

CLAIMS

- 1- A coacervate core-shell microcapsule comprising a hydrophobic material, preferably a flavor or a perfume, wherein:
- 5 a) the hydrophobic material is encapsulated in the core of the coacervate core-shell microcapsule, and
- b) the shell of the coacervate core-shell microcapsule comprises at least one plant protein extract and optionally a non-protein polymer.
- 10 2- The microcapsule according to claim 1, wherein the content of protein in the plant protein extract is less than 55% by weight.
- 3- The microcapsule according to claim 1 or 2, wherein the plant protein extract is chosen in the group consisting of protein extracts from soy, pea, wheat, rice, potato, quinoa,
- 15 amaranth, lentil, hemp, oat, buckwheat, chick pea, lupin seeds, canola, flaxseed and mixtures thereof.
- 4- The microcapsule according to any one of the preceding claims, wherein the non-protein polymer is chosen in the group consisting of gum arabic, carboxymethylcellulose,
- 20 chitosan, xanthan, agar, alginate salts, pectinate salts or carrageenan, preferably wherein the non-protein polymer is Gum Arabic.
- 5- The microcapsule according to any one of the preceding claims, wherein the plant protein extract is a soy protein extract and wherein the non-protein polymer is Gum Arabic.
- 25 6- The microcapsule according to any one of the preceding claims, wherein the shell of the microcapsule is cross-linked using formaldehyde, tannins, acetaldehyde, glutaraldehyde, glyoxal, chrome alum, transglutaminase and mixtures thereof.
- 30 7- The microcapsule according to any one of the preceding claims, wherein the ratio between the plant protein extract and the non-protein polymer is comprised between 1 and 100.
- 8- The microcapsule according to any one of the preceding claims, wherein the shell comprises an additional polymeric material.

- 5 9- The microcapsule according to claim 8, wherein the polymeric material is chosen in the group consisting of polyurea, polyurethane, polyamide, polyester, polyacrylate, polysiloxane, polycarbonate, polysulfonamide, polymers of urea and formaldehyde, melamine and formaldehyde, melamine and urea, or melamine and glyoxal and mixtures thereof.
- 10 10- A process for preparing the coacervate core-shell microcapsule as defined in any one of the preceding claims, wherein the process comprises the steps of:
- 10 a) preparing a hydrocolloid solution by dissolving at least one plant protein extract in aqueous solution, preferably water;
 - b) optionally, preparing a hydrocolloid solution by dissolving at least one non-protein polymer in aqueous solution, preferably water;
 - 15 c) optionally, mixing the hydrocolloid solutions comprising at least one plant protein extract and at least one non-protein polymer;
 - d) preparing, an emulsion and/or suspension by emulsifying and/or suspending a hydrophobic material in the solution;
 - e) forming a colloid wall comprising the plant protein extract and optionally the non-protein polymer around droplets and/or particles of the hydrophobic material
 - 20 f) optionally, cross-linking the colloid wall.
- 25 11- The process according to claim 10, wherein the plant protein extract is obtained by an acidic extraction or an alkali extraction of a pulse seed flour, pulse seeds, or root vegetables.
- 12- The process according to claim 11, wherein the extraction is an acidic extraction and is preferably carried out at a pH comprised between 2 and 5.
- 30 13- A consumer product comprising the coacervate core-shell microcapsule according to claim 1-9, wherein said product is a flavoured or fragranced product.
- 14- The consumer product according to claim 13, wherein the fragranced product is chosen in the group consisting of a liquid or solid detergent, a fabric softener, liquid or solid scent-

boosters, a shampoo, a shower gel, a hair conditioning product, a deodorant or antiperspirant.

5 15- The consumer product according to claim 13, wherein the flavored product is chosen
group consisting of a meat- and/or fish-based food or analogue, a stock, a savory cube,
a powder mix, a beef or pork based product, a seafood, surimi, instant noodles, rice,
soups, sauces, ready-made meal, frozen or chilled pizza, pasta, potato flakes or fried,
noodles, a potato/tortilla chip, a microwave popcorn, nuts , a brezel, a rice cake, a rice
10 cracker, fermented dairy analogue beverage, acidified dairy analogue beverage, non-
fermented dairy analogue beverage, cheese or cheese analogue, yoghurt or yoghurt
analogue, nutritional supplement, nutritional bar, cereal, ice cream, dairy-free ice cream,
confectionary product, chewing gum, hard-boiled candy and powdered drinks.

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