Claims

1. A food composition comprising at least 0.1% w/w microalgal biomass and one or more other ingredient, wherein the microalgal biomass (i) comprises microalgal cells of *Chlorella protothecoides* cultured under heterotrophic conditions, (ii) is reduced in green pigmentation and (iii) comprises at least 10% algal oil that is less than 5% by weight or less than 1% by weight, or is substantially free of docosahexanoic acid (DHA) (22:6).

2. The food composition of claim 1, wherein the microalgal biomass is predominantly intact cells.

3. The food composition of claim 1, wherein the microalgal biomass is predominantly lysed cells.

4. The food composition of claim 3, wherein the microalgal biomass is a homogenate.

5. The food composition of claim 3, wherein the microalgal biomass comprises one or more of the following attributes:

a. at least 50% by weight of the algal oil is monounsaturated oil;

b. between 0-115 mcg/g of total carotenoids;

c. between 20% to 40% carbohydrates by dry weight; and

d. at least 0.5% w/w algal phospholipids..

6. The food composition of claim 3, wherein the microalgal biomass comprises at least 25%, or at least 40% algal oil by dry weight.

7. The food composition of claim 1, that is a salad dressing, egg product, baked good, bread, bar, snack chip, pasta, sauce, soup, beverage, frozen dessert, butter or spread.

8. The food composition of claim 5, wherein the microalgal biomass is microalgal powder and the average particle size of the powder is from 0.2 to 10 microns.

9. A method of making a food composition of any one of claims 1 to 8, comprising combining heterotrophically cultivated microalgal biomass containing at least 10% by weight algal oil with at least one other edible ingredient.

10. The method of claim 9 comprising the steps of:

a. determining the amount of non-algal oil, non-algal fat or egg in a conventional food product; and

b. replacing all or a portion of the non-algal oil, non-algal fat or egg or supplementing the non-algal oil, non-algal fat or egg with a specified amount of algal biomass.

11. The method of claim 10 wherein no non-algal oil, non-algal fat or egg is added to the food composition.

12. The method of claim 10, wherein the amount of algal biomass is from 0.25 times to 4 times the mass or volume of the non-algal oil, non-algal fat or egg in the conventional food product.

13. The method of claim 10, wherein the algal biomass is predominantly lysed and is in the form of a powder or a homogenate.

14. The food composition of any one of claims 1 to 8, wherein the microalgal biomass is a color mutant.

15. The food composition of claim 14, wherein the color mutant is a strain selected from *Chlorella protothecoides* strain 33-55 or *Chlorella protothecoides* strain 25-32.

16. A microalgal powder that (i) comprises microalgal cells of *Chlorella protothecoides* cultured under heterotrophic conditions, (ii) is reduced in green pigmentation, and (iii) comprises at least 10% algal oil that is less than 5% by weight, less than ~~about~~ 1% by weight, or is substantially free of docosahexanoic acid (DHA)(C22:6), wherein the microalgal powder has been pasteurized.

17. The microalgal powder of claim 16 that comprises a preservative.

18. The food composition of any one of claims 1 to 8 or 14, wherein the microalgal biomass is absent of green pigmentation.

Claims

1. A food composition comprising at least 0.1% w/w microalgal biomass and one or more other ingredient, wherein the microalgal biomass (i) comprises microalgal cells cultured under heterotrophic conditions, (ii) reduced in green pigmentation and (iii) comprises at least 10% algal oil that is less than about 5% by weight or less than about 1% by weight, or is substantially free of docosahexanoic acid (DHA) (22:6).

2. The food composition of claim 1, wherein the microalgal biomass is predominantly intact cells.

3. The food composition of claim 1, wherein the microalgal biomass is predominantly lysed cells.

4. The food composition of claim 3, wherein the microalgal biomass is a homogenate.

5. The food composition of claim 3, wherein the microalgal biomass comprises one or more of the following attributes:
   a. at least about 10% algal oil by dry weight;
   b. at least about 50% by weight of the algal oil is monounsaturated oil;
   c. less than about 5% by weight of the algal oil is docosahexanoic acid (DHA) (C22:6);
   d. between about 0-115 mcg/g of total carotenoids;
   e. between about 20% to about 40% carbohydrates by dry weight; and
   f. at least about 0.5% w/w algal phospholipids.

6. The food composition of claim 3, wherein the microalgal biomass comprises at least about 25%, or at least about 40% algal oil by dry weight.

7. The food composition of claim 1, that is a salad dressing, egg product, baked good, bread, bar, snack chip, pasta, sauce, soup, beverage, frozen dessert, butter or spread.

8. The food composition of claim 5, wherein the microalgal biomass is microalgal powder and the average particle size of the powder is from about 0.2 to about 10 microns.

9. A method of making a food composition of any one of claims 1 to 8, comprising combining heterotrophically cultivated microalgal biomass containing at least 10% by weight algal oil with at least one other edible ingredient.

10. The method of claim 9 comprising the steps of:

a. determining the amount of non-algal oil, non-algal fat or egg in a conventional food product; and
b. replacing all or a portion of the non-algal oil, non-algal fat or egg or supplementing the non-algal oil, non-algal fat or egg with a specified amount of algal biomass.

11. The method of claim 10 wherein no non-algal oil, non-algal fat or egg is added to the food composition.

12. The method of claim 10, wherein the amount of algal biomass is from about 0.25 times to about 4 times the mass or volume of the non-algal oil, non-algal fat or egg in the conventional food product.

13. The method of claim 10, wherein the algal biomass is predominantly lysed and is in the form of a powder or a homogenate.

14. A food composition or method of any one of the preceding claims comprising at least about 0.1% w/w microalgal biomass and one or more other ingredient, wherein the microalgal biomass is a color mutant and comprises at least about 10% algal oil by dry weight.

15. The food composition or method of any one of the preceding claims, wherein the microalgal biomass is a species of the genus *Chlorella.*

16. The food composition or method of claim 15, wherein the microalgal biomass is of the species *Chlorella protothecoides.*

17. A microalgal powder that (i) comprises microalgal cells cultured under heterotrophic conditions, (ii) is reduced in green pigmentation, and (iii) comprises at least 10% algal oil that is less than about 5% by weight, less than about 1% by weight, or is substantially free of docosahexanoic acid (DHA)(C22:6), wherein the microalgal powder has been pasteurized.

18. The microalgal powder of claim 17 that comprises a preservative.

19. The food composition of any one of claims 1 to 8 and 14 to 16, wherein the microalgal biomass is absent of green pigmentation.