

Claims

1. An encapsulated composition comprising a plurality of core-shell microcapsules, wherein the core-shell microcapsules comprise a core and a shell surrounding the core, wherein the core comprises, preferably consists of, a perfume composition comprising, preferably consisting of, at least one, preferably at least two, more preferably at least four, even more preferably at least eight, even still more preferably at least 16, even still further more preferably at least 32, even yet still further more preferably at least 64, biodegradable ingredient(s), wherein the biodegradable ingredient(s) is/are present at a total concentration of at least 75 wt.-%, preferably at least 80 wt.-%, more preferably at least 85 wt.-%, even more preferably at least 90 wt.-%, even still more preferably at least 95 wt.-%, relative to the total weight of the perfume composition.
2. An encapsulated composition according to claim 1, wherein the biodegradable ingredient(s) is/are selected from the group consisting of (E)-2-methoxy-4-(prop-1-en-1-yl)phenyl acetate; 2,6,10-trimethylundec-9-enal; 2-(tert-butyl)cyclohexyl acetate; decanal; undec-10-enal; undecanal; dodecanal; 2-methylundecanal; octanal; 3-(4-isopropylphenyl)-2-methylpropanal; (E)-undec-9-enal; prop-2-enyl 2-(3-methylbutoxy)acetate; prop-2-enyl 3-cyclohexylpropanoate; prop-2-enyl heptanoate; (Z)-oxacycloheptadec-10-en-2-one; (3aR,5aS,9aS,9bR)-3a,6,6,9a-tetramethyl-2,4,5,5a,7,8,9,9b-octahydro-1H-benzo[e][1]benzofuran; pentyl 2-hydroxybenzoate; 4-methoxybenzaldehyde; benzyl acetate; benzyl 2-hydroxybenzoate; (2S,4S)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-yl acetate; 5-isopropyl-2-methylphenol; (1S,8aR)-1,4,4,6-tetramethyl-2,3,3a,4,5,8-hexahydro-1H-5,8a-methanoazulene; (1S,6R,8aR)-1,4,4,6-tetramethyloctahydro-1H-5,8a-methanoazulen-6-yl acetate; (1R,6S,8aS)-6-methoxy-1,4,4,6-tetramethyloctahydro-1H-5,8a-methanoazulene; (E)-3,7-dimethylocta-2,6-dienal; 3,7-dimethyloct-6-en-1-ol; 3,7-dimethyloct-6-en-1-yl acetate; (Z)-3-methylcyclotetradec-5-enone; 1-methoxy-4-methylbenzene; 2-

cyclohexylethyl acetate; cyclohexyl 2-hydroxybenzoate; (E)-1-(2,6,6-trimethylcyclohexa-1,3-dien-1-yl)but-2-en-1-one; (E)-1-(2,6,6-trimethylcyclohex-2-en-1-yl)but-2-en-1-one; 5-hexyloxolan-2-one; (E)-dec-4-enal; 2,6-dimethyloct-7-en-2-ol; oxydibenzene; 1-methoxy-4-propylbenzene; 3-methyl-2-pentylcyclopent-2-enone; methyl 2-(methylamino)benzoate; 2-methyl-1-phenylpropan-2-yl acetate; 2-methyl-1-phenylpropan-2-yl butanoate; 2,6-dimethylheptan-2-ol; 6-heptyltetrahydro-2H-pyran-2-one; 5-octyloxolan-2-one; (E)-dodec-2-enal; (E)-3-methyl-5-(2,2,3-trimethylcyclopent-3-en-1-yl)pent-4-en-2-ol; ethyl hexanoate; ethyl 2-methyl butyrate; 2-ethyl-3-hydroxy-4H-pyran-4-one; ethyl heptanoate; 3-ethoxy-4-hydroxybenzaldehyde; 1,4-dioxacycloheptadecane-5,17-dione; (1s,4s)-1,3,3-trimethyl-2-oxabicyclo[2.2.2]octane; 4-allyl-2-methoxyphenol; methyl 2,4-dihydroxy-3,6-dimethylbenzoate; 3a,6,6,9a-tetramethyldodecahydronaphtho[2,1-b]furan; 3-(3-isopropylphenyl)butanal; (E)-undec-9-enenitrile; 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one; 1-phenylethyl acetate; (E)-3,7-dimethylocta-2,6-dien-1-ol; (E)-3,7-dimethylocta-2,6-dien-1-yl acetate; (E)-oxacyclohexadec-12-en-2-one; methyl 3-oxo-2-pentylcyclopentaneacetate; (E)-hex-2-enal; (Z)-hex-3-en-1-ol; (Z)-hex-3-en-1-yl acetate; (Z)-hex-3-en-1-yl 2-hydroxybenzoate; hexyl acetate; 8,8-di(1H-indol-3-yl)-2,6-dimethyloctan-2-ol; (E)-4-(2,6,6-trimethylcyclohex-1-en-1-yl)but-3-en-2-one; (E)-3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one; (E)-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one; 3-methylbutyl acetate; 3-methylbutyl butanoate; (E)-2-methoxy-4-(prop-1-en-1-yl)phenol; 2-hexylcyclopent-2-en-1-one; (E)-3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one; 3-butyl-5-methyltetrahydro-2H-pyran-4-yl acetate; 8-isopropyl-1-oxaspiro[4.5]decan-2-one; (2E,6Z)-3,7-dimethylnona-2,6-dienenitrile; 3,7-dimethylocta-1,6-dien-3-ol; 2-(5-methyl-5-vinyltetrahydrofuran-2-yl)propan-2-ol; 3,7-dimethylocta-1,6-dien-3-yl acetate; ethyl 2-methylpentanoate; (4-isopropylcyclohexyl)methanol; 3-methyl-5-phenylpentan-1-ol; 2,6-

- dimethylhept-5-enal; mercapto-para-menthan-3-one; methyl 2-aminobenzoate; methyl benzoate; 2-ethoxy-4-(methoxymethyl)phenol; 6-methylhept-5-en-2-one; 8-methyl-1-oxaspiro[4.5]decan-2-one; methyl non-2-ynoate; methyl 2-hydroxybenzoate; 2-(2-(4-methylcyclohex-3-en-1-yl)propyl)cyclopentanone; (E)-methyl non-2-enoate; (2Z)-3,7-dimethylocta-2,6-dien-1-ol; (Z)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol; 2-ethoxynaphthalene; 1-(3-methylbenzofuran-2-yl)ethanone; (Z)-3,7-dimethylocta-2,6-dien-1-yl acetate; (2E,6Z)-nona-2,6-dienal; (Z)-non-6-enal; (Z)-non-6-en-1-ol; 3-(4-(2-methylpropyl)-2-methylphenyl)propanal; 6-propyltetrahydro-2H-pyran-2-one; 1-(2-naphthalenyl)-ethanone; 4-(tert-butyl)cyclohexyl acetate; 5-heptyldihydrofuran-2(3H)-one; 3,7-dimethyloctan-1-ol; 2-phenylethyl acetate; 2,6,6-trimethylbicyclo[3.1.1]hept-2-ene; 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane; (2E,5E)-5,6,7-trimethylocta-2,5-dien-4-one; 2,4,7-Trimethyl-6-octen-1-ol; 3-methylbut-2-en-1-yl acetate; 5-pentyldihydrofuran-2(3H)-one; 4-(4-hydroxyphenyl)butan-2-one; dec-9-en-1-ol; 4-methyl-2-(2-methylprop-1-en-1-yl)tetrahydro-2H-pyran; 4-methyl-2-phenyl-3,6-dihydro-2H-pyran; 2,6,6-trimethylcyclohexa-1,3-dienecarbaldehyde; 4-(dodecylthio)-4-methylpentan-2-one; 2-methyl-3-[4-(2-methylpropyl)phenyl]propanal; 1-phenylethyl acetate; (E)-2-((3,5-dimethylhex-3-en-2-yl)oxy)-2-methylpropyl cyclopropanecarboxylate; 1-methyl-4-propan-2-ylcyclohexa-1,4-diene; 2-(4-methylcyclohex-3-en-1-yl)propan-2-ol; 1-methyl-4-(propan-2-ylidene)cyclohex-1-ene; 3,7-dimethyloctan-3-ol; 1-(cyclopropylmethyl)-4-methoxybenzene; (E)-tridec-2-enenitrile; 3-phenylbutanal; 3-(benzo[d][1,3]dioxol-5-yl)-2-methylpropanal; (E)-4-methyldec-3-en-5-ol; 2-methoxynaphthalene; cedar wood oil; eucalyptus oil; galbanum oil; clove oil; lavandin oil; mandarin oil; orange terpenes; patchouli oil; and ylang oil.
3. The encapsulated composition according to claim 2, wherein each of the biodegradable ingredient(s) is present at a concentration equal to or less than the following maximum concentrations:

- (E)-2-methoxy-4-(prop-1-en-1-yl)phenyl acetate: 0.1 wt.-%
2,6,10-trimethylundec-9-enal: 1 wt.-%
2-(tert-butyl)cyclohexyl acetate: 50 wt.-%
decanal: 10 wt.-%
5 undec-10-enal: 2 wt.-%
undecanal: 5 wt.-%
dodecanal: 10 wt.-%
2-methylundecanal: 50 wt.-%
octanal: 5 wt.-%
10 3-(4-isopropylphenyl)-2-methylpropanal: 5 wt.-%
(E)-undec-9-enal: 5 wt.-%
prop-2-enyl 2-(3-methylbutoxy)acetate: 5 wt.-%
prop-2-enyl 3-cyclohexylpropanoate: 10 wt.-%
prop-2-enyl heptanoate: 10 wt.-%
15 (Z)-oxacycloheptadec-10-en-2-one: 2 wt.-%
(3aR,5aS,9aS,9bR)-3a,6,6,9a-tetramethyl-2,4,5,5a,7,8,9,9b-octahydro-1H-benzo[e][1]benzofuran: 2 wt.-%
pentyl 2-hydroxybenzoate: 50 wt.-%
4-methoxybenzaldehyde: 5 wt.-%
20 benzyl acetate: 10 wt.-%
benzyl 2-hydroxybenzoate: 75 wt.-%
(2S,4S)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-yl acetate: 50 wt.-%
5-isopropyl-2-methylphenol: 1 wt.-%
(1S,8aR)-1,4,4,6-tetramethyl-2,3,3a,4,5,8-hexahydro-1H-5,8a-methanoazulene: 5 wt.-%
25 (1S,6R,8aR)-1,4,4,6-tetramethyloctahydro-1H-5,8a-methanoazulen-6-yl acetate: 5 wt.-%
(1R,6S,8aS)-6-methoxy-1,4,4,6-tetramethyloctahydro-1H-5,8a-methanoazulene: 5 wt.-%
30 (E)-3,7-dimethylocta-2,6-dienal: 10 wt.-%
3,7-dimethyloct-6-en-1-ol: 25 wt.-%
3,7-dimethyloct-6-en-1-yl acetate: 25 wt.-%
(Z)-3-methylcyclotetradec-5-enone: 5 wt.-%
1-methoxy-4-methylbenzene: 1 wt.-%
35 2-cyclohexylethyl acetate: 25 wt.-%

	cyclohexyl 2-hydroxybenzoate: 15 wt.-%	
	(E)-1-(2,6,6-trimethylcyclohexa-1,3-dien-1-yl)but-2-en-1-one: 2.5 wt.-%	
	(E)-1-(2,6,6-trimethylcyclohex-2-en-1-yl)but-2-en-1-one: 5 wt.-%	
5	5-hexyloxolan-2-one: 15 wt.-%	
	(E)-dec-4-enal: 1 wt.-%	
	2,6-dimethyloct-7-en-2-ol: 50 wt.-%	
	oxydibenzene: 15 wt.-%	
	1-methoxy-4-propylbenzene: 2 wt.-%	
10	3-methyl-2-pentylcyclopent-2-enone: 5 wt.-%	
	methyl 2-(methylamino)benzoate: 1 wt.-%	
	2-methyl-1-phenylpropan-2-yl acetate: 75 wt.-%	
	2-methyl-1-phenylpropan-2-yl butanoate: 50 wt.-%	
	2,6-dimethylheptan-2-ol: 5 wt.-%	
15	6-heptyltetrahydro-2H-pyran-2-one: 5 wt.-%	
	5-octyloxolan-2-one: 10 wt.-%	
	(E)-dodec-2-enal: 0.5 wt.-%	
	(E)-3-methyl-5-(2,2,3-trimethylcyclopent-3-en-1-yl)pent-4-en-2-ol: 5 wt.-%	
20	ethyl hexanoate: 10 wt.-%	
	ethyl 2-methyl butyrate: 15 wt.-%	
	2-ethyl-3-hydroxy-4H-pyran-4-one: 10 wt.-%	
	ethyl heptanoate: 5 wt.-%	
	3-ethoxy-4-hydroxybenzaldehyde: 10 wt.-%	
25	1,4-dioxacycloheptadecane-5,17-dione: 25 wt.-%	
	(1s,4s)-1,3,3-trimethyl-2-oxabicyclo[2.2.2]octane: 25 wt.-%	
	4-allyl-2-methoxyphenol: 5 wt.-%	
	methyl 2,4-dihydroxy-3,6-dimethylbenzoate: 2 wt.-%	
	3a,6,6,9a-tetramethyldodecahydronaphtho[2,1-b]furan: 2 wt.-%	
30	3-(3-isopropylphenyl)butanal: 5 wt.-%	
	(E)-undec-9-enenitrile: 1 wt.-%	
	1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one: 5 wt.-%	
	1-phenylethyl acetate: 5 wt.-%	
	(E)-3,7-dimethylocta-2,6-dien-1-ol: 25 wt.-%	
35	(E)-3,7-dimethylocta-2,6-dien-1-yl acetate: 15 wt.-%	

- (E)-oxacyclohexadec-12-en-2-one: 15 wt.-%
methyl 3-oxo-2-pentylcyclopentaneacetate: 75 wt.-%
(E)-hex-2-enal: 1 wt.-%
(Z)-hex-3-en-1-ol: 15 wt.-%
5 (Z)-hex-3-en-1-yl acetate: 15 wt.-%
(Z)-hex-3-en-1-yl 2-hydroxybenzoate: 15 wt.-%
hexyl acetate: 15 wt.-%
8,8-di(1H-indol-3-yl)-2,6-dimethyloctan-2-ol: 2 wt.-%
(E)-4-(2,6,6-trimethylcyclohex-1-en-1-yl)but-3-en-2-one: 25 wt.-%
10 (E)-3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one:
5 wt.-%
(E)-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one: 25 wt.-%
3-methylbutyl acetate: 5 wt.-%
3-methylbutyl butanoate: 1 wt.-%
15 (E)-2-methoxy-4-(prop-1-en-1-yl)phenol: 1 wt.-%
2-hexylcyclopent-2-en-1-one: 5 wt.-%
(E)-3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one:
50 wt.-%
3-butyl-5-methyltetrahydro-2H-pyran-4-yl acetate: 15 wt.-%
20 8-isopropyl-1-oxaspiro[4.5]decan-2-one: 1 wt.-%
(2E,6Z)-3,7-dimethylnona-2,6-dienenitrile: 25 wt.-%
3,7-dimethylocta-1,6-dien-3-ol: 25 wt.-%
2-(5-methyl-5-vinyltetrahydrofuran-2-yl)propan-2-ol: 1 wt.-%
3,7-dimethylocta-1,6-dien-3-yl acetate: 25 wt.-%
25 ethyl 2-methylpentanoate: 10 wt.-%
(4-isopropylcyclohexyl)methanol: 5 wt.-%
3-methyl-5-phenylpentan-1-ol: 10 wt.-%
2,6-dimethylhept-5-enal: 2 wt.-%
mercapto-para-menthan-3-one: 1 wt.-%
30 methyl 2-aminobenzoate: 2 wt.-%
methyl benzoate: 1 wt.-%
2-ethoxy-4-(methoxymethyl)phenol: 1 wt.-%
6-methylhept-5-en-2-one: 5 wt.-%
8-methyl-1-oxaspiro[4.5]decan-2-one: 2 wt.-%
35 methyl non-2-ynoate: 1 wt.-%

	methyl 2-hydroxybenzoate: 1 wt.-%
	2-(2-(4-methylcyclohex-3-en-1-yl)propyl)cyclopentanone: 50 wt.-%
	(E)-methyl non-2-enoate: 2 wt.-%
	(2Z)-3,7-dimethylocta-2,6-dien-1-ol: 10 wt.-%
5	(Z)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol: 5 wt.-%
	2-ethoxynaphthalene: 10 wt.-%
	1-(3-methylbenzofuran-2-yl)ethanone: 5 wt.-%
	(Z)-3,7-dimethylocta-2,6-dien-1-yl acetate: 5 wt.-%
	(2E,6Z)-nona-2,6-dienal: 0.5 wt.-%
10	(Z)-non-6-enal: 0.5 wt.-%
	(Z)-non-6-en-1-ol: 0.5 wt.-%
	3-(4-(2-methylpropyl)-2-methylphenyl)propanal: 25 wt.-%
	6-propyltetrahydro-2H-pyran-2-one: 1 wt.-%
	1-(2-naphthalenyl)-ethanone: 10 wt.-%
15	4-(tert-butyl)cyclohexyl acetate: 50 wt.-%
	5-heptyldihydrofuran-2(3H)-one: 25 wt.-%
	3,7-dimethyloctan-1-ol: 10 wt.-%
	2-phenylethyl acetate: 15 wt.-%
	2,6,6-trimethylbicyclo[3.1.1]hept-2-ene: 2 wt.-%
20	6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane: 2 wt.-%
	(2E,5E)-5,6,7-trimethylocta-2,5-dien-4-one: 2 wt.-%
	2,4,7-Trimethyl-6-octen-1-ol: 2 wt.-%
	3-methylbut-2-en-1-yl acetate: 10 wt.-%
	5-pentyldihydrofuran-2(3H)-one: 5 wt.-%
25	4-(4-hydroxyphenyl)butan-2-one: 5 wt.-%
	dec-9-en-1-ol: 2 wt.-%
	4-methyl-2-(2-methylprop-1-en-1-yl)tetrahydro-2H-pyran: 2 wt.-%
	4-methyl-2-phenyl-3,6-dihydro-2H-pyran: 2 wt.-%
	2,6,6-trimethylcyclohexa-1,3-dienecarbaldehyde: 0.5 wt.-%
30	4-(dodecylthio)-4-methylpentan-2-one: 0.5 wt.-%
	2-methyl-3-[4-(2-methylpropyl)phenyl]propanal: 5 wt.-%
	1-phenylethyl acetate: 5 wt.-%
	(E)-2-((3,5-dimethylhex-3-en-2-yl)oxy)-2-methylpropyl cyclopropanecarboxylate: 5 wt.-%
35	1-methyl-4-propan-2-ylcyclohexa-1,4-diene: 5 wt.-%

- 2-(4-methylcyclohex-3-en-1-yl)propan-2-ol: 5 wt.-%
1-methyl-4-(propan-2-ylidene)cyclohex-1-ene: 15 wt.-%
3,7-dimethyloctan-3-ol: 50 wt.-%
1-(cyclopropylmethyl)-4-methoxybenzene: 10 wt.-%
5 (E)-tridec-2-enenitrile: 15 wt.-%
3-phenylbutanal: 5 wt.-%
3-(benzo[d][1,3]dioxol-5-yl)-2-methylpropanal: 5 wt.-%
(E)-4-methyldec-3-en-5-ol: 25 wt.-%
2-methoxynaphtalene: 15 wt.-%
10 cedar wood oil: 5 wt.-%
eucalyptus oil: 25 wt.-%
galbanum oil: 2 wt.-%
clove oil: 5 wt.-%
lavandin oil: 25 wt.-%
15 mandarin oil: 5 wt.-%
orange terpenes: 50 wt.-%
patchouli oil: 10 wt.-%
ylang oil: 5 wt.-%
4. The encapsulated composition according to claim 2 or 3, wherein
20 each of the biodegradable ingredient(s) is present at a concentration equal to or higher than the minimum concentration of 0.01 wt.-%, preferably 0.02 wt.-%, more preferably 0.05 wt.-%, even more preferably 0.1 wt.-%, even still more preferably 0.5 wt.-%.
5. The encapsulated composition according to one of claims 1 to 4,
25 wherein weight ratio of the core relative to the total weight of the capsule, namely the sum of the weight of the core and the weight of the shell, is at least 60 wt.-%, preferably at least 70 wt.-%, more preferably at least 80 wt.-%, even more preferably at least 90 wt.-%.
6. The encapsulated composition according to one of claims 1 to 5,
30 wherein the shell comprises a melamine-formaldehyde polymer.
7. The encapsulated composition according to one of claims 1 to 5, wherein the shell comprises a polyurea or polyurethane polymer.

8. The encapsulated composition according to one of claims 1 to 5, wherein the shell comprises a polymeric stabilizer that is formed by combination of a polymeric surfactant with at least one aminosilane.
- 5 9. The encapsulated composition according to one of claim 8, wherein the shell additionally comprises a polysaccharide, preferably a polysaccharide comprising beta (1 → 4) linked monosaccharide units, even more preferably a cellulose derivative, in particular selected form the group consisting of hydroxyethyl cellulose, hydroxypropylmethyl cellulose, cellulose acetate and carboxymethyl
10 cellulose, preferably hydroxyethyl cellulose.
10. The encapsulated composition according to one of claims 1 to 5, wherein the shell comprises a complex coacervate formed of at least one protein and at least one polysaccharide.
- 15 11. The encapsulated composition according to claim 10, wherein the shell is formed by cross-linking of the at least one protein with a first cross-linking agent, in order to form a simple coacervate, followed by the addition of the at least one polysaccharide to form a complex coacervate.
- 20 12. The encapsulated composition according to one of claims 1 to 5, wherein the shell comprises, in polymerized form, one or more monoethylenically unsaturated and/or polyethylenically unsaturated monomer(s).
- 25 13. A consumer product comprising an encapsulated composition according to one of claims 1 to 12, preferably a fabric care product, a home care product or a personal care product.
14. The use of the encapsulated composition according to one of claims 1 to 12 for obtaining a consumer product.