TITLE OF THE INVENTION

Malodor Reducing Compositions and Methods

CROSS REFERENCE TO RELATED APPLICATION

[0001] The present invention claims benefit of United States Provisional Patent Application No. 60/737,644 filed November 17, 2005, the contents of which are hereby incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

[0002] Liquid fabric softener compositions are typically used in the rinse cycle of laundry washing machines to impart anti-static properties to washed fabrics, to provide desirable scents and to provide the fabrics with a texture that is soft, smooth, and pliable to the touch. Similarly, sheets containing fabric softeners are typically used in laundry dryers, and the fabric softener is imparted to fabrics by repeated contact during the drying process. Conventional softeners may disguise the odors, but do not remove them completely.

[0003] Body malodors impart offensive odors by impregnating fabrics and clothing. Such malodors may persist even after laundering. Body malodors have a particular tendency to impregnate synthetic materials (which are often hydrophobic), and therefore tend to have a greater affinity for sebum. The malodor components also tend to be extremely difficult to remove from synthetic materials, and are often slowly released even after laundering of fabrics and clothing.

[0004] Accordingly, there is a need for compositions that are effective in controlling malodors on fabrics, as well as compositions effective in reducing malodors on fabrics after laundering of the fabrics and clothing.

BRIEF SUMMARY OF THE INVENTION

[0005] A method of reducing malodor comprising:

(a) applying a soil release polymer (SRP) composition in an aqueous solution to a fabric; and

(b) rinsing said fabric;

wherein said SRP composition is substantially free of anionic surfactants and/or builder salts.

[0006] A method of reducing malodor comprising:

(a) applying a soil release polymer (SRP) composition in an aqueous solution with a fabric softening component to a surface; and

(b) rinsing said surface;

wherein said SRP composition is substantially free of anionic surfactants and/or builder salts.

DETAILED DESCRIPTION OF THE INVENTION

[0007] As used throughout the present disclosure, ranges are a shorthand for describing each and every value within the range. Any value within the range can be selected as the terminus of the range. In addition, all references cited in the present disclosure are hereby incorporated by reference in their entireties. Percentages given below are percent of total weight unless otherwise indicated.

[0008] In certain embodiments, the present invention provides methods of reducing malodor comprising applying a composition comprising a soil release polymer in an aqueous solution to a fabric The soil release polymer (SRP) may be a co-polymer of a water-soluble polyether and a polyester, for example, a cellulose polyester polymer or a polyethylene glycol polyester, such as 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl). In certain embodiments, the soil release polymer is water soluble. In certain embodiments, the soil release polymer is nonionic.

[0009] In certain embodiments, the composition comprising the SRP for use in the method of the invention is not a component of a laundry detergent, *i.e.*, the formulation comprising the SRP is substantially free of anionic surfactants and/or substantially free of builder salts.

[0010] In certain embodiments, the invention provides methods of effecting one or more of the following results: reducing accumulation of malodors, reducing malodor, reducing the perception of malodor, or inhibiting malodor deposition on fabrics.

[0011] In certain embodiments, the methods of the present invention comprise the step of applying a composition comprising a soil release polymer in an aqueous solution to the fabric. In various embodiments, the methods may comprise any of the following: submerging a fabric in an aqueous solution comprising the SRP; adding to the composition comprising the SRP to the rinse cycle of a laundry washing machine while the fabric is being rinsed; adding the composition comprising the SRP to water and not directly on the fabric; spraying the composition comprising the SRP onto the fabric; rinsing the fabric after application of the SRP; and other similar methods of contacting the fabric with the SRP.

[0012] As used herein, the term "fabric" includes fabrics comprising natural fibers, such as, *e.g.*, cotton, wool, silk or mixtures thereof. In other embodiments, the fabric comprises synthetic fibers, such as, *e.g.*, polyester, spandex/nylon, viscose, satin, velvet, acetate, acrylic and the like. The fabric may also comprise a blend or combination of natural and synthetic fibers. The fabric may be of any conventional form; *e.g.*, woven, non-woven or pressed.

[0013] It should be noted that as used herein, "fabric" includes items that are typically worn as clothing or otherwise come into contact with the human body. For example, plastic, vinyl, polymers such as polyvinyl chloride, surfaces of chairs, car seats, protective gear worn for sports (*e.g.*, protective pads, helmets and gloves) are examples of fabrics that can be treated in accordance with the methods of the present invention. In various embodiments, the malodor to be treated is human body malodor.

[0014] In certain embodiments, the present invention provides fabric softener compositions comprising:

(a) one or more water-soluble soil release polymers (SRPs), *e.g.*, polymers of a water-soluble polyether and a polyester, such as a nonionic polymer, for example a cellulose polyester polymer or a polyethylene glycol polyester, such as 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl) (*e.g.*, Sorez™ 100, available from International Specialty Products, Wayne, New Jersey, USA) ; and

(b) one or more fabric softening components, *e.g.*, a quaternary ammonium compound, *e.g.*, a polyquat or an esterquat, for example a triethanolamine esterquat, *e.g.*, triethanolamine-esterquat tallow;

wherein the composition is substantially free of anionic surfactants and/or substantially free of builder salts.

[0015] The amount of the components of the present compositions depends on whether a given composition is concentrated or dilute, as well as on the precise selection of components. Thus, the fabric softening component may be, for example, about 0.1 to about 40% of the total weight of the composition in certain embodiments, about 0.5 to about 25% of the total weight of the composition in other embodiments, *e.g.*, about 6 to about 24% for a concentrated composition or about 1.5 to about 6% for a dilute composition.

[0016] The soil release polymer (SRP) may be present in an amount of, for example, about 0.1% to about 40% in certain embodiments, about 0.5 to about 10% of the total weight of the composition in other embodiments, about 1 to about 6% of the total weight of certain embodiments directed to a concentrated composition, or about 0.2 to about 2% of the total weight of certain embodiments directed to a dilute composition.

[0017] Preferably the ratio by weight of fabric softening component to SRP is about 30:1 to about 1:30. In various embodiments, the ratio is about 2:1 to about 20:1, or about 3:1 to about 10:1.

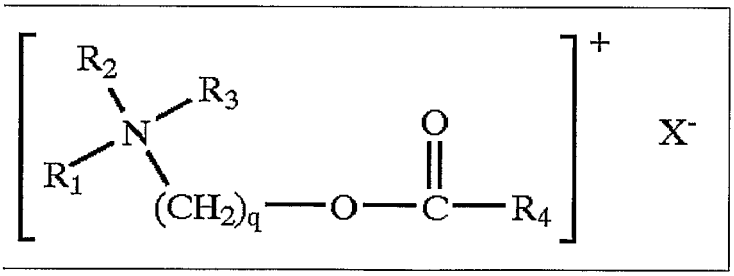
[0018] The composition may further comprise one or more chelators, colorants (*e.g.*, dyes or pigments), fatty alcohols (for example, a C_{16-18} fatty alcohol),

preservatives (for example, lactic acid) and/or perfumes, and/or other ingredients as known in the art of fabric softening compositions. For example, in certain embodiments, the compositions further comprise a chelator that is aminotrimethylene phosphonic acid.

[0019] In certain embodiments, the compositions are in an aqueous solution. In such embodiments, the compositions may be diluted by water in amounts of, for example, about 1:1 to about 1:1000 by weight, or about 1:1 to about 1:1000 by volume.

[0020] In certain embodiments, the present invention provides a fabric softener composition as described above, wherein the water soluble soil release polymer is a polyethylene glycol polyester. The polyethylene glycol polyester may be, for example, a co-polymer of 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl).

[0021] In certain embodiments, the fabric softening component is an esterquat. Such esterquat may be, for example, a compound of Structure 1 depicted below:



STRUCTURE 1

wherein

R_1 represents $(CH_2)_tR_6$ where R_6 represents benzyl, phenyl, (C1-C4)-alkyl substituted phenyl, OH or H;

R_2 and R_3 represent $(CH_2)_s$-R_5 where R_5 represents an acyloxy group containing from 8 to 22 carbon atoms, benzyl, phenyl, (C1-C4)-alkyl substituted phenyl, OH or H;

R_4 represents an aliphatic hydrocarbon group having from 8 to 22 carbon atoms;

q, s, and t, each independently, represent an integer from 1 to 3; and

X^- is a softener compatible anion.

[0022] In certain embodiments, R_1 is C_1-C_4 alkyl (*e.g.*, methyl). In certain embodiments, R_2 and R_3 are independently or both β-C_8-C_{22}-acyloxy ethyl or β-hydroxy ethyl. For example, in one embodiment, one of R_2 and R_3 is β-C_8-C_{22}-acyloxy ethyl and the other is β-hydroxy ethyl. In certain embodiments, q and s are 2. In certain embodiments, X^- is sulfate.

[0023] In certain embodiments, the esterquat is a triethanolamine esterquat (*e.g.*, a di-alkyl ester of triethanol ammonium methyl sulphate). In certain embodiments, the fabric softening component is a triethanolamine esterquat in amounts of about 10 to about 20%. In certain embodiments, the fabric softening component is a polyester polyethyleneglycol polymer in amounts of about 1 to about 6% by weight. In certain embodiments, the compositions comprise: (a) a triethanolamine esterquat in amounts of about 2.5 to about 5% by weight; and (b) a polyester polyethylene glycol polymer in amounts of about 0.2 to about 1.5% by weight.

[0024] The invention further comprises the use of a soil release polymer (SRP), *e.g.*, a polyethyleneglycol polyester polymer as described herein, to control malodor. In certain embodiments, the invention is further directed to a method of conditioning fabric comprising applying a composition as taught herein to a fabric as the fabric is being rinsed with water.

[0025] The present invention is related to a fully unexpected and innovative benefit that is provided by soil release polymers (SRPs) in rinse cycle fabric conditioning compositions. SRPs are compounds that may be used in detergent compositions to provide benefits, such as related removal of greasy stains and for anti-stain redeposition, specifically on hydrophobic fabrics such as synthetic fibers, *e.g.*, polyester. However, it has additionally been discovered herein that use of SRPs in

fabric softener compositions inhibits the deposition of sebum and human sweat on fabrics (especially synthetic fabrics), inhibits malodor absorption into the fabrics, and reduces the perception of body malodors while improving the perception of freshness. SRPs may also prevent and/or inhibit the encrustation of malodors, such as perspiration and sebum, in such fabrics. SRPs may have in the past frequently comprised water-insoluble components, such as polyesters, and were not used in fabric softener compositions. Additionally, because SRPs were present in laundry detergents, there was no motivation to add SRPs to fabric softener compositions. Certain embodiments of the present invention are directed to fabric softener compositions having a water soluble SRP.

[0026] As used herein, the terms "soil release polymer" or "SRP" are used interchangeably, and may include polymers that are absorbed onto fabric fibers where they counteract resoiling of the fibers. The soil release polymer may be a co-polymer of a water-soluble polyether and a polyester, for example a cellulose polyester polymer or a polyethylene glycol polyester, such as 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl). The polymers thus may include polyesters and co-polymers of terephthalic acid, polyesters of and co-polymers of ethylene glycol, copolymers of ethylene glycol and benzene, and polyethylene terephthalate. The polymers may include nonionic polyesters. The polymers may be modified whereby a portion of the ethylene glycol is removed and replaced with a high molecular weight hydroxy-terminated polyethylene glycol.

[0027] In certain embodiments, the SRP is hydrophilic, or may be miscible or soluble in water at any ratio. In various embodiments, the SRP in the present invention is water soluble, for example, readily soluble in cold, warm, and hot water. Preferred SRPs may also be a polymer of polyethylene glycol and polyester or cellulose ether and polyester.

[0028] In certain embodiments of the invention, the SRP used is 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-

hydroxypoly(oxy-1,2-ethanediyl). In certain embodiments, the SRP used is a polyethylene glycol polyester. In certain embodiments, a water soluble SRP is used, for example one that may be purchased from International Specialty Products (Wayne, New Jersey, USA) under the trade name Sorez™ 100. In other embodiments, the SRP used may be purchased from Clariant GmbH (Sulzbach, Germany) under the trade name TexCare SRN 170. In certain embodiments, the present invention comprises about 0.1% to about 40% weight of a SRP component.

[0029] In certain embodiments, the SRP is about 0.1% to about 40% of the total weight of the composition; in other embodiments about 2 to about 6% of the total weight of the composition, in other embodiments about 0.5 to about 2% of the total weight of the composition.

[0030] Fabric softeners may contain a fabric softening component, and may optionally contain additional components, including perfumes, chelators, preservatives, dyes, or thickeners. Other optional ingredients may also include, without limitation: solvents, alcohols, amphoteric and non-ionic surfactants, fatty alcohols, fatty acids, organic or inorganic salts, pH buffers, antifoams, germicides, fungicides, antioxidants, corrosion inhibitors, enzymes, optical brighteners, antifoams, and combinations thereof and other materials known in the art.

[0031] In certain embodiments, the present invention is substantially free of anionic surfactants and/or builder salts. As used herein, "substantially free" means, in various embodiments, less than about 5% weight, less than about 1% by weight, less than about 0.5% by weight or less than about 0.1% by weight of a given component.

[0032] Anionic surfactants include those known in the art, for example, lithium dodecyl sulfate or sodium dodecyl sulfate. Water soluble builder salts known in the art include, for example, alkali metal phosphates, *e.g.*, sodium phosphate and potassium phosphate. In various embodiments, the compositions of the present invention are substantially free of either anionic surfactants, water soluble builder salts or both.

[0033] The fabric softeners of the present invention include fabric softening components known in the art. Suitable fabric softening components may include, without limitation: cationic surfactants, quaternary ammonium salts (*e.g.*, acyclic quaternary ammonium salts, ester quaternary ammonium salts, cyclic quaternary ammonium salts, diamido quaternary ammonium salts, biodegradable quaternary ammonium salt, polymeric ammonium salts), polyquats, tertiary fatty amines, carboxylic acids, esters of polyhydric alcohols, fatty alcohols, ethoxylated fatty alcohols, alkyphenols, ethoxylated alkyphenols, ethoxylated fatty amines, ethoxylated monolycerides, ethoxylated diglycerides, mineral oils, clays, and polyols and mixtures thereof. In certain embodiments, the fabric softening component includes a quaternized fatty acid triethanolamine ester salt, *e.g.*, a triethanolamine-esterquat tallow. In certain embodiments, the fabric softening component of the present invention may include a di-alkyl ester of triethanol ammonium methyl sulfate, or a dihydrogenated tallowoylethyl hydroxyethylmonium methosulfate. Preferred fabric softening components may be purchased from Kao Corporation (Japan) under the product name Tetranyl L1/90.

[0034] In certain embodiments, the compositions comprise about 0.01% to about 35% by weight of one or more fabric softening components. In certain embodiments, the compositions comprise about 0.1% to about 25% weight of one or more fabric softening components. In certain embodiments, the compositions comprise about 1.5% to about 6% of one or more fabric softening components. In other embodiments, the compositions comprise about 6% to about 24% of one or more fabric softening components. In certain embodiments, the compositions of the present invention are useful as fabric softeners that may be added to the rinse cycle of a laundry process.

[0035] The fabric softener compositions of the present invention may be applied to fabrics, *e.g.*, clothing, using a variety of methods. In certain embodiments, the SRPs are highly soluble in water. Accordingly, the SRP may be incorporated into an aqueous solution, and the aqueous solution may be added to the rinse cycle of a laundry washing machine. The fabric softener compositions of the present invention

may be diluted in the range of about 1:1 to about 1:1000 in water when added to the rinse cycle of a laundry washing machine. In alternative embodiments, the SRP may be dissolved in water to produce a solution of about 0.0005% to about 40% by weight, and sprayed onto fabrics. Alternatively, the SRP may be in an aqueous solution and sprayed or applied onto fabrics and hard surfaces. Alternatively, the SRP may be in the continuous phase of an oil-in-water emulsion, and sprayed or applied onto fabrics and hard surfaces. Alternatively, the SRP may be in the discontinuous phase of a water-in-oil emulsion, and sprayed onto fabrics and hard surfaces. In such embodiments, excess liquids may then be wiped off fabrics or hard surfaces.

[0036] Chelating agents are known in the art, and may be present in the compositions of the present invention, in various embodiments at a level of at least about 0.001% by weight of the fabric softening composition, about 0.001 to 0.5% of the composition, about 0.003 to about 0.5% or 0.005% to 0.25%. Chelating agents useful for the present invention include, without limitation: amino carboxylic acid compounds and organo aminophosphonic acid compounds, and mixtures of the same. Suitable amino carboxylic acid compounds may include: ethylenediamine tetraacetic acid, N-hydroxyethylenediamine triacetic acid, nitrilotriacetic acid, and diethylenetriamine pentaacetic acid. Suitable organo aminophosphonic acid compounds may include, for example, methylenephosphonic acid, 1-hydroxyethane 1,1-diphosphonic acid, and aminotrimethylene phosphonic acid. In certain embodiments, the chelating agent used is an aminotrimethylene phosphonic acid, which may be obtained from Solutia, Inc. (St. Louis, Missouri, USA) under the trade name Dequest 2000. In various embodiments, the compositions may comprise a chelator in amounts of 0% to about 10%, about 0.01% to about 1%, or about 0.01% - 0.5% of a of a fatty alcohol.

[0037] Preservatives that may be useful for the present invention include lactic acid, formaldehyde, or other preservatives known in the art. In various embodiments, the compositions may comprise 0 to about 10% weight of a preservative, about 0.01% to about 2%, or about 0.05% to about 5%.

[0038] Fatty alcohols useful for the present invention may include one or more carbon chains that are fully saturated or unsaturated. In certain embodiments, fatty alcohols are present and include C_{10} - C_{28} alcohols, *e.g.*, C_{16} - C_{18}, C_{13} - C_{15} alcohols, and mixtures thereof. The present invention may comprise, in various embodiments, 0 to about 10% weight of a fatty alcohol, about 0.01 to about 5%, about 0.05 to about 1% or about 0.1 to about 0.5% of a fatty alcohol.

[0039] Dyes and perfumes are known in the art. Perfumes include odoriferous materials which are able to provide a pleasing fragrance to fabrics, and the term "perfume" encompasses conventional materials commonly used in detergent compositions to counteract a malodor in such compositions and/or provide a pleasing fragrance thereto. The perfumes may be in liquid state at ambient temperature, although solid perfumes may also be useful. Perfumes may include, for example, aldehydes, ketones, esters and the like which may be used to impart a pleasing fragrance to liquid and granular detergent and fabric softener compositions. Perfumes useful for the present invention may have relatively simple compositions or may comprise complex mixtures of natural and synthetic chemical components, all of which are intended to provide a pleasant odor or fragrance when applied to fabrics. In various embodiments of the present invention, dyes and perfumes comprise 0 to about 5%, about 0.01 to about 3% or about 0.05 to about 1% of the composition.

[0040] As shown in the Examples, the compositions of the present invention demonstrate that the fabric treated with a SRP delivers significant benefits of freshness and control of perceived body malodors on different types of fabrics (*e.g.*, synthetic and regenerated cellulose).

EXAMPLES

Example 1

[0041] The following compositions are prepared by mixing in deionized water (percentages expressed in percentage of total weight):

Component	FC#1	FC#2
TEA-esterquat tallow	3.6%	3.6%

Fatty alcohol C_{16} - C_{18}	0.2%	0.2%
Perfume	0.25 -	0.25 -
Amino trimethylene phosphonic	0.05%	0.05%
Lactic acid	0.05 %	0.05 %
Dye	< 0.005%	< 0.005%
Polyethylene glycol polyester	-	1%
Water	Balance	Balance

Example 2

[0042] Thirty-six patches of polyester, nylon/Lycra, and viscose fabrics are cut into 25 x 25 cm sheets. The fabrics are washed in a laundry washing machine at 50°C with detergent. During the rinse cycle, half of the fabrics are treated with FC#1, and half of the fabrics are treated with FC#2. The fabrics are dried in an electric tumble dryer.

[0043] 1.6 grams of artificial sweat soil and 1.6 grams of sebum dispersion (compositions given in Tables 1 and 2) are sprayed on each fabric, and the fabrics are dried for 30 minutes on a line. The fabrics are again washed in laundry washing machine and during the rinse cycle, fabrics treated with FC#1 are treated with FC#1, and fabrics treated with FC#2 are treated with FC#2. The fabrics are dried in an electric tumble dryer. The soiling and washing cycle is repeated several times.

Table 1: Composition of artificial sweat

Component	% weight
SD alcohol 40	98.171
hexanoic acid	0.00732
4-ethyl-pentanoic acid	0.02783
3methyl-2-hexenoic acid	0.09372
octanoic acid	0.98145
4-ethyl octanoic acid	0.05859
n-nonanoic acid	0.01392
heptanoic acid	0.37207

2-methyl heptanoic acid	0.00293
5α-androst-16-en-3-one	0.14648
Trans-2-nonenal	0.06250
Cis-4-heptenal	0.06250

Table 2: Composition of sebum dispersion

Component	% weight
Deionized Water	97.10
Synperonic SA20	1.000
Concentrated Sebum (free fatty acids, 18%; beef tallow, 32.8%; fatty acid triglycerides, 3.6%; lanoline, 18.3%; cholesterol, 3.7%; hydrocarbon mixture, 12.0%; and cutina, 11.6%)	1.900

[0044] A panel of 18 judges is asked to compare fabrics treated with FC#1 and fabrics treated with FC#2 after 5 and then 10 cycles of soiling and washing cycle, for both wetted and dried fabrics, and during ironing after 10 cycles of soiling and washing cycle to give their sensory preference (if any) to each fabric. The results of the comparison are given below in Tables 3 - 7, the first number being the number judges preferring FC#2 treated fabrics; the second number being the number of judges preferring FC#1 treated fabrics, and the third number being the number of judges with no preference between FC#1 and FC#2 treated fabrics. The probability that FC#1 and FC#2 treated fabrics are different is given in the parentheses.

Table 3: Evaluation of wet soiled FC#1 and FC#2 treated fabrics following 5 applications of sebum and sweat

	Polyester	PA/Lycra	Viscose
Preferences / ratio	12 / 2 / 4 (99.5%)	15 / 1 / 2 (100%)	13 / 2 / 3 (99.9%)

Table 4: Evaluation of dry soiled FC#1 and FC#2 treated fabrics following 5 applications of sebum and sweat

	Polyester	PA/Lycra	Viscose
Preferences / ratio	14 / 2 / 2 (100%)	17 / 0 / 1 (100%)	13 / 1 / 4 (100%)

Table 5: Evaluation of wet soiled FC#1 and FC#2 treated fabrics following 10 applications of sebum and sweat

	Polyester	PA/Lycra	Viscose
Preferences / ratio	13 / 1 / 4 (100%)	17 / 0 / 1 (100%)	12 / 4 / 2 (96.5%)

Table 6: Evaluation of dry soiled FC#1 and FC#2 treated fabrics following 10 applications of sebum and sweat

	Polyester	PA/Lycra	Viscose
Preferences / ratio	11 / 5 / 2 (86.6%)	13 / 3 / 2 (99.5%)	9 / 2 / 7 (92.7%)

Table 7: Evaluation of FC#1 and FC#2 treated fabrics following 10 applications of sebum and sweat and ironing

	Polyester	PA/Lycra	Viscose
Preferences / ratio	4 / 6 / 5 (39.8%)	9 / 5 / 0 (73.5%)	8 / 4 / 3 (71.6%)

[0045] It is shown that FC#2, which contains 1% polyethylene glycol polyester, has a significant benefit over FC#1 on the perception of freshness and reduction of the perception of body malodors after 5 and 10 cycles on wet and dry fabrics (dried on line).

Example 3

The following composition is prepared by dissolving components in deionized water:

Component	% weight

TEA-Esterquat (tallow)	15%
Perfume	1.3 - 1.8%
Amino trimethylene phosphonic	0.05%
Lactic acid	0.05%
Dye	0.005%
Polyethylene glycol polyester	4%
Water	balance

Example 4

The following composition is prepared in accordance with the present invention. Amounts are percent weight:

Component	**% weight**
TEA-esterquat tallow	3.6%
Fatty alcohol C_{16} - C_{18}	0.2%
Perfume	0.25 - 0.5%
Amino trimethylene phosphonic	0.05%
Preservatives	0.05 - 0.15%
Dye	< .005%
Polyethylene glycol polyester	1%
Water	Balance

Example 5

[0046] Up to 40 grams of Sorez™ 100 are dissolved in 60 grams of deionized water to produce a 40% SRP solution. The solution is added to a spray bottle, and sprayed onto a fabric to impart malodor resisting properties.

We Claim:

1. A method of reducing malodor comprising:

(a) applying a soil release polymer (SRP) composition in an aqueous solution to a fabric; and

(b) rinsing the fabric;

wherein the SRP composition is substantially free of anionic surfactants and/or builder salts.

2. The method of claim 1 wherein said soil release polymer is polyethylene glycol polyester.

3. The method of claim 1, wherein said soil release polymer is 1,4-benzenedicarboxylic acid polymer with 1,2-ethanediol and alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl).

4. The method of claim 1 wherein said malodor is human body malodor.

5. The method of claim 1 wherein said fabric comprises synthetic fibers.

6. The method of claim 1 wherein said fabric comprises polyester, spandex, viscose, nylon, satin, velvet, acetates, acrylics, or mixtures or blends thereof.

7. The method of claim 1 wherein said SRP is provided to the rinse cycle of a laundry washing machine while said fabric is being rinsed.

8. A method of reducing malodor comprising:

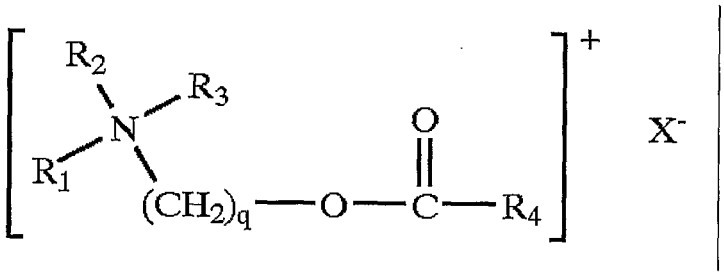
(a) applying a soil release polymer (SRP) composition in an aqueous solution with a fabric softening component to a surface; and

(b) rinsing said surface;

wherein said SRP composition is substantially free of anionic surfactants and/or builder salts.

9. The method of claim 8 wherein said fabric softening component is a triethanolamine-esterquat.

10. The method of claim 8 wherein said fabric softening component has the structure:



STRUCTURE 1

wherein

R_1 represents $(CH_2)_tR_6$ where R_6 represents benzyl, phenyl, (C1-C4)-alkyl substituted phenyl, OH or H;

R_2 and R_3 represent $(CH_2)_s$-R_5 where R_5 represents an acyloxy group containing from 8 to 22 carbon atoms, benzyl, phenyl, (C1-C4)-alkyl substituted phenyl, OH or H;

R_4 represents an aliphatic hydrocarbon group having from 8 to 22 carbon atoms;

q, s, and t, each independently, represent an integer from 1 to 3; and

X^- is a softener compatible anion.

11. The method of claim 8 wherein the ratio by weight of fabric softening component to soil release polymer is about 30:1 to about 1:30.

12. The method of claim 8 further comprising a component chosen from a chelator, dye, fatty alcohol, preservative or perfume.