When a polyisocyanate is further added (in addition to the amino-acid derived polyisocyanate), it is added in an amount comprised between 0.1 and 20%, preferably between 0.5 and 2% by weight, based on the total weight of the oil phase.

In another step of the process, a dispersing phase comprising a stabilizer is prepared

Dispersing phase

There is no restriction regarding the nature of the solvent that can be used in step b) as long as it can dissolve/disperse the stabilizer.

According to a particular embodiment, the dispersing phase comprises, preferably consists of water.

According to another particular embodiment, the content of water is below or equal to 10%, preferably below or equal to 5%, more preferably below or equal to 3% by weight based on the total weight of the dispersing phase.

According to a particular embodiment, the dispersing phase is free of water.

According to an embodiment, the dispersing phase comprises a solvent chosen in the group consisting of glycerol, 1,4-butanediol, ethylene glycol and mixtures thereof.

Stabilizer

According to the invention, the stabilizer can be ionic or non-ionic.

Among the ionic stabilizer, one may cite gum Arabic, carboxymethyl cellulose, soy protein, sodium caseinate, gelatin, bovine serum albumin, sugar beet pectin, hydrolyzed soy protein, hydrolyzed sericin, Pseudocollagen, Biopolymer SA-N (INCI name : Hyaluronic Acid (and) Serum Albumen (and) Dextran Sulfate), Pentacare-NA PF (Hydrolyzed Wheat Gluten (and) Ceratonia Siliqua (Carob) Gum (and) Aqua (and) Sodium Dextran Sulfate (and) Bis-Hydroxyethyl Tromethamine (and) Phenoxyethanol (and) Ethylhexylglycerin), and mixtures thereof.

Among the non-ionic emulsifier, one may cite polyvinyl alcohol, modified polyvinyl alcohol, modified starch, modified cellulose, polysaccharides, and mixtures thereof.

According to a particular embodiment, the stabilizer is chosen in the group consisting of gum Arabic, modified starch, polyvinyl alcohol, polyvinylpyrrolidone (PVP), carboxymethylcellulose

CLAIMS

1. A process for the preparation of a core-shell microcapsule slurry comprising the following steps:

a) dissolving at least an amino-acid derived polyisocyanate having at least two isocyanate functional groups in a hydrophobic material, preferably a perfume to form an oil phase;

b) preparing a dispersing phase comprising a stabilizer, wherein the dispersing phase is not miscible with the oil phase;

c) adding the oil phase into the dispersing phase to form a two-phases dispersion;

d) optionally, adding a reactant to the dispersion obtained in step c); and

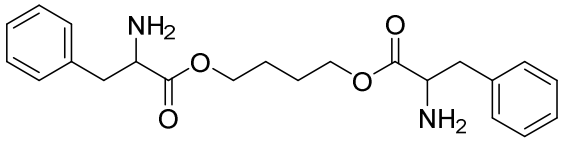
e) performing a curing step to form core-shell microcapsules in the form of a slurry.

2. The process according to claim 1, characterized in that a reactant chosen in the group consisting of an amino acid, a polyamine, a polyol, and mixtures thereof is added in step d).

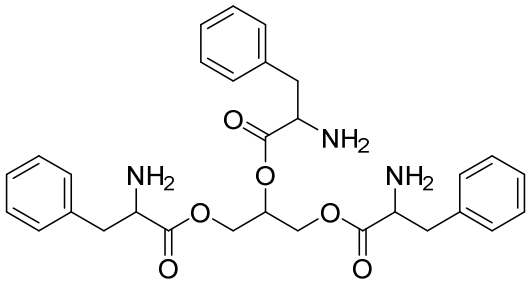
3. The process according to claim 1 or 2, characterized in that the reactant is used an amount of between 0.1 and 15%, preferably between 4 and 12%, these percentages being defined by weight relative to the total weight of the slurry.

4. The process according to claim 2, characterized in that the reactant is a polyamine chosen in the group consisting of water soluble guanidine salts, guanidine, tris-(2-aminoethyl)amine, N,N,N′,N′-tetrakis(3-aminopropyl)-1,4-butanediamine and N,N'-bis(3-aminopropyl)-ethylenediamine, a polyaminoester, and mixtures thereof.

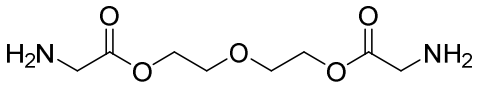
5. The process according to claim 4, characterized in that the polyaminoester is chosen in the group consisting of



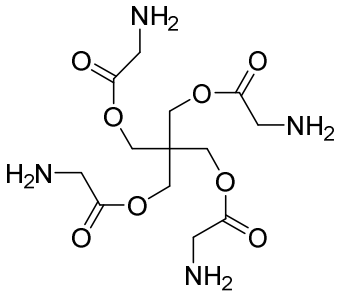
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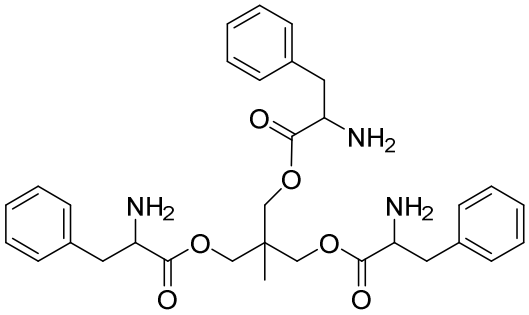
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6. The process according to claim 2, characterized in that the reactant is an amino acid preferably chosen from the group consisting of lysine, arginine, cysteine, asparagine, glutamine, serine, threonine, cystine, and mixtures thereof.

7. The process according any one of the preceding claims, characterized in that the amino-acid derived polyisocyanate is chosen in the group consisting of an amino-acid derived triisocyanate, an amino-acid derived diisocyanate, and mixture thereof.

8. The process according to claim 7, characterized in that the amino-acid derived polyisocyanate is an amino-acid derived trisocyanate chosen in the group

consisting of arginine triisocyanate, asparagine triisocyanate, proline triisocyanate, glutamine triisocyanate, lysine triisocyanate, lysine ethyl ester triisocyanate, lysine methyl ester triisocyanate, lysine propyl ester triisocyanate, or derivatives thereof, and mixtures thereof.

9. The process according to claim 8, characterized in that the amino-acid derived triisocyanate is lysine triisocyanate.

10. The process according to any one of the preceding claims, characterized in that there is used an amount of between 0.5 and 20% of amino-acid derived polyisocyanate, these percentages being defined by weight relative to the total weight of the oil phase.

11. The process according to any one of the preceding claims, characterized in that the oil phase of step a) further comprises at least one polyisocyanate selected from the group consisting of a polyisocyanurate of toluene diisocyanate, a trimethylol propane-adduct of toluene diisocyanate and a trimethylol propane-adduct of xylylene diisocyanate, and mixtures thereof.

12. The process according to any one of the preceding claims, characterized in that the stabilizer is chosen in the group consisting of gum Arabic, modified starch, polyvinyl alcohol, polyvinylpyrrolidone (PVP), carboxymethylcellulose (CMC), anionic polysaccharides, acrylamide copolymer, inorganic particles, protein such as soy protein, rice protein, whey protein, white egg albumin, sodium caseinate, gelatin, bovine serum albumin, hydrolyzed soy protein, hydrolyzed sericin, pseudocollagen, silk protein, sericin powder, and mixtures thereof.

13. A core-shell microcapsule comprising:

- an oil-based core comprising a hydrophobic material, preferably comprising a perfume oil, and

- a shell comprising at least a polymerized amino-acid derived polyisocyanate having at least two isocyanate functional groups;
  wherein the amino-acid derived polyisocyanate is lysine diisocyanate or chosen in the group consisting of arginine triisocyanate, asparagine triisocyanate, proline triisocyanate, glutamine triisocyanate, lysine triisocyanate, lysine ethyl ester triisocyanate, lysine methyl ester triisocyanate, lysine propyl ester triisocyanate, or derivatives thereof, and mixtures thereof.

14. A perfuming composition comprising

(i) perfume microcapsule as defined in claim 13, wherein the hydrophobic material comprises a perfume,

(ii) at least one ingredient selected from the group consisting of a perfumery carrier, a perfumery co-ingredient and mixtures thereof, and

(iii) optionally at least one perfumery adjuvant.

15. A liquid perfumed consumer product comprising:

a) from 2 to 65% by weight, relative to the total weight of the consumer product, of at least one surfactant;

b) water or a water-miscible hydrophilic organic solvent; and

c) the microcapsule as defined in claim 13 or the perfuming composition as defined in claim 14.