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(54) Title: A CLEANSING COMPOSITION RELEASABLE AS A SHAPEABLE FOAM

(57) Abstract: A cleansing composition contains a) a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant, at least one O/W emulsifier, at least two different saturated fatty acids and/or their respective salts and water, b) at least one propellant, and c) a packaging device, comprising a dispenser suitable of forming a shapeable foam.



A Cleansing Composition Releasable as a Shapeable Foam

Technical field

The present invention belongs to the cosmetic field, and relates to a cleansing composition, especially a cleansing composition released from a suitable packaging device as a foam. The foam is a very dense one, resulting in the capability of forming distinct objects, which are sufficiently stable. Furthermore the composition has effective cleansing properties and at the same time is a mild, non-irritating composition. The composition may especially be used as a make-up remover.

Background art

Cleansing compositions in form of a mousse or foam are very popular today. In general, cleansing products are supposed to cleanse the skin and hair. Cleansing products are primarily used to remove dirt from the skin surface. External solid or liquid components, which reached the skin and were deposited thereupon or components applied to the skin, for instance as make-up, are part of the dirt on the skin, which is to be removed. Furthermore, the dirt on the skin also includes excess skin lipids and dead cells. By the aid of surfactants in the cleansing compositions, the components of the dirt are solubilized and removed from the surface of the skin during rinsing off. This holds also true for make-up, which shall be removed from the skin, hair and skin appendages, in particular of the face.

Make-up compositions contain a great number of raw materials, which are of very different chemical nature. The dyes, contained in make-up compositions, are selected from inorganic pigments such as silicates (magnesium silicate (talc), aluminum silicate (kaolin)), and metal oxides (chrome, iron, manganese, titanium, and zinc oxides), and/or organic pigments. Binding means may be esters of stearic acid, lanolin alcohol and lanolin acetate. Furthermore, waxes, such as for instance, beeswax or carnauba wax, and oils, such as for instance, paraffin oil, silicone oil or castor oil, may be contained. Additionally, preservatives, antioxidants, thickeners and other additives may be comprised.

To achieve a proper face cleansing, these different compounds have to be removed from the skin. At the same time nonpolar substances such as waxes, oils and silicone oils and pigments

of low solubility, such as talc or titanium oxide, must be solubilized. This holds true for foundations, lipsticks, eye shadows, eye pencils, and also for long-lasting and waterproof products.

Prior art discloses face cleansing compositions suitable to remove make-up as well. Different types of compositions are described and respective products are in the market. The compositions may be in form of emulsions, creamy, milky or liquid ones, gels and oily compositions, sometimes with two distinct phases, which are mixed upon shaking. Products mainly in form of foams have also been described.

Prior art discloses attempts to improve the foamability and the foam volume. For instance, EP 3238697 A1 describes compositions containing one or more surfactants chosen from a specific set of surfactants, namely an anionic surfactant having a carboxyl group, an amphoteric surfactant and a nonionic surfactant and a specific derivative of an acyl basic amino acid, e.g., bis(Nε-lauroyl-L-lysine)sebacoyl amide or a salt thereof, and bis(Nε-octanoyl-L-lysine)sebacoyl amide, or a salt thereof.

EP 2740467 A1 discloses pumpable compositions, which are foamable. These compositions also contain a set of surfactants comprising amphoteric surfactants and nonionic surfactants.

CN 107536773 A is directed to post-foaming cleansing gels, which comprise amongst others a saponifying agent being palmitic acid, triethanol amine and stearic acid, laureth-23, and alkyl glycosides. The cleansing gel provides good cleansing efficacy and is at the same time not causing irritations.

None of the aforementioned prior art is specifically directed to a cleansing mousse, especially a cleansing mousse for face cleansing. In general, cleansing mousses have a soft and creamy texture, which is described to be very suitable for face cleansing, especially for people having a sensitive face skin.

Moreover, mousses can easily be applied to the skin and removed with water together with the solubilized dirt.

In addition to known cleansing foams or mousses, there is a need to provide a product, effectively removing make-up and dirt, from the skin, hair and skin appendages, in particular of the face and having an appealing appearance. Furthermore, the product shall be mild and not cause any irritations.

Summary of the invention

Surprisingly, an appealing appearance is obtained by a composition released in form of a foam, wherein the foam is so dense and stable that for instance a rose or other distinct objects may be formed. In the meaning of the following invention this property will be termed shapeable foam.

The object of the present invention is a cosmetic product containing

a cleansing composition, which is releasable in form of a shapeable foam, comprising

- a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant,
- at least one O/W-emulsifier,
- at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
- water.

at least one propellant, and

a packaging device, comprising a dispenser suitable of forming a shapeable foam.

A further object of the present invention is a cosmetic cleansing composition containing

- a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant,
- at least one O/W-emulsifier,
- at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
- water.

Still a further object of the present invention is a cosmetic cleansing composition containing

- at one amino acid based surfactant,
- at least one O/W-emulsifier,
- at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
- water.

Still a further object of the present invention is a cosmetic product containing a cleansing composition, which is releasable in form of a shapeable foam, comprising

- at least one amino acid based surfactant,
- at least one O/W-emulsifier,
- at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
- water.

at least one propellant, and

a packaging device, comprising a dispenser suitable of forming a shapeable foam.

Still a further object of the present invention is the use of at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms in a cosmetic cleansing composition containing

- a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant, and
- at least one O/W-emulsifier,

to form a shapeable foam.

Yet, still a further object of the present invention is the use of at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms in a cosmetic cleansing composition containing

- at least one amino acid based surfactant, and
- at least one O/W-emulsifier,

to form a shapeable foam.

The composition contains water, hence it is an aqueous composition. The water content ranges from 60 to 98 % by weight, preferably 65 to 95 % by weight, more preferably 70 to 90 % by weight, in relation to the total weight of the composition.

Detailed description of the invention

In the meaning of the present applications the words “fill material” and “bulk” are synonymous to the composition of the invention containing a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant; at least one O/W-emulsifier; at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and water or synonymous to a composition containing at least one amino acid based surfactant; at least one O/W-emulsifier; at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms; and water.

In one embodiment the composition according to the invention contains a surfactant system, comprising at least one nonionic surfactant and at least one amphoteric surfactant. These surfactants are contributing to the cleansing efficacy, especially to an effective make-up removal. Furthermore, the surfactants help to achieve a pleasant sensory feeling of the skin after rinsing off the composition. In the meaning of the invention the surfactant system does not comprise any fatty acids and/or the respective salts thereof.

In a further embodiment the composition according to the invention contains a surfactant system, comprising at least two different nonionic surfactants and at least one amphoteric surfactant. The nonionic surfactants are preferably chosen from alkyl poly glycosides and poloxamers. These surfactants are as well contributing to the cleansing efficacy, especially to an effective make-up removal. Furthermore, the surfactants help to achieve a pleasant sensory feeling of the skin after rinsing off the composition. In the meaning of the invention the surfactant system does not comprise any fatty acids and/or the respective salts thereof.

Advantageously, the nonionic surfactant may be chosen from the group of alkyl poly glycosides, represented by the formula $RO-(Z)_x$, wherein R is the alkyl group having 6 to 30 carbon atoms, Z is a sugar moiety and x is the number of sugar moieties (1.1-5 on average). The alkyl poly glycosides according to the invention may have a specific alkyl group, representing one distinct number of carbon atoms. In general, alkyl poly glycosides are produced starting from natural oils, preferably plant oils, more preferably coconut oil. In this case, the alkyl group R is a mixture of the alkyl groups of the respective fatty acids of natural oil used as a starting material.

It is preferred, if the alkyl poly glycosides have alkyl groups, where R represents C8 to C30 alkyl groups, preferably C8 to C24 alkyl groups, and more preferably C8 to C12 alkyl groups.

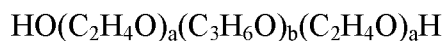
The sugar moieties may be monosaccharides or oligosaccharides. In general, the sugar moieties have 5 or 6 carbon atoms, which are contained as monosaccharides or

oligosaccharides. Examples for suitable sugar moieties are glucose, fructose, galactose, arabinose, ribose, xylose, lyxose, allose, altrose, mannose, gulose, idose, talose and sucrose. It is preferred, if the sugar moieties are glucose or sucrose. It is more preferred, if the sugar moiety is glucose.

The alkyl poly glycosides contain 1.1 to 5 sugar moieties on average, preferably 1.1 to 2.0, more preferably 1.1 to 1.8. It is most preferred, if the alkyl poly glycoside is decyl glucoside. Decyl glucoside may be purchased as a composition of 53% decyl glucoside and 47% water, under the trade name Plantacare 2000 UP from BASF Personal Care and Nutrition.

If at least one nonionic surfactant chosen from the group of alkyl poly glycoside is contained in the composition according to the present invention, the at least one alkyl poly glycoside is contained in an amount of 0.1 to 7.5 % by weight, preferably 0.5 to 5.0 % by weight, and more preferably 2.0 to 4.0 % by weight in the composition according to the invention, in relation to the active content and in relation to the total weight of the composition.

Likewise advantageously, the at least one nonionic surfactant may be chosen from block polymers. Block polymers are copolymers of ethylene oxide and propylene oxide units called poloxamer. They are characterized by the formula

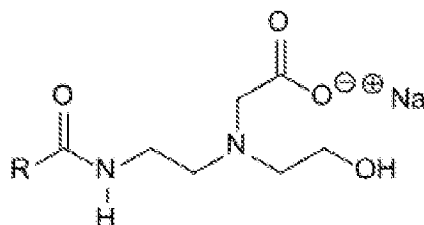


where b has the values of 15 to 67 and a has the values of 1 to 130. The proportion of “a” units can be from 20 to 90% of the poloxamer. The poloxamers are characterized by their name; P stands for poloxamer, followed by three digits: the first two digits multiplied by 100 give the approximate molecular mass of the polyoxypropylene core, and the last digit multiplied by 10 gives the percentage polyoxyethylene content.

The following poloxamers may be used, Poloxamer 101, Poloxamer 124 and Poloxamer 184. It is preferred, if poloxamer 184 is contained in the composition according to the invention. This compound is available, for example, under the trade name Pluracare L 64G from BASF.

If the at least one nonionic surfactant chosen from the group of poloxamers is contained in the composition of the present invention, the at least one poloxamer is contained in a total amount of 0.1 to 8 wt.% by weight, preferably 0.2 to 5 wt.% by weight, more preferably 0.25 to 4 wt.% by weight in the composition according to the invention, in relation to the total weight of the composition.

Advantageously, the at least one amphoteric surfactant is chosen from alkyl amphotoacetates, which may be described by the formula



wherein R is an alkyl residue of 8 to 30 carbon atoms.

In general, alkyl amphotoacetates are synthesized in two steps. Firstly, a fatty acid, preferably having not less than 8 carbon atoms, or a blend of fatty acids derived from a natural oil, preferably a plant oil such as coconut oil, soy bean oil or palm oil is reacted with *N*-(2-Hydroxyethyl)ethylenediamine. The resulting 2-alkyl-1-hydroxyethylimidazoline is hydrolysed with NaOH to a linear amidoamine and reacted with monochloroacetic acid to alkyl monoamphotoacetate. If higher molar amounts of monochloroacetic acid are used, alkyl amphodiacetates are generated.

Alkyl amphotoacetates are amphoteric surfactants, which behave as anionic, zwitterionic, or cationic surfactants depending on the pH value. Sodium salts of alkyl amphotoacetate are known to contribute to the generation of rich foam and cause only less irritation of the skin and the eyes.

According to the present invention it is preferred, if the alky residue is derived from plant oil, more preferably coconut oil.

Furthermore, it is preferred, if sodium salts of alky amphotoacetates are contained in the composition of the present invention.

It is most preferred, if sodium cocoamphotoacetate is contained in the composition according to the invention. Sodium cocoamphotoacetate may be purchased as a composition of 32.5% sodium cocoamphotoacetate, 7.5% Sodium Chloride and 60% water, under the trade name Rewoteric AM C from Evonik Industries.

Advantageously, the at least one alkyl amphotoacetate is contained in an amount of 0.2 to 5.0 % by weight, preferably 0.5 to 3.0 % by weight, and more preferably 1.0 to 2.5 % by weight in the composition according to the invention, in relation to the active content and in relation to the total weight of the composition.

In a further embodiment at least one amino acid based surfactant is contained in the composition of the present invention. The at least one amino acid based surfactant is used instead of the surfactant system containing at least one nonionic and at least one amphoteric surfactant.

It is preferred, if the at least one amino acid based surfactant is an acyl amino acid (and/or a salt thereof), examples of amino acid based surfactants are presented in the following listing:

- Acyl glutamates, for example, sodium acyl glutamate, such as sodium lauroyl glutamate, sodium myristoyl glutamate, and sodium palmoyl glutamate,
- sarcosinates, for example, sodium lauroyl sarcosinate, and sodium cocoyl sarcosinate,
- glycinate, for example sodium cocoyl glycinate.

It is preferred, if Sodium Cocoyl Glutamate, is contained in the composition according to the invention. Sodium Cocoyl Glutamate may be purchased as Hostapon CCG from the company Clariant.

If at least one amino acid based surfactant is contained in the composition according to the invention, the at least one amino acid based surfactant contained in an amount of 0.2 to 5.0 % by weight, preferably 1.0% to 2.5% by weight, in relation to the active content and in relation to the total weight of the composition.

According to the invention at least one O/W-emulsifier is contained. In general, O/W-emulsifiers have HLB values of 8 to 18. HLB values may be determined according to the following formula:

$$\text{HLB} = 20 \times (1 - M_{\text{lipophile}}/M),$$

wherein $M_{\text{lipophile}}$ represents the molecular weight of the lipophilic portion in the emulsifier, and M stands for the molecular weight of the entire emulsifier. In general, emulsifiers having an HLB value up to about 8 are considered as W/O emulsifiers. By contrast, O/W emulsifiers have HLB values of greater than 8 up to 18. Substances having HLB values greater than 18 may be referred to as solubilizers.

Unless specifically stated or obvious from context, as used herein, the term "about" in reference to a number or range of numbers is understood to mean the stated number and numbers $\pm 10\%$ thereof, or 10% below the lower listed limit and 10% above the higher listed limit for the values listed for a range.

In a preferred embodiment, the at least one O/W emulsifier is chosen from ethoxylated alcohols, preferably from ethoxylated lauryl alcohols, more preferably Laureth-23 is chosen as O/W-emulsifier.

If the at least one emulsifier is chosen from ethoxylated alcohols, the at least one ethoxylated alcohol is contained in an amount of 0.2 to 10.0 % by weight, preferably 0.5 to 8.0 % by weight, and more preferably 1.0 to 5.0 % by weight in the composition according to the invention, in relation to the active content and in relation to the total weight of the composition.

In a further preferred embodiment the O/W-emulsifier is sodium stearyl glutamate, which may be purchased as Emulgin® SG from the company BASF.

If the at least one emulsifier is sodium stearyl glutamate, sodium stearyl glutamate is contained in an amount of 0.01 to 5.0 % by weight, preferably 0.05 to 2.0 % by weight, and more preferably 0.1 to 1.0 % by weight in the composition according to the invention, in relation to the active content and in relation to the total weight of the composition.

The composition according to the invention contains at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms. Preferably, at least three different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are contained in the composition according to the invention. More preferably, only three different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are contained in the composition according to the invention. Even more preferably, only three different saturated fatty acids and/or their respective salts having 10 to 24 carbon atoms are contained in the composition according to the invention. Even further more preferably, the three different saturated fatty acids and/or their respective salts are chosen from the group of palmitic acid, stearic acid, myristic acid, lauric acid, and/or the respective salts. In the meaning of the present invention fatty acids and/or the respective salts are not part of the surfactant system.

Advantageously, in the composition according to the invention the at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are contained in an amount of 0.5 to 30.0 % by weight, preferably 1.0 to 10 % by weight, in relation, in relation to the total weight of the composition.

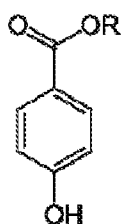
To evaluate the influence of the carbon chain length, palmitic acid, stearic acid, myristic acid, lauric acid acids were used in different weight ratios in the compositions according to the invention. It became apparent, that upon increasing the amount of long chain fatty acids

(C18/C16) the shapeable foam was much harder, for instance providing a very clear rose shape. The combination of long chain fatty acids (C18/C16) with shorter chain fatty acids (C12/C14) resulted in a perfect shaped foam (for instance a rose), while the foam had a pleasant consistency, not being too stiff.

Advantageously, for providing fine shapeable foams, lauric acid is added to the composition of the invention in an amount of 0.5 to 3.0 % by weight, myristic acid in an amount of 0.5 to 6.0 % by weight, palmitic acid in an amount of 0.5 to 6.0 % by weight, and stearic acid in an amount of 0.5 to 6.0 % by weight. Said acids must be neutralized by using an organic or inorganic base, preferably triethanolamine is used for neutralization. A neutralization of 85 to 100% of the fatty acids is preferred, more preferred is a neutralization of 95 %.

Advantageously, the composition according to the present invention contains preservatives. All preservatives, which are allowed and suitable for cosmetic compositions may be contained in the composition according to the invention.

However, it is preferred, if one or more paraben(s) is/are contained. Parabens are characterized by the following formula



wherein R is a linear or branched alkyl residue of 1 to 5 carbon atoms. Common parabens are methyl-, ethyl-, propyl-, butylparaben, as well as isopropyl-, isobutyl-, pentyl-, and phenylparaben. It is more preferred, if methyl- and/or ethylparaben are contained.

The one or more paraben(s) is/are contained in a total amount of 0.01 to 2.0 % by weight, preferably 0.05 to 1.0 % by weight, more preferably 0.1 to 0.8 % by weight in the composition according to the invention, in relation to the total weight of the composition.

It is likewise preferred, if Phenoxyethanol is contained in the composition according to the invention. Phenoxyethanol is contained in an amount of 0.01 to 5.0 % by weight, preferably 0.05 to 3.0 % by weight, more preferably 0.1 to 0.9 % by weight in the composition according to the invention, in relation to the total weight of the composition.

It is also likewise preferred, if a combination of one or more parabene(s) and Phenoxyethanol is contained. It is more preferred, if one parabene and Phenoxyethanol are contained; it is

most preferred, if methylparaben and Phenoxyethanol are contained in the composition according to the invention.

It is also likewise preferred, if Piroctone Olamine is contained. Piroctone Olamine is effective against gram positive and gram negative bacteria, but especially against yeasts and molds. If Piroctone Olamine is contained in the composition according to the invention, it is used in an amount of 0.01 to 1.0 % by weight, especially 0.03 to 0.5 % by weight, in relation to the total amount of the composition.

Advantageously, the pH value of the composition according to the invention ranges from 7.5 to 10, preferably 8.0 to 9.0. The pH value may be adjusted by using an organic or inorganic base; however, it is preferred to use potassium hydroxide to adjust the pH value.

Advantageously, one or more complexing agent(s) may be contained in the composition of the present invention. Complexing agents are auxiliaries used in cosmetics or medicinal pharmaceutical technology which are known per se. By complexing undesired metals such as Mn, Fe, Cu and others, it is possible, for example, to prevent undesired chemical reactions in cosmetic or dermatological preparations.

The complexing agent(s) can advantageously be chosen from the group of customary compounds, preferably at least one substance from the group consisting of tartaric acid and anions thereof, citric acid and anions thereof, aminopolycarboxylic acids and anions thereof (such as, for example, ethylenediaminetetraacetic acid (EDTA) and anions thereof, nitrilotriacetic acid (NTA) and anions thereof, hydroxyethylenediaminetriacetic acid (HOEDTA) and anions thereof, diethyleneaminopentaacetic acid (DPTA) and anions thereof, trans-1,2-diaminocyclohexanetetraacetic acid (CDTA) and anions thereof).

According to the invention, the complexing agent(s) is/are advantageously present in composition according to the invention in amount of from 0.01 % to 5.0 % by weight, preferably from 0.05 % to 2 % by weight, more preferably 0.1 to 1.0 % by weight, based on the total weight of the composition.

The composition according to the invention is a foamable composition, which upon being released from the packaging device forms a shapeable foam.

For this purpose the composition according to the invention is contained in an aerosol spraying device. Aerosol spraying devices may be aerosol containers with a filling of the liquid or slurry-like substances which are under the pressure of a propellant. Containers of this

type may be equipped with dispensers, containing valves and spray heads of very diverse constructions which allow the contents to be removed as foam. Aerosol container may be pressurized gas container.

Suitable pressurized gas containers for the purpose of the present invention are primarily cylindrical vessels made of metal (aluminum, tinplate, contents <1000 ml), protected or shatter-resistant glass or plastic (contents <220 ml) or shattering glass or plastic (contents <150 ml), in the choice of which compressive strength and breaking strength, corrosion resistance, ease of filling, or ease of sterilizing etc., but also esthetic aspects, manageability, printing properties etc. play a role. The maximum permissible operating pressure of spray cans made of metal at 50°C is 12 bar and the maximum fill volume at this temperature is about 90% of the total volume. For glass and plastic cans, the values for the operating pressure are lower and dependent on the size of the container and the propellant (whether liquefied, compressed or dissolved gas).

For the purposes of the present invention, cans made of tinplate or aluminum are particularly advantageous. For reasons of corrosion protection, metal cans can be coated on the inside (silver- or gold-coated), for which purpose all standard commercial internal protective coatings are suitable. For the purposes of the present invention, preference is given to polyester, epoxyphenol and polyamide-imide coatings. Film laminates made of polyethylene (PE), polypropylene (PP) and/or polyethylene terephthalate (PET) on the inside of the cans are also advantageous, in particular for cans made of tinplate.

The pressurized gas containers are usually single-part or two-part, but in most cases three-part cylindrical, conical or differently shaped. If plastics are used as the spray container material, then these should be resistant to chemicals and the sterilization temperature, gas-tight, impact-resistant and stable to internal pressures in excess of 12 bar. In principle, polyacetals and polyamides are suitable for spray container purposes.

The internal construction of the spray cans and the valve construction are very varied, depending on the intended use and the physical nature of the ingredient, e.g. whether it is in the form of a two-phase or three-phase system and can be determined by the person skilled in the art by simple exploratory investigations without inventive activity. For suitable variants, reference may be made to the "Aerosol Technologie Handbuch der Aerosol-Verpackung" (Wolfgang Tauscher, Melcher Verlag GmbH Heidelberg/Munich, 1996).

Valves, which are advantageous according to the invention, may be designed with or without dip tube. The individual components, from which valves according to the invention are usually constructed, preferably consist of the following materials:

- Pate: tinplate: uncoated, gold- or clear-coated, film-laminated (PE, PP or PET) aluminum: uncoated, silver- or gold-coated, different coating variants, Stoner-Mudge design;
- Gasket: natural or synthetic elastomers or thermoplastic (sleeve gaskets, film-lined made of PE or PP) internal and external seals, e.g. made of perbunan, buna, neoprene, butyl, CLB, LDPE, viton, EPDM, chlorobutyl, bromobutyl and/or diverse compounds
- Cone: PA, POM, brass and diverse special materials, standard bores (e.g.: 0.25 to 0.70 mm or 2×0.45 to 2 x 1.00 mm), various shaft diameters
- Spring: metal, particularly preferably V2A, stainless steel; plastic and also elastomer
- Housing: standard and impact VPH bores, RPT bores or slit for upside-down applications materials: e.g. polyacetal, PA, PE, POM and the like
- Dip tube: plastic (polymer resin), e.g. PE, PP, PA or polycarbonate

Advantageous spray heads for the purposes of the present invention are, for example, foaming heads for upright use (hold can vertically).

The dispenser, comprising a valve and a spray head is an essential part in forming distinct objects of foam. In case of forming a rose of the released foam a suitable dispenser may be purchased from Guangdong Neat Packaging Co., Ltd. The dispenser has to contain a device, which enables the formation of a distinct object of foam. For instance, the device of a dispenser enabling the formation of a rose foam is an aperture plate having a multiplicity of apertures having a banana-like form. Such a plate is shown in Fig. 4a in top view and in Fig. 4b in a combined top and side view. The spray head is preferably made from Polypropylene.

For the purposes of the present invention, the weight content of propellant gas is chosen from the range from 0.5 to 20% by weight, preferably 1 to 10 % by weight, more preferably 3 to 8 % by weight, based on the total weight of fill material and propellant gas (corresponding to a weight content of 80 to 99.5 % by weight, preferably 90 to 99 % by weight, more preferably 92 to 97 % by weight of fill material).

Advantageously according to the present invention one or more propellants, chosen from hydrocarbon gases, fluorinated gases, hydrofluorocarbon gases, dimethyl ether, nitrogen, air or carbon dioxide and/or mixtures thereof are contained in the composition according to the invention. Preference is given to a blend of propellants, chosen from isobutane, propane and n-butane. More preferably a blend of 60 % n-butane, 20 % isobutene and 20% propane (by weight) is contained in the composition according to the invention.

Brief description of the Drawings

Fig.1 shows the results of the shape-ability and stability of the foam of three different compositions MHAC 149, MHAC 177, and 178;

Fig.2 illustrates the test procedure in order to show the make-up removing efficacy of one composition (MHAC 184, containing a surfactant system (Decylglucoside, Sodium Cocoamphoacetate and Poloxamer 184), fatty acids (total content 3.96 % by weight) and the emulsifier Laureth-23), and one comparative composition (MHAC 210, containing fatty acids (total content 5.95 % by weight), the emulsifier Laureth-23, but no surfactant system);

Fig.3 shows the removal ratio (abbreviated MUR) for the two compositions, wherein the composition containing a surfactant system is significantly more effective in removing make-up; and

Fig.4a shows a plate in top view, and Fig.4b shows the plate in a combined top and side view, wherein the device of a dispenser enabling the formation of a rose foam is an aperture plate having a multiplicity of apertures having a banana-like form.

Examples

The examples below are intended to illustrate the present invention without limiting it. The numerical values in the examples are percentages by weight, based on the total weight of the particular preparations, given as active content.

Example 1: Compositions 1-6 used in analyzing the influence of different fatty acids in different amount (weight ratios)

INCI		1	2	3	4	5	6
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Laureth-23	Part A	2.75	2.75	2.75	2.75	2.75	2.75
PEG-150 Distearate		0.50	0.50	0.50	0.50	0.50	0.50
<i>Palmitic Acid</i>		0.97	1.21	1.46	1	3	1.21
<i>Stearic Acid</i>		0.94	1.18	1.41			1.18
<i>Myristic Acid</i>		2.05	2.56	3.08	2	1	3.06
<i>Lauric Acid</i>					2	1	
Aqua*	Part B	Ad 100	Ad 100	Ad 100	Ad 100	Ad 100	Ad100
Trisodium EDTA		0.20	0.20	0.20	0.20	0.20	0.20
Triethanolamine	Part C	2.30	2.88	3.47	3.23	2.30	2.87
Decyl Glucoside	Part D	2.92	2.92	2.92	2.92	2.92	2.92
Sodium Cocoamphoacetate		1.63	1.63	1.63	1.63	1.63	1.63
Poloxamer 184		1.00	1.00	1.00	1.00	1.00	1.00
Glycerine		4.95	4.95	4.95	4.95	4.95	4.95
Piroctone Olamine		0.05	0.05	0.05	0.05	0.05	0.05
Perfume		0.30	0.30	0.30	0.30	0.30	0.30
Phenoxyethanol		0.60	0.60	0.60	0.60	0.60	0.60
CI 16035	Part E	0.0001- 0.005	0.0001- 0.005	0.0001- 0.005	0.0001- 0.005	0.0001- 0.005	0.0001- 0.005
Potassium Hydroxide	Part F	0.01-0.5	0.01-0.5	0.01-0.5	0.01-0.5	0.01-0.5	0.01-0.5

The composition according to the present invention may be prepared by any technique known or effective to prepare a cleansing composition of the kind of the present invention. The process to prepare the composition of the present invention comprises conventional formulating and mixing techniques.

Specifically, the composition of the present invention is preferably produced with the following procedure:

Process:

1. For melting, heat the components of part A in a water bath, the temperature of the water bath is about 80°C;
2. Heat the components of part B about 80°C;
3. Add part B to part A, and homogenizing for 10 to 15 minutes with IKA T50 digital ULTRA TURRAX, the mixed phase now being called main phase;
4. Add Part C to the main phase (now called new main phase), keep the temperature at about 80°C while magnetic stirring the whole phase for 20 to 30 minutes until a uniform preparation is obtained;
5. Cool down the new main phase to about 35°C;

6. Mix and stir the components of part D until a uniform preparation is obtained;
7. Add part D and part E to the new main phase, and stir until a uniform preparation is obtained, the resulting phase is called new main phase II
8. Add sufficient part F to the new main phase II to adjust pH value to 8.0 - 8.8, this preparation is called "bulk".
9. The bulk and propellant (e.g. 60% butane + 20% isobutane + 20% propane) are filled in an aerosol spraying device.

Example 2: Compositions used in the evaluation of dermatological and ophthalmological tolerance and foam

INCI	MHAC 149 ¹	MHAC 177 ²	MHAC 178 ³
Aqua	Add to 100	Add to 100	Add to 100
Methylparaben		0.10	
Palmitic Acid	0.97		1.46
Stearic Acid	0.94		1.41
Myristic Acid	1.05		3.08
Citric Acid		0.01-0.5	
Trisodium EDTA	0.20		0.20
Phenoxyethanol	0.60	0.60	0.60
<i>Laureth-23</i>			2.75
Glycerin	4.95	4.95	4.95
PEG-40 Hydrogenated Castor Oil		0.50	
PEG-200 Hydrogenated Glyceryl Palmate		0.42	
Hydroxypropyl Methylcellulose			0.15
Coco-Caprylate/Caprate	0.50		
Piroctone Olamine	0.05		0.05
<i>Decyl Glucoside</i>	2.92	2.92	
<i>Sodium Cocoamphoacetate</i>	1.63	1.63	
PEG-150 Distearate		0.50	0.50
Triethanolamine	1.67		3.6
<i>Disodium Cocoyl Glutamate</i>			1.25
Propylene Glycol			0.25
Perfume	0.3	0.30	0.3
Sodium Stearoyl Glutamate	0.20		
Potassium Hydroxide	0.10-0.50		0.10-0.50
<i>Poloxamer 184</i>	1.00	1.00	

¹ composition according to the invention, also called code 20,

² composition of a comparative product, also called code 10,

³ composition according to the invention (containing higher amount of fatty acids), also called code 30.

The compositions shown in the table above were also used in the evaluation of shape-ability of the foam.

Example 3: Compositions used in the evaluation of make-up removal and cleansing properties

INCI	MHAC 184	MHAC 210
Aqua	Add to 100	Add to 100
<i>Palmitic Acid</i>	0.97	1.46
<i>Stearic Acid</i>	0.94	1.41
<i>Myristic Acid</i>	2.05	3.08
Trisodium EDTA	0.20	0.20
Phenoxyethanol	0.60	0.60
<i>Laureth-23</i>	2.75	
Glycerin	4.95	4.95
Coco-Caprylate/Caprate		0.50
Piroctone Olamine	0.05	0.05
<i>Decyl Glucoside</i>	2.92	
<i>Sodium Cocoamphoacetate</i>	1.63	
PEG-150 Distearate	0.50	
Triethanolamine	2.30	3.60
<i>Sodium Stearoyl Glutamate</i>		0.20
Parfum	0.30	0.30
Potassium Hydroxide	0.10-0.50	0.10-0.50
<i>Poloxamer 184</i>	1.00	

Example 4: Compositions used in the evaluation of the stability of the compositions

INCI	MHAC 149	MHAC 71	MHAC 211
Aqua	Ad 100	Ad 100	Ad 100
Methylparaben		0.10	0.10
<i>Palmitic Acid</i>	0.97	2.67	2.67
<i>Stearic Acid</i>	0.94	2.59	2.59
<i>Myristic Acid</i>	1.05	0.14	0.14
Phenoxyethanol	0.60	0.60	0.60
Trisodium EDTA	0.20		
<i>Laureth-23</i>		2.75	
Glycerin	4.95	4.95	4.95
PEG-40 Hydrogenated Castor Oil		0.50	0.50

PEG-200 Hydrogenated Glyceryl Palmate		0.42	
Coco-Caprylate/Caprate	0.50	0.50	0.50
Piroctone Olamine	0.05		
<i>Decyl Glucoside</i>	2.92	2.92	2.92
<i>Sodium Cocoamphoacetate</i>	1.63	1.63	1.63
PEG-150 Distearate		0.50	0.50
Triethanolamine	1.67	2.79	2.79
Parfum	0.3	0.30	0.30
<i>Sodium Stearoyl Glutamate</i>	0.20		
Potassium Hydroxide	0.10-0.50	0.01-0.50	0.01-0.50
<i>Poloxamer 184</i>	1.00	1.00	1.00

Example 5:

In order to evaluate the dermatological and ophthalmological tolerance of two compositions of the present invention two rounds of an eye cleansing panel (ECP) were conducted. During the ECP a subjective ophthalmological and dermatological assessment via questioning for cleansing performance and skin feel was performed. It was a comparative screening study. 15 qualified female voluntary subjects took part in this study and all of these subjects completed the study correctly and completely. These 15 subjects were between 21.8 and 44.4 years (mean: 34.9 years; SD: ± 7.6 years). The subjects had a dry facial skin (n=2), an oily facial skin (n=1), a normal facial skin (n=1) or a combination facial skin (n=11), and all subjects had sensitive facial skin, according to self-assessment. In the morning before assessment the use of any skin care products as well as caring skin cleansers like bath / shower oils was prohibited on the face. Further, the subjects were prohibited to use their personal make-up products at home. The subjects were to bring and apply their own products. There was one test area on each side of the face, including the eye area (split face design) for test product use. Before the application of the test products test persons were asked to apply their make-up. In the first round a test product (according to example 2, composition MHAC 149) and a comparative product (according to example 2, composition MHAC 177) were used simultaneously. In a second round the test product was according to example 2, composition MHAC 178 and the comparative product was the same as in the first round. The subjects did not know, which of the products the test product and the comparative product was.

Application mode:

- Subjects: Wet face and hands,

- Test manager: Product dispensing by the test manager who was trying to keep a similar dosage for both products for each subject (1 press for each product sample),
- Subjects: Receiving each product sample in each hand,
- Subjects: application of the product sample to the wet skin-face and eye area, massage and foam up in circular motions (the subjects were performing their normal wash routine, the subjects were told to leave the product on their skin for 5 minutes after they stopped applying the test product).
- Subjects: Leave the product on skin for 5 minutes.
- Subjects: Rinse the skin and dab dry.

Subjects: Self-assessment, subjective ophthalmological assessment evaluating the criteria eye-burning, eye-redness, eye-itching, and watering of eyes; subjective dermatological assessment evaluating the criteria facial skin- burning, facial skin-redness, tension/dryness of the facial skin, and itching of the facial skin; subjective assessment of the cleansing performance and skin feel.

Upon analysis of the evaluations, it became apparent that both products according to inventive compositions, which were differing in the emulsifier, the amount of fatty acids, and the surfactant(s), as well as the comparative product were all well tolerated. The comparative product was assessed a little bit better in relation to the dermatological or ophthalmological criteria. Referring to cleansing performance both products according to the invention were evaluated well, the product according to the formula MHAC 178 a little bit better. In all cases referring to the foam quality (foam thickness, foam elasticity, and long lasting foam) the inventive products were evaluated better than the comparative product.

Example 6:

To further evaluate the shape-ability and stability of the foam, three different compositions were analyzed, namely compositions MHAC 149, MHAC 177, and 178, the same compositions as mentioned above. The results are shown in Fig. 1.

It becomes apparent that only the compositions according to the invention are capable of producing a shapeable foam. Only compositions containing fatty acids and/or the respective

salts, especially palmitic, stearic and myristic acids and their respective salts impart cleansing compositions the property to generate a shapeable foam.

Example 7:

In order to show the make-up removing efficacy two compositions were prepared, one according to the invention (MHAC 184, containing a surfactant system (Decylglucoside, Sodium Cocoamphoacetate and Poloxamer 184), fatty acids (total content 3.96 % by weight) and the emulsifier Laureth-23); and one comparative composition (MHAC 210, containing fatty acids (total content 5.95 % by weight), the emulsifier Laureth-23, but no surfactant system). The weight ratios of the fatty acids were kept constant. The test procedure is illustrated in Fig. 2. The values obtained were expressed as a removal ratio, calculated by the following formula:

$$\text{Removal ratio: } \Delta a\% = (a1 - a2) / (a1 - a0) \times 100$$

a0: Chromometer value before application of make-up,

a1: Chromometer value after application of make-up;

a2: Chromometer value after using the composition MHAC 184 or MHAC 210.

The removal ratio (abbreviated MUR) for the two compositions is shown the results in Fig. 3. Both compositions show make-up removing efficacy. However, the composition containing a surfactant system is significantly more effective in removing make-up. This result shows that the surfactant system has an important part in the process of make-up removing.

Example 8:

Furthermore the stability of the cleansing compositions (also termed bulk, which means composition without propellant) was analyzed. Three different compositions were tested, composition MHAC 71 contains the emulsifier Laureth-23, fatty acids in a total amount of 5.4 % by weight and a surfactant system (Decylglucoside and Poloxamer 184, and Sodium Cocoamphoacetate). The composition MHAC 211 does not contain the emulsifier Laureth-23 or Sodium Stearoyl Gluatamate. The composition MHAC 149 contains a different emulsifier, namely Sodium Stearoyl Glutamate. The results are shown below.

Storage conditions / Samples	MHAC 71	MHAC 211	MHAC 149
- 10C~40°C ¹	OK	Phase separation, solid fatty acid became apparent	OK
-10°C ²	OK	Phase separation, solid fatty acid became apparent	OK
room temperature ³	OK	Phase separation, solid fatty acid became apparent	OK
6°C ⁴	OK	Phase separation solid fatty acid became apparent	OK
40°C ⁵	OK	OK	OK
50°C ⁶	OK	OK	OK
window light ⁷	OK	Phase separation solid fatty acid became apparent	OK

¹the compositions were kept at changing temperatures; at -10°C for 24hours, then heated to 40°C during the next 30 minutes, kept at 40°C for 24 hours and then cooled down to -10°C during the next 60 minutes. The whole circle was run for 30 days.

² the compositions were kept at -10°C for 4 weeks

³ the compositions were kept at room temperature for 8 days

⁴ the compositions were kept at 6°C for 8 weeks

⁵ the compositions were kept at 40°C for 8 weeks

⁶ the compositions were kept at 50°C for 4 weeks

⁷ the compositions were kept in transparent packaging devices in front of a window for 8 weeks.

OK means that there was no solid fatty acid phase separation; after shaking the whole bulk is a uniform composition; no changes became apparent referring to the color and the smell of the composition.

It became obvious that the compositions MHAC 71 and MHAC 149 were stable compositions under all conditions tested. The composition MHAC 211, which does not contain any of the emulsifiers is not stable under most of the conditions tested. Hence the emulsifiers essentially contribute to the stability of the composition.

Claims

1. A cosmetic product containing
 - a) a cleansing composition, which is releasable in form of a shapeable foam, comprising
 - i) a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant,
 - ii) at least one O/W-emulsifier,
 - iii) at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
 - iv) water.
 - b) at least one propellant, and
 - c) a packaging device, comprising a dispenser suitable of forming a shapeable foam.
2. A cosmetic cleansing composition containing
 - a) a surfactant system comprising at least one nonionic surfactant and at least one amphoteric surfactant,
 - b) at least one O/W-emulsifier,
 - c) at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
 - d) water.
3. A cosmetic product containing
 - a) a cleansing composition, which is releasable in form of a shapeable foam, comprising
 - i) at least one amino acid based surfactant ,
 - ii) at least one O/W-emulsifier,
 - iii) at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
 - iv) water.
 - b) at least one propellant, and
 - c) a packaging device, comprising a dispenser suitable of forming a shapeable foam.
4. A cosmetic cleansing composition containing
 - a) At least one amino acid based surfactant,
 - b) at least one O/W-emulsifier,

- c) at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, and
 - d) water.
5. The cosmetic product or composition according to any of claims 1, 2, 3, and 4 characterized in that the composition contains water in an amount of 60 to 98 % by weight, preferably 65 to 95 % by weight, more preferably 70 to 90 % by weight, in relation to the total weight of the composition.
 6. The cosmetic product or composition according to any of claims 1, 2, and 5, characterized in that the at least one nonionic surfactant of surfactant system is chosen from the group of alkyl poly glycosides, preferably alkyl poly glycoside containing an alkyl group having 8 to 30 carbon atoms, more preferably 8 to 24 carbon atoms, even more preferably 8 to 12 carbon atoms.
 7. The cosmetic product or composition according to claim 6, characterized in that the alkyl group of the at least one alkyl poly glycoside is derived from natural oils, preferably plant oils, more preferably coconut oil.
 8. The cosmetic product or composition according to any of claims 6 and 7, characterized in that the sugar moieties of the at least one alkyl poly glycoside are chosen from glucose or sucrose, preferably glucose.
 9. The cosmetic product or composition according to any of claims 6, 7, and 8, characterized in that the at least one alkyl poly glycosides is contained in an amount of 0.1 to 7.5 % by weight, preferably 0.5 to 5.0 % by weight, and more preferably preferred 2.0 to 4.0 % by weight, in relation to the active content and in relation to the total weight of the composition.
 10. The cosmetic product or composition according to any of claims 1, 2, 5, 6, 7, 8 and 9, characterized in that the at least one nonionic surfactant of surfactant system is chosen from the group of block polymer, preferably chosen from Poloxamer 101, Poloxamer 124 and/or Poloxamer 184, more preferably poloxamer 184.
 11. The cosmetic product or composition according to claim 10, characterized in that the at least one block polymer is contained in a total amount of 0.1 to 8 wt. % by weight, preferably 0.2 to 5 wt.% by weight, more preferably 0.25 to 4 wt.% by weight, in relation to the total weight of the composition.
 12. The cosmetic product or composition according to any of claims 1, 2, 5, 6, 7, 8, 9, 10, and 11, characterized in that the at least one amphoteric surfactant is chosen from sodium salts of alky amphotoacetates.

13. The cosmetic product or composition according to claim 12, characterized in that the at least one alkyl amphoacetate is contained in an amount of 0.2 to 5.0 % by weight, preferably 0.5 to 3.0 % by weight, more preferably preferred 1.0 to 2.5 % by weight, in relation to the active content and in relation to the total weight of the composition.
14. The cosmetic product or composition according to any of claims 3, 4, and 5, characterized in that at least one amino acid based surfactant is contained in an amount of 0.2 to 5.0 % by weight, preferably 1.0 to 2.5 % by weight, in relation to the active content and in relation to the total weight of the composition.
15. The cosmetic product or composition according to any of the preceding claims characterized in that the at least one O/W-emulsifier is chosen from ethoxylated alcohols, preferably from ethoxylated lauryl alcohols, more preferably Laureth-23.
16. The cosmetic product or composition according to any of the preceding claims characterized in that the at least one O/W-emulsifier chosen from ethoxylated alcohols is contained in an amount of 0.2 to 10.0 % by weight, preferably 0.5 to 8.0 % by weight, and more preferably 1.0 to 5.0 % by weight, in relation to the active content and in relation to the total weight of the composition.
17. The cosmetic product or composition according to any of claims 1 to 14 characterized in that the at least one O/W-emulsifier is sodium stearyl glutamate.
18. The cosmetic product or composition according to claim 17 characterized in that sodium stearyl glutamate is contained in an amount of 0.01 to 5.0 % by weight, preferably 0.05 to 2.0 % by weight, and more preferably 0.1 to 1.0 % by weight, in relation to the active content and in relation to the total weight of the composition.
19. The cosmetic product or composition according to any of the preceding claims characterized in that at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are at least three different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are contained, preferably only three different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms, more preferably only three different saturated fatty acids and/or their respective salts having 10 to 24 carbon atoms.
20. The cosmetic product or composition according to claim 19 characterized in that the three different saturated fatty acids and/or their respective salts having 10 to 24 carbon atoms are chosen from the group of palmitic acid, stearic acid, myristic acid, lauric acid, and/or the respective salts.

21. The cosmetic product or composition according to any of the preceding claims characterized in that the at least two different saturated fatty acids and/or their respective salts having 8 to 30 carbon atoms are contained in an amount of 0.5 to 30.0 % by weight, preferably 1.0 to 10 % by weight, in relation to the total amount of the composition.
22. The cosmetic product according to claim 1 or 3 characterized in that the at least one propellant is chosen from hydrocarbon gases, fluorinated gases, hydrofluorocarbon gases, dimethyl ether, nitrogen, air or carbon dioxide and/or mixtures thereof, preferably chosen from isobutane, propane and n-butane, more preferably a blend of 60 % n-butane, 20 % isobutene and 20% propane (by weight).
23. The cosmetic product according to claim 1 or 3 characterized in that the dispenser comprises a device, which enables the formation of a distinct object of foam.
24. The cosmetic product according to claim 23 characterized in that the device enabling the formation of a rose foam is an aperture plate having a multiplicity of apertures having a banana-like form.

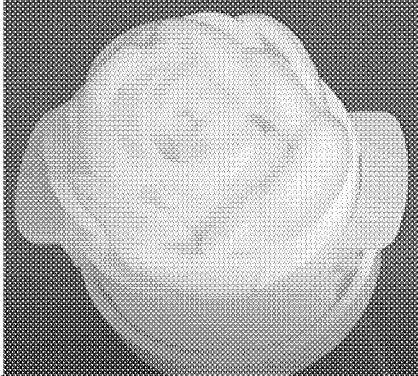
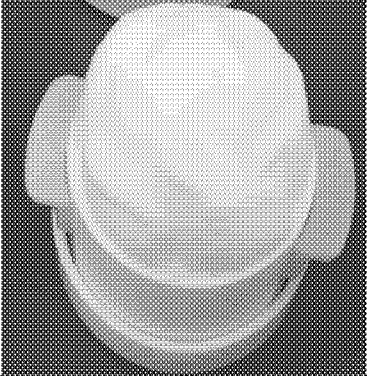
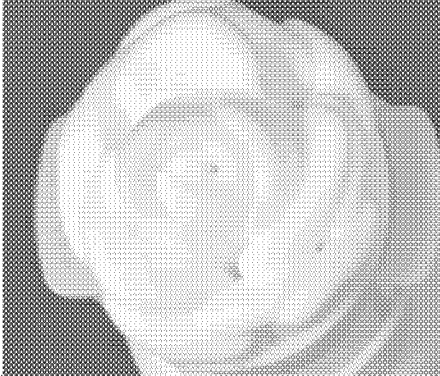
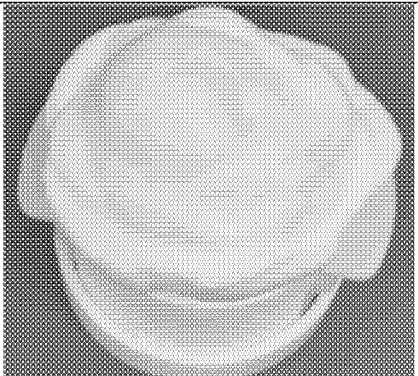
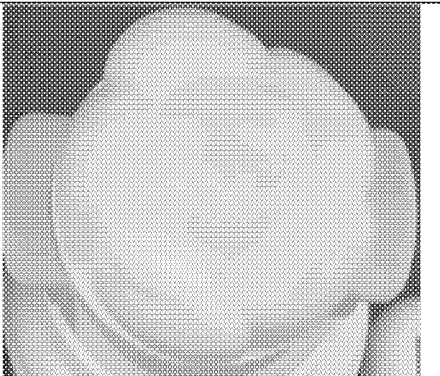
Compositions:		
MHAC 149;	MHAC 177	MHAC 178
		
Immediately after dispensing	Immediately after dispensing; no rose shaped foam can be formed	Immediately after dispensing
		
2 minutes after dispensing		30 minutes after dispensing

Fig. 1

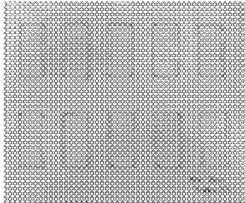
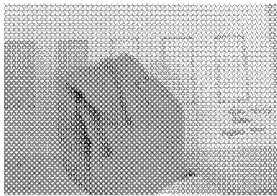
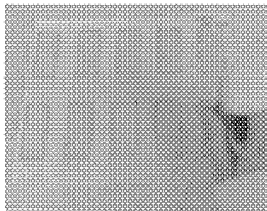
Test material: PU/PVC leather (test area 2 x 5 cm): 	Application of lipstick by a make-up brush, the amount of applied lipstick was kept equal by weight control: 	Application of the composition MHAC 184 or MHAC 210 using a cotton pad and a spreader: 	Evaluation by Chromometer: 
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Fig. 2

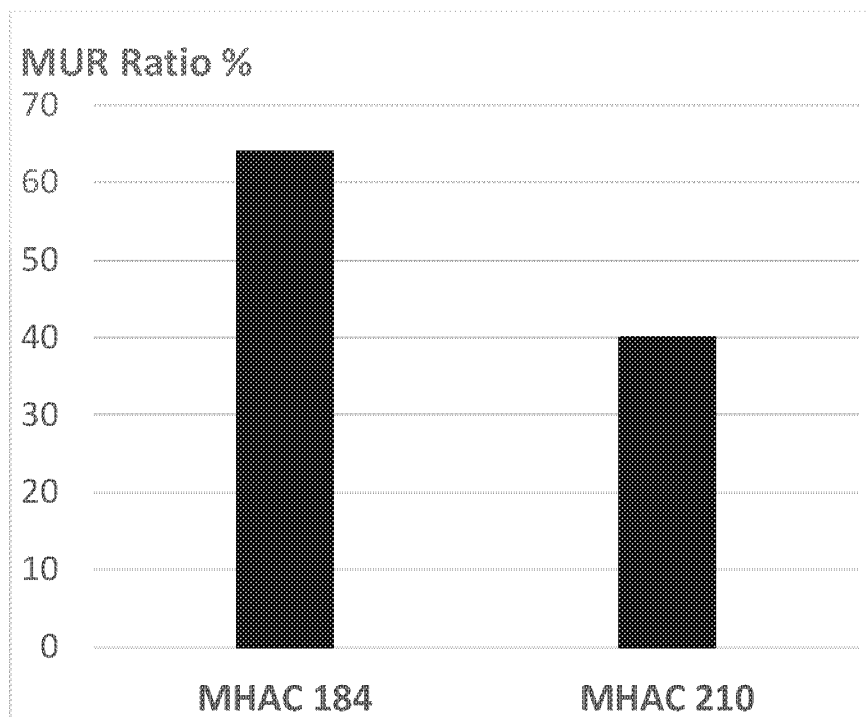


Fig. 3

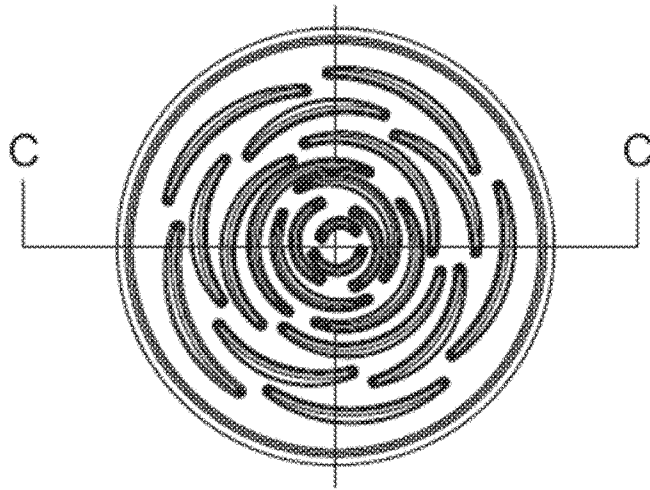


Fig. 4a

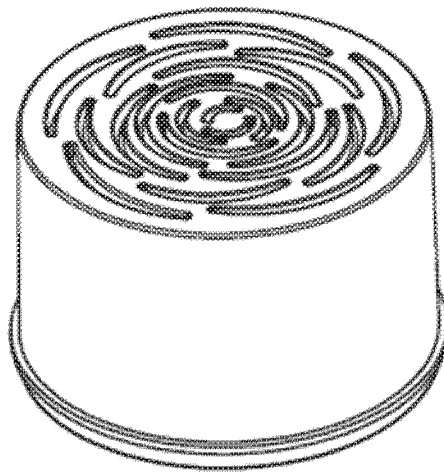


Fig. 4b

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/075154**A. CLASSIFICATION OF SUBJECT MATTER**

A61K 8/36(2006.01)i; A61K 8/34(2006.01)i; A61K 8/44(2006.01)i; A61K 8/42(2006.01)i; A61K 8/31(2006.01)i; A61K 8/30(2006.01)i; A61K 8/18(2006.01)i; A61Q 19/10(2006.01)i; A61Q 1/14(2006.01)i

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)

A61K.A61Q

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 practicable, search terms used)

Database:VEN, DWPL,CPRSABS,CNABS,CNTXT,CNKI;foam,shapeable, emulsifier, clean,sodium, salt, amphoteric, fatty acid, nonionic, propellant, potassium, foam, dispenser,rose,banana,plate,apeture,flower,myristic,lauric,aerosol

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2014029711 A2 (UNILEVER PLC ET AL.) 27 February 2014 (2014-02-27) description, example 1, table 1, example No. R-60-C9, page 4, line 30- page 5, line 2, page 1, lines 28-31, claim 7	1-24
X	WO 2007111962 A2 (PROCTER & GAMBLE ET AL.) 04 October 2007 (2007-10-04) description, example 14	1-24
X	CN 108066164 A (SHANGHAI JAHWA CORP CORP) 25 May 2018 (2018-05-25) description, table 3, example 8, paragraph [0042]	2, 4-21
X	CN 101036621 A (L'OREAL SA) 19 September 2007 (2007-09-19) description, example 1	2, 4-21

☐ Further documents are listed in the continuation of Box C.☒ See patent family 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 application or patent 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 (as 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

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“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

“&” document member of the same patent family

Date of the actual completion of the international search

12 November 2019

Date of mailing of the international search report

20 November 2019

Name and mailing address of the ISA/CN

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2014029711	A2	27 February 2014	BR	112015003693	A2	04 July 2017
				MX	2015002280	A	20 August 2015
				WO	2014029711	A3	12 September 2014
				GB	201215054	D0	10 October 2012
				EA	027395	B1	31 July 2017
				CN	104661636	B	10 May 2017
				EA	201590177	A1	30 July 2015
				CN	104661636	A	27 May 2015
				JP	6333253	B2	30 May 2018
				MX	352365	B	22 November 2017
				TW	201408331	A	01 March 2014
				JP	2015526451	A	10 September 2015
				TW	I586372	B	11 June 2017
WO	2007111962	A2	04 October 2007	WO	2007111963	A3	22 November 2007
				MX	2008012155	A	03 October 2008
				WO	2007111962	A3	22 November 2007
				WO	2007111963	A2	04 October 2007
				CN	101404972	B	14 November 2012
				EP	1996146	B1	30 April 2014
				CN	101404972	A	08 April 2009
				US	8580725	B2	12 November 2013
				US	2007225193	A1	27 September 2007
				JP	2009536920	A	22 October 2009
				US	8680035	B2	25 March 2014
				CA	2645738	C	28 February 2012
				KR	20080098659	A	11 November 2008
				CA	2645738	A1	04 October 2007
				CA	2645459	A1	04 October 2007
				CN	101404973	A	08 April 2009
				US	2007225196	A1	27 September 2007
CN	108066164	A	25 May 2018	EP	1996146	A2	03 December 2008
				EP	1996147	A2	03 December 2008
				None			
CN	101036621	A	19 September 2007	JP	2007246510	A	27 September 2007
				EP	1837012	A1	26 September 2007
				FR	2898270	A1	14 September 2007