CLAIMS

1. A core-shell microcapsule comprising:

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

b) a polymeric shell comprising a regenerated biopolymer,

wherein the regenerated biopolymer is obtained from a natural biopolymer by dissolving, precipitation and re-dispersion treatment process.

2. The microcapsule according to claim 1, wherein the polymeric shell is made of a polymeric material selected from the group consisting of polyurea, polyurethane, polyamide, polyacrylate, polysiloxane, polycarbonate, polysulfonamide, urea formaldehyde, melamine formaldehyde resin, melamine urea resin, melamine glyoxal resin, gelatin/ gum arabic and mixtures thereof.

3. The microcapsule according to claim 2, wherein the polymeric shell is made of a polymeric material selected from the group consisting of polyurea, polyurethane, polyamide and mixtures thereof.

4. The microcapsule according to any one of the preceding claims, wherein the regenerated biopolymer is selected from the group consisting of regenerated cellulose, regenerated chitin, regenerated lignocellulose, regenerated silk fibroin, regenerated pectin, regenerated alginic acid and mixtures thereof.

5. The microcapsule according to any one of the preceding claims, wherein the polymeric shell comprises less than 20% by weight of a polymeric material based on the total weight of the microcapsule.

6. The microcapsule according to any one of the preceding claims, wherein the hydrophobic material comprises a perfume oil.

7. A process for preparing core-shell microcapsules as defined in any one of claims 1-6, wherein the process comprises the steps of:

1) suspending in water a regenerated biopolymer to form a water phase;

2) preparing an oil phase comprising a hydrophobic material, preferably a perfume oil;

3) adding the oil phase to the water phase and mixing them to form an oil-in-water Pickering emulsion, under conditions allowing the formation of core-shell microcapsule by interfacial polymerization and/or interfacial reaction,

wherein a polyfunctional monomer is added in step 1) in the water phase and/or in step 2) in the oil phase and/or in step 3) in the emulsion.

8. The process according to claim 7, wherein the polyfunctional monomer is chosen in the group consisting of at least one polyisocyanate, poly maleic anhydride, poly acid chloride, polyepoxide, acrylate monomers, polyalkoxysilane, melamine-based resin and mixtures thereof.

9. The process according to claim 7 or 8, wherein the regenerated biopolymer is obtained by a process comprising the following steps:

(i) Dispersing a natural biopolymer into water and/or dissolving a natural biopolymer into a solvent to form a homogeneous solution

(ii) Adding an anti-solvent into the solution obtained in step (i) or removing the solvent from the solution obtained in step (i) to obtain a precipitated biopolymer

(iii) Dispersing the precipitated biopolymer into water and treating via high-pressure homogenizer to obtain a regenerated biopolymer suspension.

10. The process according to any one of claims 7-9, wherein the oil-in-water Pickering emulsion is formed at room temperature or at a temperature below room temperature, preferably at a temperature comprised between 0°C and 10°C.

11. The process according to any one of claims 7-10, wherein a reactant is added in step 1) and/or step 3).

12. The process according to any one of claims 7-11, wherein the total amount of regenerated biopolymer is comprised between 0.01 and 10 wt%, preferably between 0.01and 5 wt% based on the total weight of the water phase.

13. The process according to any one of claims 7-12, characterized in that the oil phase represents between 5 and 60%, preferably between 20 and 40% by weight of the Pickering emulsion.

14. A consumer product comprising:

- a personal care active base, and
- microcapsules as defined in any one of claims 1-6,

wherein the consumer product is in the form of a personal care composition.

15. A consumer product comprising:

- a home care or a fabric care active base, and
- microcapsules as defined in any one of claims 1-6,

wherein the consumer product is in the form of a home care or a fabric care composition.