; a chocolate food product; or a chocolate-like food product; a bakery food product; a soup; a mayonnaise; a salad dressing; or a sauce, preferably

wherein:

(a) the food product is a meat analogue food product or a meat food product; and wherein the emulsion is an emulsion composition according to Claim 6;

(b) the food product is a confectionary food product; a chocolate food product; or a chocolate-like food product; and wherein the emulsion is an emulsion composition according to Claim 5; or

(c) the food product is a bakery food product; and wherein the emulsion is an emulsion composition according to Claim 6.

12. A food product according to Claim 11, wherein the food product is a meat food product or a meat analogue food product formed from 2% to 30% by weight of fat; from 30% to 70% by weight of water; and from 2% to 40% by weight of a non-animal protein, preferably

wherein the food product is a vegetarian or vegan meat substitute food product; preferably wherein the vegetarian or vegan meat substitute food product is a burger, sausage, meat ball, nugget, patty, mince product, meatloaf, frankfurter, bologna, mortadella, pepperoni, salami, pate, meat loaf, or other product intended to mimic conventional meat-based food products,

optionally wherein the food product is an uncooked food product, a cooked food product, or a partially cooked food product; and/or

wherein the non-animal protein comprises protein derived from fungi or plants, fermentation derived protein, or a combination thereof, preferably

wherein the non-animal protein comprises plant protein, preferably, wherein the plant protein is selected from algae protein, black bean protein, canola wheat protein, chickpea protein, fava protein, lentil protein, lupin bean protein, mung bean protein, oat protein, pea protein, potato protein, rice protein, soy protein, sunflower seed protein, wheat protein,

white bean protein, seitan, rice protein, mushroom protein, legume protein, tempeh, yam flour, tofu, mycoprotein, peanut flour, yuba, protein isolates or concentrates thereof, or any combination thereof, more preferably

wherein the non-animal protein comprises pea protein isolate; and/or

wherein the food product further comprises one or more polysaccharides; preferably wherein the one or more polysaccharides comprise cellulose, one or more starches, or any derivative or combination thereof, preferably

wherein the one or more polysaccharides are present in the food product in a total amount of from 1% to 10% by weight of the food product; preferably wherein the food product comprises methylcellulose and one or more starches in a total amount of from 1% to 10% by weight of the food product, more preferably

wherein the one or more polysaccharides comprise methylcellulose and potato starch; and/or

wherein the food product further comprises one or more fibers; preferably wherein the one or more fibers comprise non-animal water insoluble fibers, preferably

wherein the non-animal water insoluble fibers comprise vegetable fibers, fruit fibers, plant fibers, or any combination thereof; preferably wherein the non-animal water insoluble fibers comprise citrus fibers, peas fibers such as yellow or green peas fibers potato fibers, bamboo fibers, oat fibers, wheat fibers, cellulose fibers, and any combination thereof; more preferably wherein the non-animal water insoluble fibers comprise citrus fibers,

optionally wherein the one or more fibers and fat are intermixed,

and further optionally wherein the food product comprises one or more fibers in a total amount of from 1% to 10% by weight of the food product; preferably wherein the food product comprises citrus fibers in an amount of from 1% to 10% by weight of the food product; and/or

wherein the food product further comprises one or more of: i) polysaccharides and/or modified polysaccharides, preferably selected from methylcellulose, hydroxypropyl methylcellulose, carboxymethyl cellulose, maltodextrin, carrageenan and salts thereof, alginic acid and salts thereof, agar, agarose, agaropectin, pectin and alginate; ii) hydrocolloids; and iii) gums, preferably selected from xanthan gum, guar gum, locust bean gum, gellan gum, gum arabic, vegetable gum, tara gum, tragacanth gum, konjac gum, fenugreek gum, and gum karaya; and/or

wherein the food product further comprises an ionic or non-ionic emulsifier, a polyhydroxy compound, milk, liquid flavours, alcohols, humectants, honey, liquid preservatives, liquid sweeteners, liquid oxidising agents, liquid reducing agents, liquid anti-oxidants, liquid acidity regulators, liquid enzymes, milk powder, hydrolysed protein isolates (peptides), amino acids, yeast, sugar substitutes, starch, salt, spices, fibre, flavour components, colourants, thickening and gelling agents, egg powder, enzymes, gluten, vitamins, preservatives, sweeteners, oxidising agents, reducing agents, anti-oxidants, and acidity regulators; and/or

wherein the food product comprises fat in an amount of from 7.5% to 25% by weight of the food product; and/or

wherein the food product comprises water in an amount of from 50% to 70% by weight of the food product.

13. A food product according to Claim 12, wherein the food product is a sausage analogue food product or a sausage food product; preferably wherein the food product is a sausage analogue food product.

14. A food product according to any one or more of Claims 10 to 11, wherein the food product is a confectionary food product, a chocolate food product, or a chocolate-like food product; preferably wherein the food product further comprises one or more of cocoa solids, cocoa butter, sugar, milk powder, condensed milk, milk, or water.

15. A food product according to any one or more of Claims 10 to 11, wherein the food product is a bakery food product; preferably wherein the food product further comprises one or more of flour, water, salt, sugar, yeast or eggs.

16. A food product according to any one or more of Claims 10 to 11, wherein the food product is a salad dressing food product; wherein the one or more oils are present in the food product in a total amount of from 10% to 60% by weight of the total amount of water and oil present in the food product; and wherein the water is present in the food product in an amount of from 40% to 90% by weight of the total amount of water and oil present in the food product; optionally wherein the food product further comprises one or more additional components such as one or more vinegars, one or more mustards, or one more flavouring additives.

17. A food product according to any one or more of Claims 10 to 11, wherein the food product is a mayonnaise food product; wherein the one or more oils are present in the food product in a total amount of from 50% to 70% by weight of the total amount of water and oil present in the food product; and wherein the water is present in the food product in an amount of from 30% to 50% by weight of the total amount of water and oil present in the food product; optionally wherein the food product further comprises one or more additional components such as egg.

18. A food product according to any one or more of Claims 10 to 17, wherein the food product is substantially free of animal-derived products, preferably, wherein the food products is free of animal-derived products; or

wherein the food product further comprises one or more animal-derived products such as animal oils, marine oils, animal-derived proteins, animal-derived polysaccharides, or any combination thereof, such as

wherein the one or more animal-derived products comprise animal milk proteins, animal milk fats, or a combination thereof,

and wherein the one or more animal-derived products are present in the food product in an amount of from 1% to 20% by weight of the food product.

19. A food product according to any one or more of Claims 10 to 18, wherein the food product is substantially free of palm oil and palm oil derived products; preferably wherein the food product is free of palm oil or palm oil derived products.

20. A food product according to any one or more of Claims 10 to 19, wherein the food product comprises from 40% to 90% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion, preferably

wherein the food product is according to Claim 12, and wherein the food product comprises from 45% to 85% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion, more preferably

wherein:

(i) the food product is a frankfurter analogue product, wherein the food product comprises from 70% to 85% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion;

(ii) the food product is a bologna analogue product, wherein the food product comprises from 65% to 85% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion;

(iii) the food product is a mortadella analogue product, wherein the food product comprises from 65% to 85% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion;

(iv) the food product is a pepperoni analogue product, wherein the food product comprises from 40% to 60% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion;

(v) the food product is a salami analogue product, wherein the food product comprises from 45% to 65% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion;

(vi) the food product is a pate analogue product, wherein the food product comprises from 70% to 85% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion; or

(vii) the food product is a meat loaf analogue product, wherein the food product comprises from 45% to 60% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion.

21. A food product according to Claim 16, wherein the food product comprises from 45% to 90% by weight of a combined weight of water and one or more oils that are present in the form of an emulsion.

22. A food product according to Claim 13, wherein the food product comprises 100% by weight of an emulsion and wherein the emulsion is a meat emulsion, preferably

wherein the meat emulsion comprises a continuous phase of water and gelled, dissolved proteins; and a dispersed phase of fat and optionally water insoluble proteins.

23. Use of karitene as an emulsifier in an emulsion, preferably

wherein the use comprises using the karitene to improve the stability of the emulsion to phase separation or to prevent degradation of the emulsion,

optionally wherein the emulsion is as defined in any one or more of Claims 1 to 9.

24. Use according to Claim 23, wherein the use further comprises using the emulsion in a food product according to any one or more of Claims 10 to 22, preferably

wherein the use comprises using the karitene to improve the organoleptic perception of the food product relative to an analogous food product with lower karitene content,

optionally wherein the use comprises using the karitene to improve the texture of the food product, the homogeneity of the food product and/or the umami flavour of the food product relative to an analogous food product with lower karitene content, for example

wherein the food product is as defined in any one or more of Claims 12 to 13; and wherein the use comprises using the karitene to enhance the meatiness perception, mouth feel, texture and/or umami sensation of the food product relative to an analogous food product with lower karitene content.

25. Use according to Claim 24, wherein the use comprises using the karitene to increase the homogeneity of the food product relative to a comparative food product with lower karitene content; and/or

wherein the food product is as defined in any one or more of Claims 12 to 13, and wherein the use comprises using the karitene to increase the homogeneity of the food product relative to a comparative meat or meat analogue food product with lower karitene content, preferably

wherein the use comprises using the karitene to increase the extrusion force of the meat or meat analogue food product relative to a comparative meat or meat analogue food product with lower karitene content.

26. A process for preparing an emulsion composition according to any one or more of Claims 1 to 9, wherein the process comprises combining water and one or more oils so as to form the emulsion composition; optionally wherein the process comprises mixing such as blending the water and the one or more oils.

27. A process for preparing a food product according to any one of Claims 10 to 22, wherein the process comprises combining water, one or more oils, and one or more additional components so as to form the food product, preferably

wherein the process comprises:

(a) combining water with one or more additional components to form an aqueous mixture; and

(b) combining the aqueous mixture from step (a) with one or more oils so as to form the food product according to any one of Claims 10 to 22,

optionally wherein the process comprises mixing the aqueous mixture formed in step (a) and/or mixing the aqueous mixture formed in step (a) with the one or more oils in step (b).

28. A process according to Claim 27, wherein the process comprises extruding the food product, preferably

wherein the food product is according to any one or more of Claims 12 to 13; and wherein the process further comprises filling casings with extruded food product.