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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



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División de Nueva Creaciones

SOLICITUD

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54. TITULO

COMPOSICION PARA EL CUIDADO PERSONAL; CUIDADO DE SUPERFICIES DEL
HOGAR Y CUIDADO DE TELAS QUE COMPRENDE UN DERIVADO DE ACEITE DE
SEMILLA DE MEADOWFOAM (LIMNANTHES ALBA)

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COLGATE - PALMOLIVE COMPANY

DOMICILIO

NEW YORK, NEW YORK, ESTADOS UNIDOS DE AMERICA

74. APODERADO

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22. SANTAFE DE BOGOTA, D.C.

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☐ Patente de Modelo de Utilidad.

☐ Capítulo I.

☒ Capítulo II.

2

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(71)

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Número 80.410.337 TP 57492

4

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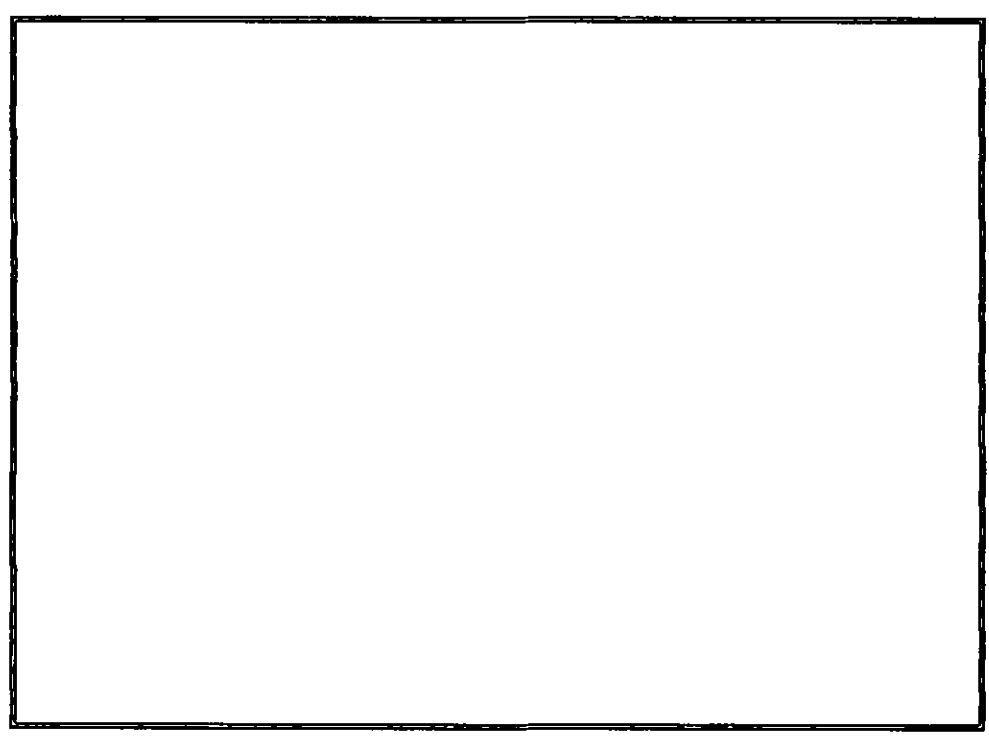
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ANEXOS

- ☒ Comprobante de pago de la tasa de presentación de la solicitud. \$443.000
- ☒ Documento que acredite la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☒ Poderes, si fuere el caso. **Fotocopia autenticada**
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones.
- ☒ Copia de la solicitud internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Copia del examen preliminar efectuado por la IPEA.
- ☐ Traducción del examen preliminar efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico.
- ☐ Arte final 12x12.
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☒ Otros: Tarjeta de Propietarios

11 FIGURA CARACTERÍSTICA:



12 Solicito la concesión de la patente,

NOMBRE: JUAN PABLO CADENA SARMIENTO

FIRMA: *Juan Pablo Cadena Sarmiento*
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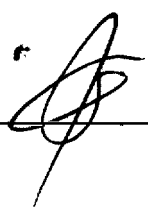
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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
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SOLICITANTE/S. RAZON SOCIAL O APELLIDOS Y NOMBRES COLGATE - PALMOLIVE COMPANY

DOMICILIO NEW YORK, NEW YORK, ESTADOS UNIDOS DE AMERICA

APODERADO JUAN PABLO CADENA SARMIENTO

TITULO COMPOSICION PARA EL CUIDADO PERSONAL, CUIDADO DE SUPERFICIES DEL HOGAR Y CUIDADO DE TELAS QUE COM-
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PRORROGA CAMBIO DE NOMBRE

TRASPASO A

INVENTOR (ES) RICHARD KEVIN PAYNE, NADIA SOLIMAN, SUMAN CHOPRA, JEAN BAKK, CHRISTINA A. BIELL

OTROS

OFICINA DE COMUNICACIONES

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1. **CONTRACT** 2. **AGREEMENT** 3. **DEED** 4. **WARRANTY** 5. **COVENANT** 6. **ASSURANCE** 7. **GUARANTEE** 8. **INDENTURE** 9. **CHARTER** 10. **DEED** 11. **WARRANTY** 12. **COVENANT** 13. **ASSURANCE** 14. **GUARANTEE** 15. **INDENTURE** 16. **CHARTER** 17. **DEED** 18. **WARRANTY** 19. **COVENANT** 20. **ASSURANCE** 21. **GUARANTEE** 22. **INDENTURE** 23. **CHARTER** 24. **DEED** 25. **WARRANTY** 26. **COVENANT** 27. **ASSURANCE** 28. **GUARANTEE** 29. **INDENTURE** 30. **CHARTER** 31. **DEED** 32. **WARRANTY** 33. **COVENANT** 34. **ASSURANCE** 35. **GUARANTEE** 36. **INDENTURE** 37. **CHARTER** 38. **DEED** 39. **WARRANTY** 40. **COVENANT** 41. **ASSURANCE** 42. **GUARANTEE** 43. **INDENTURE** 44. **CHARTER** 45. **DEED** 46. **WARRANTY** 47. **COVENANT** 48. **ASSURANCE** 49. **GUARANTEE** 50. **INDENTURE** 51. **CHARTER** 52. **DEED** 53. **WARRANTY** 54. **COVENANT** 55. **ASSURANCE** 56. **GUARANTEE** 57. **INDENTURE** 58. **CHARTER** 59. **DEED** 60. **WARRANTY** 61. **COVENANT** 62. **ASSURANCE** 63. **GUARANTEE** 64. **INDENTURE** 65. **CHARTER** 66. **DEED** 67. **WARRANTY** 68. **COVENANT** 69. **ASSURANCE** 70. **GUARANTEE** 71. **INDENTURE** 72. **CHARTER** 73. **DEED** 74. **WARRANTY** 75. **COVENANT** 76. **ASSURANCE** 77. **GUARANTEE** 78. **INDENTURE** 79. **CHARTER** 80. **DEED** 81. **WARRANTY** 82. **COVENANT** 83. **ASSURANCE** 84. **GUARANTEE** 85. **INDENTURE** 86. **CHARTER** 87. **DEED** 88. **WARRANTY** 89. **COVENANT** 90. **ASSURANCE** 91. **GUARANTEE** 92. **INDENTURE** 93. **CHARTER** 94. **DEED** 95. **WARRANTY** 96. **COVENANT** 97. **ASSURANCE** 98. **GUARANTEE** 99. **INDENTURE** 100. **CHARTER**

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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$$\begin{array}{c} R_1 \\ | \\ R_4 - N^+ - R_2 \\ | \\ R^3 \end{array} X^-$$

(57) Abstract: A composition useful in an area selected from the group consisting of personal care, household surface care and fabric care, which comprises (a) an active agent in quantities sufficient to bring about a desired effect, (b) a deposition and/or duration active agent extending amount of a material or materials of the formula.

COMPOSITION FOR PERSONAL CARE, HOUSEHOLD SURFACE CARE
AND FABRIC CARE COMPRISING MEADOWFORM SEED OIL DERIVATIVE

BACKGROUND OF THE INVENTION

5

Fragrances have been utilized in skin contacting compositions for hundreds of years. Those who use fragrances desire to have an aroma about them that is pleasing to themselves and others in their immediate vicinity. The first criterion of a fragrance in use in a skin contacting composition is that the fragrance be deposited on the skin and stay there for an appropriate time span. Although this can be accomplished relatively easily in "leave on" compositions such as lotions, creams, and the like, it is much more difficult to accomplish when using a rinse off composition using water to remove the composition from the skin after a relatively short contact time with the skin, such as a maximum contact time of about 2 minutes, generally no more than about 90 seconds or about 60 seconds or about 30 seconds. The second criterion is that the fragrance aroma must be releasable from the skin for whatever reason, such as the fragrance vapor pressure, its measure of attachability to the skin, and the like, and at a rate which brings about a significant duration of the aroma at a point detectable above the level of the skin. The ideal fragrance, therefore, is one, which has significant skin substantivity, for purposes of getting it onto the skin, but also manages to have a detectable, desirable aroma above the skin for a significant duration of time. This combination of effects is difficult to achieve with the fragrance per se because the most significant trait of a fragrance is its desirable "aroma" or "scent" not the two variables of concern here. Therefore, a significant amount of time has been put into studying materials, which can improve at least one and preferably two of the above-identified criteria.

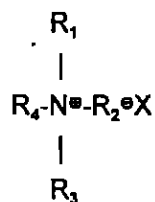
A series of materials has been found which significantly increases the substantivity and duration of fragrance aroma. This effect(s) can be significantly increased when a further family of materials is also present. The effects can be present in both leave-on and rise-off compositions used in contacting the skin. Such rinse-off compositions can additionally have a skin cleansing level of a surfactant or mixture of surfactants. Unless in solid form, a substantial amount, preferably a majority amount of the rinse-off compositions, are aqueous.

The benefit of this family(ies) of material can also be effectively applied to other hydrophobic active agents such as antibacterial agents, silicones, anti-fungal agents, and the like. The technology benefits other systems apart from skin care wherein deposition and duration of effect(s) are also desirable such as household surface care products (sinks, toilets, stove tops, floors and counter-tops), and fabric care products such as detergents and softeners. They can be used for the deposition and duration of fragrances, antibacterial agents, odor controlling agents, and the like.

SUMMARY OF THE INVENTION

In accordance with the invention, there is a composition useful in an area selected from the group consisting of personal care, household surface care, and fabric care, which comprises:

- (a) an active agent in quantities sufficient to bring about a desired effect,
- (b) a deposition and/or duration extending amount of a material or materials of the formula



wherein R_1 , R_2 , R_3 and R_4 are the same or different and are

R_5 wherein R_5 is alkyl of one to four carbon atoms, inclusive;

R_6 wherein R_6 is $\{CH_2CH_2(CH_2)_aO\}_bR_7$ where R_7 is hydrogen or methyl, a is 0 or 1 and b is 1, 2, or 3;

R_8 wherein R_8 is a meadowfoam seed oil or seed oil derivative which has a covalent bond with the nitrogen of the formula;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 is an R_5 ;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_8 ;

5 and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_8 ;

and X is a counterion bearing a negative charge, and

10 (c) a surface compatible carrier.

It has now been found that even more extended deposition and/or duration material, particularly fragrance times, can be achieved with an additional cationic material selected from the group consisting of a cationic
15 polymer, or mixtures thereof..

DETAILED DESCRIPTION OF THE INVENTION

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The usage of component (b) of the invention brings about greater substantivity and duration of time for effectiveness of the fragrance aroma in any composition wherein substantivity and duration of the fragrance aroma are desirable. As disclosed earlier, these compositions are essentially any
25 composition, which has a fragrance wherein the fragrance can be deposited on a surface. Non-limiting examples of these compositions have been provided earlier in this disclosure. Further non-limiting illustrative examples include Hair, clothing, towels, and inanimate surfaces such as floors and counter-tops.

30 As previously noted, other types of active agents are contemplated beyond fragrances. These active agents' substantivity will also be increased through the use of component (b) of the invention

Generally, these compositions are divided into the compositions, which
35 have a relatively lengthy contact time with a surface and those with relatively short contact time prior to rinsing off the surface, usually with water. Generally, a "leave-on" product which is a personal care lotion or cream is left on the skin

for at least about two minutes while a "rinse-off" product is left on the skin for less than about two minutes, preferably no more than about 90, 60, or 30 seconds. Examples of the latter are hand cleansers and body cleansers. The effect of the (b) component is particularly noteworthy with respect to the

5 compositions useful in the personal care area, particularly the skin cleansing, skin care, hair cleansing and hair conditioning, and antiperspirant deodorant product areas. The ability to increase fragrance substantivity and duration of effect in these areas can be very significant both in leave-on and rinse-off

10 compositions. Liquids and gels can be of a viscosity of about 100 to about 10,000 cps or higher. Emollients can be present for skin feel, moisturization and the like. Illustrative examples of such emollients include long chain alkyl or alkenyl fatty acids, fatty acid esters, short chain acids with long chain alcohols such as myristyl propionate, mineral oil, petrolatum, silicone, and the like. Gelling agents such as silicone elastomer (e.g., Dow 9040), silicone polyamides,

15 dibenzylidene sorbitol, xanthan gum and carboxy methylcellulose can be employed. As stated previously, the composition, particularly the liquid and gel, need not be effective for cleansing a surface but can be used to condition a surface, such as for example skin or hair, through conditioning and/or moisturizing. Hair conditioners, skin lotions and creams can be employed. In

20 these skin lotions and creams the compositions can have emulsifying surfactants in small levels because of their emulsifying properties with the various oily materials that make the composition a "lotion" or "cream."

Of particular significance are compositions wherein there is a surfactant

25 therein and a cleansing of a surface takes effect, for example skin, hard surface, or clothing. In each of these circumstances, the compatible carrier component (c) is usually water or includes water. Some of the carrier include water but are solids such as "soap" bars for cleansing skin and pellets or granules for washing clothing.

30 Cleansing surfactants which can be employed include: Soap, a long chain alkyl or alkenyl, branched or normal carboxylic acid salt such as sodium, potassium, ammonium or substituted ammonium salt, can be present in the composition as an example of an anionic surfactant. Exemplary of long chain

35 alkyl or alkenyl are from about 8 to about 22 carbon atoms in length, specifically about 10 to about 20 carbon atoms in length, more specifically alkyl and most specifically normal, or normal with little branching. Small quantities of olefinic

bond(s) may be present in the predominantly alkyl sections, particularly if the source of the "alkyl" group is obtained from a natural product such as tallow, coconut oil and the like. Because of its potential harshness soap is not a preferred surfactant and can be omitted from the composition.

5

Other cleansing surfactants can be present in the composition as well. Examples of such surfactants are the anionic, amphoteric, nonionic and cationic surfactants. Examples of anionic surfactants include but are not limited to soaps, alkyl sulfates, anionic acyl sarcosinates, methyl acyl taurates, N-acyl

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glutamates, acyl isethionates, alkyl sulfosuccinates, alkyl phosphate esters, ethoxylated alkyl phosphate esters, trideceth sulfates, protein condensates, ethoxylated alkyl sulfates and the like.

Alkyl chains for these surfactants are C_8-C_{22} , preferably $C_{10}-C_{18}$, more

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preferably $C_{12}-C_{14}$.

Anionic non-soap surfactants can be exemplified by the alkali metal salts of organic sulfate having in their molecular structure an alkyl radical containing from about 8 to about 22 carbon atoms and a sulfonic acid or sulfuric acid ester radical (included in the term alkyl is the alkyl portion of higher acyl radicals). Preferred are the sodium, ammonium, potassium or triethanolamine alkyl sulfates, especially those obtained by sulfating the higher alcohols (C_8-C_{18} carbon atoms), sodium coconut oil fatty acid monoglyceride sulfates and sulfonates; sodium or potassium salts of sulfuric acid esters of the reaction product of 1 mole of a higher fatty alcohol (e.g., tallow or coconut oil alcohols) and 1 to 12 moles of ethylene oxide; sodium or potassium salts of alkyl phenol ethylene oxide ether sulfate with 1 to 10 units of ethylene oxide per molecule and in which the alkyl radicals contain from 8 to 12 carbon atoms, sodium alkyl glyceryl ether sulfonates; the reaction product of fatty acids having from 10 to 22 carbon atoms esterified with isethionic acid and neutralized with sodium hydroxide; water soluble salts of condensation products of fatty acids with sarcosine; and others known in the art.

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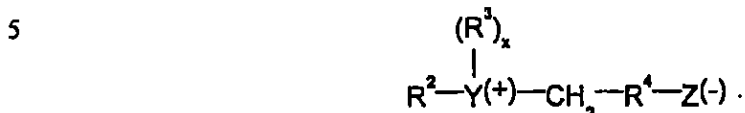
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Zwitterionic surfactants can be exemplified by those which can be broadly described as derivatives of aliphatic quaternary ammonium, phosphonium, and sulfonium compounds, in which the aliphatic radicals can be straight chain or

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branched and wherein one of the aliphatic substituents contains from about 8 to 18 carbon atoms and one contains an anionic water-solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. A general formula for these compounds is:



10 wherein R^2 contains an alkyl, alkenyl, or hydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety; Y is selected from the group consisting of nitrogen, phosphorus, and sulfur atoms; R^3 is an alkyl or monohydroxyalkyl group containing 1 to about 3 carbon atoms; X is 1 when Y is a sulfur atom and 2 when Y is a nitrogen or phosphorus atom, R^4 is an alkylene or hydroxyalkylene of from 15 0 to about 4 carbon atoms and Z is a radical selected from the group consisting of carboxylate, sulfonate, sulfate, phosphonate, and phosphate groups.

Examples include: 4-[N,N-di(2-hydroxyethyl)-N-octadecylammonio]-butane-1-carboxylate; 5-[S-3-hydroxypropyl-S-hexadecylsulfonio]-3-
20 hydroxypentane-1-sulfate; 3-[P,P-diethyl-P 3,6,9 trioxatetradecyl-phosphonio]-2-hydroxypropane-1-phosphate; 3-[N,N-dipropyl-N-3 dodecoxy-2-hydroxypropylammonio]-propane-1-phosphonate; 3-(N,N-di-methyl-N-hexadecylammonio) propane-1-sulfonate; 3-(N,N-dimethyl-N-hexadecylammonio)-2-hydroxypropane-1-sulfonate; 4-(N,N-di(2-hydroxyethyl)-N-
25 (2 hydroxydodecyl) ammonio]-butane-1-carboxylate; 3-[S-ethyl-S-(3-dodecoxy-2-hydroxypropyl)sulfonio]-propane-1-phosphate; 3-(P,P-dimethyl-P-dodecylphosphonio)-propane-1-phosphonate; and 5-[N,N-di(3-hydroxypropyl)-N-hexadecylammonio]-2-hydroxy-pentane-1-sulfate.

30 Examples of amphoteric surfactants which can be used in the compositions of the present invention are those which can be broadly described as derivatives of aliphatic secondary and tertiary amines in which the aliphatic radical can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to about 18 carbon atoms and one contains
35 an anionic water solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. Examples of compounds falling within this definition are sodium 3-dodecylaminopropionate, sodium 3-dodecylaminopropane sulfonate,

N-alkyltaurines, such as the one prepared by reacting dodecylamine with sodium isethionate according to the teaching of U.S. Patent No. 2,658,072, N-higher alkyl aspartic acids, such as those produced according to the teaching of U.S. Patent No. 2,438,091, and the products sold under the trade name "Miranol" and
5 described in U.S. Patent No. 2,528,378. Other amphotericics such as betaines are also useful in the present composition.

Examples of betaines useful herein include: the high alkyl betaines such as coco dimethyl carboxymethyl betaine, lauryl dimethyl carboxy-methyl betaine,
10 lauryl dimethyl alpha-carboxyethyl betaine, cetyl dimethyl carboxymethyl betaine, lauryl bis-(2-hydroxyethyl)carboxy methyl betaine, stearyl bis-(2-hydroxypropyl) carboxymethyl betaine, oleyl dimethyl gamma-carboxypropyl betaine, lauryl bis-(2-hydroxypropyl) alpha-carboxyethyl betaine, etc. The sulfobetaines may be represented by coco dimethyl sulfopropyl betaine, stearyl dimethyl sulfopropyl
15 betaine, amido betaines, amidosulfobetaines, and the like.

Many cationic surfactants are known to the art. By way of example, the following may be mentioned:

- stearyldimethylbenzyl ammonium chloride;
- 20 - dodecyltrimethylammonium chloride;
- nonylbenzylethyldimethyl ammonium nitrate;
- tetradecylpyridinium bromide;
- laurylpyridinium chloride;
- cetylpyridinium chloride
- 25 - laurylpyridinium chloride;
- laurylisoquinolium bromide;
- ditallow(Hydrogenated)dimethyl ammonium chloride;
- dilauryldimethyl ammonium chloride; and
- stearalkonium chloride.

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Additional cationic surfactants are disclosed in USP 4,303,543 see column 4, lines 58 and column 5, lines 1-42, incorporated herein by references. Also see CTFA Cosmetic Ingredient Dictionary, 6th Edition 1995, pages 795-799 for various long chain alkyl cationic surfactants; incorporated herein by
35 references.

Nonionic surfactants include those which can be broadly defined as compounds produced by the condensation of alkylene oxide groups (hydrophilic in nature) with an organic hydrophobic compound, which may be aliphatic or alkyl aromatic in nature. Examples of preferred classes of nonionic surfactants are:

1. The polyethylene oxide condensates of alkyl phenols, e.g., the condensation products of alkyl phenols having an alkyl group containing from about 6 to 12 carbon atoms in either a straight chain or branched chain configuration, with ethylene oxide, the said ethylene oxide being present in amounts equal to 10 to 60 moles of ethylene oxide per mole of alkyl phenol. The alkyl substituent in such compounds may be derived from polymerized propylene, diisobutylene, octane, or nonane, for example.

2. Those derived from the condensation of ethylene oxide with the product resulting from the reaction of propylene oxide and ethylene diamine products which may be varied in composition depending upon the balance between the hydrophobic and hydrophilic elements which is desired. For example, compounds containing from about 40% to about 80% polyoxyethylene by weight and having a molecular weight of from about 5,000 to about 11,000 resulting from the reaction of ethylene oxide groups with a hydrophobic base constituted of the reaction product of ethylene diamine and excess propylene oxide, said base having a molecular weight of the order of 2,500 to 3,000, are satisfactory.

3. The condensation product of aliphatic alcohols having from 8 to 18 carbon atoms, in either straight chain or branched chain configuration with ethylene oxide, e.g., a coconut alcohol ethylene oxide condensate having from 10 to 30 moles of ethylene oxide per mole of coconut alcohol, the coconut alcohol fraction having from 10 to 14 carbon atoms. Other ethylene oxide condensation products are ethoxylated fatty acid esters of polyhydric alcohols (e.g., Tween 20-polyoxyethylene (20) sorbitan monolaurate).

4. Long chain tertiary amine oxides corresponding to the following general formula:



wherein R₁ contains an alkyl, alkenyl or monohydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties, and from 0 to 1 glyceryl moiety, and, R₂ and R₃ contain from 1 to about 3 carbon atoms and from 0 to about 1 hydroxy group, e.g., methyl, ethyl, propyl, hydroxy ethyl, or hydroxy propyl radicals. The arrow in the formula is a conventional representation of a semipolar bond. Examples of amine oxides suitable for use in this invention include dimethyldodecylamine oxide, oleyl-di(2-hydroxyethyl) amine oxide, dimethyloctylamine oxide, dimethyldecylamine oxide, dimethyl-tetradecylamine oxide, 3,6,9 trioxaheptadecyldiethylamine oxide, di(2-hydroxyethyl)-tetradecylamine oxide, 2-dodecoxyethyldimethylamine oxide, 3-dodecoxy-2-hydroxypropyldi(3-hydroxypropyl)amine oxide, dimethyl-hexadecylamine oxide.

5. Long chain tertiary phosphine oxides corresponding to the following general formula:



wherein R contains an alkyl, alkenyl or monohydroxyalkyl radical ranging from 8 to 20 carbon atoms in chain length, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety and R' and R'' are each alkyl or monohydroxyalkyl groups containing from 1 to 3 carbon atoms. The arrow in the formula is a conventional representation of a semipolar bond. Examples of suitable phosphine oxides are: dodecyldimethylphosphine oxide, tetradecylmethylethylphosphine oxide, 3,6,9-trioxaoctadecyldimethylphosphine oxide, cetyldimethylphosphine oxide, 3-dodecoxy-2-hydroxypropyldi(2-hydroxyethyl) phosphine oxide, stearyldimethylphosphine oxide, cetylethyl propylphosphine oxide, oleyldiethylphosphine oxide, dodecyldiethylphosphine oxide, tetradecyldiethylphosphine oxide, dodecyldipropylphosphine oxide, dodecyldi(hydroxymethyl)phosphine oxide, dodecyldi(2-hydroxyethyl)phosphine oxide, tetradecylmethyl-2-hydroxypropylphosphine oxide, oleyldimethylphosphine oxide, 2-hydroxydodecyldimethylphosphine oxide.

6. Long chain dialkyl sulfoxides containing one short chain alkyl or hydroxy alkyl radical of 1 to about 3 carbon atoms (usually methyl) and one long hydrophobic chain which contain alkyl, alkenyl, hydroxy alkyl, or keto alkyl radicals containing from about 8 to about 20 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety. Examples include:

octadecyl methyl sulfoxide, 2-ketotridecyl methyl sulfoxide, 3,6,9-trioxaoctadecyl 2-hydroxyethyl sulfoxide, dodecyl methyl sulfoxide, oleyl 3-hydroxypropyl sulfoxide, tetradecyl methyl sulfoxide, 3-methoxytridecylmethyl sulfoxide, 3-hydroxytridecyl methyl sulfoxide, 3-hydroxy-4-dodecoxybutyl methyl sulfoxide.

5

7. Alkylated polyglycosides wherein the alkyl group is from about 8 to about 20 carbon atoms, preferably about 10 to about 18 carbon atoms and the degree of polymerization of the glycoside is from about 1 to about 3, preferably about 1.3 to about 2.0.

10

Fragrances include any materials which provide an aroma when on a surface. These are generally due to the volatile perfume ingredients therein.

The volatile perfume ingredients employed in the personal cleansing, hard surface cleansing and fabric cleansing compositions of the present invention are the conventional ones known in the art. Selection of the perfume ingredients used in the liquid personal cleansing shower gel compositions of the present invention can be based on the desired fragrance characteristics for the composition.

20

Suitable perfume compounds and compositions can be found in the art including U.S. Pat. Nos.: 4,145,184, Brain and Cummins, issued Mar. 20, 1979; 4,209,417, Whyte, issued Jun. 24, 1980; 4,515,705, Moeddel, issued May 7, 1985; and 4,152,272, Young, issued May 1, 1979, all of said patents being incorporated herein by reference.

25

Perfumes can be classified according to their volatility. For purposes of the present invention, "volatile" perfumes are those having a boiling point of less than about 500°C. The highly volatile, low boiling, perfume ingredients typically have boiling points of about 250°C. or lower. The moderately volatile perfume ingredients are those having boiling points of from about 250°C. to about 300°C. The less volatile, high boiling, perfume ingredients are those having boiling points of about from about 300°C. to about 500°C. Many of the perfume ingredients as discussed hereinafter, along with their odor and/or flavor characters, and their physical and chemical properties, such as boiling point and molecular weight, are given in "Perfume and Flavor Chemicals (Aroma

30

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Chemicals)," Steffen Arctander, published by the author, 1969, incorporated herein by reference. It is preferred that the products herein particularly the liquid or gel personal cleansing products herein contain, as measured by the total fragrance, at least about 5%, more preferably about 25%, and most preferably at least about 50% of highly volatile perfume ingredients having a boiling point of 250°C. or lower.

Examples of the highly volatile, low boiling, perfume ingredients are: anethole, benzaldehyde, benzyl acetate, benzyl alcohol, benzyl formate, isobornyl acetate, camphene, cis-citral (neral), citronellal, citronellol, citronellyl acetate, para-cymene, dical, dihyrolinalool, dihydromyrcenol, dimethyl phenyl carbinol, eucalyptol, geranial, geraniol, geranyl acetate, geranyl nitrile, cis-3-hexenyl acetate, hydroxycitronellal, di-limonene, linalool, linalool oxide linalyl acetate, linalyl propionate, methyl anthranilate, alpha-methyl ionone, methyl nonyl acetaldehyde, methyl phenyl carbonyl acetate, laevomenthyl acetate, menthone, iso-menthone, myrcene, myrcenyl acetate, myrcenol, nerol, neryl acetate, nonyl acetate, phenyl ethyl alcohol, alpha-pinene, beta-pinene, gamma-terpinene, alpha-terpineol, beta-terpineol, terpinyl acetate, and vertenex (para-tertiary-butyl cyclohexyl acetate). Some natural oils also contain large percentages of highly volatile perfume ingredients. For example, lavandin contains as major components: linalool; linalyl acetate; geraniol; and citronellol. Lemon oil and orange terpenes both contain about 95% of d-limonene.

Examples of moderately volatile perfume ingredients are: amyl cinnamic aldehyde, iso-amyl salicylate, beta-caryophyllene, cedrene, cinnamic alcohol, coumarin, dimethyl benzyl carbonyl acetate, ethyl vanillin, eugenol, iso-eugenol, flor acetate, heliotropine, 3-cis-hexenyl salicylate, hexyl salicylate, lilial (para-tertiarybutyl-alpha-methyl hydrocinnamic aldehyde), gamma-methyl ionone, nerolidol, patchouli alcohol, phenyl hexanol, beta-selicarb, trichloromethyl phenyl carbonyl acetate, triethyl citrate, vanillin, and veratraldehyde. Cedarwood terpenes are composed mainly of alpha-cedrene, beta-cedrene, and other C₁₅H₂₄ sesquiterpenes.

Examples of the less volatile, high boiling, perfume ingredients are: benzophenone, benzyl salicylate, ethylene brassylate, galaxolide (1,3,4,6,7,8-hexahydro-4, 6,6,7,8,8-hexamethyl-cyclopenta-gama-2-benzopyran) hexyl cinnamic aldehyde, lyral (4-(4-hydroxy-4-methyl pentyl)-3-cyclohexene-10-

carboxaldehyde), methyl cedrylone, methyl dihydro jasmonate, methyl-beta-naphthyl ketone, musk indanone, musk ketone, musk tibetene, and phenylethyl phenyl acetate.

5 The material that enhances the substantivity and duration of the fragrance is meadowfoam seed oil or any derivative thereof that is capable of forming a covalent bond with the nitrogen of component (b) of the formula. Meadowfoam seed oil and its derivatives are particularly able in promoting deposition. The meadowfoam seed oil is commonly found in native state in *Limnanthes Alba* as
10 the triglyceride with fatty acids being a mix of alkenoic fatty acids, mostly C_{20} , i.e., 5-eicosenoic acid, others being C_{21} i.e., 5,13-heneicosenoic acid while still others being a mix of C_{22} , i.e., 5-docosenoic acid and C_{22} ; i.e. 13-docosenoic acid.

15 Various issued patents have disclosed the meadowfoam seed oil constituents and its derivatives in a more detailed manner, e.g. U.S. Patent 5,646,321; 5,741,915; 5,741,916; and 5,741,919 incorporated by reference wherein the following structure and quantities are mentioned.

20 The fatty distribution of the oil ranges from 20 to 22 carbons and has unsaturation in specific locations. The oil contains 97% by weight higher unsaturated alkyl groups. Typically, meadowfoam oil is believed to contain 60-65% of a twenty carbon terminal mono-carboxy acid having one unsaturation between carbon 5 and 6. Additionally, it contains 12-20% of a twenty two carbon
25 terminal mono-carboxy acid having one unsaturation between carbon 5 and 6, and 15-28% of a twenty two carbon terminal mono-carboxy acid having one unsaturation between carbon 5 and 6, an another between carbon 13 and 14. These are shown below structurally.

30 60-65% by weight $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{13}-\text{CH}_3$

12-20% by weight a mixture of
 $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{15}-\text{CH}_3$
and

$\text{HOOC}-(\text{CH}_2)_{11}-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{CH}_3$
and

35 15-28% by weight

$\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_6-\text{CH}=\text{CH}-(\text{CH}_2)_6-\text{CH}_3$

Meadowfoam seed oil can also be present in its glyceride form.

18

Derivatives of the meadowfoam oil carboxylic acids can be used in the compositions of this invention as well as the long chain carboxylic acids depicted above. These involve performing standard chemistry on the carboxy group while

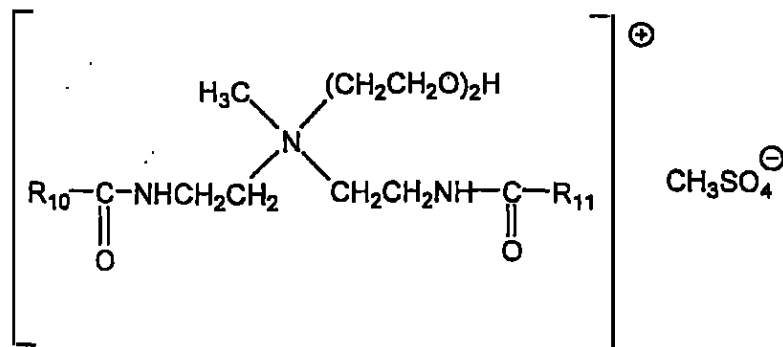
5 maintaining the unsaturation untouched or at least essentially untouched. Examples of such derivatives are the esters, for example, as disclosed in U.S. Patent 5,741,919 and 5,646,321; the alkanolamides, for examples, as disclosed in 5,741,916 and the betaines derivatives, for example, as disclosed in 5,741,915. . Additionally, a derivative of meadowfoam seed oil includes

10 materials wherein the normal distribution of the meadowfoam oil can be altered to accentuate the quantity of one or more of the unsaturated alkyl monocarboxylic acids. For example, the total concentration of erucic acid, a C₂₂ unsaturated monocarboxylic acid can be enriched to 80 or more wt. percent of the meadowfoam oil composition. These quaternary ammonium materials based

15 on meadowfoam oils are available from The Fanning Corporation, 2450 West Hubbard Street, Chicago, Illinois 60612. Further exemplification is an alkenyl grouping, which can be readily prepared. All these materials can be covalently bonded to the quaternary nitrogen atom of component (b). A specific example of a component (b) material is available from Fanning as Meadowquat®HG. Its

20 structure is

19



- With reference to schematic formula of component (b), X is methosulfate, R₁ is methyl, R₂ is ethoxy (wherein a is zero, b is 2, and R₈ is hydrogen, and R₁₀ and R₁₁ are the same and are the long chain hydrocarbon substituent of a meadowfoam seed oil which is bonded to an amido ethyl group wherein the last carbon at the ethyl is attached to the quaternary nitrogen. This molecule marketed by Fanning is known Meadowquat®HG also known in the INCI nomenclature as PEG-2 dimeadowfoam amido ethyl imonium methosulfate,

- The meadowfoam oil carboxylic acids or derivatives thereof can be used in the composition at deposition enhancing quantities, generally a minimum of about 0.25 wt%, 0.5 wt% or about 1.0 or 2.0 wt%. A maximum quantity is generally no higher than about 6 wt%, or preferably about 5, 4 or 3 wt% of the composition.

- The counterion of the quaternary ammonium material is any anionic substance such as chloride, nitrate, sulfate, phosphate, methosulfate and the like.

- The effectiveness of the quaternary ammonium material in increasing substantivity and duration of a fragrance is significantly enhanced by the presence of a second cationic material, which is a cationic polymer. Examples of such cationic materials include the various polyquats known to the art which include but are not limited to Polyquaternium 2 (a polyelectrolyte formed from quaternized ioenes), Polyquaternium 4 (hydroxycellulose diallyldimethyl ammonium chloride), Polyquaternium 5 (acrylamide/β-

methacryloxyethyltrimethyl ammonium methosulfate), Polyquaternium 6 and 7 (homopolymer of dimethyl diallyl ammonium chloride and the copolymer of dimethyl diallyl ammonium chloride with acrylamide), Polyquaternium 8 (methyl and stearyl dimethylaminoethyl methacrylate quaternized with dimethylsulfate),

5 Polyquaternium 10 (1-hydroxypropyl trimethyl ammonium chloride ethers of hydroxyethyl cellulose), Polyquaternium 11 (quaternized PVP and dimethylaminoethyl methacrylate), Polyquaternium 16 (copolymer of PVP/methyl vinylimidazoline), Polyquaternium 17 and 18 (polyelectrolyte formed from quaternized ioenes), Polyquaternium 19 (a vinyl alcohol hydroxypropyl amine

10 salt), Polyquaternium 24 (polymeric quaternized ammonium salt of hydroxymethylcellulose and lauryl dimethyl ammonium substituted epoxide), Polyquaternium 27 (polyelectrolyte formed from quaternized ioenes). Other cationic materials include Polycare 133 (a polymethacrylamideopropyl trimonium chloride from Rhone-Poulenc). These materials are known to be the

15 type that neutralizes a negative charge, such as on skin.

The physical form of the composition can be a solid, liquid or gel. A solid can illustratively be in the form of powder, granule, bar, precipitated on a carrier such as a fabric softener backing and the like.

20

When employed in a composition of the invention that requires a cleansing action on a surface, the amount of surfactant or mixture of surfactants is a cleansing effective amount. Depending upon the surfaces to be cleansed and the physical form of the composition, a minimum of about 1,2,3,4, 5 or 6 wt.

25 % of surfactant can be employed in the liquid or gel composition. Generally, for liquids or gels the maximum amount of surfactants is about 5 to 40 wt. %, preferably about 25, 20, or 15 wt. % of the composition. For solids, such as bars, granules and the like, a higher maximum and minimum of surfactant is employed. Generally, a minimum of about 40 wt. % surfactant in the

30 composition is employed, preferably about 45, 50, 55, or 60 wt. %. The maximum amount of surfactant employed in the solid is generally no more than about 90 wt. %, preferably no more than about 85, 80, or 75 wt. % of the composition. The amount of water in a cleansing liquid or gel is a minimum of about 40 wt. % of the composition, preferably at least about 50, 60 or 70 wt. %.

35 For a solid such as a cleansing bar, a minimum of about 5 wt. % of the composition, desirably about 7, 10 or 15 wt. % is water.

21

The total amount of volatile perfume present is enough to provide an aroma. Generally, a minimum of about 0.01 preferably 0.05, 0.1, 0.2, or 0.4 wt. % of the composition can be employed. Generally, no more than about 3 wt. %, preferably about 2, 1 or 0.5 wt. % of the composition is employed.

5

The additional cationic deposition material when it is present can be a minimum of about 0.05, 0.1, or 0.2 wt. % of the composition. The maximum is generally no more than about 1.0 or even less about 0.8, 0.6, or 0.5 wt. % of the composition.

10

The compositions of the invention are prepared by standard methods generally known in the art. In order to ensure proper stability and performance of the composition with respect to deposition and/or duration of the agent, specifically fragrance, it is preferred to add the component (b) material to the composition prior to the fragrance or other active agent and the cationic polymer, assuming the cationic polymer is used, which is preferable.

When using the component (b) material enhanced deposition on a surface and/or duration of activity of the fragrance or other active agent is observed. With the presence of the additional cationic polymer, the results can be even more pronounced. Dramatic increases in deposition (substantivity) to the surface by the active agent such as a fragrance, antimicrobial, anti-fungal and emollients can be obtained and/or duration of activity.

The results are assessed using an in vitro test, which has been validated by trained test human panels for the fragrance testing.

Analytical Methodology

The in vitro methodology employs the use of a wool (worsted fabric) swatch that is washed in the test product solution, rinsed in a 100-ppm total hardness ($\text{Ca}^{+2}/\text{Mg}^{+2}$) water and then blotted dry with a paper towel. The swatch is then transferred to a headspace-sampling flask that is maintained at a constant temperature of 32°C., which is recognized as average skin temperature. A tube containing a polymer adsorbent (Tenax™ TA (2,6-diphenylene oxide polymer) 60/80 mesh) is used to capture volatile fragrance

materials exiting the sampling flask. The wool swatch is purged with 99.99% pure Nitrogen at a flow rate of 50mL/min which is equivalent to a total volume of 3 liters. At the end of one hour, the purge flow is stopped and the tube is removed and capped. A fresh, pre-conditioned tube is reconnected to the sample flask and the purging procedure is repeated until five tubes (over five hours) are collected. The tubes are then subject to thermal desorption using an Automated Thermal Desorber (ATD) which is interfaced to a GC column (inside the GC oven) via a fused silica transfer line. Fragrance components are separated by the GC column and detected on an Ion Trap Mass Spectrometer and peak areas are integrated by the controlling computer system. Peak area data for each sample (or time point) are converted to ASCII files and process to yield a table with all fragrance components collected over the five hour period. Only the peak areas of fragrance components are totaled (summed) for each sample time and plotted against time.

15

Validation studies with human test panels using a fragrance(s) in bar soap and shower gel confirmed the validity of the in vitro test method.

Below are experiments showing the same formulations with and without specific quantities of Meadowquat HG® (PEG-2 Dimeadow foam amido ethylmonium Methosulfate) (CTFA name) available from Fanning Corporation. An additional sample had this meadowfoam seed oil derivative and 0.2 wt. % of the composition of the cationic deposition polymer Polyquat 7. The surfactant containing composition (shower gel base) used in the experiments below is as follows:

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AB
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Table 1
Shower Gel Base

Component	wt/wt%
Sodium laureth sulfate	8.20
Cocamidopropyl betaine	3.00
Alkyl polyglucoside	1.12
Fragrance	1.00
Preservatives	0.30
Citric acid	0.06
Water, salt and cationic material	Q.S
Total	100.00

5

Experiments:

Control	0% Meadowquat HG/0% Polyquaternium-7
Exp. 1	1% Meadowquat HG/0% Polyquaternium-7
Exp. 2	2% Meadowquat HG/0% Polyquaternium-7
Exp. 3	3% Meadowquat HG/0% Polyquaternium-7
Exp. 4	2% Meadowquat HG/0.20% Polyquaternium-7 (Non preferred order of addition)
Exp. 5	1% Meadowquat HG/0.20% Polyquaternium-7 (Preferred order of addition).

10

Results:

The base formula given above was prepared by adding the anionic, amphoteric and nonionic surfactants to water, which were mixed until clear. Preservatives were added until clear then the pH of the preparation was adjusted to between 5.0 and 6.5 using aqueous citric acid. In the case of the control formula, the fragrance was then added and mixed until clear, after which the formula viscosity was adjusted to between 4000 and 10000 cps (centipoise)

15

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using anhydrous sodium chloride. The formula was finally Q.S with water to 100 wt/wt%

5 Experimental formulas 1-3 were prepared as above except the cationic material (Meadowquat HG) and fragrance were added together and allowed to mix until clear. The viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

10 Experimental formula 4 was prepared as above for experimental formulas 1-3 except the combined cationic material (Polyquaternium 7/Meadowquat HG) and fragrance were added together and allowed to mix until clear. The viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

15 Experimental formula 5 was prepared as in the shower gel base, except the cationic materials and fragrance were added in a specific order and allowed to mix until clear. First the Meadowquat HG is added to the shower gel base and mixed until the product is completely clear. This process was repeated for the fragrance and then the Polyquaternium 7. It is important that the Meadowquat HG be added prior to the fragrance and Polyquaternium 7 so as to
20 achieve enhanced phase stability. After addition of cationic material and fragrance, the viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

25 The fragrance longevity measured for the experimental formulas 2-5 is put forth in Table 1. Here the percent increase in total peak area for an experimental formula (relative to the control formula) has been calculated.

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TABLE 2

5

% Increase in fragrance intensity measured
as integrated peak areas for experimental
formulas versus control formula

Experimental Formula	1 hr	2 hr	3 hr	4 hr	5hr
Exp. 1 (1% Meadowquat HG/ 0% Polyquaternium-7)	29	160	96	102	90
Exp. 2 (2% Meadowquat HG/ 0% Polyquaternium-7)	95	235	266	312	307
Exp. 3 (3% Meadowquat HG/ 0% Polyquaternium-7)	188	278	187	164	193
Exp. 4 (2% Meadowquat HG/ 0.20% Polyquaternium-7)	144	536	2647	4100	3887
Exp. 5 (1% Meadowquat HG/0.20% Polyquaternium-7	-13	190	344	599	526

10

Addition of Meadowquat HG to the base formula shows an increase in fragrance intensity over time, relative to the control formula (Table 2). The addition of a second cationic material, Polyquaternium 7, to the 2% Meadowquat
15 HG formula (Experimental formula 4) provides a significant percent increase in fragrance intensity compared to Experimental formula 3 (without Polyquaternium 7). Thermal and freeze/thaw stability of experimental formulas 1-4 showed some flocculation after three to six weeks at 120°F. and four weeks after freeze/thaw cycling at 32°F. to 72°F.

20

Experimental formula 5 was prepared with a lower level of cationic material (1% Meadowquat HG /0.2% Polyquaternium 7) with a different process of preparation, the preferred process as noted above. Experimental formula 5 was found to be stable after 13 weeks at 120°F and after 13 weeks of
25 freeze/thaw cycling from 32°F. to 72°F. The percent increase in fragrance intensity for this formula ranged from 190% at 2 hours to 600% after 4 hours.

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5 Illustrated below are various other liquid formulations wherein an active agent such as a antimicrobial or fragrance is present with a meadowfoam seed oil quaternary material and preferably a cationic deposition polymer to bring about increased deposition and/or duration of activity of the active agent.

Table 3
Liquid Hand Soap

10

Ingredient	Wt/Wt%
Water	74.85
PEG Glyceryl monococoate	1.5
Sodium Laureth Sulfate (2 EO)	5.37
Sodium Lauryl Sulfate	10.00
Cocoamidopropyl Betaine	5.00
Alkyl polyglucoside	1.13
Triclosan	0.15
Polyquaternium-7	0.2
Meadowquat HG (Fanning)	1.0
Fragrance	1.0
DMDM Hydantoin	0.4
Citric Acid –anhydrous	0.1

27 27

Table 4
Liquid Body Wash

5

Ingredient	Wt/Wt%
Water	83.14
Sodium Laureth Sulfate	8.20
Cocamidopropyl Betaine	3.00
Sodium Chloride	1.44
Alkyl Polyglucoside	1.13
Meadowquat HG	1.00
Fragrance	1.00
Citric Acid	0.60
Preservatives	0.29
Polyquaternium 7	0.20

10

Table 5
Liquid Detergent

Ingredient	Wt/Wt%
Water	70.98
Dodecylbenzene Sulfonate	12.36
Ethoxylated C ₁₂ -C ₁₄ Alcohol	9.50
Silicate	4.56
Meadowquat HG	1.00
Preservative	0.77
Perfume	0.50
Polyquaternium 7	0.20
Color	0.13

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Table 6
Dish Washing Liquid

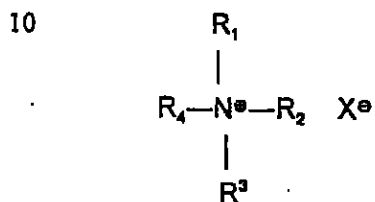
Ingredient	wt/wt%
Water	57.89
Ethoxylated alcohol sulfate sodium salt	25.86
Dodecylbenzene sulfonate magnesium salt	6.30
Alkyl Polyglucoside	3.00
Laurylmonomethyl ethanolamine/ Sodium Xylene Sulfonate	2.56
Sodium Chloride	1.99
Meadowquat HG	1.00
Mageslum Sulfate	0.50
Color	0.30
Perfume	0.25
Polyquaternium-7	0.20
Preservative	0.153

10

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CLAIMS

1. A composition useful in an area selected from the group consisting of
 5 personal care, household surface care and fabric care, which comprises
 (a) an active agent in quantities sufficient to bring about a desired effect,
 (b) a deposition and/or duration active agent extending amount of a
 material or materials of the formula.



wherein R_1 , R_2 , R_3 and R_4 are the same or different and are R_5 wherein R_5 is alkyl of one to four carbon atoms, inclusive;

20 R_6 wherein R_6 is $(CH_2CH_2(CH_2)_aO)_bR_7$ where R_7 is hydrogen or methyl, a is 0 or 1 and b is 1, 2, or 3;

R_8 wherein R_8 is a meadowfoam seed oil or seed oil derivative which has a covalent bond with the nitrogen of the formula;

25 and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 is an R_5 ;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_6 ;

30 and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_8 ;

and X is a counterion bearing a negative charge, and
 35 a surface compatible carrier.

30

2. The composition in accordance with claim 1 wherein the area is personal care.
3. The composition in accordance with claim 1 wherein the area is household surface care.
- 5 4. The composition in accordance with claim 1 wherein the area is fabric care.
5. The composition in accordance with claim 2 wherein the active agent is a fragrance.
6. The composition in accordance with claim 3 wherein the active agent is a fragrance.
- 10 7. The composition in accordance with claim 4 wherein the active agent is a fragrance.
8. The composition in accordance with claim 5 wherein a cleansing amount of a surfactant or mixture of surfactant is present.
- 15 9. The composition in accordance with claim 8 wherein the composition is a solid.
10. The composition in accordance with claim 8 wherein the composition is a liquid or gel.
11. The composition in accordance with claim 9 wherein about 0.25 to about 4.0 wt. % of the composition is component (b).
- 20 12. The composition in accordance with claim 10 wherein about 0.25 to about 4.0 wt. % of a composition is component (b).
13. The composition in accordance with claim 11 wherein additionally present is a deposition effective amount of a cationic polymer, mixtures of polymer.
- 25 14. The composition in accordance with claim 12 wherein additionally present is a deposition effective amount of a cationic polymer, mixtures of polymer.
15. The composition in accordance with claim 13 wherein from 0.01 to about 1.0 wt. % of the composition is the cationic polymer, or mixtures of polymer.
- 30 16. The composition in accordance with claim 14 wherein from 0.01 to about 1.0 wt. % of the composition is the cationic polymer, or mixtures of polymer.

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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US 03/36967

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K7/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Meadowquat TM HG" FANCOR SPECIFICATIONS, 'Online! 15 April 2001 (2001-04-15), XP002277360 Retrieved from the Internet: <URL:http://www.archive.org/web/2001....com/specs/specmeadowquathg.htm> 'retrieved on 2004-04-20! the whole document ---	1-16
Y	US 6 136 330 A (NABI ZEENAT F ET AL) 24 October 2000 (2000-10-24) column 6, line 23 -column 7, line 30; claims 1-20 ---	1-16
Y	US 6 383 232 B1 (O'LENICK JR ANTHONY J ET AL) 7 May 2002 (2002-05-07) column 1, line 34-56 ---	1-16
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (see specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US 03/36967A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K7/48

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Meadowquat TM HG" FANCOR SPECIFICATIONS, 'Online! 15 April 2001 (2001-04-15), XP002277360 Retrieved from the Internet: <URL:http://www.archive.org/web/2001....co m/specs/specmeadowquathg.htm> 'retrieved on 2004-04-20! the whole document	1-16
Y	US 6 136 330 A (NABI ZEENAT F ET AL) 24 October 2000 (2000-10-24) column 6, line 23 -column 7, line 30; claims 1-20	1-16
Y	US 6 383 232 B1 (O'LENICK JR ANTHONY J ET AL) 7 May 2002 (2002-05-07) column 1, line 34-56	1-16
-/--		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 03/36967

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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(84) Estados Designados (regional): patente ARIPO (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Patente Euroasiática (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Patente europea (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), Patente OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaraciones bajo la Regla 4.17:

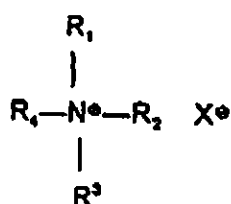
- en cuanto al derecho del solicitante para solicitar y que le se conceda una patente (Regla 4.17(iii)) para todas las designaciones.
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Para códigos de dos letras y otras abreviaciones, referirse a las "Notas de guía sobre Códigos y Abreviaturas" que aparecen al comienzo de cada edición de la Gaceta del PCT

(54) Título: COMPOSICION PARA EL CUIDADO PERSONAL, CUIDADO DE SUPERFICIES DEL HOGAR Y CUIDADO DE TELAS QUE COMPRENDE UN DERIVADO DE ACEITE DE SEMILLA DE MEADOWFOAM (LIMNANTHES ALBA)



57) Resumen: Una composición útil en un área seleccionada del grupo que consiste de cuidado personal, cuidado de superficies del hogar y cuidado de telas, la cual comprende (a) un ingrediente activo en cantidades suficientes para lograr un efecto deseado; (b) una cantidad que se extiende de un agente activo de deposición y/o duración de un material o materiales de fórmula:

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COMPOSICION PARA EL CUIDADO PERSONAL, CUIDADO DE SUPERFICIES
DEL HOGAR Y CUIDADO DE TELAS QUE COMPRENDE UN DERIVADO DE
ACEITE DE SEMILLA DE MEADOWFOAM (LIMNANTHES ALBA)

5

Antecedentes de la Invención

Las fragancias han sido utilizadas en composiciones para contactar la piel por cientos de años. Aquellos que usan fragancias desean tener un aroma alrededor de ellos que sea agradable a si mismos y a otros en su inmediata vecindad. El primer criterio de una fragancia en uso en una composición de contacto con la piel es que la fragancia se deposite sobre la piel y permanezca ahí por un lapso de tiempo apropiado. Aún cuando esto puede lograrse relativamente fácil, en las composiciones de "dejar" tales como lociones, cremas, y similares, es mucho más difícil el lograrlo cuando se usa una composición de enjuague usando agua para remover la composición de la piel después de relativamente corto tiempo de contacto con la piel, tal como un tiempo máximo de contacto de alrededor de 2 minutos, generalmente de no más de alrededor de 90 segundos o de alrededor de 60 segundos o de alrededor de 30 segundos. El segundo criterio es que el aroma de la fragancia debe ser liberado desde la piel por cualquier razón, tal como la presión del vapor de la fragancia, su medida de vinculación a la piel, y similares, y a una tasa que produce una significativa duración del aroma en un punto detectable arriba del nivel de la piel. La fragancia ideal, por tanto, es una que tiene una significativa sustentividad de la piel, para propósitos de llegar a la piel, pero también se dirige a tener un aroma deseable, detectable sobre la piel por una significativa duración de tiempo. Esta combinación de efectos es difícil de lograr con la fragancia por sí misma se debido al más significativo rasgo de una fragancia que es su deseable

"aroma" u "olor", ninguna de las dos variables son de preocupar aquí. Por lo tanto, una significativa cantidad de tiempo ha sido puesto en estudiar los materiales que pueden mejorar al menos uno y preferiblemente dos de los criterios
5 antes identificados.

Una serie de materiales han sido encontrados que significativamente aumentan la sustantividad y la duración del aroma de la fragancia. Esos efectos pueden ser
10 significativamente aumentados cuando una ulterior familia de materiales está también presente. Los efectos pueden estar presentes en ambas composiciones de dejar y de enjuagar usadas en contactar la piel. Tales composiciones de enjuagar pueden adicionalmente tener un nivel de limpieza de la piel de un
15 surfactante o una mezcla de surfactantes. A menos que esté en forma sólida, una sustancial cantidad, preferiblemente una mayor cantidad de composiciones de enjuague, son acuosas.

Los beneficios de estas familias de material
20 también pueden ser efectivamente aplicados a otros agentes activos hidrofóbicos tales como agentes antibactericidas, silicios, agentes antifungicidas, y similares. La tecnología beneficia otros sistemas aparte de el cuidado de la piel en donde la deposición y la duración de los efectos son también
25 deseables tales como productos para el cuidado de las superficies del hogar (lavabos, retretes, cubiertas de estufa, pisos y mostradores), y productos para el cuidado de las telas, tales como detergentes y suavizantes. Pueden usarse para la deposición y la duración de las fragancias, agentes
30 antibactericidas, agentes de control de olor, y similares.

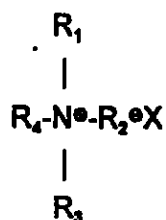
Síntesis de la Invención

De conformidad con la invención, hay una composición útil en un área seleccionada de un grupo que consiste de cuidado personal, cuidado de superficies del hogar, y de cuidado de telas, que comprende:

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a) un agente activo en cantidades suficientes para lograr el deseado efecto,

b) una cantidad extendida, deposición y/o
10 duración de un material o materiales de la fórmula



en donde R_1 , R_2 , R_3 , y R_4 son el mismo o
15 diferente y son R_5 en donde R_5 es alquilo de uno a cuatro átomos de carbón, inclusive;

R_6 en donde R_6 es $(-CH_2CH_2(CH_2)_aO-)_bR_8$ donde R_8 es hidrógeno o metil, a es 0 ó 1 y b es 1, 2, ó 3;

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R_9 en donde R_9 es un aceite de semilla de Meadowfoam (*Limnanthes alba*) o aceite de semillas derivativas, el cual tiene una unión covalente con el nitrógeno de la fórmula;

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y, en donde al menos uno pero más de dos de R_1 , R_2 , R_3 , y R_4 es un R_5 ;

y, en donde al menos uno pero no más de dos de

$R_1, R_2, R_3,$ y R_4 son un R_6 ;

y, en donde al menos uno pero no más de dos de $R_1, R_2, R_3,$ y R_4 es un R_9 ;

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X es un contraión que lleva una carga negativa;

y

c) un portador de superficie compatible.

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Se ha encontrado ahora que un material aún más extendido de deposición y/o de duración, particularmente tiempos de fragancia, puede lograrse con un adicional material catiónico seleccionado del grupo que consiste de un polímero catiónico, o de mezclas del mismo.

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Descripción Detallada de la Invención

El uso de los componentes (b) de la invención trae una mayor sustentividad y duración de tiempo para la efectividad del aroma de la fragancia en cualquier composición en donde la sustentividad y la duración del aroma de la fragancia son deseables. Como se describió antes, estas composiciones son esencialmente cualquier composición, que tiene una fragancia en donde la fragancia puede depositarse sobre una superficie. Ejemplos no limitantes de estas composiciones han sido proporcionados más temprano en esta descripción. Ulteriores ejemplos no limitantes ilustrativos incluyen cabello, ropa, toallas, y superficies inanimadas tales como pisos y cubiertas de mostrador.

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Como previamente se notó, otros tipos de agentes activos son contemplados más allá de las fragancias. La

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sustantividad de estos agentes activos también aumentará a través del uso del componente (b) de la invención.

Generalmente, estas composiciones están
5 divididas en las composiciones que tienen un relativamente largo tiempo de contacto con una superficie y aquellos con relativamente corto tiempo de contacto antes de enjuagar la superficie, usualmente con agua. Generalmente, un producto de "dejar" que es una loción o crema para el cuidado personal es
10 dejado sobre la piel por al menos alrededor de dos minutos mientras que un producto de "enjuagar" es dejado sobre la piel por menos de alrededor de dos minutos, preferiblemente no más de alrededor de 90, 60, ó 30 segundos. Ejemplos del último son los limpiadores de manos y limpiadores del cuerpo. El efecto
15 del componente (b) es particularmente digno de notarse con respecto a las composiciones útiles en el área para el cuidado personal, particularmente la limpieza de la piel, el cuidado de la piel, la limpieza del cabello, y el acondicionado del cabello, y las áreas de productos desodorantes
20 antitranspirantes. La capacidad de aumentar la sustentividad y duración de la fragancia de efecto en estas áreas puede ser muy significativa en ambas composiciones de dejar y de enjuagar. Los líquidos y los geles pueden ser de una viscosidad de alrededor de 100 a alrededor de 10,000
25 centipoises o mayor. Los emolientes pueden estar presentes para la sensación de la piel, humectación y similares. Los ejemplos ilustrativos de tales emolientes incluyen ácidos grasos alquenilo o alquilo de larga cadena, ésteres de ácido graso, ácidos de cadena corta con alcoholes de larga cadena
30 tales como miristilo propionato, aceite mineral, petrolato, silicio, y similares. Agentes de gelación tales como el elastómero de silicio (por ejemplo, Dow 9040), poliamidas de silicio, sorbitol dibencilideno, goma de xantano, y carboxil

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metilcelulosa pueden ser empleados. Como se señaló previamente, la composición, particularmente el líquido y el gel, no necesitan ser efectivos para la limpieza de una superficie pero pueden ser útiles para acondicionar una superficie, tal como por ejemplo, piel o cabello, a través del acondicionado y/o la humectación. Los acondicionadores de cabello, lociones y cremas para la piel, pueden emplearse. En estas lociones y cremas para la piel las composiciones pueden tener surfactantes emulsificantes en pequeños niveles debido a sus propiedades de emulsificar con los varios materiales aceitosos que hacen a la composición una "loción" o una "crema".

De particular significado son las composiciones en donde hay un surfactante en ellas y una limpieza de una superficie tiene efecto, por ejemplo, la piel, una superficie dura, o ropa. En cada una de estas circunstancias, el componente portador compatible (C) es usualmente agua o incluye agua. Algunos de los portadores incluyen agua pero son sólidos tales como barras de "jabón" para limpiar la piel y gránulos o bolitas para lavar la ropa.

Los surfactantes de limpieza que pueden emplearse incluyen: jabón, un alquilo o alquenilo de cadena larga, una sal de ácido carboxílico normal o ramificada tal como sodio, potasio, amonio, o sal de amonio sustituida, Pueden estar presentes en la composición como un ejemplo de un surfactante aniónico. Ejemplares de alquilo o alquenilo de larga cadena son desde alrededor de 8 a alrededor de 22 átomos de carbón en longitud, específicamente de alrededor de 10 a alrededor de 20 átomos de carbón de longitud, más específicamente alquilo y más específicamente normal, o normal con poco ramificado. Pequeñas cantidades de uniones olefínicas

V3

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pueden estar presentes en las secciones predominantemente alquilo, particularmente si la fuente del grupo "alquilo" es obtenido de un producto natural tal como sebo, aceite de coco, y similares. Debido a su potencial aspereza el jabón no es un
5 preferible surfactante y puede ser omitido de la composición.

Otros surfactantes de limpieza pueden estar presentes en la composición también. Ejemplos de tales surfactantes son surfactantes aniónicos, anfotéricos, no
10 iónicos, y catiónicos. Ejemplos de surfactantes aniónicos incluyen pero no están limitados a, jabones, sulfatos alquilo, sarcosinatos acilo aniónicos, tauratos acilo metil, glutamatos N-acilo, acilo isetionatos, alquilo sulfosuccinatos, alquilo
fosfato ésteres, ésteres fosfato alquilo etoxilatados,
15 sulfatos trideceth, proteína condensada, sulfatos alquilo etoxilatados, y similares.

Cadenas de alquilo para estos surfactantes son
C₈-

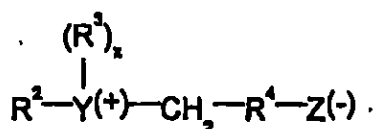
20 C₂₂, preferiblemente C₁₀-C₁₈, más preferiblemente C₁₂-C₁₄.

Surfactantes no jabón aniónicos pueden ejemplificarse por las sales de metal álcali de sulfato orgánico que tiene en su estructura molecular un radical
25 alquilo que contiene desde alrededor de 8 a alrededor de 22 átomos de carbón, y un ácido sulfónico o éster ácido sulfúrico radical (incluido en el término alquilo es la parte alquilo de radicales acilo mayores). Preferibles son los sulfatos alquilo trietanolamina o de potasio, amonio, sodio, especialmente
30 aquellos obtenidos por el sulfatado de alcoholes más altos (C₈-C₁₈ átomos de carbón), sodio, aceite de coco, ácido graso, sulfatos mono-glicéridos y sulfonatos; sales de sodio o de potasio de ésteres de ácido sulfúrico del producto de reacción

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de 1 mol de un más alto alcohol graso (por ejemplo, sebo, o alcoholes de aceite de coco) y 1 a 12 moles de óxido etileno; sales de sodio o de potasio de sulfato de éter óxido etileno fenol alquilo con 1 a 10 unidades de óxido etileno por molécula y en la cual los radicales alquilo contienen desde 8 a 12 átomos de carbón, sulfonatos éter gliceril alquilo de sodio; el producto de reacción de los ácidos grasos tiene desde 10 a 22 átomos de carbón esterificados con ácido isetiónico y neutralizado con hidróxido de sodio; sales solubles en agua de productos de condensación de ácidos grasos con sarcosina; y otros conocidos en el arte.

Los surfactantes suiteriónicos pueden ejemplificarse por aquellos que pueden ser ampliamente descritos como derivados de amonio cuaternario alifático, fosfonio y compuestos de sulfonio, en los cuales los radicales alifáticos pueden ser una cadena recta o ramificada y en donde uno de los sustituyentes alifáticos contiene desde alrededor de 8 a 18 átomos de carbón y uno contiene un grupo solubilizador agua aniónica, por ejemplo, carboxi, sulfonato, sulfato, fosfato, o fosfonato. Una fórmula general para estos compuestos es:



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en donde R^2 contiene un radical alquilo, alquenilo, o hidroxil alquilo desde alrededor de 8 a alrededor de 18 átomos de carbón, desde 0 a alrededor de 10 mitades de óxido etileno y desde 0 a 1 mitad glicerilo; Y es seleccionado del grupo que consiste de átomos de nitrógeno, de fósforo, y

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de sulfuro; R^3 es un alquilo o grupo monohidroxialquilo que contiene 1 a alrededor de 3 átomos de carbón; X es 1 cuando Y es un átomo de sulfuro y 2 cuando Y es un átomo de nitrógeno o de fósforo; R^4 es un alquilenos o hidroxialquilenos desde 0 a
5 alrededor de 4 átomos de carbón y Z es un radical seleccionado desde el grupo que consiste de grupos carboxilato, sulfonato, sulfato, fosfonato, y fosfato.

Los ejemplos incluyen: 4-[N,N-di(2-hidroxietil)-

10 N-octadecilamonio]-butano-1-carboxilato; 5-[S-3-hidroxipropilo-S-hexadecilsulfonio]-3 hidroxipentano-1-sulfato; 3-[P,P-P-dietilo-P 3,6,9 trioxatetradecil-fosfonio]-2-hidroxipropano-1-fosfato; 3-[N,N-dipropilo-N-3 dodecoxi-2-hidroxipropilamonio]-propano-1-fosfonato; 3-(N,N-di-metil-N-
15 hexadecilamonio)propano-1-sulfonato; 3-(N,N-dimetil-N-hexadecilamonio)-2-hidroxipropano-1-sulfonato; 4-(N,N-di(2-hidroxietil)-N-(2-hidroxidodeci)amonio-butano-1-carboxilato; 3-[S-etil-S-(3-dodecoxi-2-hidroxipropil)sulfonio]-propano-1-fosfato; 3-(P,P-dimetil-P-dodecilfosfonio)-propano-1-
20 fosfonato; y 5-[N,N-di(3-hidroxipropil)-N-hexadecilamonio]-2-hidroxipentano-1-sulfato.

Los ejemplos de surfactantes anfotéricos que pueden usarse en las composiciones de la presente invención
25 son aquellos que pueden ser ampliamente descritos como derivados de alifáticos secundarios y de terciarios aminas en las cuales el alifático radical puede ser una cadena recta o ramificada y en donde uno de son sustitutos alifáticos contiene desde alrededor de 8 a alrededor de 18 átomos de
30 carbón y uno contiene un grupo solubilizador agua aniónica, por ejemplo, carboxi, sulfonato, sulfato, fosfato, o fosfonato. Los ejemplos de compuestos que caen dentro de esta definición son sodio 3-dodecilaminopropionato, sodio 3-

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dodecilaminopropano sulfonato, N-alquilautinos, tales como uno
preparado por la reacción de dodecilamina con sodio isetionato
de conformidad con las enseñanzas de la patente de los Estados
Unidos de América número 2,658,072, ácidos aspárticos N-más
5 alto alquilo, tales como aquellos producidos de conformidad
con las enseñanzas de la patente de los Estados Unidos de
América número 2,438,091, y los productos vendidos bajo el
nombre de marca de "Miranol" y descrito en la patente de los
Estados Unidos de América número 2,528,378. Otros anfotéricos
10 tales como betaínas son también útiles en la presente
composición.

Los ejemplos de betaínas útiles aquí incluyen a
betaínas de alto alquilo tales como coco dimetil carboximetil
15 betaína, laurilo dimetil carboximetil betaína, laurel dimetil
alfa-carboxietil betaína, cetil dimetil carboximetil betaína,
laurilo bis-(2-hidroxietil)carboxi metil betaína, estearil
bis-(2-hidroxipropil) carboximetil betaína, oleil dimetil
gamma-carboxipropil betaína, laurilo bis-(2-
20 hidroxipropil)alfa-carboxietil betaína, etc. Las sulfobetainas
pueden ser representadas por coco dimetil sulfopropil betaína,
estearil dimetil sulfopropil betaína, amido betaínas,
amidosulfobetainas, y similares.

25 Muchos surfactantes catiónicos son conocidos en
el arte. A modo de ejemplo, lo siguiente puede mencionarse:

- estearildimetilbencil amonio cloruro;
- dodeciltrimetilamonio cloruro;
- 30 -nonilbenciletildimetil amonio nitrato;
- tetradecilpirridinio bromuro;
- laurilopiridinio cloruro;
- cetilpiridinio cloruro;

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- laurilopiridinio cloruro;
- lauriloisoquinolio bromuro;
- disebo (Hidrogenado) dimetil amonio cloruro;
- dilaurildimetil amonio cloruro; y
- 5 -estearalconio cloruro.

Los surfactantes catiónicos adicionales están descritos en el documento de la patente de los Estados Unidos de América número (USP) 4,303,543, véase la columna 4, líneas 10 58 y columna 5, línea 1-42, incorporada aquí por referencia. También véase el Diccionario de Ingredientes de Cosmética de la Asociación de Fragancias, Artículos de Tocador y Cosméticos (CTFA), 6ª edición 1995, páginas 795-799 para 15 varios surfactantes catiónicos alquilo de larga cadena; incorporado aquí por referencia.

Los surfactantes no iónicos incluyen aquellos que pueden ser ampliamente definidos como compuestos producidos por la condensación de grupos óxido alquilenos 20 (hidrofílico por naturaleza) con un compuesto hidrofóbico orgánico, que puede ser alifático o alquilo aromático por naturaleza. Ejemplos de preferibles clases de surfactantes no iónicos son:

25 1. Los condensados de óxido polietileno de fenoles alquilo, por ejemplo, la condensación de productos de fenoles alquilo que tienen un grupo alquilo que contiene desde alrededor de 6 a 12 átomos de carbón en ya sea una configuración de cadena recta o cadena ramificada. Con óxido 30 etileno, el llamado óxido etileno estando presente en cantidades iguales a 10 a 60 moles de óxido etileno por mol de fenol alquilo. El sustituto alquilo en tales compuestos puede derivarse de propileno polimerizado, diisobutileno,

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octano, o nonato, por ejemplo.

2. Aquellos derivados de la condensación de
óxido etileno con el producto resultante de la reacción de
5 óxido propileno y de productos de diamina etileno que pueden
variar en composición dependiendo con el balance entre los
elementos hidrofóbicos e hidrofílicos que se desee. Por
ejemplo, los compuestos que contienen desde alrededor de 40%
a alrededor de 80% polioxietileno por peso y que tienen un
10 peso molecular desde alrededor de 5,000 a alrededor de 11,000
resultando de la reacción de grupos de óxido etileno con una
base hidrofóbica constituida de la reacción del producto de
diamina etileno y exceso de óxido propileno, la denominada
base que tiene un peso molecular del orden de 2,500 a 3,000
15 son satisfactorios.

3. El producto de condensación de alcoholes
alifáticos que tienen desde 8 a 18 átomos de carbón, en ya
20 sea una configuración de cadena recta o cadena ramificada con
óxido etileno, por ejemplo, un condensado de óxido etileno
alcohol de coco que tiene desde 10 a 30 moles de óxido
etileno por mol de alcohol de coco, la fracción del alcohol
de coco tiene desde 10 a 14 átomos de carbón. Otros productos
25 de condensación de óxido etileno son ésteres de ácido graso
etoxilatado de alcoholes polihídricos, (por ejemplo, Tween
20- polioxietileno (20) sorbitan monolaurato).

4. Óxidos de amina terciaria de cadena larga,
30 correspondientes a la siguiente fórmula general:



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En donde R1 contiene un alquilo, alquenoilo o monohidroxi alquilo radical desde alrededor de 8 a alrededor de 18 átomos de carbón, desde 0 a alrededor de 10 mitades óxido etileno, y desde 0 a 1 mitad glicerilo, y R2 y R3 contienen desde 1 a alrededor de 3 átomos de carbón y desde 0 a alrededor de 1 grupo hidroxilo, por ejemplo, metil, etil, propil, hidroxilo etil, o hidroxilo propil radicales. La flecha en la fórmula es una representación convencional de una unión semi-polar. Ejemplos de óxidos amina adecuados para usar en esta invención incluyen óxido dimetildodecilamina, oleil-di(2-hidroxietil) amina óxido, dimetiloctilamina óxido, dimetildecilamina óxido, dimetil-tetradecilamina óxido, 3,6,9 trioxaheptadecildietilamina óxido, di(2-hidroxietil)-tetradecilamina óxido, 2-dodecoxi-etildimetilamina óxido, 3-dodecoxi-2-hidroxipropildi(3-hidroxipropil)amina óxido, dimetil-hexadecilamina óxido.

5. Óxidos fosfina terciaria de cadena larga correspondientes a la siguiente fórmula general:



en donde R contiene un alquilo, alquenoilo o monohidroalquilo radical en el rango desde 8 a 20 átomos de carbón en longitud de cadena, desde 0 a alrededor de 10 mitades óxido etileno y desde 0 a 1 mitad gliceril y R' y R'' son cada uno grupos alquilo o mono-hidroalquilo que contienen desde 1 a 3 átomos de carbón. La flecha en la fórmula es una representación convencional de una unión semi-polar. Ejemplos de adecuados óxidos fosfinos son: dodecildimetilfosfina óxido, tetra-decilmetil-etilfosfina óxido, 3,6,9-trioxaoctadecildimetilfosfina óxido, cetildimetilfosfina óxido, 3-dodecoxi-2-hidroxipropil(2-hidroxietil)fosfina

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óxido, estearidimetilfosfina óxido, cetiletilpropilfosfina
 óxido, oleildietilfosfina óxido, dodecildietilfosfina óxido,
 tetra-decildietilfosfina óxido, dodecildipropilfosfina óxido,
 dodecil-di(hidroximetil)fosfina óxido, dodecildi(2-
 5 hidroxietil)fosfina óxido, tetradecilmetil-2-
 hidroxipropilfosfina óxido, oletildimetilfosfina óxido, 2-
 hidroxidodecildiemtilfosfina óxido.

6. Los sulfóxidos dialquilo de larga cadena que
 10 contienen un alquilo o hidroxil alquilo radical de corta
 cadena de 1 a alrededor de 3 átomos de carbón (usualmente
 metil) y una cadena hidrofóbica larga que contiene alquilo,
 alquenilo, hidroxil alquilo, o ceto alquilo radicales que
 contienen desde alrededor de 8 a alrededor de 20 átomos de
 15 carbón, desde 0 a alrededor de 10 mitades óxido etileno y
 desde 0 a 1 mitad gliceril. Ejemplos incluyen: octaldecil
 metil sulfóxido, 2-cetotridecil metil sulfóxido, 3,6,9-
 trioxaoctadecil 2-hidroetil sulfóxido, dodecil metil
 sulfóxido, oleil 3-hidroxipropil sulfóxido, tetradecil metil
 20 sulfóxido, 3 metoxitridecilmetil sulfóxido, 3-
 hidroxitridecilmetil sulfóxido, 3, hidroxil-4-dodecoxibutil
 metil sulfóxido.

7. Poliglicósidos alquilados en donde el
 25 grupo alquilo es desde alrededor de 8 a alrededor de 20
 átomos de carbón, preferiblemente de alrededor de 10 a
 alrededor de 18 átomos de carbón y el grado de polimerización
 del glicósido es desde alrededor de 1 a alrededor de 3,
 preferiblemente de alrededor de 1.3 a alrededor de 2.0.

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Las fragancias incluyen cualesquiera materiales
 que proporcionen un aroma cuando está sobre la superficie.
 Esto es generalmente debido a los ingredientes de perfume

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volátil en ellos.

Los ingredientes volátiles de perfume empleados en las composiciones de limpieza personal, limpieza de superficies duras, limpieza de telas de la presente invención son los convencionales conocidos en el arte. La selección de los ingredientes de perfume usados en las composiciones de gel para baño de limpieza personal líquida de la presente invención puede basarse en las deseadas características de fragancia para la composición.

Adecuados compuestos y composiciones de perfume pueden encontrarse en el arte incluyendo las patentes de los Estados Unidos de América números: 4,145,154, otorgada a Brain & Cummins, el 20 de marzo de 1979; 4,209,417, otorgada a Whyte, el 24 de junio de 1980; 4,515,705, otorgada a Moeddel, el 7 de mayo de 1985; y 4,152,272, otorgada a Young, el 1 de mayo de 1979, todas las denominadas patentes son incorporadas aquí por referencia.

Los perfumes pueden clasificarse de conformidad con su volatilidad. Para propósitos de la presente invención, los perfumes "volátiles" son aquellos que tienen un punto de ebullición de menos de alrededor de 500 grados centígrados. Los ingredientes de perfume altamente volátiles, de baja ebullición, típicamente tienen puntos de ebullición de alrededor de 250 grados centígrados o menores. Los ingredientes de perfume moderadamente volátil son aquellos que tienen puntos de ebullición desde alrededor de 250 grados centígrados a alrededor de 300 grados centígrados. Los ingredientes de perfume menos volátiles, de alta ebullición son aquellos que tienen puntos de ebullición desde alrededor de 300 grados centígrados a alrededor de 500 grados

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centígrados. Muchos de los ingredientes de perfume son descritos a continuación aquí, junto con sus caracteres de olor y/o sabor, y sus propiedades físicas y químicas, tales como punto de ebullición y peso molecular, dados en "Químicos de Perfume y de Sabor (Químicos de Aroma)", Steffen Arctander, publicado por el autor, 1969, incorporado aquí por referencia. Es preferible que los productos de la presente, particularmente los productos de limpieza personal en gel o líquidos aquí contenidos, como se miden por la fragancia total, sean de al menos de alrededor de 5%, más preferiblemente de alrededor de 25%, y más preferiblemente de al menos alrededor de 50% o ingredientes de perfume altamente volátiles tienen un punto de ebullición de 250 grados centígrados o inferior.

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Los ejemplos de ingredientes de perfume altamente volátiles, de baja ebullición son: acetol, benzaldehído, acetato bencil, alcohol bencil, formato bencil, acetato iso-bornil, camfene, cis-citral (neral), citronella, citronellol, acetato citronelil, para-cimeme, dicenal, dihirollinalol, dihidromircenol, dimetil fenil carbinol, eucaliptol, geranial, geraniol, geranio acetato, geranio nitrilo, cis-3-hexeni acetato, hidroxicitronella, dilimonene, linatol, óxido linalol linalil acetato, linalil propionato, metil antranilato, alfa-metil ionona, metil nonil acetaldehído, metil fenil carbinil acetato, laevomentil acetato, mentona, iso-mentona, mirceno, mircenil acetato, mircenol, nerol, neril acetato, nonil acetato, fenil etil alcohol, alfa-pinene, beta-pinene, gamma-terpinene, alfa-terpineol, beta-terpineol, terpinil acetato, y vertenex (para-terciario-butil ciclohexil acetato). Algunos aceites naturales también contienen grandes porcentajes de ingredientes de perfume altamente volátiles. Por ejemplo,

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lavandina contiene como principales componentes: linalol, linalil acetato, geraniol, y citrinelol. El aceite de limón y los terpenos de naranja ambos contienen alrededor de 95% de di-limonene.

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Los ejemplos de ingredientes de perfume moderadamente volátiles son: amil cinámico aldehído, iso-amil salicilato, beta-cariofileno, cedreno, alcohol cinámico, cumarú, dimetil bencil carbinil acetato, etil vainilla, eugenol, iso-eugenol, flor acetato, heliotropina, 3-cis-hexenil salicilato, hexil salicilato, lilial (para-terciaributil-alfa-metil hidrocínámico aldehído), gamma-metil ionona, nerolidol, alcohol de pachulí, fenil hexanol, beta-selicarb, triclorometil fenil carbinil acetato, trietil citrato, vainilla, y veratraldehído. Los terpenos de madera de cedro son compuestos principalmente de alfa-cedreno, beta-cedreno, y otros sesquiterpenos $C_{15}H_{24}$.

Los ejemplos de ingredientes de perfume, menos volátiles, de alta ebullición son: benzofenona, bencil salicilato, etileno brasilato, galaxolida (1,3,4,6,7,8-hexahidro-4,6,6,7,8,8-hexametil-ciclopenta-gama-2-benzopiran) hexil cinámica aldehído, liral (4-(4-hidroxil-4-metil pentil)3-ciclohexeno-10-carboxaldehído), metil cedrilona, metil dihidro jasmonato, metil-beta-naftil quejona, almizcle indanona, almizcle quejona, almizcle tibetana, y fenil etil fenil acetato.

El material que resalta la sustentividad y la duración de la fragancia es el aceite de semilla de Meadowfoam (*Limnanthes alba*) o cualquier derivado del mismo que es capaz de formar una unión covalente con el nitrógeno del componente (b) de la fórmula. El aceite de semilla de

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Meadowfoam (*Limnanthes alba*) y sus derivados son particularmente capaces de promover la deposición. El aceite de semilla de Meadowfoam (*Limnanthes alba*) es comúnmente encontrado en el estado nativo como *Limnanthes Alba* como el

5 triglicérido con ácidos grasos siendo una mezcla de ácidos grasos alquenólicos, principalmente C₂₀, por ejemplo, ácido 5-eisosenólico, otros siendo C₂₁, por ejemplo, ácido 5,13-heneicosenólico mientras que aún otros son una mezcla de C₂₂, por ejemplo ácido 5-docosenólico y C₂₂, por ejemplo, ácido 13-

10 docosenólico.

Varias patentes otorgadas han descrito los constituyentes del aceite de semilla de Meadowfoam (*Limnanthes alba*) y sus derivados de una manera más

15 detallada, por ejemplo, las patentes de los Estados Unidos de América números 5,646,321; 5,741,915; 5,741,916; y 5,741,919 incorporadas por referencia en donde la siguiente estructura y cantidades son mencionadas.

La distribución grasa de los rangos de aceite desde 20 a 20 carbonos y tiene instauración en ubicaciones específicas. El aceite contiene 97% por peso de grupos alquilo insaturados más altos. Típicamente, el aceite de Meadowfoam (*Limnanthes alba*) se cree que contiene 60-65% de

25 un ácido mono-carboxi terminal de veinte carbonos que tiene una instauración entre el carbón 5 y 6. Adicionalmente, contiene 12-20% de ácido mono-carboxi terminal de veintidós carbonos que tiene una instauración entre el carbón 5 y 6, y 15-28% de un ácido mono-carboxi terminal de veintidós

30 carbonos que tiene una instauración entre el carbón 5 y 6, y otra entre el carbón 13 y 14. Estos son mostrados a continuación, estructuralmente.

60-65% por peso $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{13}-\text{CH}_3$

12-20% por peso de una mezcla de $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{15}-\text{CH}_3$; y

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$\text{HOOC}-(\text{CH}_2)_{11}-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{CH}_3$

15-28% por peso $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_6-\text{CH}=\text{CH}-(\text{CH}_2)_6-\text{CH}_3$

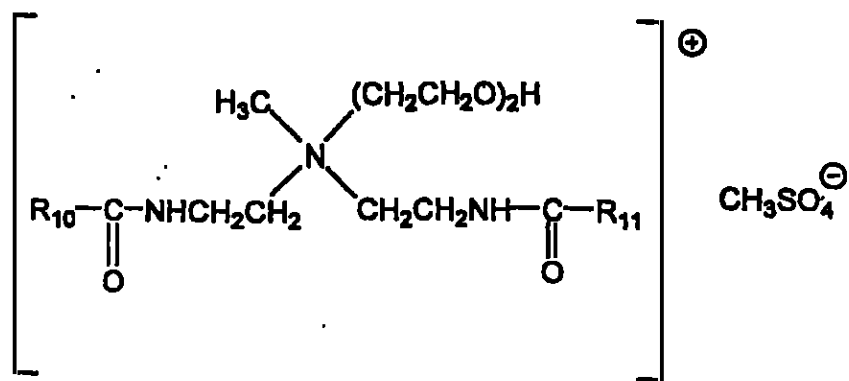
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El aceite de semilla de Meadowfoam (*Limnanthes alba*) también puede estar presente en su forma glicérida.

Pueden usarse derivados de los ácidos carboxílicos de aceite de Meadowfoam (*Limnanthes alba*) en las composiciones de esta invención así como los ácidos carboxílicos de larga cadena descritos arriba. Estos involucran el desempeño estándar de la química sobre el grupo carboxi mientras que mantiene la insaturación sin tocar o al menos esencialmente sin tocar. Ejemplos de tales derivados son los ésteres, por ejemplo como se describen en las patentes de los Estados Unidos de América números 5,741,919 y 5,646,321; las alcanolamidas, por ejemplo, como se describen en el documento 5,741,916 y las betaínas derivativas, por ejemplo, como se describen en el documento 5,741,915. Adicionalmente, un derivado del aceite de semilla de Meadowfoam (*Limnanthes alba*) incluye materiales en donde la normal distribución del aceite de Meadowfoam (*Limnanthes alba*) pueden alterarse al acentuar la cantidad de uno o más de los ácidos monocarboxílicos alquilo insaturados. Por ejemplo, la concentración total de ácido erúcico, un ácido monocarboxílico insaturado C22 puede enriquecerse a 80 ó más por ciento por peso de la composición de aceite de Meadowfoam

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(*Limnanthes alba*) Estos materiales de amonio cuaternario con base en aceites de Meadowfoam (*Limnanthes alba*) están disponibles de The Fanning Corporation, de 2450 West Hubbard Street, de Chicago, Illinois, 60612. Ulterior ejemplificación es un alquenilo agrupado, el cual puede estar prontamente preparado. Todos estos materiales pueden ser unidos de forma covalente al átomo de nitrógeno cuaternario del componente (b). Un específico ejemplo de un material de componente (b) es disponible de Fanning, como Meadowquat® HG. Su estructura es:



Con referencia a la fórmula esquemática del componente (b), X es metosulfato, R1 es metil, R2 es etoxi (en donde a es cero, b es 2, y R8 es hidrógeno, y R10 y R11 son el mismo y son los sustitutos de hidrocarburo de cadena larga de un aceite de semilla de Meadowfoam (*Limnanthes alba*) que es unido a un grupo etil amido en donde el último carbón en el etilo es acoplado al nitrógeno cuaternario. Esta molécula es comercializada por Fanning y es conocida como Meadowquat® HG, también conocida en la nomenclatura INCI como PEG-2 dimeadowfoam amido etil amonio metosulfato.

Los ácidos carboxílicos de aceite de Meadowfoam (*Limnanthes alba*) o derivados de los mismos pueden ser usados

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en la composición en la deposición resaltando las cantidades, generalmente un mínimo de alrededor de 0.25 por ciento por peso, 0.5 por ciento por peso, o alrededor de 1.0 ó 2.0 por ciento por peso. Una cantidad máxima es generalmente mayor de
5 alrededor de 6 por ciento por peso, o preferiblemente de alrededor de 5,4, ó 3 por ciento por peso de la composición.

En contra ión del material de amonio cuaternario es cualquier sustancia aniónica tal como cloruro,
10 nitrato, sulfato, fosfato, metosulfato, y similares.

La efectividad del material de amonio cuaternario en aumento de sustantividad y duración de una fragancia es significativamente mejorada por la presencia de
15 un segundo material catiónico, el cual es un polímero catiónico. Ejemplos de tales materiales catiónicos incluyen a varios poliquats conocidos en el arte los cuales incluyen pero no están limitados a Policuaternio 2 (un polielectrolito formado de iones cuaternizados), policuaternio 4
20 (hidroxixelulosa dialildimetil amonio cloruro), policuaternio 5 (acrilamida β -metacriloxietiltrimetil amonio metosulfato), policuaternio 6 y 7 (homopolímero de dimetil dialilo amonio cloruro y el copolímero de dimetil dialil amonio cloruro con acrilamida), policuaternio 8 (metil y estearil
25 dimetilaminoetil metacrilato cuaternizado con dimetilsulfato), policuaternio 10 (1-hidroxipropil trimetil amonio cloruro éteres de hidroxietil celulosa), policuaternio 11 (PVP cuaternizado y dimetilaminoetil metacrilato), policuaternio 16 (copolímero de PVP/metil vinilimidazolina),
30 policuaternio 17 y 18 (polielectrolito formado de iones cuaternizados), policuaternio 19 (un alcohol vinil sal de hidroxipropil amina), policuaternio 24 (sal de amonio cuaternizada polimérica de hidroximetilcelulosa y laurel

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dimetil amonio epóxido sustituido), policuaturnio 27 (polielectrolito formado de iones cuaternizados). Otros materiales catiónicos incluyen a Polycare 133 (polimetilacrilamideopropil trimonio cloruro de Rhone-Poulenc). Estos materiales son conocidos por ser del tipo que neutraliza una carga negativa, tal como sobre la piel.

La forma física de la composición puede ser sólida, líquida o en gel. Un sólido puede ilustrativamente estar en forma de un polvo, gránulo, barra, precipitado sobre un portador tal como un respaldo suavizante de tela y similares.

Cuando se emplea en una composición de la invención que requiere una acción limpiadora sobre una superficie, la cantidad de surfactante o de mezcla de surfactantes es una cantidad efectiva de limpieza. Dependiendo con las superficies a limpiarse y la forma física de la composición, un mínimo de alrededor de 1, 2, 3, 4, 5, ó 6 por ciento por peso del surfactante puede emplearse en la composición del líquido o gel. Generalmente, para líquidos o geles la cantidad máxima de surfactantes es de alrededor de 5 a 40 por ciento por peso, preferiblemente de alrededor de 25, 20, ó 15 por ciento por peso de la composición. Para los sólidos, tales como barras, gránulos, y similares, un máximo más alto y un mínimo de surfactante es empleado. Generalmente, un mínimo de alrededor de 40 por ciento por peso de surfactante en la composición es empleada, preferiblemente de alrededor de 45, 50, 55, ó 60 por ciento por peso. La cantidad máxima de surfactante empleado en el sólido es generalmente de no más de alrededor de 90 por ciento por peso, preferiblemente de no más de alrededor de 85, 80, ó 75 por ciento por peso de la composición. La

cantidad de agua en un líquido o gel de limpieza es un mínimo de alrededor de 40 por ciento por peso de la composición, preferiblemente de al menos de alrededor de 50, 60, ó 70 por ciento por peso. Para un sólido tal como una barra de limpieza, un mínimo de alrededor de 5 por ciento por peso de la composición, deseablemente de alrededor de 7, 10, ó 15 por ciento por peso de agua.

La cantidad total del perfume volátil presente es suficiente para proporcionar un aroma. Generalmente, puede emplearse un mínimo de alrededor de 0.01, preferiblemente de 0.05, 0.1, 0.2, ó 0.4 por ciento por peso de la composición. Generalmente, no más de alrededor de 3 por ciento por peso, preferiblemente de alrededor de 2, 1, ó 0.5 por ciento por peso de la composición es empleada.

El adicional material de deposición catiónico cuando está presente puede ser de un mínimo de alrededor de 0.05, 0.1, ó 0.2 por ciento por peso de la composición. El máximo es generalmente de no más de alrededor de 1.0 ó aún de menos de alrededor de 0.8, 0.6, ó 0.5 por ciento por peso de la composición.

Las composiciones de la invención están preparadas por métodos estándar generalmente conocidos en el arte. A fin de asegurar la adecuada estabilidad y desempeño de la composición con respecto a la deposición y/o la duración del agente, específicamente la fragancia, es preferible añadir el material del componente (b) a la composición antes de la fragancia u otro agente activo y el polímero catiónico, asumiendo que el polímero catiónico es usado, lo cual es preferible.

Cuando se usa el material del componente (b) mejorada deposición sobre una superficie y/o duración de la actividad de la fragancia u otro agente activo es observado. Con la presencia del adicional polímero catiónico, los resultados pueden ser aún más pronunciados. Dramáticos aumentos en la deposición (sustantividad) a la superficie por el agente activo tal como una fragancia, antimicrobiano, antifúngica, y emolientes puede obtenerse y/o la duración de la actividad.

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Los resultados son evaluados usando una prueba *in vitro*, que ha sido validada por paneles humanos entrenados de prueba para el probado de fragancia.

15 Metodología Analítica

La metodología in vitro emplea el uso de un parche de lana (tela mejorada) que es lavada en la solución del producto de prueba, enjuagada en 1 a 100 partes por millón del total de dureza de agua ($\text{Ca}^{+2}/\text{Mg}^{+2}$) y entonces secado con una toalla de papel. El parche es entonces transferido a un frasco de muestreo/de volumen sólido que es mantenido a una temperatura constante de 32 grados centígrados, la cual es reconocida como una temperatura promedio de la piel. Un tubo que contiene un polímero absorbente (Tenax™ TA (2,6-difenileno óxido polímero) 60/80 malla) es usada para capturar los materiales de la fragancia volátil que sale del frasco de muestreo. El parche de lana es purgado con 99.99% de nitrógeno puro a una tasa de flujo de 50 mL por minuto, el cual es equivalente a un volumen total de 3 litros. Al final de una hora, el flujo de purga es detenido y el tubo es removido y tapado. Un tubo fresco, previamente condicionado es reconectado al frasco de muestra

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y el procedimiento de purgado es repetido hasta que cinco tubos (sobre 5 horas) han sido recolectados. Los tubos son entonces sometidos a extracción térmica usando un aparato de Desabsorción Térmica Automática (ATD) el cual es entre
5 conectado a una columna GC (dentro del horno GC) por vía de una línea de transferencia de silicio fundido. Los componentes de fragancia son separados por la columna GC y detectados sobre un Espectrómetro de Masa de Ión Atrapado y las áreas pico son integradas por el sistema de computación
10 de control. Los datos del área pico de cada muestra (o período de tiempo) son convertidos en archivos ASCII y procesados para producir una tabla con todos los componentes de la fragancia recolectados sobre el período de cinco horas. Solamente las áreas pico de los componentes de fragancia son
15 sumados para cada tiempo de muestra y delineados contra el tiempo.

Los estudios de validación con paneles de prueba humanos usando una fragancia en una barra de jabón y
20 un gel de baño confirmaron la validez del método de prueba in vitro.

Abajo hay experimentos que muestran las mismas fórmulas con y sin específicas cantidades del Meadowquat® HG
25 (PEG-2 dimeadowfoam amido etilmonio metosulfato) (nombre CTFA), disponible de Fanning Corporation. Una adicional muestra tiene ese derivado de aceite de semilla de Meadowfoam (*Limnanthes alba*) y 0.2 por ciento por peso de la composición del polímero de deposición catiónica Polyquat 7. El
30 surfactante que contiene la composición (base de gel de baño) usado en los experimentos abajo es como sigue:

Tabla 1

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Base de Gel de Baño

Componente	Peso/por ciento por peso
Sodio laureth sulfato	8.20
Cocamidopropil betaína	3.00
Alquilo poliglucósido	1.12
Fragancia	1.00
Preservativos	0.30
Acido cítrico	0.06
Agua, sal y material catiónico	Cantidad suficiente
Total	100.00

Experimentos:

Control	0% Meadowquat HG/0% policuaternio 7
Experimento 1	1% Meadowquat HG/0% policuaternio 7
Experimento 2	2% Meadowquat HG/0% policuaternio 7
Experimento 3	3% Meadowquat HG/0% policuaternio 7
Experimento 4	2% Meadowquat HG/0.20% policuaternio 7 (no preferible orden de adición)
Experimento 5	1% Meadowquat HG/0.20% policuaternio 7 (preferible orden de adición)

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Resultados:

La fórmula base dada arriba fue preparada por la adición de surfactantes aniónicos, anfotéricos, y no iónicos al agua, la cual fue mezclada hasta aclarar. Los preservativos fueron añadidos hasta aclarar entonces el pH de la preparación fue ajustada a entre 5.0 y 6.5, usando ácido cítrico acuoso. En el caso de la fórmula de control, la fragancia fue entonces añadida y mezclada hasta aclarar, después la viscosidad de la fórmula fue ajustada a entre 4000 y 10000 centipoises usando cloruro de sodio anhidro. La fórmula fue finalmente QS con agua a 100 peso/ por ciento por peso.

Las fórmulas experimentales 1-3 fueron preparadas como arriba excepto que el material catiónico (Meadowquat HG) y la fragancia fueron añadidos y dejados mezclar hasta aclarar. La viscosidad fue entonces ajustada como arriba y la fórmula QS con agua a 100 de peso/por ciento por peso.

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La fórmula experimental 4 fue preparada como arriba para las fórmulas experimentales 1-3, excepto que el material catiónico combinado (policuaturnio 7/Meadowquat HG) y la fragancia fueron añadidos juntos y dejados mezclar hasta aclarar. La viscosidad fue entonces ajustada como arriba y la fórmula QS con agua a 100 peso/por ciento por peso.

La fórmula experimental 5 fue preparada como en la base de gel para baño, excepto que los materiales catiónicos y la fragancia fueron añadidos en un específico orden y dejados mezclar hasta aclarar. Primero el Meadowquat HG es añadido a la base de gel de baño y mezclado hasta que el producto está completamente claro. Este proceso fue repetido para la fragancia y entonces para el policuaturnio 7. Es importante que el Meadowquat HG sea añadido antes de la fragancia y del policuaturnio 7, como para lograr mejorada fase de estabilidad. Después de la adición del material catiónico y la fragancia, la viscosidad fue entonces ajustada como arriba y la fórmula QS con agua a 100 de peso/ por ciento por peso.

La longevidad de la fragancia medida para las fórmulas experimentales 2-5 es señalada en la Tabla 1. Aquí, ha sido calculado el por ciento de aumento total en el área pico para una fórmula experimental (con relación a la fórmula de control).

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Tabla 2

% de aumento en intensidad de la fragancia medida como áreas pico integradas para las fórmulas experimentales en contra de

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la fórmula de control

Fórmula Experimental	1 hora	2 horas	3 horas	4 horas	5 horas
Experimento 1: (1% Meadowquat HG/0% policuaternio 7)	29	160	96	102	90
Experimento 2: (2% Meadowquat HG/0% policuaternio 7)	95	235	266	312	307
Experimento 3: (3% Meadowquat HG/0% policuaternio 7)	188	278	187	164	193
Experimento 4: (2% Meadowquat HG/0.20% policuaternio 7)	144	536	2647	4100	3887
Experimento 5: (1% Meadowquat HG/0.20% policuaternio 7)	-13	190	344	599	526

La adición del Meadowquat HG a la fórmula base muestra un aumento en la intensidad de la fragancia con el tiempo, con relación a la fórmula de control (Tabla 2). La adición de un segundo material catiónico, policuaternio 7, a la fórmula al 2% del Meadowquat HG (fórmula experimental 4) proporciona un significativo aumento porcentual en la intensidad de la fragancia comparada a la fórmula experimental 3 (sin el policuaternio 7). La estabilidad derretida/congelada y térmica de las fórmulas experimentales 1-4, muestran alguna floculación después de tres a seis semanas a 120 grados Fahrenheit, y cuatro semanas después del ciclo de congelado y derretido de 32 grados Fahrenheit a 72 grados Fahrenheit.

La fórmula experimental 5 fue preparada con un más bajo nivel de material catiónico (1% Meadowquat HG/0.20% policuaternio 7) con un diferente proceso de preparación, el proceso preferible como se anota arriba. La fórmula experimental 5 se encontró ser estable después de 13 semanas a 120 grados Fahrenheit y después de 13 semanas del ciclo de congelado y derretido de 32 grados Fahrenheit a 72 grados Fahrenheit. El aumento porcentual en la intensidad de la fragancia para esta fórmula está en el rango desde 190% a 2 horas hasta 600% después de 4 horas.

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Se ilustran abajo varias otras fórmulas líquidas en donde un agente activo tal como un antimicrobiano o una fragancia está presente con un material cuaternario de aceite de semilla de Meadowfoam (*Limnanthes alba*) y preferiblemente un polímero de deposición catiónico para producir aumentada deposición y/o duración de la actividad de un agente activo.

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Tabla 3

Jabón Líquido para Manos

Ingrediente	Peso/por ciento por peso
Agua	74.85
PEG Gliceril monococoato	1.5
Sodio laureth sulfato (2EO)	5.37
Sulfato lauril sódico	10.00
Cocamidopropil betaina	5.00
Alquilo poliglucósido	1.13
Triclosan	0.15
Policuaternio 7	0.2
Meadowquat HG (Fanning)	1.00
Fragancia	1.00
DMDM Hidrantoin	0.4
Acido cítrico anhidro	0.1

Tabla 4

Jabón Líquido para el Cuerpo

Ingrediente	Peso/por ciento por peso
Agua	83.14
Sodio laureth sulfato	8.20
Cocamidopropil botaina	3.00
Sodio cloruro	1.44
Alquilo poliglucósido	1.13
Meadowquat HG	1.00
Fragancia	1.00
Acido cítrico	0.60
Preservativos	0.29
Policuaternio 7	0.20

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Tabla 5

Detergente Líquido

Ingrediente	Peso/por ciento por peso
Agua	70.98
Dodecibenceno Sulfonato	12.36
Alcohol etoxilatado C ₁₂ -C ₁₄	9.50
Silicato	4.56
Meadowquat HG	1.00
Preservativos	0.77
Perfume	0.50
Policuaternio 7	0.20

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Color	0.13
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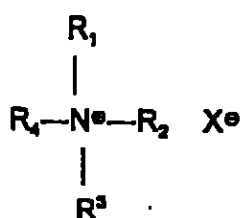
Tabla 6
Líquido para Lavar Trastos

Ingrediente	Peso/por ciento por peso
Agua	57.89
Sal de sodio sulfato alcohol etoxilatado	25.86
Sal magnesio dodecilbenceno sulfonato	6.30
Alquilo poliglucósido	3.00
Laurilmonometil etanolamina/sodio xileno sulfonato	2.56
Cloruro de sodio	1.99
Meadowquat HG	1.00
Sulfato de magnesio	0.50
Color	0.30
Perfume	0.25
Policuaternio 7	0.20
Preservativo	0.153

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REIVINDICACIONES

1. Una composición útil en un área seleccionada del grupo que consiste de cuidado personal, cuidado de superficies del hogar y cuidado de telas, que comprende (a) un agente activo en cantidades suficientes para presentar un efecto deseado; (b) una cantidad que extiende la deposición y/o duración del agente activo de un material o materiales de la fórmula



en donde R_1 , R_2 , R_3 , y R_4 son el mismo o diferente y son R_5 en donde R_5 es alquilo de uno a cuatro átomos de carbón, inclusive;

R_6 en donde R_6 es $(-CH_2CH_2(CH_2)_aO-)_bR_8$ donde R_8 es hidrógeno o metilo, a es 0 ó 1 y b es 1, 2, ó 3;

R_9 en donde R_9 es un aceite de semilla de Meadowfoam (*Limnanthes alba*) o aceite de semillas derivativas, el cual tiene una unión covalente con el nitrógeno de la fórmula;

y, en donde al menos uno pero más de dos de R_1 , R_2 , R_3 , y R_4 es un R_5 ;

y, en donde al menos uno pero no más de dos de R_1 , R_2 , R_3 , y R_4 son un R_6 ;

y, en donde al menos uno pero no más de dos de

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$R_1, R_2, R_3,$ y R_4 es un R_9 ;

y X es un contraión que lleva una carga negativa; y

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un portador de superficie compatible.

2. La composición tal y como se reivindica en la cláusula 1, caracterizada porque el área es cuidado personal.

10

3. La composición tal y como se reivindica en la cláusula 1, caracterizada porque el área es cuidado de superficies del hogar.

15

4. La composición tal y como se reivindica en la cláusula 1, caracterizada porque el área es cuidado de telas.

20

5. La composición tal y como se reivindica en la cláusula 2, caracterizada porque el agente activo es una fragancia.

6. La composición tal y como se reivindica en la cláusula 3, caracterizada porque el agente activo es una fragancia.

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7. La composición tal y como se reivindica en la cláusula 4, caracterizada porque el agente activo es una fragancia.

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8. La composición tal y como se reivindica en la cláusula 5, caracterizada porque está presente una

cantidad limpiadora de un surfactante o mezcla de surfactante.

9. La composición tal y como se reivindica en la cláusula 8, caracterizada porque la composición es un sólido.

10. La composición tal y como se reivindica en la cláusula 8, caracterizada porque la composición es un líquido o gel.

11. La composición tal y como se reivindica en la cláusula 9, caracterizada porque alrededor de 0.25 a alrededor de 4.0% por peso de la composición es el componente (b).

12. La composición tal y como se reivindica en la cláusula 10, caracterizada porque alrededor de 0.25 a alrededor de 4.0% por peso de la composición es el componente (b).

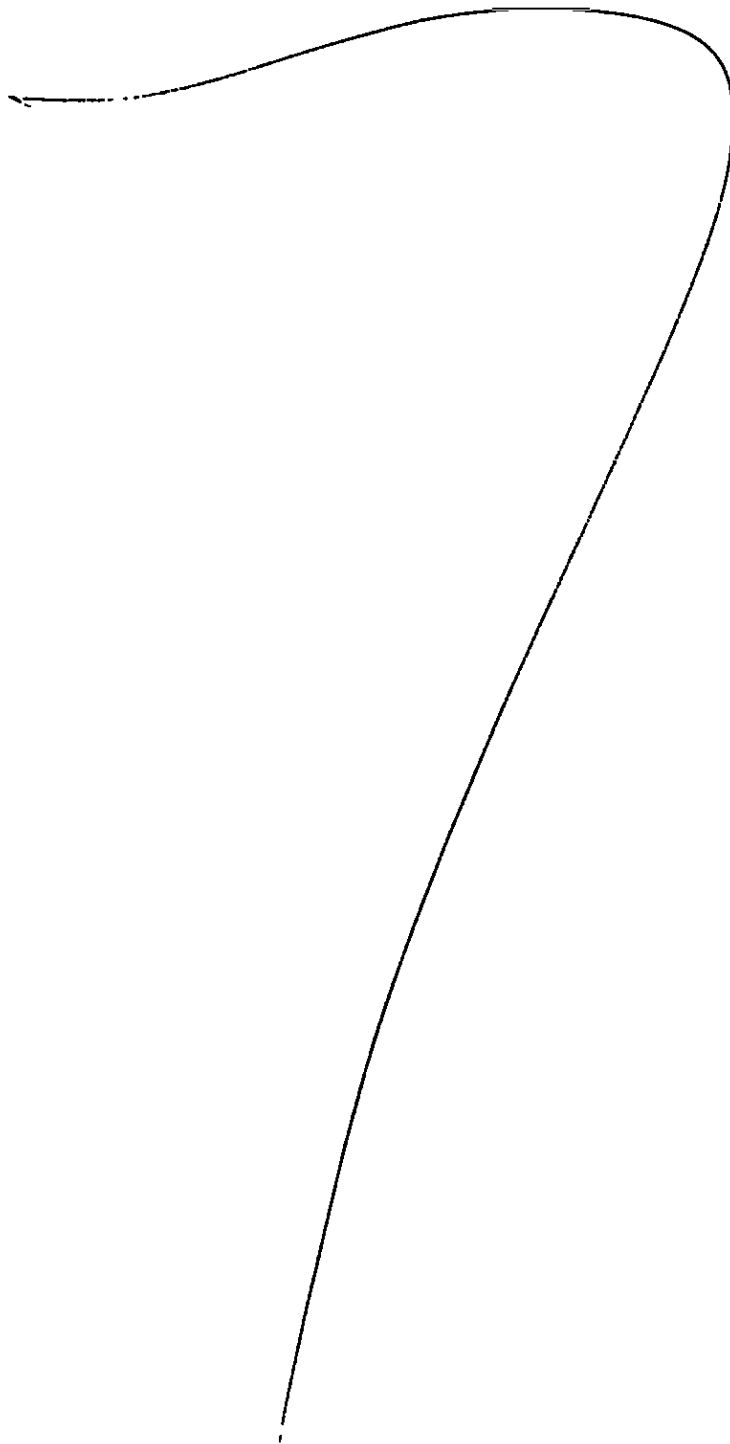
13. La composición tal y como se reivindica en la cláusula 11, caracterizada porque está presente adicionalmente una cantidad de deposición efectiva de un polímero catiónico, mezclas de polímero.

14. La composición tal y como se reivindica en la cláusula 12, caracterizada porque está presente adicionalmente una cantidad de deposición efectiva de un polímero catiónico, mezclas de polímero.

15. La composición tal y como se reivindica en la cláusula 13, caracterizada porque desde 0.01 a alrededor

de 1.0% por peso de la composición es el polímero catiónico,
o mezclas de polímero.

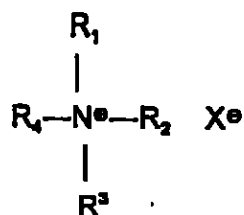
16. La composición tal y como se reivindica en
5 la cláusula 13, caracterizada porque desde 0.01 a alrededor
de 1.0% por peso de la composición es el polímero catiónico,
o mezclas de polímero.



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R E S U M E N

Una composición útil en un área seleccionada del grupo que consiste de cuidado personal, cuidado de superficies del hogar y cuidado de telas, que comprende (a) un agente activo en cantidades suficientes para presentar un efecto deseado, (b) una cantidad que extiende la deposición y/o duración del agente activo de un material o materiales de la fórmula



PATENT COOPERATION TREATY

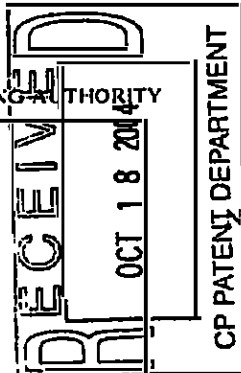
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72 72

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

MIANO, Rosemary, M.
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NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year) 11/10/2004

Applicant's or agent's file reference
IR 6956-00

10/10/04

IMPORTANT NOTIFICATION

International application No.
PCT/US03/36967

International filing date (day/month/year)
19/11/2003

Priority date (day/month/year)
21/11/2002

Applicant

COLGATE-PAIOLIVE COMPANY

- The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
- A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
- Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IR/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

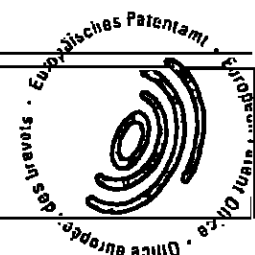
Name and mailing address of the IPEA/



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Form PCT/IPEA/416 (August 2002) P20473

77 73

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

(Rationalised Report according to the Notice of the President of the EPO published in the OJ11/2001)

Applicant's or agent's file reference IR 6956-00	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPFA/416)
International application No. PCT/US03/36967	International filing date (day/month/year) 19/11/2003	Priority date (day/month/year) 21/11/2002
International Patent Classification (IPC) or national classification and IPC A61K7/48		
Applicant COLGATE-PALMOLIVE COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 2 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

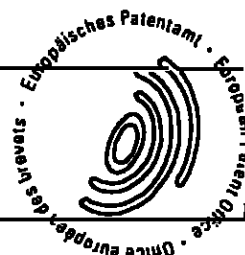
These annexes consists of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 21/06/2004	Date of completion of this report 06/10/2004
Name and mailing address of the IPEA/  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Netherlands Tel.: (+ 31-70) 340-2040 Fax: (+ 31-70) 340-3016	Authorized officer STEVNSBORG N Tel. (+ 49-89) 2399 2828

Form PCT/IPFA/409 (cover sheet) P20476 (October 2002)



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No.

PCT/US03/36967

24 74

I. Basis of the report

The basis of this international preliminary examination is the application as originally filed.

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability

In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claim references).

TRANSMITTAL LETTER TO THE
UNITED STATES RECEIVING OFFICE

Date	19 November 2003
International Application No.	
Attorney Docket No.	IR 6956-00

25

I. Certification under 37 CFR 1.10 (if applicable)

EV 360772504 US	19 November 2003
Express Mail mailing number	Date of Deposit

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

	Carol Stanley
Signature of person mailing correspondence	Typed or printed name of person mailing correspondence

EV 360772504 US

II. ☒ New International Application

TITLE	COMPOSITION	Earliest priority date (Day/Month/Year)
		21 November 2002

SCREENING DISCLOSURE INFORMATION: In order to assist in screening the accompanying international application for purposes of determining whether a license for foreign transmittal should and could be granted and for other purposes, the following information is supplied. (Note: check as many boxes as apply):

A. ☐ The invention disclosed was not made in the United States.

B. ☐ There is no prior U.S. application relating to this invention.

C. ☒ The following prior U.S. application(s) contain subject matter which is related to the invention disclosed in the attached international application. (NOTE: priority to these applications may or may not be claimed on form PCT/RO/101 (Request) and this listing does not constitute a claim for priority).

application no.	USSN 10/301,190	filed on	21 November 2002
application no.		filed on	

D. ☐ The present international application ☐ is identical ☐ contains less subject matter than that found in the prior U.S. application(s) identified in paragraph C.

E. ☐ The present international application ☐ contains additional subject matter not found in the prior U.S. application(s) identified in paragraph C. above. The additional subject matter is found on pages and ☐ DOES NOT ALTER ☐ MIGHT BE CONSIDERED TO ALTER the general nature of the invention in a manner which would require the U.S. application to have been made available for inspection by the appropriate defense agencies under 35 U.S.C. 181 and 37 CFR 5.1. See 37 CFR 5.15

III. ☐ A Response to an Invitation from the RO/US. The following document(s) is (are) enclosed:

A. ☐ A Request for An Extension of Time to File a Response

B. ☐ A Power of Attorney (General or Regular)

C. ☐ Replacement pages:

pages		of the request (PCT/RO/101)	pages		of the figures
pages		of the description	pages		of the abstract
pages		of the claims			

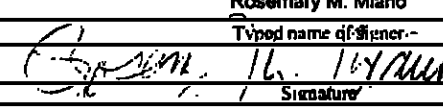
D. ☐ Submission of Priority Documents

Priority document		Priority document	
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E. ☐ Fees as specified on attached Fee Calculation sheet form PCT/RO/101 annex

IV. ☐ A Request for Rectification under PCT 91 ☐ A Petition ☐ A Sequence Listing Diskette

V. ☐ Other (please specify):

The person signing this form is the:	☐ Applicant	Rosemary M. Miano
	☒ Attorney/Agent (Reg. No.) 29,674	Typed name of signer
	☐ Common Representative	 Signature

PCT REQUEST

Original (for SUBMISSION) - printed on 19.11.2003 10:18:21 AM

0	For receiving Office use only	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.92 (updated 01.07.2003)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	United States Patent and Trademark Office (USPTO) (RO/US)
0-7	Applicant's or agent's file reference	6956-00
I	Title of Invention	COMPOSITION
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States
II-4	Name	COLGATE-PALMOLIVE COMPANY
II-5	Address:	300 Park Avenue New York, NY 10022 United States of America
II-6	State of nationality	US
II-7	State of residence	US
II-8	Telephone No.	732-878-7153
II-9	Facsimile No.	732-878-7853
III-1	Applicant and/or Inventor	
III-1-1	This person is:	inventor only
III-1-4	Name (LAST, First)	PAYNE, Richard, Kevin
III-1-5	Address:	281 Old Bridge Road Brielle, NJ 08730 United States of America
III-2	Applicant and/or inventor	
III-2-1	This person is:	inventor only
III-2-4	Name (LAST, First)	SOLIMAN, Nadia
III-2-5	Address:	53 Racetrack Road East Brunswick, NJ 08816 United States of America

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6956-00

III-3	Applicant and/or inventor	
III-3-1	This person is:	inventor only
III-3-4	Name (LAST, First)	CHOPRA, Suman
III-3-5	Address:	505 Major Road Dayton, NJ 08810 United States of America
III-4	Applicant and/or inventor	
III-4-1	This person is:	inventor only
III-4-4	Name (LAST, First)	BAKK, Jean
III-4-5	Address:	57 Bentley Court Bedminster, NJ 07921 United States of America
III-5	Applicant and/or inventor	
III-5-1	This person is:	inventor only
III-5-4	Name (LAST, First)	BIELLI, Christina, A.
III-5-5	Address:	247-2A Gemini Drive Hillsborough, NJ 08844 United States of America
IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	MIANO, Rosemary, M.
IV-1-2	Address:	Colgate-PalmoliveCompany 909 River Road P.O. Box 1343 Piscataway, NJ 08855-1343 United States of America
IV-1-3	Telephone No.	732-878-7153
IV-1-4	Facsimile No.	732-878-7853
IV-1-5	e-mail	rosemary_miano@colpal.com
IV-1-5	Agent's registration No.	29,674

V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE BG CH&LI CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH&LI CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	21 November 2002 (21.11.2002)
VI-1-2	Number	10/301,190
VI-1-3	Country	US

PCT REQUEST

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VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI - 1	
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)	
VIII	Declarations	Number of declarations	
VIII-1	Declaration as to the identity of the inventor	-	
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	1	
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	1	
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	-	
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-	

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VIII-2-1	Declaration: Entitlement to apply for and be granted a patent Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(II)), in a case where the declaration under Rule 4.17(iv) is not appropriate: Name:	in relation to this international application COLGATE-PALMOLIVE COMPANY is entitled to apply for and be granted a patent by virtue of the following:
VIII-2-1 (iv)		an assignment from PAYNE, Richard, Kevin to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-2-1 (iv)		an assignment from SOLIMAN, Nadia to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-2-1 (iv)		an assignment from CHOPRA, Suman to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-2-1 (iv)		an assignment from BAKK, Jean to COLGATE-PALMOLIVE COMPANY, dated 04 November 2002 (04.11.2002)
VIII-2-1 (iv)		an assignment from BIELLI, Christina, A. to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-2-1 (ix)	This declaration is made for the purposes of:	all designations

VIII-3-1	Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)): Name:	in relation to this international application COLGATE-PALMOLIVE COMPANY is entitled to claim priority of earlier application No. 10/301,190 by virtue of the following:
VIII-3-1 (iv)		an assignment from PAYNE, Richard, Kevin to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-3-1 (iv)		an assignment from SOLIMAN, Nadia to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-3-1 (iv)		an assignment from CHOPRA, Suman to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-3-1 (iv)		an assignment from BAKK, Jean to COLGATE-PALMOLIVE COMPANY, dated 04 November 2002 (04.11.2002)
VIII-3-1 (iv)		an assignment from BIELLI, Christina, A. to COLGATE-PALMOLIVE COMPANY, dated 01 November 2002 (01.11.2002)
VIII-3-1 (ix)	This declaration is made for the purposes of:	all designations

PCT REQUEST

7/7

6956-00

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IX	Check list	number of sheets	electronic file(s) attached
IX-1	Request (including declaration sheets)	7	-
IX-2	Description	23	-
IX-3	Claims	2	-
IX-4	Abstract	1	EZABST00.TXT
IX-5	Drawings	0	-
IX-7	TOTAL	33	
	Accompanying Items	paper document(s) attached	electronic file(s) attached
IX-8	Fee calculation sheet	✓	-
IX-17	PCT-EASY diskette	-	Diskette
IX-19	Figure of the drawings which should accompany the abstract		
IX-20	Language of filing of the international application	English	
X-1	Signature of applicant, agent or common representative		
X-1-1	Name (LAST, First)	MIANO, Rosemary, M.	

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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PCT (ANNEX - FEE CALCULATION SHEET)

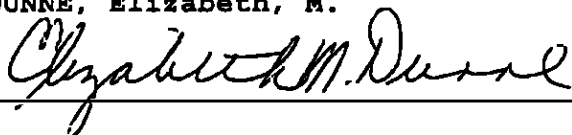
Original (for SUBMISSION) - printed on 19.11.2003 10:18:21 AM

(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only			
0-1	International Application No.			
0-2	Date stamp of the receiving Office			
0-4	Form - PCT/RO/101 (Annex) PCT Fee Calculation Sheet			
0-4-1	Prepared using	PCT-EASY Version 2.92 (updated 01.07.2003)		
0-9	Applicant's or agent's file reference	6956-00		
2	Applicant	COLGATE-PALMOLIVE COMPANY		
12	Calculation of prescribed fees	fee amount/multiplier	Total amounts (USD)	
12-1	Transmittal fee T	⇒	240	
12-2-1	Search fee S	⇒	1,119	
12-2-2	International search to be carried out by	EP		
12-3	International fee			
	Basic fee (first 30 sheets) b1	476		
12-4	Remaining sheets	3		
12-5	Additional amount (X)	12		
12-6	Total additional amount b2	36		
12-7	b1 + b2 = B	512		
12-8	Designation fees			
	Number of designations contained in international application	97		
12-9	Number of designation fees payable (maximum 5)	5		
12-10	Amount of designation fee (X)	104		
12-11	Total designation fees D	520		
12-12	PCT-EASY fee reduction R	-148		
12-13	Total International fee (B+D-R) I	⇒	884	
12-14	Fee for priority document			
	Number of priority documents requested	1		
12-15	Fee per document (X)	20		
12-16	Total priority document fee P	⇒	20	
12-17	TOTAL FEES PAYABLE (T+S+I+P)	⇒	2,263	
12-19	Mode of payment	authorization to charge deposit account		
12-20	Deposit account instructions			
	The receiving Office:	United States Patent and Trademark Office (USPTO) (RO/US)		
12-20-1	Authorization to charge the total fees indicated above.	✓		

PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION) - printed on 19.11.2003 10:18:21 AM

12-20-2	Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.	✓
12-20-3	Authorization to charge the fee for priority document.	✓
12-21	Deposit account No.	03-2457
12-22	Date	19 November 2003 (19.11.2003)
12-23	Name and signature	DUNNE, Elizabeth, M. 

VALIDATION LOG AND REMARKS

13-2-2	Validation messages States	Green? More designations could be made. The following States have not been designated: US. Please verify.
13-2-7	Validation messages Contents	Yellow! The power of attorney or a copy of the general power of attorney will need to be furnished unless all applicants sign the request form.
		Green? The international application contains no drawings. Please verify.
13-2-9	Validation messages Payment	Green? Please ensure that you have a valid deposit account with the receiving Office selected.

PCT

GENERAL POWER OF ATTORNEY

(for several international applications filed under the Patent Cooperation Treaty)

(PCT Rule 90.5)

The undersigned person(s):

(Family name followed by given name; for a full legal entity, full official designation. The address must include postal code and name of country.)

COLGATE-PALMOLIVE COMPANY

300 Park Avenue

New York, New York 10022

United States of America

hereby appoint(s) the following person as:

☒ agent

☐ common representative

Name and address

(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Martin B. Barancik, Henry S. Goldfine, Bernard Lieberman, Michael J. McGreal, Rosemary M. Miano, Richard E. Nanfeldt, Ellen Park and Clifford Wilkins of

COLGATE-PALMOLIVE COMPANY

909 River Road

P.O. Box 1343

Pliscataway, New Jersey 08855-1343

United States of America

to represent the undersigned before

☒ all the competent International Authorities

☐ the International Searching Authority only

☐ the International Preliminary Examining Authority only

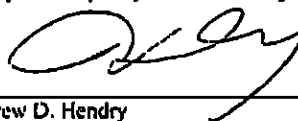
in connection with any and all international applications filed by the undersigned with the following Office

RO/US

as receiving Office

and to make or receive payments on behalf of the undersigned.

Signature(s) (where there are several persons, each of them must sign; next to each signature, indicate the name of the person signing and the capacity in which the person signs, if such capacity is not obvious from reading this power):



Andrew D. Hendry
Senior Vice President, General Counsel and
Secretary

Date: October 16, 2003

COMPOSITIONBACKGROUND OF THE INVENTION

5

Fragrances have been utilized in skin contacting compositions for hundreds of years. Those who use fragrances desire to have an aroma about them that is pleasing to themselves and others in their immediate vicinity. The first criterion of a fragrance in use in a skin contacting composition is that the
10 fragrance be deposited on the skin and stay there for an appropriate time span. Although this can be accomplished relatively easily in "leave on" compositions such as lotions, creams, and the like, it is much more difficult to accomplish when using a rinse off composition using water to remove the composition from the skin after a relatively short contact time with the skin, such as a maximum
15 contact time of about 2 minutes, generally no more than about 90 seconds or about 60 seconds or about 30 seconds. The second criterion is that the fragrance aroma must be releasable from the skin for whatever reason, such as the fragrance vapor pressure, its measure of attachability to the skin, and the like, and at a rate which brings about a significant duration of the aroma at a
20 point detectable above the level of the skin. The ideal fragrance, therefore, is one, which has significant skin substantivity, for purposes of getting it onto the skin, but also manages to have a detectable, desirable aroma above the skin for a significant duration of time. This combination of effects is difficult to achieve with the fragrance per se because the most significant trait of a fragrance is its
25 desirable "aroma" or "scent" not the two variables of concern here. Therefore, a significant amount of time has been put into studying materials, which can improve at least one and preferably two of the above-identified criteria.

A series of materials has been found which significantly increases the
30 substantivity and duration of fragrance aroma. This effect(s) can be significantly increased when a further family of materials is also present. The effects can be present in both leave-on and rise-off compositions used in contacting the skin. Such rinse-off compositions can additionally have a skin cleansing level of a surfactant or mixture of surfactants. Unless in solid form, a substantial amount,
35 preferably a majority amount of the rinse-off compositions, are aqueous.

The benefit of this family(ies) of material can also be effectively applied to other hydrophobic active agents such as antibacterial agents, silicones, anti-fungal agents, and the like. The technology benefits other systems apart from skin care wherein deposition and duration of effect(s) are also desirable such as household surface care products (sinks, toilets, stove tops, floors and counter-tops), and fabric care products such as detergents and softeners. They can be used for the deposition and duration of fragrances, antibacterial agents, odor controlling agents, and the like.

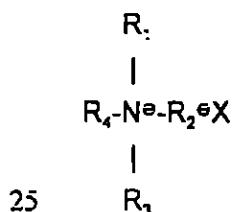
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SUMMARY OF THE INVENTION

In accordance with the invention, there is a composition useful in an area selected from the group consisting of personal care, household surface care, and fabric care, which comprises:

- (a) an active agent in quantities sufficient to bring about a desired effect,
- (b) a deposition and/or duration extending amount of a material or materials of the formula

20



25

wherein R_1 , R_2 , R_3 and R_4 are the same or different and are

R_5 wherein R_5 is alkyl of one to four carbon atoms, inclusive;

30

R_6 wherein R_6 is $\{CH_2CH_2(CH_2)_aO\}_bR_8$ where R_8 is hydrogen or methyl, a is 0 or 1 and b is 1, 2, or 3;

35

R_9 wherein R_9 is a meadowfoam seed oil or seed oil derivative which has a covalent bond with the nitrogen of the formula:

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 is an R_5 ;

426 88

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_5 ;

5 and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_5 ;

and X is a counterion bearing a negative charge, and

10 (c) a surface compatible carrier.

It has now been found that even more extended deposition and/or duration material, particularly fragrance times, can be achieved with an additional cationic material selected from the group consisting of a cationic
15 polymer, or mixtures thereof..

DETAILED DESCRIPTION OF THE INVENTION

20

The usage of component (b) of the invention brings about greater substantivity and duration of time for effectiveness of the fragrance aroma in any composition wherein substantivity and duration of the fragrance aroma are desirable. As disclosed earlier, these compositions are essentially any
25 composition, which has a fragrance wherein the fragrance can be deposited on a surface. Non-limiting examples of these compositions have been provided earlier in this disclosure. Further non-limiting illustrative examples include Hair, clothing, towels, and inanimate surfaces such as floors and counter-tops.

30 As previously noted, other types of active agents are contemplated beyond fragrances. These active agents' substantivity will also be increased through the use of component (b) of the invention

Generally, these compositions are divided into the compositions, which
35 have a relatively lengthy contact time with a surface and those with relatively short contact time prior to rinsing off the surface, usually with water. Generally, a "leave-on" product which is a personal care lotion or cream is left on the skin

for at least about two minutes while a "rinse-off" product is left on the skin for less than about two minutes, preferably no more than about 90, 60, or 30 seconds. Examples of the latter are hand cleansers and body cleansers. The effect of the (b) component is particularly noteworthy with respect to the

5 compositions useful in the personal care area, particularly the skin cleansing, skin care, hair cleansing and hair conditioning, and antiperspirant deodorant product areas. The ability to increase fragrance substantivity and duration of effect in these areas can be very significant both in leave-on and rinse-off compositions. Liquids and gels can be of a viscosity of about 100 to about

10 10,000 cps or higher. Emollients can be present for skin feel, moisturization and the like. Illustrative examples of such emollients include long chain alkyl or alkenyl fatty acids, fatty acid esters, short chain acids with long chain alcohols such as myristyl propionate, mineral oil, petrolatum, silicone, and the like. Gelling agents such as silicone elastomer (e.g., Dow 9040), silicone polyamides,

15 dibenzylidene sorbitol, xanthan gum and carboxy methylcellulose can be employed. As stated previously, the composition, particularly the liquid and gel, need not be effective for cleansing a surface but can be used to condition a surface, such as for example skin or hair, through conditioning and/or moisturizing. Hair conditioners, skin lotions and creams can be employed. In

20 these skin lotions and creams the compositions can have emulsifying surfactants in small levels because of their emulsifying properties with the various oily materials that make the composition a "lotion" or "cream."

Of particular significance are compositions wherein there is a surfactant

25 therein and a cleansing of a surface takes effect, for example skin, hard surface, or clothing. In each of these circumstances, the compatible carrier component (c) is usually water or includes water. Some of the carrier include water but are solids such as "soap" bars for cleansing skin and pellets or granules for washing clothing.

30 Cleansing surfactants which can be employed include: Soap, a long chain alkyl or alkenyl, branched or normal carboxylic acid salt such as sodium, potassium, ammonium or substituted ammonium salt, can be present in the composition as an example of an anionic surfactant. Exemplary of long chain

35 alkyl or alkenyl are from about 8 to about 22 carbon atoms in length, specifically about 10 to about 20 carbon atoms in length, more specifically alkyl and most specifically normal, or normal with little branching. Small quantities of olefinic

bond(s) may be present in the predominantly alkyl sections, particularly if the source of the "alkyl" group is obtained from a natural product such as tallow, coconut oil and the like. Because of its potential harshness soap is not a preferred surfactant and can be omitted from the composition.

5

Other cleansing surfactants can be present in the composition as well. Examples of such surfactants are the anionic, amphoteric, nonionic and cationic surfactants. Examples of anionic surfactants include but are not limited to soaps, alkyl sulfates, anionic acyl sarcosinates, methyl acyl taurates, N-acyl glutamates, acyl isethionates, alkyl sulfosuccinates, alkyl phosphate esters, ethoxylated alkyl phosphate esters, trideceth sulfates, protein condensates, ethoxylated alkyl sulfates and the like.

10

Alkyl chains for these surfactants are C_8 - C_{22} , preferably C_{10} - C_{18} , more preferably C_{12} - C_{14} .

15

Anionic non-soap surfactants can be exemplified by the alkali metal salts of organic sulfate having in their molecular structure an alkyl radical containing from about 8 to about 22 carbon atoms and a sulfonic acid or sulfuric acid ester radical (included in the term alkyl is the alkyl portion of higher acyl radicals). Preferred are the sodium, ammonium, potassium or triethanolamine alkyl sulfates, especially those obtained by sulfating the higher alcohols (C_8 - C_{18} carbon atoms), sodium coconut oil fatty acid monoglyceride sulfates and sulfonates; sodium or potassium salts of sulfuric acid esters of the reaction product of 1 mole of a higher fatty alcohol (e.g., tallow or coconut oil alcohols) and 1 to 12 moles of ethylene oxide; sodium or potassium salts of alkyl phenol ethylene oxide ether sulfate with 1 to 10 units of ethylene oxide per molecule and in which the alkyl radicals contain from 8 to 12 carbon atoms. sodium alkyl glyceryl ether sulfonates; the reaction product of fatty acids having from 10 to 22 carbon atoms esterified with isethionic acid and neutralized with sodium hydroxide; water soluble salts of condensation products of fatty acids with sarcosine; and others known in the art.

20

25

30

Zwitterionic surfactants can be exemplified by those which can be broadly described as derivatives of aliphatic quaternary ammonium, phosphonium, and sulfonium compounds, in which the aliphatic radicals can be straight chain or

35

branched and wherein one of the aliphatic substituents contains from about 8 to 18 carbon atoms and one contains an anionic water-solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. A general formula for these compounds is:



wherein R^2 contains an alkyl, alkenyl, or hydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety; Y is selected from the group consisting of nitrogen, phosphorus, and sulfur atoms; R^3 is an alkyl or monohydroxyalkyl group containing 1 to about 3 carbon atoms; X is 1 when Y is a sulfur atom and 2 when Y is a nitrogen or phosphorus atom. R^4 is an alkylene or hydroxyalkylene of from 0 to about 4 carbon atoms and Z is a radical selected from the group consisting of carboxylate, sulfonate, sulfate, phosphonate, and phosphate groups.

Examples include: 4-[N,N-di(2-hydroxyethyl)-N-octadecylammonio]-butane-1-carboxylate; 5-[S-3-hydroxypropyl-S-hexadecylsulfonio]-3-hydroxypentane-1-sulfate; 3-[P,P-P-diethyl-P 3,6,9 trioxatetradecyl-phosphonio]-2-hydroxypropane-1-phosphate; 3-[N,N-dipropyl-N-3 dodecoxy-2-hydroxypropylammonio]-propane-1-phosphonate; 3-(N,N-di-methyl-N-hexadecylammonio) propane-1-sulfonate; 3-(N,N-dimethyl-N-hexadecylammonio)-2-hydroxypropane-1-sulfonate; 4-(N,N-di(2-hydroxyethyl)-N-(2 hydroxydodecyl) ammonio]-butane-1-carboxylate; 3-[S-ethyl-S-(3-dodecoxy-2-hydroxypropyl)sulfonio]-propane-1-phosphate; 3-(P,P-dimethyl-P-dodecylphosphonio)-propane-1-phosphonate; and 5-[N,N-di(3-hydroxypropyl)-N-hexadecylammonio]-2-hydroxy-pentane-1-sulfate.

Examples of amphoteric surfactants which can be used in the compositions of the present invention are those which can be broadly described as derivatives of aliphatic secondary and tertiary amines in which the aliphatic radical can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to about 18 carbon atoms and one contains an anionic water solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. Examples of compounds falling within this definition are sodium 3-dodecylaminopropionate, sodium 3-dodecylaminopropane sulfonate,

q2 q2

N-alkyltaurines, such as the one prepared by reacting dodecylamine with sodium isethionate according to the teaching of U.S. Patent No. 2,658,072, N-higher alkyl aspartic acids, such as those produced according to the teaching of U.S. Patent No. 2,438,091, and the products sold under the trade name "Miranol" and
5 described in U.S. Patent No. 2,528,378. Other amphoterics such as betaines are also useful in the present composition.

Examples of betaines useful herein include the high alkyl betaines such as coco dimethyl carboxymethyl betaine, lauryl dimethyl carboxy-methyl betaine,
10 lauryl dimethyl alpha-carboxyethyl betaine, cetyl dimethyl carboxymethyl betaine, lauryl bis-(2-hydroxyethyl)carboxy methyl betaine, stearyl bis-(2-hydroxypropyl) carboxymethyl betaine, oleyl dimethyl gamma-carboxypropyl betaine, lauryl bis-(2-hydroxypropyl) alpha-carboxyethyl betaine, etc. The sulfobetaines may be represented by coco dimethyl sulfopropyl betaine, stearyl dimethyl sulfopropyl
15 betaine, amido betaines, amidosulfobetaines, and the like.

Many cationic surfactants are known to the art. By way of example, the following may be mentioned:

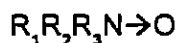
- stearyldimethylbenzyl ammonium chloride;
- 20 - dodecyltrimethylammonium chloride;
- nonylbenzylethyldimethyl ammonium nitrate;
- tetradecylpyridinium bromide;
- laurylpyridinium chloride;
- cetylpyridinium chloride
- 25 - laurylpyridinium chloride;
- laurylisoquinolium bromide;
- ditallow(Hydrogenated)dimethyl ammonium chloride;
- dilauryldimethyl ammonium chloride; and
- stearalkonium chloride.

30

Additional cationic surfactants are disclosed in USP 4,303,543 see column 4, lines 58 and column 5, lines 1-42, incorporated herein by references. Also see CTFA Cosmetic Ingredient Dictionary, 6th Edition 1995, pages 795-799 for various long chain alkyl cationic surfactants; incorporated herein by
35 references.

Nonionic surfactants include those which can be broadly defined as compounds produced by the condensation of alkylene oxide groups (hydrophilic in nature) with an organic hydrophobic compound, which may be aliphatic or alkyl aromatic in nature. Examples of preferred classes of nonionic surfactants are:

1. The polyethylene oxide condensates of alkyl phenols, e.g., the condensation products of alkyl phenols having an alkyl group containing from about 6 to 12 carbon atoms in either a straight chain or branched chain configuration, with ethylene oxide, the said ethylene oxide being present in amounts equal to 10 to 60 moles of ethylene oxide per mole of alkyl phenol. The alkyl substituent in such compounds may be derived from polymerized propylene, diisobutylene, octane, or nonane, for example.
2. Those derived from the condensation of ethylene oxide with the product resulting from the reaction of propylene oxide and ethylene diamine products which may be varied in composition depending upon the balance between the hydrophobic and hydrophilic elements which is desired. For example, compounds containing from about 40% to about 80% polyoxyethylene by weight and having a molecular weight of from about 5,000 to about 11,000 resulting from the reaction of ethylene oxide groups with a hydrophobic base constituted of the reaction product of ethylene diamine and excess propylene oxide, said base having a molecular weight of the order of 2,500 to 3,000, are satisfactory.
3. The condensation product of aliphatic alcohols having from 8 to 18 carbon atoms, in either straight chain or branched chain configuration with ethylene oxide, e.g., a coconut alcohol ethylene oxide condensate having from 10 to 30 moles of ethylene oxide per mole of coconut alcohol, the coconut alcohol fraction having from 10 to 14 carbon atoms. Other ethylene oxide condensation products are ethoxylated fatty acid esters of polyhydric alcohols (e.g., Tween 20-polyoxyethylene (20) sorbitan monolaurate).
4. Long chain tertiary amine oxides corresponding to the following general formula:



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wherein R₁ contains an alkyl, alkenyl or monohydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties, and from 0 to 1 glyceryl moiety, and, R₂ and R₃ contain from 1 to about 3 carbon atoms and from 0 to about 1 hydroxy group, e.g., methyl, ethyl, propyl, hydroxy ethyl, or hydroxy propyl radicals. The arrow in the formula is a conventional representation of a semipolar bond. Examples of amine oxides suitable for use in this invention include dimethyldodecylamine oxide, oleyl-di(2-hydroxyethyl) amine oxide, dimethyloctylamine oxide, dimethyldecylamine oxide, dimethyl-tetradecylamine oxide, 3,6,9 trioxaheptadecyldiethylamine oxide, di(2-hydroxyethyl)-tetradecylamine oxide, 2-dodecoxyethyldimethylamine oxide, 3-dodecoxy-2-hydroxypropyldi(3-hydroxypropyl)amine oxide, dimethyl-hexadecylamine oxide.

5. Long chain tertiary phosphine oxides corresponding to the following general formula:



wherein R contains an alkyl, alkenyl or monohydroxyalkyl radical ranging from 8 to 20 carbon atoms in chain length, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety and R' and R'' are each alkyl or monohydroxyalkyl groups containing from 1 to 3 carbon atoms. The arrow in the formula is a conventional representation of a semipolar bond. Examples of suitable phosphine oxides are: dodecyldimethylphosphine oxide, tetradecylmethylethylphosphine oxide, 3,6,9-trioxaoctadecyldimethylphosphine oxide, cetyldimethylphosphine oxide, 3-dodecoxy-2-hydroxypropyldi(2-hydroxyethyl) phosphine oxide, stearyldimethylphosphine oxide, cetylethyl propylphosphine oxide, oleyldiethylphosphine oxide, dodecyldiethylphosphine oxide, tetradecyldiethylphosphine oxide, dodecyldipropylphosphine oxide, dodecyldi(hydroxymethyl)phosphine oxide, dodecyldi(2-hydroxyethyl)phosphine oxide, tetradecylmethyl-2-hydroxypropylphosphine oxide, oleyldimethylphosphine oxide, 2-hydroxydodecyldimethylphosphine oxide.

6. Long chain dialkyl sulfoxides containing one short chain alkyl or hydroxy alkyl radical of 1 to about 3 carbon atoms (usually methyl) and one long hydrophobic chain which contain alkyl, alkenyl, hydroxy alkyl, or keto alkyl radicals containing from about 8 to about 20 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety. Examples include:

ax as

octadecyl methyl sulfoxide, 2-ketotridecyl methyl sulfoxide, 3,6,9-trioxaoctadecyl 2-hydroxyethyl sulfoxide, dodecyl methyl sulfoxide, oleyl 3-hydroxypropyl sulfoxide, tetradecyl methyl sulfoxide, 3-methoxytridecylmethyl sulfoxide, 3-hydroxytridecyl methyl sulfoxide, 3-hydroxy-4-dodecoxybutyl methyl sulfoxide.

5

7. Alkylated polyglycosides wherein the alkyl group is from about 8 to about 20 carbon atoms, preferably about 10 to about 18 carbon atoms and the degree of polymerization of the glycoside is from about 1 to about 3, preferably about 1.3 to about 2.0.

10

Fragrances include any materials which provide an aroma when on a surface. These are generally due to the volatile perfume ingredients therein.

The volatile perfume ingredients employed in the personal cleansing, hard surface cleansing and fabric cleansing compositions of the present invention are the conventional ones known in the art. Selection of the perfume ingredients used in the liquid personal cleansing shower gel compositions of the present invention can be based on the desired fragrance characteristics for the composition.

20

Suitable perfume compounds and compositions can be found in the art including U.S. Pat. Nos.: 4,145,184, Brain and Cummins, issued Mar. 20, 1979; 4,209,417, Whyte, issued Jun. 24, 1980; 4,515,705, Moeddel, issued May 7, 1985; and 4,152,272, Young, issued May 1, 1979, all of said patents being

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Perfumes can be classified according to their volatility. For purposes of the present invention, "volatile" perfumes are those having a boiling point of less than about 500°C. The highly volatile, low boiling, perfume ingredients typically have boiling points of about 250°C. or lower. The moderately volatile perfume ingredients are those having boiling points of from about 250°C. to about 300°C. The less volatile, high boiling, perfume ingredients are those having boiling points of about from about 300°C. to about 500°C. Many of the perfume ingredients as discussed hereinafter, along with their odor and/or flavor characters, and their physical and chemical properties, such as boiling point and molecular weight, are given in "Perfume and Flavor Chemicals (Aroma

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Chemicals)," Steffen Arctander, published by the author, 1969, incorporated herein by reference. It is preferred that the products herein particularly the liquid or gel personal cleansing products herein contain, as measured by the total fragrance, at least about 5%, more preferably about 25%, and most preferably at least about 50% of highly volatile perfume ingredients having a boiling point of 250°C. or lower.

Examples of the highly volatile, low boiling, perfume ingredients are: anethole, benzaldehyde, benzyl acetate, benzyl alcohol, benzyl formate, isobornyl acetate, camphene, cis-citral (neral), citronellal, citronellol, citronellyl acetate, para-cymene, dical, dihyrolinalool, dihydromyrcenol, dimethyl phenyl carbinol, eucalyptol, geranial, geraniol, geranyl acetate, geranyl nitrile, cis-3-hexenyl acetate, hydroxycitronellal, di-limonene, linalool, linalool oxide linalyl acetate, linalyl propionate, methyl anthranilate, alpha-methyl ionone, methyl nonyl acetaldehyde, methyl phenyl carbonyl acetate, laevomenthyl acetate, menthone, iso-menthone, myrcene, myrcenyl acetate, myrcenol, nerol, neryl acetate, nonyl acetate, phenyl ethyl alcohol, alpha-pinene, beta-pinene, gamma-terpinene, alpha-terpineol, beta-terpineol, terpinyl acetate, and vertenex (para-tertiary-butyl cyclohexyl acetate). Some natural oils also contain large percentages of highly volatile perfume ingredients. For example, lavandin contains as major components: linalool; linalyl acetate; geraniol; and citronellol. Lemon oil and orange terpenes both contain about 95% of d-limonene.

Examples of moderately volatile perfume ingredients are: amyl cinnamic aldehyde, iso-amyl salicylate, beta-caryophyllene, cedrene, cinnamic alcohol, coumarin, dimethyl benzyl carbonyl acetate, ethyl vanillin, eugenol, iso-eugenol, flor acetate, heliotropine, 3-cis-hexenyl salicylate, hexyl salicylate, lilial (para-tertiarybutyl-alpha-methyl hydrocinnamic aldehyde), gamma-methyl ionone, nerolidol, patchouli alcohol, phenyl hexanol, beta-selicarb, trichloromethyl phenyl carbonyl acetate, triethyl citrate, vanillin, and veratraldehyde. Cedarwood terpenes are composed mainly of alpha-cedrene, beta-cedrene, and other $C_{15}H_{24}$ sesquiterpenes.

Examples of the less volatile, high boiling, perfume ingredients are: benzophenone, benzyl salicylate, ethylene brassylate, galaxolide (1,3,4,6,7,8-hexahydro-4, 6,6,7,8,8-hexamethyl-cyclopenta-gama-2-benzopyran) hexyl cinnamic aldehyde, lyral (4-(4-hydroxy-4-methyl pentyl)-3-cyclohexene-10-

carboxaldehyde), methyl cedrylone, methyl dihydro jasmonate, methyl-beta-naphthyl ketone, musk indanone, musk ketone, musk tibetene, and phenylethyl phenyl acetate.

5 The material that enhances the substantivity and duration of the fragrance is meadowfoam seed oil or any derivative thereof that is capable of forming a covalent bond with the nitrogen of component (b) of the formula. Meadowfoam seed oil and its derivatives are particularly able in promoting deposition. The meadowfoam seed oil is commonly found in native state in *Limnanthes Alba* as
 10 the triglyceride with fatty acids being a mix of alkenoic fatty acids, mostly C_{20} , i.e., 5-eicosenoic acid, others being C_{21} , i.e., 5,13-heneicosenoic acid while still others being a mix of C_{22} , i.e., 5-docosenoic acid and C_{22} , i.e. 13-docosenoic acid.

15 Various issued patents have disclosed the meadowfoam seed oil constituents and its derivatives in a more detailed manner, e.g. U.S. Patent 5,646,321; 5,741,915; 5,741,916; and 5,741,919 incorporated by reference wherein the following structure and quantities are mentioned.

20 The fatty distribution of the oil ranges from 20 to 22 carbons and has unsaturation in specific locations. The oil contains 97% by weight higher unsaturated alkyl groups. Typically, meadowfoam oil is believed to contain 60-65% of a twenty carbon terminal mono-carboxy acid having one unsaturation between carbon 5 and 6. Additionally, it contains 12-20% of a twenty two carbon
 25 terminal mono-carboxy acid having one unsaturation between carbon 5 and 6, and 15-28% of a twenty two carbon terminal mono-carboxy acid having one unsaturation between carbon 5 and 6, an another between carbon 13 and 14. These are shown below structurally.

60-65% by weight $\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{13}-\text{CH}_3$

30 12-20% by weight a mixture of

$\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_{15}-\text{CH}_3$

and

$\text{HOOC}-(\text{CH}_2)_{11}-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{CH}_3$

and

35 15-28% by weight

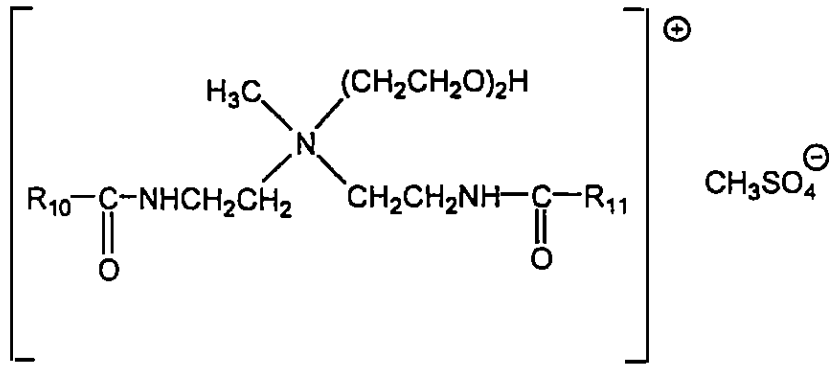
$\text{HOOC}-(\text{CH}_2)_3-\text{CH}=\text{CH}-(\text{CH}_2)_6-\text{CH}=\text{CH}-(\text{CH}_2)_8-\text{CH}_3$

Meadowfoam seed oil can also be present in its glyceride form.

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Derivatives of the meadowfoam oil carboxylic acids can be used in the compositions of this invention as well as the long chain carboxylic acids depicted above. These involve performing standard chemistry on the carboxy group while
5 maintaining the unsaturation untouched or at least essentially untouched. Examples of such derivatives are the esters, for example, as disclosed in U.S. Patent 5,741,919 and 5,646,321; the alkanolamides, for examples, as disclosed in 5,741,916 and the betaines derivatives, for example, as disclosed in 5,741,915. . Additionally, a derivative of meadowfoam seed oil includes
10 materials wherein the normal distribution of the meadowfoam oil can be altered to accentuate the quantity of one or more of the unsaturated alkyl monocarboxylic acids. For example, the total concentration of erucic acid, a C₂₂ unsaturated monocarboxylic acid can be enriched to 80 or more wt. percent of the meadowfoam oil composition. These quaternary ammonium materials based
15 on meadowfoam oils are available from The Fanning Corporation, 2450 West Hubbard Street, Chicago, Illinois 60612. Further exemplification is an alkenyl grouping, which can be readily prepared. All these materials can be covalently bonded to the quaternary nitrogen atom of component (b). A specific example of a component (b) material is available from Fanning as Meadowquat®HG. Its
20 structure is

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- With reference to schematic formula of component (b), X is methosulfate,
- 5 R₁ is methyl, R₂ is ethoxy (wherein a is zero, b is 2, and R₃ is hydrogen, and R₁₀ and R₁₁ are the same and are the long chain hydrocarbon substituent of a meadowfoam seed oil which is bonded to an amido ethyl group wherein the last carbon at the ethyl is attached to the quaternary nitrogen. This molecule marketed by Fanning is known Meadowquat®HG also known in the INCI
- 10 nomenclature as PEG-2 dimeadowfoam amido ethyl imonium methosulfate,

- The meadowfoam oil carboxylic acids or derivatives thereof can be used in the composition at deposition enhancing quantities, generally a minimum
- 15 of about 0.25 wt%. 0.5 wt% or about 1.0 or 2.0 wt%. A maximum quantity is generally no higher than about 6 wt%, or preferably about 5, 4 or 3 wt% of the composition.

- The counterion of the quaternary ammonium material is any anionic
- 20 substance such as chloride, nitrate, sulfate, phosphate, methosulfate and the like.

- The effectiveness of the quaternary ammonium material in increasing substantivity and duration of a fragrance is significantly enhanced by the
- 25 presence of a second cationic material, which is a cationic polymer. Examples of such cationic materials include the various polyquats known to the art which include but are not limited to Polyquaternium 2 (a polyelectrolyte formed from quaternized ioenes), Polyquaternium 4 (hydroxycellulose diallyldimethyl ammonium chloride), Polyquaternium 5 (acrylamide/β--

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- methacryloxyethyltrimethyl ammonium methosulfate), Polyquaternium 6 and 7 (homopolymer of dimethyl diallyl ammonium chloride and the copolymer of dimethyl diallyl ammonium chloride with acrylamide), Polyquaternium 8 (methyl and stearyl dimethylaminoethyl methacrylate quaternized with dimethylsulfate).
- 5 Polyquaternium 10 (1-hydroxypropyl trimethyl ammonium chloride ethers of hydroxyethyl cellulose). Polyquaternium 11 (quaternized PVP and dimethylaminoethyl methacrylate), Polyquaternium 16 (copolymer of PVP/methyl vinylimidazoline), Polyquaternium 17 and 18 (polyelectrolyte formed from quaternized ioenes), Polyquaternium 19 (a vinyl alcohol hydroxypropyl amine
- 10 salt), Polyquaternium 24 (polymeric quaternized ammonium salt of hydroxymethylcellulose and lauryl dimethyl ammonium substituted epoxide). Polyquaternium 27 (polyelectrolyte formed from quaternized ioenes). Other cationic materials include Polycare 133 (a polymethacrylamideopropyl trimonium chloride from Rhone-Poulenc). These materials are known to be the
- 15 type that neutralizes a negative charge, such as on skin.

The physical form of the composition can be a solid, liquid or gel. A solid can illustratively be in the form of powder, granule, bar, precipitated on a carrier such as a fabric softener backing and the like.

20

- When employed in a composition of the invention that requires a cleansing action on a surface, the amount of surfactant or mixture of surfactants is a cleansing effective amount. Depending upon the surfaces to be cleansed and the physical form of the composition, a minimum of about 1,2,3,4, 5 or 6 wt.
- 25 % of surfactant can be employed in the liquid or gel composition. Generally, for liquids or gels the maximum amount of surfactants is about 5 to 40 wt. %, preferably about 25, 20, or 15 wt. % of the composition. For solids, such as bars, granules and the like, a higher maximum and minimum of surfactant is employed. Generally, a minimum of about 40 wt. % surfactant in the
- 30 composition is employed, preferably about 45, 50, 55, or 60 wt. %. The maximum amount of surfactant employed in the solid is generally no more than about 90 wt. %, preferably no more than about 85,80, or 75 wt. % of the composition. The amount of water in a cleansing liquid or gel is a minimum of about 40 wt. % of the composition, preferably at least about 50, 60 or 70 wt. %.
- 35 For a solid such as a cleansing bar, a minimum of about 5 wt. % of the composition, desirably about 7, 10 or 15 wt. % is water.

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The total amount of volatile perfume present is enough to provide an aroma. Generally, a minimum of about 0.01 preferably 0.05, 0.1, 0.2, or 0.4 wt. % of the composition can be employed. Generally, no more than about 3 wt. %, preferably about 2, 1 or 0.5 wt. % of the composition is employed.

5

The additional cationic deposition material when it is present can be a minimum of about 0.05, 0.1, or 0.2 wt. % of the composition. The maximum is generally no more than about 1.0 or even less about 0.8, 0.6, or 0.5 wt. % of the composition.

10

The compositions of the invention are prepared by standard methods generally known in the art. In order to ensure proper stability and performance of the composition with respect to deposition and/or duration of the agent, specifically fragrance, it is preferred to add the component (b) material to the composition prior to the fragrance or other active agent and the cationic polymer, assuming the cationic polymer is used, which is preferable.

15

When using the component (b) material enhanced deposition on a surface and/or duration of activity of the fragrance or other active agent is observed. With the presence of the additional cationic polymer, the results can be even more pronounced. Dramatic increases in deposition (substantivity) to the surface by the active agent such as a fragrance, antimicrobial, anti-fungal and emollients can be obtained and/or duration of activity.

20

The results are assessed using an in vitro test, which has been validated by trained test human panels for the fragrance testing.

25

Analytical Methodology

The in vitro methodology employs the use of a wool (worsted fabric) swatch that is washed in the test product solution, rinsed in a 100-ppm total hardness ($\text{Ca}^{+2}/\text{Mg}^{+2}$) water and then blotted dry with a paper towel. The swatch is then transferred to a headspace-sampling flask that is maintained at a constant temperature of 32°C., which is recognized as average skin temperature. A tube containing a polymer adsorbent (Tenax™ TA (2,6-diphenylene oxide polymer) 60/80 mesh) is used to capture volatile fragrance

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materials exiting the sampling flask. The wool swatch is purged with 99.99% pure Nitrogen at a flow rate of 50mL/min which is equivalent to a total volume of 3 liters. At the end of one hour, the purge flow is stopped and the tube is removed and capped. A fresh, pre-conditioned tube is reconnected to the sample flask and the purging procedure is repeated until five tubes (over five hours) are collected. The tubes are then subject to thermal desorption using an Automated Thermal Desorber (ATD) which is interfaced to a GC column (inside the GC oven) via a fused silica transfer line. Fragrance components are separated by the GC column and detected on an Ion Trap Mass Spectrometer and peak areas are integrated by the controlling computer system. Peak area data for each sample (or time point) are converted to ASCII files and process to yield a table with all fragrance components collected over the five hour period. Only the peak areas of fragrance components are totaled (summed) for each sample time and plotted against time.

15

Validation studies with human test panels using a fragrance(s) in bar soap and shower gel confirmed the validity of the in vitro test method.

Below are experiments showing the same formulations with and without specific quantities of Meadowquat HG® (PEG-2 Dimeadow foam amido ethylmonium Methosulfate) (CTFA name) available from Fanning Corporation. An additional sample had this meadowfoam seed oil derivative and 0.2 wt. % of the composition of the cationic deposition polymer Polyquat 7. The surfactant containing composition (shower gel base) used in the experiments below is as follows:

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Table 1
Shower Gel Base

Component	wt/wt%
Sodium laureth sulfate	8.20
Cocamidopropyl betaine	3.00
Alkyl polyglucoside	1.12
Fragrance	1.00
Preservatives	0.30
Citric acid	0.06
Water, salt and cationic material	Q.S
Total	100.00

5

Experiments:

Control	0% Meadowquat HG/0% Polyquaternium-7
Exp. 1	1% Meadowquat HG/0% Polyquaternium-7
Exp. 2	2% Meadowquat HG/0% Polyquaternium-7
Exp. 3	3% Meadowquat HG/0% Polyquaternium-7
Exp. 4	2% Meadowquat HG/0.20% Polyquaternium-7 (Non preferred order of addition)
Exp. 5	1% Meadowquat HG/0.20% Polyquaternium-7 (Preferred order of addition).

10

Results:

The base formula given above was prepared by adding the anionic, amphoteric and nonionic surfactants to water, which were mixed until clear. Preservatives were added until clear then the pH of the preparation was adjusted to between 5.0 and 6.5 using aqueous citric acid. In the case of the control formula, the fragrance was then added and mixed until clear. after which the formula viscosity was adjusted to between 4000 and 10000 cps (centipoise)

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using anhydrous sodium chloride. The formula was finally Q.S with water to 100 wt/wt%

5 Experimental formulas 1-3 were prepared as above except the cationic material (Meadowquat HG) and fragrance were added together and allowed to mix until clear. The viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

10 Experimental formula 4 was prepared as above for experimental formulas 1-3 except the combined cationic material (Polyquaternium 7/Meadowquat HG) and fragrance were added together and allowed to mix until clear. The viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

15 Experimental formula 5 was prepared as in the shower gel base, except the cationic materials and fragrance were added in a specific order and allowed to mix until clear. First the Meadowquat HG is added to the shower gel base and mixed until the product is completely clear. This process was repeated for the fragrance and then the Polyquaternium 7. It is important that the Meadowquat HG be added prior to the fragrance and Polyquaternium 7 so as to
20 achieve enhanced phase stability. After addition of cationic material and fragrance, the viscosity was then adjusted as above and the formula Q.S. with water to 100 wt/wt%.

25 The fragrance longevity measured for the experimental formulas 2-5 is put forth in Table 1. Here the percent increase in total peak area for an experimental formula (relative to the control formula) has been calculated.

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TABLE 2

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% Increase in fragrance intensity measured
as integrated peak areas for experimental
formulas versus control formula

Experimental Formula	1 hr	2 hr	3 hr	4 hr	5hr
Exp. 1 (1% Meadowquat HG/ 0% Polyquaternium-7)	29	160	96	102	90
Exp. 2 (2% Meadowquat HG/ 0% Polyquaternium-7)	95	235	266	312	307
Exp. 3 (3% Meadowquat HG/ 0% Polyquaternium-7)	188	278	187	164	193
Exp. 4 (2% Meadowquat HG/ 0.20% Polyquaternium-7)	144	536	2647	4100	3887
Exp. 5 (1% Meadowquat HG/0.20% Polyquaternium-7)	-13	190	344	599	526

10

Addition of Meadowquat HG to the base formula shows an increase in fragrance intensity over time, relative to the control formula (Table 2). The addition of a second cationic material, Polyquaternium 7, to the 2% Meadowquat HG formula (Experimental formula 4) provides a significant percent increase in fragrance intensity compared to Experimental formula 3 (without Polyquaternium 7). Thermal and freeze/thaw stability of experimental formulas 1-4 showed some flocculation after three to six weeks at 120°F. and four weeks after freeze/thaw cycling at 32°F. to 72°F.

20

Experimental formula 5 was prepared with a lower level of cationic material (1% Meadowquat HG /0.2% Polyquaternium 7) with a different process of preparation, the preferred process as noted above. Experimental formula 5 was found to be stable after 13 weeks at 120°F and after 13 weeks of freeze/thaw cycling from 32°F. to 72°F. The percent increase in fragrance intensity for this formula ranged from 190% at 2 hours to 600% after 4 hours.

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Illustrated below are various other liquid formulations wherein an active agent such as a antimicrobial or fragrance is present with a meadowfoam seed oil quaternary material and preferably a cationic deposition polymer to bring about increased deposition and/or duration of activity of the active agent.

Table 3
Liquid Hand Soap

10

Ingredient	Wt/Wt%
Water	74.85
PEG Glyceryl monococoate	1.5
Sodium Laureth Sulfate (2 EO)	5.37
Sodium Lauryl Sulfate	10.00
Cocoamidopropyl Betaine	5.00
Alkyl polyglucoside	1.13
Triclosan	0.15
Polyquaternium-7	0.2
Meadowquat HG (Fanning)	1.0
Fragrance	1.0
DMDM Hydantoin	0.4
Citric Acid –anhydrous	0.1

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Table 4
Liquid Body Wash

5

Ingredient	Wt/Wt%
Water	83.14
Sodium Laureth Sulfate	8.20
Cocamidopropyl Betaine	3.00
Sodium Chloride	1.44
Alkyl Polyglucoside	1.13
Meadowquat HG	1.00
Fragrance	1.00
Citric Acid	0.60
Preservatives	0.29
Polyquaternium 7	0.20

10

Table 5
Liquid Detergent

Ingredient	Wt/Wt%
Water	70.98
Dodecylbenzene Sulfonate	12.36
Ethoxylated C ₁₂ -C ₁₄ Alcohol	9.50
Silicate	4.56
Meadowquat HG	1.00
Preservative	0.77
Perfume	0.50
Polyquaternium 7	0.20
Color	0.13

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Table 6
Dish Washing Liquid

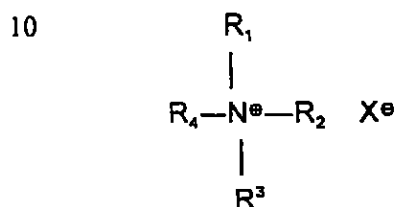
5

Ingredient	wt/wt%
Water	57.89
Ethoxylated alcohol sulfate sodium salt	25.86
Dodecylbenzene sulfonate magnesium salt	6.30
Alkyl Polyglucoside	3.00
Laurylmonomethyl ethanolamine/ Sodium Xylene Sulfonate	2.56
Sodium Chloride	1.99
Meadowquat HG	1.00
Magesium Sulfate	0.50
Color	0.30
Perfume	0.25
Polyquaternium-7	0.20
Preservative	0.153

10

CLAIMS

1. A composition useful in an area selected from the group consisting of
 5 personal care, household surface care and fabric care, which comprises
 (a) an active agent in quantities sufficient to bring about a desired effect,
 (b) a deposition and/or duration active agent extending amount of a
 material or materials of the formula.



15

wherein R_1 , R_2 , R_3 and R_4 are the same or different and are R_5 wherein R_5 is alkyl of one to four carbon atoms, inclusive;

20

R_6 wherein R_6 is $\{CH_2CH_2(CH_2)_aO\}_bR_8$ where R_8 is hydrogen or methyl, a is 0 or 1 and b is 1, 2, or 3;

R_9 wherein R_9 is a meadowfoam seed oil or seed oil derivative which has a covalent bond with the nitrogen of the formula;

25

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 is an R_5 ;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_6 ;

30

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_9 ;

and X is a counterion bearing a negative charge, and

35

a surface compatible carrier.

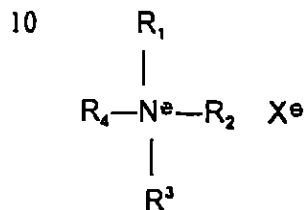
140

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2. The composition in accordance with claim 1 wherein the area is personal care.
3. The composition in accordance with claim 1 wherein the area is household surface care.
- 5 4. The composition in accordance with claim 1 wherein the area is fabric care.
5. The composition in accordance with claim 2 wherein the active agent is a fragrance.
6. The composition in accordance with claim 3 wherein the active agent is a fragrance.
- 10 7. The composition in accordance with claim 4 wherein the active agent is a fragrance.
8. The composition in accordance with claim 5 wherein a cleansing amount of a surfactant or mixture of surfactant is present.
- 15 9. The composition in accordance with claim 8 wherein the composition is a solid.
10. The composition in accordance with claim 8 wherein the composition is a liquid or gel.
11. The composition in accordance with claim 9 wherein about 0.25 to about 20 4.0 wt. % of the composition is component (b).
12. The composition in accordance with claim 10 wherein about 0.25 to about 4.0 wt. % of a composition is component (b).
13. The composition in accordance with claim 11 wherein additionally present is a deposition effective amount of a cationic polymer, mixtures of 25 polymer.
14. The composition in accordance with claim 12 wherein additionally present is a deposition effective amount of a cationic polymer, mixtures of polymer.
15. The composition in accordance with claim 13 wherein from 0.01 to about 30 1.0 wt. % of the composition is the cationic polymer, or mixtures of polymer.
16. The composition in accordance with claim 14 wherein from 0.01 to about 1.0 wt. % of the composition is the cationic polymer, or mixtures of 35 polymer.

ABSTRACT

A composition useful in an area selected from the group consisting of
 5 personal care, household surface care and fabric care, which comprises
 (a) an active agent in quantities sufficient to bring about a desired effect,
 (b) a deposition and/or duration active agent extending amount of a material or
 materials of the formula.



15 wherein R_1 , R_2 , R_3 and R_4 are the same or different and are R_5 wherein R_5 is
 alkyl of one to four carbon atoms, inclusive;

R_6 wherein R_6 is $(CH_2CH_2(CH_2)_aO)_bR_9$ where R_9 is hydrogen or methyl, a is 0 or 1
 20 and b is 1, 2, or 3;

R_9 wherein R_9 is a meadowfoam seed oil or seed oil derivative which has a
 covalent bond with the nitrogen of the formula;

25 and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 is an R_5 ;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_6 ;

and wherein at least one but no more than two of R_1 , R_2 , R_3 and R_4 are an R_9 ;

30 and X is a counterion bearing a negative charge, and

a surface compatible carrier.

PATENT COOPERATION TREATY

42
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From the RECEIVING OFFICE

PCT

NOTIFICATION OF THE INTERNATIONAL
APPLICATION NUMBER AND OF THE
INTERNATIONAL FILING DATE

(PCT Rule 20.5(c))

To: ROSEMARY M. MIANO COLGATE-PALMOLIVE COMPANY 909 RIVER ROAD P.O. BOX 1343 PISCATAWAY, NEW JERSEY 08855-1343		Date of mailing <i>(day month year)</i> 10 Feb 2004
Applicant's or agent's file reference 6956-00		IMPORTANT NOTIFICATION
International application No. PCT/US03/36967	International filing date <i>(day month year)</i> 19 Nov 2003	Priority date <i>(day month year)</i> 21 Nov 2002
Applicant COLGATE-PALMOLIVE COMPANY		
Title of the invention COMPOSITION		

1. The applicant is hereby notified that the international application has been accorded the international application number and the international filing date indicated above

2. The applicant is further notified that the record copy of the international application:

- ☒ was transmitted to the International Bureau on 10 Feb 2004
- ☐ has not yet been transmitted to the International Bureau for the reason indicated below and a copy of this notification has been sent to the International Bureau*:
- ☐ because the necessary national security clearance has not yet been obtained
☐ because *(transmit to the applicant)*

* The International Bureau monitors the transmittal of the record copy by the receiving Office and will notify the applicant (with Form PCT/IB/301) of its receipt. Should the record copy not have been received by the expiration of 14 months from the priority date, the International Bureau will notify the applicant (Rule 22.1(c)).

3. FOREIGN TRANSMITTAL LICENSE INFORMATION Completed by: LR

☐ • Additional license for foreign transmittal not required. This subject matter is covered by a license already granted on the equivalent U.S. national application. Refer to that license for information concerning its scope.

☐ License for foreign transmittal not required. 37 CFR 5.11(c)(1) or 37 CFR 5.11(c)(2). However, a license may be required for additional subject matter. See 37 CFR 5.15(b).

☒ Foreign transmittal license granted. 35 U.S.C. 184; 37 CFR 5.11 on 05 Feb 2004
☒ 37 CFR 5.15(a) ☐ 37 CFR 5.15(b)
(date)

Name and mailing address of the receiving Office Mail Stop PCT, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 703-305-3230	Authorized officer Latrice Russell Telephone No. 703-306-5829
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Form PCT/R0/105 (July 1992)

113 113

Apostille

(Convention de La Haye du 5 Octobre 1961)

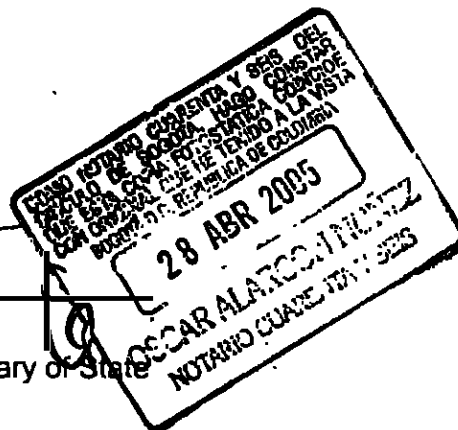
1. Country: **United States of America**
This public document
2. has been signed by **Norman Goodman**
3. acting in the capacity of **County Clerk**
4. bears the seal/stamp of the county of **New York**

Certified

5. At New York, New York
6. the 30th day of October 2001
7. by Special Deputy Secretary of State, State of New York
8. No. NYC-9786540B
9. Seal/Stamp
10. Signature



Aqil M. Qureshi
Aqil M. Qureshi
Special Deputy Secretary of State



114

FROM : BRIGARD Y CASTRO

PHONE NO. : 3882700

OCT. 29 2001 01:03PM P2

Brigard & Castro

SANTA FE DE BOGOTA - COLOMBIA

PODER

POWER OF ATTORNEY

Yo (nosotros)

domiciliado(s) en

Nombro(amos) a: RAMIRO CASTRO DUQUE y/o JUAN PABLO CADENA SARMIENTO y/o BEATRIZ JARAMILLO S.

de Santafé de Bogotá, Colombia, apoderados verdaderos y legales con poder especial, amplio y suficiente, para recabar de las oficinas y autoridades colombianas administrativas, judiciales y de policía, en cualquier instancia o recurso, la obtención de patentes de invención, registros de marcas, diseños industriales, modelos de utilidad, depósitos de nombres comerciales y enseñanzas, registros de derechos de autor y contratos sobre los mismos, obtención de certificados de obtentor de variedades vegetales, así como sus prórrogas, renovaciones, anotaciones de traspaso, cambios de nombre y/o domicilio; elaborar, tramitar y registrar contratos de licencia y licencias de cualesquiera clases; intervenir como demandante o como demandado en cualquier instancia y recurso ante cualquier juez, corporación, funcionario público o autoridad en acciones judiciales, administrativas y de policía tales como: oposiciones al registro de marcas; acciones de caducidad, cancelación y nulidad; acciones reivindicatorias, acciones derivadas de la obtención o explotación de licencias; acciones de competencia desleal; demandas penales; acciones de indemnización de perjuicios, reclamos y observaciones a solicitudes de patentes, diseños industriales, modelos de utilidad, en el ejercicio de medidas cautelares y en otras acciones o medidas similares.

A este efecto, lo(s) faculto(amos) para elevar solicitudes, formular descripciones, enmiendas, protestas, declaraciones, oposiciones, cancelaciones, nulidades, apelaciones y reclamos; pagar impuestos, cuotas y gravámenes prescritos por la ley; renunciar o desistir a derechos concedidos o en curso de concesión; recibir toda clase de documentos y valores, dando el descargo respectivo, y, en general, para dar ante dichas autoridades todos los pasos necesarios al efecto indicado y tomar todas las medidas que creyeran conducentes al resguardo de mis (nuestros intereses), con todas las demás facultades legales necesarias.

Este poder comprende la facultad de ratificar o confirmar en mi (nuestro) nombre lo actuado así como la facultad de desistir, transigir, comprometer, y la de sustituirlo en todo o en parte y revocar sustituciones. Asimismo nombro(amos) a: RAMIRO CASTRO DUQUE y/o JUAN PABLO CADENA SARMIENTO y/o BEATRIZ JARAMILLO S. domiciliado(s) en la Carrera 7 No. 16-56, Piso 9, mis (nuestros) apoderados en Colombia, con facultades para recibir notificaciones y designar apoderados judiciales o extrajudiciales.

Otorgado y firmado en

hoy de

Firma

Nombre

VICE PRESIDENT &
ASSOCIATE GENERAL COUNSEL
TRADEMARK

I (We)

COLGATE-PALMOLIVE COMPANY, a Delaware corporation, of 300 Park Avenue, New York, New York 10022, U. S. A.

Hereby appoint RAMIRO CASTRO DUQUE and/or JUAN PABLO CADENA SARMIENTO and/or BEATRIZ JARAMILLO S.

of Santafé de Bogotá, Colombia, my (our) true and lawful attorneys with special, ample and sufficient power to obtain from the Colombian administrative, judicial and police offices and authorities, in any instance, privileges of patents of invention, registration of trademarks, industrial designs and utility models; registration of commercial names and emblems, registration of copyright and contracts related thereto, certificates of obtainers of vegetables varieties, as well as extensions, renewals and recordal of assignments and changes of name and domicile related to the above; to prepare, prosecute and register licenses of any kind; to act as plaintiff or defendant in any instance or recourse, and before any judge, corporation, public official or authority in judicial, administrative and police actions, such as: oppositions to the registration of trademarks; caducity, cancellation and nullity actions; claim actions derived from the obtaining or exploitation of licenses, action of unfair competition; penal demands, actions of indemnities for damages; claims or observations on patent applications, models, industrial designs and utility models; in the exercise of preventive measures; and in other actions or similar proceedings.

To that effect they are hereby empowered to file applications, formulate descriptions, amendments, protests, declarations, oppositions, cancellations, nullities, appeals and claims; to pay taxes, quotas and assessments prescribed by law, renounce or waive the rights granted or in the process of granting to receive all kind of documents and values, giving the respective release of receipt, and to appear before said authorities the necessary steps to such effect, and any measures they may deem pertinent to the safeguarding of my (our) interests with all the other powers.

This power includes the faculty to ratify or confirm, desist, settle and compromise on my (our) behalf and to substitute this power in whole or in part and to revoke substitutions at the same time. (We) hereby appoint RAMIRO CASTRO DUQUE and/or JUAN PABLO CADENA SARMIENTO and/or BEATRIZ JARAMILLO S.

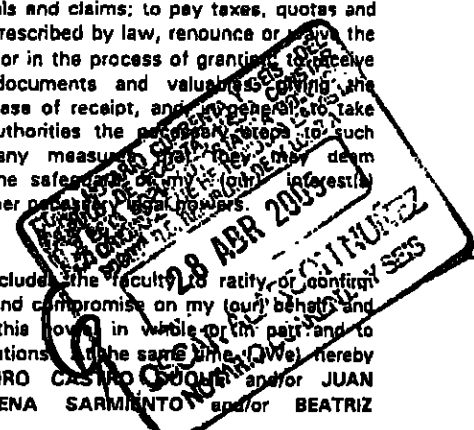
domiciled in Carrera 7 No. 16-56, Piso 9, my (our) attorney(s) in fact, with powers to receive notifications and to designate judicial and extrajudicial attorneys.

Granted and signed in New York, N.Y.

this OCT 29 2001 day of

Signature

Name



FROM BRIGARD Y CASTRO

PHONE NO. : 3832780

OCT. 29 2001 01:10PM F4

CERTIFICADO NOTARIAL (SOCIEDAD)

Hoy de de
personalmente compareció ante mí

a quien conozco, y de quien me consta que firmó el
anterior documento, debidamente juramentado declaró
y dijo que él es

de

Sociedad legalmente constituida para un periodo de
duración que aún no ha terminado; que el declarante
está autorizado por dicha compañía para conferir este
poder; que el sello estampado por él al pie de tal poder,
en nombre y representación de la expresada compañía,
es el sello oficial de ella; y que el objeto para el cual se
confiere este instrumento está comprendido dentro del
de la sociedad.

El suscrito Notario hace constar que tuvo a la vista las
pruebas de la existencia de la sociedad.

Estado de
con fecha

y que quien confiere el presente poder es su
representante.

Notario Público (sello)

CERTIFICADO NOTARIAL
PERSONA NATURAL

Hoy de de , compareció(eron)
ante mí

a quien (es) conozco y me consta que es(son) la(s)
persona(s) firmante(s) del documento que precede y
quien(es) declara(n) que otorgan el mismo para los
fines y propósitos que en él se expresan.

Notario-Público (sello)

LEGALIZACION POR APOSTILLA ES REQUERIDA.

NOTARIAL CERTIFICATE (CORPORATION)

On this OCT 29 2001 day of of
personally appeared before me

SCOTT E THOMPSON

to me known, and known to me to be the person who
signed the foregoing instrument who being by me duly
sworn did depose and say that he (she) is the

VICE PRESIDENT &

ASSOCIATE GENERAL COUNSEL

TRADEMARK

COLGATE-PALMOLIVE COMPANY

Which is legally constituted for a term not yet expired,
that deponent is authorized by said Company to confer
this Power of Attorney: that the seal affixed hereunto
by the deponent in the name and on behalf of said
Corporation is the corporate seal thereof; and that the
purpose for which this instrument is granted is
included within the corporate purpose of company.

The undersigned Notary Public attests that he has seen
the documents that prove the existence of the
company.

State of Delaware
under date of May 13, 1997

and that he (she) who grants the present power of
attorney is its Representative.

Notary Public

ROSIE S. DIZON

Notary Public, State of New York

No. 31-4941117

Qualified in New York County

Commission Expires Aug. 15, 2002

On this OCT 29 2001 day of
personally appeared

SCOTT E THOMPSON

who is(are) known to me and who (has) (have) executed
the foregoing document and by the instrument he
(they) grant(s) the document for the purposes and for the
therein expressed.

Notary Public

ROSIE S. DIZON

Notary Public, State of New York

No. 31-4941117

Qualified in New York County

Commission Expires Aug. 15, 2002

State of New York
County of New York

NEW YORK
COUNTY

252373

Form 1

I, NORMAN GOODMAN, County Clerk and Clerk of the Supreme Court of the State of New York, in and for the County of New York, a Court of Record, having by law a seal,
DO HEREBY CERTIFY pursuant to the Executive Law of the State of New York, that

Rosie S. Dizon

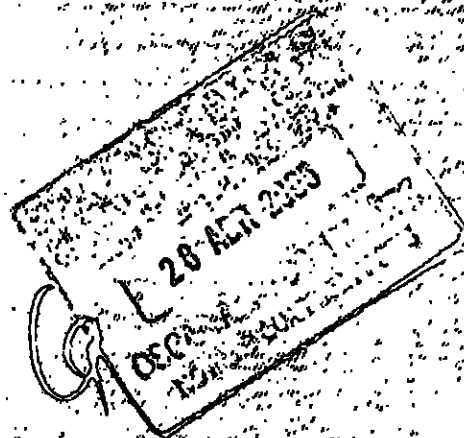
whose name is subscribed to the annexed affidavit, deposition, certificate of acknowledgment or proof, was at the time of taking the same a NOTARY PUBLIC in and for the State of New York duly commissioned, sworn and qualified to act as such; that pursuant to law, a commission or a certificate of his official character, with his autograph signature has been filed in my office; that at the time of taking such proof, acknowledgment or oath, he was duly authorized to take the same; that I am well acquainted with the handwriting of such NOTARY PUBLIC or have compared the signature on the annexed instrument with his autograph signature deposited in my office, and I believe that such signature is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand affixed my official seal this

OCT 30 2001

FEE PAID \$3.00

Norman Goodman
County Clerk and Clerk of the Supreme Court, New York County



117 19

APOSTILLE

(Convención de La Haya del 5 de Octubre de 1961)

1. País: ESTADOS UNIDOS DE AMERICA
Este documento público
2. ha sido firmado por **Norman Goodman**
3. actuando en capacidad de **Oficial del Condado**
4. lleva el sello/timbre del condado de **New York**

CERTIFICADO

5. en New York, New York
6. el 30 de Octubre de 2001
7. por Secretario de Estado Encargado Especial, Estado de New York
8. No. NYC-9786540B
9. Sello/Timbre
10. Firma

(Firma)
Aquil M. Qureshi
Secretario de Estado Encargado Especial



~~24~~ 118.

252373

Rosie S. Dizon



ORGANIZACION ELECTORAL
REGISTRADURÍA NACIONAL DEL ESTADO CIVIL

GAVIRI A

119

REGISTRO CIVIL DE DEFUNCIÓN

Indicativo
Serial

5562241

Datos de la oficina de registro												
Clase de oficina: Registraduría		Notaría ☒		Consulado		Corregimiento		Insp. de Policía		Código 9795		
País - Departamento - Municipio - Corregimiento o/o Inspección de Policía												
COLOMBIA CUNDINAMARCA BOGOTA D.C. NOTARIA 32.												
Datos del inscrito												
Apellidos y nombres completos												
CASTRO DUQUE RAMIRO												
Documento de identificación (Clase y número)								Sexo (en Letras)				
C.C. No. 170322 DE BOGOTA								MASCULINO				
Datos de la defunción												
Lugar de la Defunción: País - Departamento - Municipio - Corregimiento o/o Inspección de Policía												
COLOMBIA CUNDINAMARCA BOGOTA D.C.												
Fecha de la defunción				Hora		Número de certificado de defunción						
Año	2	0	0	4	Mes	1	0	Día	3	0	04:10 PM	A- 2094375.
Presunción de muerte												
Juzgado que profiere la sentencia					Fecha de la sentencia							
-					Año Mes Día							
Documento presentado					Nombre y cargo del funcionario							
Autorización judicial ☐ Certificado Médico ☒					ANDRES DIAZ CAMPOS. R.M. No. 79982662							
Datos del denunciante												
Apellidos y nombres completos												
EDGAR DAVID REGINO H.												
Documentos de identificación (Clase y número)								Firma				
C.C. No. 15.030.154 DE LORICA/ CORDOBA												
Primer testigo												
Apellidos y nombres completos												
-												
Documentos de identificación (Clase y número)								Firma				
-												
Segundo testigo												
Apellidos y nombres completos												
-												
Documentos de identificación (Clase y número)								Firma				
-												
Fecha de inscripción				Nombre y firma del funcionario que autoriza								
Año	2	0	0	4	Mes	1	1	Día	0	2	BLANCA RESTREPO NOTARIA	
PADRES: ALFONSO CASTRO										ESPACIO PARA NOTAS		
MERCEDES DUQUE.												

ORIGINAL PARA LA OFICINA DE REGISTRO

NOTARIA 32

DEL CIRCULO DE SANTA FE DE BOGOTA, D.C.

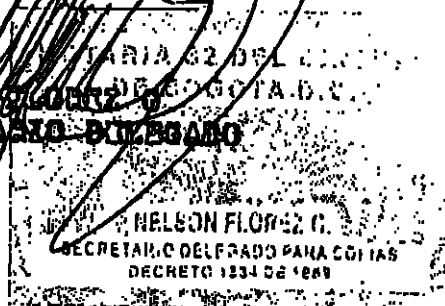
Germán Eleázar Moreno L.
Notario

COMO SECRETARIO DELEGADO DE LA NOTARIA TREINTA Y DOS (32) DEL
CIRCULO DE BOGOTA

CERTIFICO QUE:

La presente acta es fiel copia del original tomada del registro
civil de defunciones serial indicativo número: **556224**
que expido en la ciudad de Bogotá D.C. hoy: **05 NOV. 2004**

NOTARIO DELEGADO
SECRETARIO DELEGADO



REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

	USUARIO	RADICADOR
PATENTE DE INVENCION ✓	()	()
MODELO DE UTILIDAD	()	()
- Indicación de que se solicita la concesión de una patente.	()	()
- Datos de identificación del solicitante o de la persona que se presenta la solicitud.	()	()
- Descripción de la invención.	()	()
- Dibujos de ser estos pertinentes.	()	()
- Comprobante de Pago de las tasas establecidas.	()	()

COMPLETA () **INCOMPLETA** ()

DISEÑO INDUSTRIAL ()

- | | | |
|--|-----|-----|
| - Indicación de que se solicita el registro de Diseño Industrial | () | () |
| - Datos de identificación del solicitante o de la persona que presenta la solicitud. | () | () |
| - Representación gráfica o fotográfica del Diseño Industrial o muestra del Material que incorpora el diseño. | () | () |
| - Comprobante de pago de las tasas establecidas | () | () |

COMPLETA () **INCOMPLETA** ()

ESQUEMA DE TRAZADO ()

- | | | |
|--|-----|-----|
| - Indicación de que solicita el registro de un Esquema de trazado. | () | () |
| - Datos de identificación del solicitante o de la persona que presenta la solicitud. | () | () |
| - Representación gráfica del esquema de trazado | () | () |
| - Comprobante de pago de las tasas establecidas. | () | () |

COMPLETA () **INCOMPLETA** ()

Firma Responsable:



Fecha:

121



Industria y Comercio
SUPERINTENDENCIA

Folio 121

2020
Bogotá DC

Doctor(a)
JUAN PABLO CADENA SARMIENTO
Apoderado(a)
COLGATE – PALMOLIVE COMPANY

REFERENCIA: Radicación No. 05 – 53781
 Solicitud Internacional PCT/US2003/036967
 Fecha límite inicio fase Nacional 21 – 06 - 2005
 Trámite 011
 Evento 379
 Actuación 416
 Oficio No. 517
 Folios 001

Teniendo en cuenta que la solicitud de privilegio de patente que se tramita bajo el expediente indicado en la referencia, reúne los requisitos de forma establecidos en la Decisión 486 de la Comisión de la Comunidad Andina, el Tratado de Cooperación en Materia de Patentes (PCT), el Reglamento y la Circular Única de la Superintendencia de Industria y Comercio, se envía el extracto de la solicitud a la Oficina de Comunicaciones para efecto de su publicación en la Gaceta de Propiedad Industrial.

Cúmplase
Dado en Bogotá DC

30 JUN. 2005

ALIX CESPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones

Al contestar favor indique el número de radicación consignado en el sticker

Sede Centro: Carrera 13 No. 27-00 Pisos 2, 5, 7 y 10
Conmutador: 3 820840 Fax: 3 505220
Sede CAN: Tr. 40A No. 38-50 3153265 al 69
Fax: 3 505220. Línea 9800-910 165
Web: www.sic.gov.co e-mail: info@sic.gov.co
Bogotá D.C. - Colombia