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(54) **SCENT ENHANCING COMPOSITION**

(57) The present invention relates to scent enhancing compositions, articles comprising it and its uses as a laundry composition or a hard surface composition, wherein the composition comprises at least one fragrance; and at least one non-ionic detergent wherein the total amount of the at least one fragrance is equal or larger than the total amount of the at least one non-ionic detergent, and wherein the at least one non-ionic detergent is present in an amount of less than 1,5 wt.-%.

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Description

[0001] The present invention relates to scent enhancing compositions, articles comprising it and its uses as a laundry composition or as a hard surface composition.

[0002] Cleaning compositions, in particular laundry detergent compositions, are commonly used for cleaning purposes. However, there are still several drawbacks associated with commonly known cleaning compositions. In general, cleaning compositions contain in addition to fragrances and detergents various different elaborate components, which render to product expensive and more cumbersome to produce. For instance, a laundry detergent compositions used for a rinsing step, i.e. a step following the actual washing step, contains in addition to detergents and fragrances also one or more softening agents, i.e. fabric softeners. However, the use of such softening agents is expensive and the corresponding products are in particular not affordable for low-income end-consumers.

[0003] Hence, there is a need to provide compositions that circumvent these problems, and which are easy to apply and cost efficient to produce while nevertheless being optically appealing and stable.

[0004] This need is met by means of the present invention which relates to a composition, wherein the composition comprises at least one fragrance and at least one non-ionic detergent, wherein the total amount of the at least one fragrance is equal or larger than the total amount of the at least one non-ionic detergent, and wherein the at least one non-ionic detergent is present in an amount of less than 3 wt.-%, preferably less than 2 wt.-%, more preferably less than 1,5 wt.-%, and more preferably about 1 wt.-%.

[0005] The composition according to the invention only comprises relatively low amounts of detergent rendering the compositions less expensive wherein the composition can be produced with less effort while still providing a long-lasting scent impression. Hence, the present invention can be described as a scent enhancing composition suitable for all sorts of applications and which keeps a continuous and long-lasting scent impression.

[0006] In the context of the present invention the term "surfactant" is used synonymously to the term "detergent".

[0007] In the context of the present invention the term "thickener" is used synonymously to the term "thickening agent".

[0008] In the context of the present invention the term "softening agent" is used synonymously to the term "softener" in particular "fabric softener" or "textile softener".

[0009] The term "total amount of the at least one non-ionic detergent" is preferably to be construed as referring to the total amount of all non-ionic detergents, i.e. non-ionic surfactants, in the composition. The term "total amount of the at least one fragrance" is preferably to be construed as referring to the total amount of all fragrances in the composition. For instance, in a particular embodiment, the total amount of all fragrances relative to the total amount of all non-ionic detergents is in a ratio of at least 1,2. In the context of the present invention, this is preferably to be construed as the total amount of all of the fragrances in the composition relative to the total amount of all of the non-ionic detergents in the composition. In a particular embodiment, the "total amount of the at least one fragrance" is to be construed as the total amount of perfume, which may comprise in addition to the at least one or more fragrances solvents for said fragrances.

[0010] The term "wt.-%" refers in the context of the present invention to "weight percent" and is to be construed as weight relative to the total weight of the composition.

[0011] The term "about" in combination with a numerical value is to be construed in the context of the present invention as a variation of $\pm$30% relative to the numerical value. For instance, the expression "about 10" would be equivalent to a numerical range from 7 to 13. More preferably, the term "about" in combination with a numerical value is to be construed in the context of the present invention as a variation of $\pm$20%, even more preferably $\pm$10%, and even more preferably $\pm$5%, relative to the numerical value.

[0012] Preferably, the fragrance is selected from the group consisting of aromatic and aliphatic esters having molecular weights from about 130 to about 250; aliphatic and aromatic alcohols having molecular weights from about 90 to about 240; aliphatic ketones having molecular weights from about 150 to about 260; aromatic ketones having molecular weights from about 150 to about 270; aromatic and aliphatic lactones having molecular weights from about 130 to about 290; aliphatic aldehydes having molecular weights from about 140 to about 200; aromatic aldehydes having molecular weights from about 90 to about 230; aliphatic and aromatic ethers having molecular weights from about 150 to about 270; and condensation products of aldehydes and amines having molecular weights from about 180 to about 320 and mixtures thereof.

[0013] The composition may comprise one or more additional components. The additional component are preferably selected from the group comprising bodying agents, drape and form control agents, smoothness agents, static control agents, wrinkle control agents, sanitization agents, disinfecting agents, germ control agents, mold control agents, mildew control agents, antiviral agents, anti-microbials, drying agents, stain resistance agents, soil release agents, malodor control agents, fabric refreshing agents, chlorine bleach odor control agents, dye fixatives, dye transfer inhibitors, color maintenance agents, color restoration/rejuvenation agents, anti-fading agents, whiteness enhancers, anti-abrasion agents, wear resistance agents, fabric integrity agents, anti-wear agents, defoamers and anti-foaming agents, rinse aids, UV protection agents, sun fade inhibitors, insect repellents, anti-allergenic agents, enzymes, flame retardants, water proofing agents, fabric. In a particular, the composition may comprise one or more defoamers and/or anti-foaming

agents.

[0014] In an alternative embodiment, the composition does not comprise any of the above mentioned additional components. Thereby the composition is rendered less expensive and can be produced with less effort.

[0015] According to an embodiment, the composition does not comprise any softening agents, in particular fabric softeners. Such a composition without softener but with perfume at higher levels is less expensive and can be produced with less effort while still providing a long lasting scent impression. Softening agents are well known to a person skilled in that art working in the field of cleaning compositions, in particular in the field of laundry cleaning compositions.

[0016] Various kind of molecules and ions can serve as surfactants or detergents in the context of the present invention. Detergents or surfactants within the meaning of the present invention are ions or molecules that contain both polar and nonpolar components. The polar component allows the detergent to dissolve in the water, whereas the nonpolar portion solubilizes "greasy" (hydrophobic) material. In particular, the hydrophobic part of the detergent is configured for emulsifying or solubilizing the fragrances. The polar group may be ionic or non-ionic.

[0017] The surfactant may be an anionic, a neutral, in particular non-ionic or amphoteric, or a cationic detergent.

[0018] At least one non-ionic detergent is used. The non-ionic detergent has been found suitable for emulsifying the at least one fragrance. Preferably a polyalkoxylated ether is used. In particular, a polyethoxylated ether is used. More particularly, a polyethoxylated ether of the formula R-O-$(CH_2CH_2O)_nH$ is used, with R being a C9-23, in particular a C12-18, substituted or unsubstituted alkyl, alkenyl or alkinyl residue with n being equal 1 to 50, in particular 2 to 10. In a particular embodiment, R is a C9-23, in particular a C12-18 linear alkyl substituent and n is between 2 to 10, in particular n being 7.

[0019] According to a particular embodiment, the total amount of the at least one fragrance relative to the total amount of the at least one non-ionic detergent is present in a ratio of at least 1,2.

[0020] According to a particular embodiment, the total amount of the at least one non-ionic detergent is in the range of 0,4 wt.-% to 0,6 wt.-% and the total amount of the at least one fragrance is in the range of 0,5 wt.-% to 0,7 wt.-%.

[0021] According to a further embodiment, the composition comprises at least one thickening agent. Preferably, the at least one thickening agent is present in an amount in the range of 0,6 wt.-% to 1,0 wt.-%, in particular about 0,8 wt.-%.

[0022] Preferably, the thickening agent is a cellulose thickening agent, more preferably hydroxyethyl methyl cellulose. The term "cellulose thickening agent" preferably designates thickening agents structurally based on cellulose and its derivatives.

[0023] According to a further embodiment, the composition comprises an anionic detergent. Preferably, the composition comprises an anionic detergent in an amount in the range of 0,3 wt.-% to 1,2 wt.-%, in particular 0,5 wt.-% to 1 wt.-%. Preferably, the anionic detergent is a sulfate detergent, more preferably a sodium octyl sulfate.

[0024] In a preferred embodiment, the composition comprises at least one a thickening agent and an anionic surfactant.

[0025] It was surprisingly observed that the use of an anionic surfactant in combination with a thickener enhances the rheological properties of the composition. The composition then remains stable even after addition of larger amounts of perfume. In particular, the combination of a cellulose thickener with an anionic surfactant provides a suitable rheological behavior and helps stabilizing the composition even in the presence of larger amounts of perfume while using relatively low amounts of non-ionic surfactant and more in particular even in the absence of a softener.

[0026] In a particular embodiment, the composition comprises a builder. The builder is preferably present in an amount in the range of 0,05 wt.-% to 0,2 wt.-%, in particular in the range of 0,7 wt.-% to 1,3 wt.-%.

[0027] Preferably, the builder is an acid-N-oxide, in particular a phosphonic acid-N-oxide, in particular an aminotrimethylene phosphonic acid-N-oxide.

[0028] In a further embodiment, the composition comprises an opacifier. In one embodiment, the opacifier is present in an amount of less than 0,04 wt.-%, in particular less than 0,03 wt.-%.

[0029] In a further embodiment, the composition comprises one or more preservatives.

[0030] According to a further aspect, the invention relates to an article comprising the composition.

[0031] In a particular embodiment, the composition of the article is present as at least one selected from the group containing liquid, powder, spray, or granules. Particularly preferred is a composition, which is present in liquid form, in particular as a water emulsion or aqueous solution.

[0032] In a particular embodiment, the article comprises a sachet wherein the composition is comprised within the sachet. Such a single dosing of the composition allows an easy use and at the same time prevents overdosing or underdosing of the composition. Preferably the sachet is water soluble. In particular, the sachet comprises at least on water soluble polymer. Preferably, the sachet is configured to withstand at least one washing step without setting free the cleaning composition at this stage while dissolving to such an extent that the cleaning composition is set free only at the stage of the rising step. This can for instance be achieved by altering the thickness of the sachet and/or the material of the sachet.

[0033] Another aspect of the present invention is the use of the composition comprising the step of applying the composition to a substrate. The "term applying the composition to a substrat" comprises the direct application of the composition to the substrate. The "term applying the composition to a substrat" further comprises mixing the cleaning

composition with further compositions, wherein the latter are brought into direct contact with the substrate. For instance the cleaning composition may be diluted with water and only then brought into contact with the substrate.

[0034] According to a particular embodiment, the use of the composition comprises the step of applying the composition to a textile substrate, i.e. the composition is used as a laundry composition, more in particular as laundry composition for a rinsing step. A rinsing step is a step which follows a main washing step or main washing cycle. In particular, the washing and/or the rinsing is performed using a washing machine. The composition is in particular used for a rinsing step, wherein the composition does not comprise a softening agent, i.e. a fabric softener. A softening agent may be in general an anionic softening agent or a cationic softening agent. Examples of cationic softening agents are distearyldimethylammonium chloride (DHTDMAC) or in general salts quaternary ammonium cations. Preferably, the cations contain one or two long alkyl chains derived from fatty acids. Other cationic compounds can be derived from imidazolium, substituted amine salts, or quaternary alkoxy ammonium salts. Examples of anionic softening agents are salts of monoesters and diesters of phosphoric acid and the fatty alcohols. Anionic softeners may be used together with cationic softeners.

[0035] The present invention can be described as a scent enhancing composition, in particular a laundry composition for rinsing, suitable for all types of textile substrates, i.e. garments, that keeps going where the scent impressions achieved by common composition fade. This will allow the user to experience a long lasting scent on textile substrates.

[0036] The present composition is applied to the laundry preferably after a washing step preferably before or during a rinsing step.

[0037] According to a particular embodiment, the use of the composition comprises the step of applying the composition to a hard surface substrate, i.e. the composition is used as a hard surface composition. Hard surfaces, which the composition may be applied to are for instance metals, plastics, surfaces of objects which the composition may be applied on are for instance toilet bowls or lavatories, floors, walls, glass surfaces.

[0038] In particular, the use of the composition may follow at least one prior washing step and/or cleaning step, wherein the prior step makes use of a further composition.

[0039] Preferably, the further composition used for the washing step, which is carried out before the rinsing step, has a lower content of at least fragrance than the composition according to the invention which is preferably used in a rinsing step after the washing step. In a particular, the ratio of the total amount of fragrance in the composition according to the invention relative to the total amount of fragrance in the further composition is at least 1,2, more particular at least 1,5.

Example composition

[0040] Example compositions have been prepared according to the following table:

Type	Name	C1	C2	E1	E2
Non ionic surfactant	Galaxy MW 287	2	2	0,5	0,5
	Empilan KR 8	-	1	-	-
Anionic surfactant	Texapon 842 UP	0,5	-	-	-
	Galaxy SLES 70	-	-	-	1
Alkali	Caustic soda	0,05	0,05	0,031	0,031
Acids	Citric acid	-	-	0,05	0,05
Thickener	Acusol 805S	0,5	0,5	0,5	-
	Walocel	-	-	-	0,8
Preservative	Acticide MBS 2250	0,0075	0,0075	0,0075	0,015
Opacifier	Acusol OP 301	0,1	0,1	0,05	0,05
Builder	Sequion CLR	-	-	-	0,215
Perfume		1	1	1	1
Stability without perfume		+	+	+	+
Viscosity without perfume		+	+	+	+
Appearance without perfume		+	+	+	+
Stability with perfume		○	○	+	+

(continued)

Type	Name	C1	C2	E1	E2
Viscosity with perfume		-	-	-	+
Appearance with perfume		-	-	-	+

[0041] "Empilan KR 8" comprises alcohols C9-11, ethoxylated (8 EO). "Texapon 842 UP" is a sodium octyl sulfate (40% active substance). "Acusol 805S" is an acrylic based copolymer emulsion (40% active substance). "Sequion CLR" is a phosphonic acid-N-oxide (40% active substance). "Galaxy SLES 70" is a sodium lauryl ether sulfate (70% active substance). "Galaxy MW 287" is an polyethoxylated ether of the formula R-O-$(CH_2CH_2O)_7$H, with R being a C12-18 residue. "Walocel" is a hydroxyethyl methyl cellulose.

[0042] The stability, the viscosity and the appearance have been evaluated with and without addition of perfume:

Comparative compositions C1, C2 contain higher levels of non-ionic surfactants relative to the amount of perfume, i.e. fragrances, used. Manufacture of these compositions, in particular on an industrial scale, is more cumbersome and more expensive than for compositions E1 and E2. In addition, they are less stable than compositions E1 and E2, in particular less stable than composition E2.

[0043] The inventors of the present invention have found that providing a composition with larger amounts of at least one fragrance/perfume suffers from having relatively poor optical and rheological properties after addition of the perfume to the raw composition. These issues were observed in the case of all comparative compositions C1 and C2. These problems also occurred to a some extend in the case of E1 but not in the case of composition E2.

[0044] In particular, it was surprisingly observed that the use of a builder enhances the optical properties of the composition - even when using a lower amount of opacifier than in the case of C1 and C2. While in the case of C1, C2 and E1, the optical properties deteriorated after some time, with the composition turning brownish, the composition according to E2 remained optically stable.

[0045] Further, it was surprisingly observed that the combined use of an anionic surfactant enhances the rheological properties of the composition. While in the case of C1, C2 and E1, the thickness of the composition was suitable before addition of the perfume, it quickly deteriorated after addition of the perfume. In contrast, the composition according to E2 remained stable even after addition of the perfume. Without being bound to any theory it is assumed by the inventors that the combination of a cellulose thickener with an anionic surfactant which provides this suitable rheological behavior.

Claims

1. A composition, wherein the composition comprises

at least one fragrance; and
at least one non-ionic detergent

wherein the total amount of the at least one fragrance is equal or larger than the total amount of the at least one non-ionic detergent, and wherein the at least one non-ionic detergent is present in an amount of less than 1,5 wt.-%.

2. The composition according to claim 1, wherein
the total amount of the at least one fragrance relative to the total amount of the at least one non-ionic detergent is in a ratio of at least 1,2.

3. The composition according to claim 1 or claim 2, wherein
the total amount of the at least one non-ionic detergent is in the range of 0,4 wt.-% to 0,6 wt.-% and the total amount of the at least one fragrance is in the range of 0,5 wt.-% to 0,7 wt.-%.

4. The composition according to any of the preceding claims, wherein
the composition comprises at least one a thickening agent.

5. The composition according to claim 4, wherein
the thickening agent is a cellulose thickening agent, preferably hydroxyethyl methyl cellulose.

6. The composition according to claim 5 or claim 4, wherein
the at least one thickening agent is present in an amount in the range of 0,6 wt.-% to 1,0 wt.-%.

7. The composition according to any of the preceding claims, wherein
the composition comprises an anionic detergent in an amount in the range of 0,3 wt.-% to 1,2 wt.-%.

8. The composition according to any of the preceding claims, wherein the composition comprises a builder.

9. The composition according to claim 8, wherein the builder is preferably present in an amount in the range of 0,05 wt.-% to 0,2 wt.-%.

10. An article comprising the composition according to any of the preceding claims, wherein the composition is present as at least one selected from the group containing liquid, powder, spray, or granules.

11. The article according to claim 10, wherein the article comprises a sachet wherein the composition is comprised within the sachet.

12. Use of the article according to any of the claims 10 or 11 comprising the step of applying the composition to a substrate.

13. Use according to claim 12, comprising the step of applying the composition to a textile substrate, in particular during a rising cycle.

14. Use of the composition according to claim 12, comprising the step of applying the composition to a hard surface substrate.

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EUROPEAN SEARCH REPORT

Application Number
EP 17 19 5302

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2015/030555 A1 (PANANDIKER RAJAN KESHAV [US] ET AL) 29 January 2015 (2015-01-29) * paragraph [0141] * * table 2 * * paragraphs [0011], [0027] * * the whole document *	1-14	INV. C11D1/66 C11D3/50 C11D17/00 C11D17/06
X	EP 3 101 100 A1 (PROCTER & GAMBLE [US]) 7 December 2016 (2016-12-07) * table 1; compound A * * paragraphs [0072], [0078] * * the whole document *	1-14	
X	EP 1 282 680 B1 (PROCTER & GAMBLE [US]) 5 September 2007 (2007-09-05) * example 8 * * paragraph [0007] * * the whole document *	1-14	

TECHNICAL FIELDS SEARCHED (IPC)

C11D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 February 2018	Yildirim, Zeynep

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 17 19 5302

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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