CLAIMS

1. A process for the preparation of a melamine-formaldehyde free microcapsule comprising the steps of:

1) admixing a perfume or flavour oil with at least one polyisocyanate having at least three isocyanate functional groups to form an oil phase, provided that the oil phase is essentially free from diisocyanate;
2) dissolving an ionic surfactant or ionic colloidal stabilizer in water to form a water phase;
3) adding the oil phase to the water phase to form an oil-in-water dispersion, wherein the mean droplet size is comprised between 1 and 500 μm, preferably between 5 and 50 microns;
4) performing a curing step to form a microcapsule slurry;

said process being characterized in that the at least one polyisocyanate having at least three isocyanate functional groups is present in an amount comprised between 1 and 15 wt% of the oil phase, the water phase is essentially free from melamine-formaldehyde and no amine or polyamine is added at any stage of the process.

2. A process according to claim 1, further comprising the step of adding a polymer selected from the group consisting of a non-ionic polysaccharide, a cationic polymer and mixtures thereof to form an outer coating to the microcapsule.

3. A process according to claim 1 or 2, further comprising the step of drying the capsule slurry to obtain dried microcapsules.

4. A process according to any one of claims 1 to 3, characterized in that the at least one polyisocyanate having at least three isocyanate functional groups is present in an amount comprised between 2 and 8 wt% of the oil phase.

5. A process according to any one of claims 1 to 4, characterised in that the at least one polyisocyanate having at least three isocyanate functional groups is present in an amount comprised between 2 and 6 wt% of the oil phase.

6. A process according to any one of claims 1 to 5, characterized in that the at least one polyisocyanate having at least three isocyanate functional groups is a mixture of at least one aliphatic polyisocyanate and at least one aromatic polyisocyanate, the aliphatic polyisocyanate and the aromatic polyisocyanate being in a respective molar ratio ranging from 80:20 to 10:90.

7. A process according to any one of claims 1 to 5, characterized in that the at least one polyisocyanate having at least three isocyanate functional groups is an aromatic polyisocyanate.

8. A process according to any one of claims 1 to 7, characterized in that the oil phase consists essentially of the perfume or flavour oil with the at least one polyisocyanate having at least three isocyanate functional groups.

9. A process according to any one of claims 1 to 8, characterized in that the curing step is performed at a temperature comprised between 50 and 130°C, for 15 min to 8 hours, preferably between 50 and 95°C for between 30 min and 4 hours, more preferably between 75 and 90°C for between 1 hour and 4 hours.

10. A melamine-formaldehyde free microcapsule obtainable by a process as defined in any one of claims 1 to 9, characterised in that it has a core-shell morphology and comprises

-a core comprising a perfume or flavour oil;

-a shell consisting essentially of polymerised polyisocyanate formed from at least one polyisocyanate comprising at least three isocyanate functional groups.

11. A perfuming composition comprising

(i) microcapsules as defined in claim 10;

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

(iii) optionally at least one perfumery adjuvant.

12. 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) microcapsules as defined in claim 10.

13. A liquid perfumed consumer product according to claim 12, characterised in that said product is a home- or personal-care product.

14. A powder perfumed product comprising

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

(b) microcapsules as defined in claim 10.