Claims

[Claim 1]. A composition for forming a fat replacement emulsion for food products comprising: 5 to 60 weight percent insoluble fibre wherein the insoluble fibre is microcrystalline cellulose; at least two hydrocolloid forming polysaccharides each having 0.2 to 10 weight percent wherein the at least two hydrocolloid forming polysaccharides are guar gum and xanthan gum or carboxymethylcellulose sodium, methylcellulose and gum Arabic; and 20 to 85 weight percent emulsifying agent wherein the emulsifying agent is sodium starch octenylsuccinate or sodium starch octenylsuccinate and polyglycerol polyricinoleate, the weight percentages being based on the total composition.

~~2. The composition according to claim 1, wherein the insoluble fibre is selected from cellulose fibres; and microcrystalline cellulose.~~

~~3. The composition according to claim 1 or 2, wherein the at least two hydrocolloid forming polysaccharides are selected from carboxymethylcellulose sodium; methylcellulose; Gum Arabica; guar gum; locust bean gum; beta glucan; Dammar gum; Glucomannan; Psyllium seed gum; Konjac gum; gellan gum; Tara gum; Gum Ghatti; and xanthan gum.~~

~~4. The composition according to any one of claims 1-3, wherein the at least two hydrocolloid forming polysaccharides comprise a combination of carboxymethylcellulose sodium; methylcellulose; and Gum Arabica~~

~~5. The composition according to any one of claims 1-3, wherein the at least two hydrocolloid forming polysaccharides are each uncharged hydrocolloid forming polysaccharides.~~

~~6. The composition according to claim 5, wherein the uncharged hydrocolloid forming polysaccharides are each selected from guar gum; locust bean gum; beta glucan; Dammar gum; Glucomannan; Psyllium seed gum; Tara gum; and xanthan gum.~~

~~7. The composition according to any one of claims 5, wherein the uncharged hydrocolloid forming polysaccharides are guar gum and xanthan gum.~~

~~8. The composition according to any one of claims 1 to 8, wherein the emulsifying agent is selected from a sugar ester; a starch esterified with octenylsuccinic compound; a low Hydrophilic-Lipophilic Balance (HLB) emulsifier and acetylated starch.~~

~~9. The composition according to claim 8, wherein the sugar ester comprises a sucrose ester or a glucose ester.~~

~~10. The composition according to claim 8, wherein the starch esterified with octenylsuccinic compound comprises sodium starch octenylsuccinate or aluminium starch octenylsuccinate.~~

~~11. The composition according to claim 8, wherein the low Hydrophilic-Lipophilic Balance (HLB) emulsifier is selected from Polyglycerol polyricinoleate, sucrose esters, mono-diglycerides and lecithins.~~

~~12. The composition according to claim 8, wherein the low Hydrophilic-Lipophilic Balance (HLB) emulsifier comprises Polyglycerol polyricinoleate.~~

~~13. The composition according to claim 1, wherein~~

~~the insoluble fibre is microcrystalline cellulose;~~

~~the at least two hydrocolloid forming polysaccharides are guar gum and xanthan gum; and~~

~~the emulsifying agent is sodium starch octenylsuccinate.~~

[Claim 2~~14~~]. The composition according to claim 1~~3~~, wherein the weight ratio of microcrystalline cellulose : xanthan gum : guar gum : sodium starch octenylsuccinate is 31 : 4 : 2 : 63.

~~15. The composition according to claim 1, wherein:~~

~~the insoluble fibre is microcrystalline cellulose;~~

~~the at least two hydrocolloid forming polysaccharides are carboxymethylcellulose sodium, methylcellulose and gum Arabic ; and~~

~~the emulsifying agent is sodium starch octenylsuccinate and polyglycerol polyricinoleate.~~

[Claim 3~~16~~]. The composition according to claim 1~~5~~, wherein the weight ratio of microcrystalline cellulose : carboxymethylcellulose sodium : methylcellulose : gum Arabic : sodium starch octenylsuccinate : polyglycerol polyricinoleate is 42 : 6 : 12 : 24 : 383 : 33.

[Claim 4~~17~~]. A fat replacement substance for food products comprising: the composition according to any one of claims 1 to ~~16~~3, and an aqueous liquid combined under shear force.

[Claim 5~~18~~]. The fat replacement substance according to claim ~~17~~4, wherein the weight ratio of the composition to aqueous liquid is in the range of 1 : 19 to 1 : 4.

[Claim 6~~19~~]. The fat replacement substance according to claim ~~17~~4, wherein the weight ratio of the composition to aqueous liquid is 1 : 6 to 1 : 7.

[Claim 7~~20~~]. The fat replacement substance according to any one of claims ~~17~~ 4 to ~~19~~6, further comprising a lipid.

[Claim 8~~21~~]. A food product comprising the composition according to any one of claims 1 to ~~16~~3, or the fat replacement substance according to any one of claims ~~17~~ 4 to ~~20~~7.

[Claim 9~~22~~]. The food product according to claim ~~21~~8, comprising baked goods.

[Claim 10~~23~~]. The food product according to claim ~~21~~8, comprising plant based meat substitutes.

[Claim 11~~24~~]. The food product according to claim ~~21~~8, comprising a meat composite.

[Claim 12~~25~~]. The food product according to claim ~~21~~8, comprising a sauce.

[Claim 13~~26~~]. The food product according to claim ~~21~~8, comprising a drink.

[Claim 14~~27~~]. A method of manufacturing a fat replacement substance for food products comprising:

a. adding the composition of any one of claims 1 to ~~16~~ 3 to an aqueous liquid; and
b. applying shear force until the fat replacement emulsion forms.

[Claim 15~~28~~]. The method according to claim ~~27~~14, wherein the composition is added to the aqueous liquid at a ratio in the range of 1 : 19 to 1 : 4.

[Claim 16~~29~~]. The method according to claim ~~27~~14, wherein the composition is added to the aqueous liquid at a ratio of 1 : 6 to 1 : 7.

[Claim 17~~30~~]. The method according to any one of claims ~~27~~ 14 to ~~29~~16, further comprising adding a lipid to the fat replacement substance either before or during applying shear force.