(19) **DANMARK** (10) **DK/EP 3290020 T3**

(12) Oversættelse af europæisk patentskrift

Patent- og
Varemærkestyrelsen

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(51) Int.Cl.: ***A 61 K 8/45 (2006.01)*** ***A 61 K 8/60 (2006.01)*** ***A 61 Q 5/00 (2006.01)***
A 61 Q 9/02 (2006.01) ***A 61 Q 11/00 (2006.01)*** ***A 61 Q 19/00 (2006.01)***

(45) Oversættelsen bekendtgjort den: **2022-02-28**

(80) Dato for Den Europæiske Patentmyndigheds
bekendtgørelse om meddelelse af patentet: **2021-11-24**

(86) Europæisk ansøgning nr.: **17020389.7**

(86) Europæisk indleveringsdag: **2017-08-25**

(87) Den europæiske ansøgnings publiceringsdag: **2018-03-07**

(30) Prioritet: **2016-08-29 CH 11122016**

(84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**

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(54) Benævnelse: **MILD PREPARATIONS CONTAINING ALKOXYLATED FATTY ACID AMIDES**

(56) Fremdragne publikationer:
WO-A1-2013/182759
DE-A1- 4 409 189
DE-A1- 19 600 743
DE-A1-102009 046 169

Mild preparations containing alcoxylated fatty acid amides

Description

Subject matter

[0002] The subject matter of this application are cosmetic preparations containing at least one glycolipid biosurfactant and at least one alkoxylated fatty acid amide. The alkoxylated surfactant or surfactants are based on fatty acids of vegetable oils with an exceptionally high proportion of long-chain unsaturated hydrocarbon chains. A further object is their non-therapeutic use as or for the production of cosmetic or medical cleaning or care products.

Problem - Prior art

[0003] The present invention is directed to a cosmetic preparation with improved dermatological compatibility and the non-therapeutic use of the preparations for body cleansing and care, hair washing, make-up removal, dental care, and shaving, in particular for the removal of carbohydrates and stains of various kinds.

[0004] The removal of carbohydrate-containing impurities is extremely important in body care. Especially in diseased skin, fungi or bacteria play a central role, e.g. Propionibacterium acnes (acne), Streptococci (dental plaque), Malassezia furfur (dandruff). It is known that surface-active agents modify the permeability of biological membranes and thus have an antibacterial, antiviral or fungicidal effect. For example, EP 209 783 (Wella) discloses sophorolipids and their use as anti-dandruff and bacteriostatic agents. Apart from the antimicrobial effect, however, it is ofutmost importance to preventively counteract the colonisation by microorganisms from the outset. This is possible by depriving the microorganisms of their nutritional basis - which primarily consists of carbohydrates - or, in the case of dental plaque, by preventing the early formation of a matrix of carbohydrates and protein. In particular, carbohydrates can also impair dental health, as they are degraded by certain types of bacteria in the oral cavity to lactic acid, for example, and can attack the enamel of juvenile or adult teeth (caries).

[0005] Carbohydrate removal is also important in facial care and shaving. The face in particular is exposed to environmental influences and pollution. For example, pollen, whose main component are carbohydrates, as well as soot and dust particles can absorb on the skin and hair. Furthermore, carbohydrate cleansing is important in hair care in order to easily wash out residues of styling products from the hair. Therefore, one goal of body hygiene is the effective removal of carbohydrates.

[0006] Another aspect ofhygienic body cleansing is the removal of metabolic products that are often pathogenic. For example, Malassezia furfur produces fluorescent pigments which are associated with pathogenic action. Thus, for cleansing, whether in oral hygiene, skin or hair, it is important to achieve not only good removal of carbohydrates, but also the removal of colour or pigment dirt.

[0007] In contrast to material cleaning, good cleaning performance is particularly problematic when cleaning the body or fur, as the cleaning performance is limited to a narrow temperature range of approx. 15 - approx. 40°C and the mechanical removal of dirt is also only possible to a limited extent. Furthermore, aggressive ingredients and extreme pH values < 2 or > 12 must be avoided. Especially for facial cleansing and removal of eye make-up, it is also desirable to achieve gentle cleansing without mechanical forces.

[0008] Typically, surfactant mixtures are used for the removal of stubborn dirt. Frequently, cleaning products for mechanical cleaning contain abrasive particles such as wood flour, cellulose, plastic particles, kaolin, sand and others. Particularly stubborn dirt is removed with the addition of aggressive organic solvents, such as aliphatic hydrocarbons.

[0009] The more frequently the products are used, e.g. in sensitive areas such as the eye area, intimate areas or even in the commercial sector, the more obvious the adverse effects of the ingredients they contain. For example, many ofthe commonly used surfactants are known to irritate the skin. In particular, the commonly used solvents also lead to degreasing and drying of the skin by destroying the hydro-lipid mantle. The skin thus becomes more permeable to toxic or allergenic substances and reacts by skin irritation and allergenic skin reactions.

[0010] A variety of formulations have been proposed in the patent literature to avoid the aforementioned skin problems. Nevertheless, the improved skin tolerances as well as the improved protection against skin dehydration are accompanied by a loss of cleansing effect.

[0011] The removal of colour and pigment residues from decorative cosmetics is another challenge here - mild cleansing, especially of sensitive skin areas such as the eye area, occupies a key position. Technically challenging is the fact that decorative cosmetics are based on different formulation concepts and the consumer often has to resort to several products to remove water- or oil-soluble cosmetics. Alternatively, there are 2-phase products.

[0012] Mild cleaning of stubborn stains is still desirable in the commercial sector, such as painters, hairdressers, car mechanics, gardeners, etc. But also in the artistic, leisure and family sectors, the removal of colour stains from skin and hair is a frequent necessity. Last but not least, rough cleaning is also often necessary in animal care, for example the grooming of pets.

[0013] In addition to the ambitious goal of achieving better skin compatibility with high cleaning power, the ingredients should also be obtained from renewable raw materials. In recent years, palm oil, especially palm kernel oil for detergents and cleaning agents, has been established as a vegetable base for surfactants.

[0014] However, the sustainability of palm oil-based surfactants is increasingly being called into question, as they originate from tropical monocultures whose cultivation area is often obtained through the uncontrolled clearing of valuable tropical rainforests. These vegetable oils are used because of their technical properties such as advantageous foaming, washing and cleaning performance, which they possess thanks to their high lauric acid content (C12 fatty acid, saturated).

[0015] Alternatively, other palm oils with a high lauric acid content, such as coconut oil or babassu oil, are also used to a lesser extent. Animal oils and fats have also been used for a long time. However, due to the unfavourable fatty acid composition, hygienic (e.g. TSE problem) and ideological reasons (e.g. vegan trend), animal raw materials are often undesirable from the consumer's point ofview. Furthermore, vegetable soap has been used for washing and cleaning purposes for thousands of years, its application is also limited due to the formation of lime soaps and necessity of an alkaline pH value.

[0016] The challenge of this invention is therefore to dispense with petroleum, animal fats and palm oils (palm oil, palm kernel oil, coconut oil, babassu oil) as the fatty acid source for the surfactants as the main component and to use surfactants from less problematic sources, such as vegetable oils from European cultivation or fermentation, to the greatest possible extent.

[0017] Technically, this is a problem because the desired lauric acid cannot be obtained in sufficient quantities from available oils, for example from Central Europe, and thus cleaning agents commonly used today are largely based on petroleum or palm oils.

[0018] Glycolipid biosurfactants, which can be produced from a wide variety of substrates via fermentation, meet the requirements for sustainability and are also characterised by low skin irritation potential and toxicity. Furthermore, they have an excellent fat and oil dissolving capacity, which is advantageous for cosmetic use, but which can severely dry out the skin. In order to meet all the requirements of cosmetic products, such as foam, cleansing power, stability, etc., glycolipid biosurfactants are usually combined with other surfactants.

[0019] In this context, the glycolipid biosurfactants according to prior art are in turn combined with surfactants based on lauric acid from palm or petrochemical origin, e.g.DE19600743 (Henkel) skin-compatible dishwashing detergents, WO 2011120776 (Unilever) mild and foaming washing compositions for body cleansing, JP 2009275145 (Seraya) skin cleansing with sophorolipids in combination with soaps, WO 2016050439 (Evonik) biosurfactants-containing formulations with improved foaming and fat dissolving properties. Further known from EP 0499434, US 5520839 is the combination of biosurfactants with anionic surfactants including rapeseed soap for improved oil and fat solubility.
All combinations of biosurfactant glycolipids with surfactants presented so far contain hydrophobic parts of the surfactants, which are derived from lauric acid. The combination of glycolipids with solvents for non-cosmetic applications is known from DE102009046169. WO 2013/182759 discloses the use of sophorolipids as solubilizers ofpoorly water soluble substances.

[0020] Furthermore, the use of long-chain unsaturated alkoxylated fatty acid amides for cosmetic purposes is known in the literature. This class of surfactants is used for mild body cleansing, thanks to their good thickenability, the possibility of transparent formulations, their good foaming capacity (DE 4409189, Chemische Fabrik, Chem-Y) as well as for an increased stability of the compositions (e.g. coarse hand cleansing EP 2455062, Stockhausen). In prior art, the amides are again preferably combined with sodium laureth sulphate in the disclosed embodiments.

[0021] However, this does not solve the problem. To produce sustainable preparations with biosurfactant glycolipids and surfactants based on vegetable oils with a high content of long-chain, predominantly unsaturated fatty acids, which have a high cleansing and care performance, in particular cleansing of carbohydrates and stains, and at the same time have excellent dermatological compatibility and moreover, can be applied over the entire pH range.

[0022] The complex technical task of the invention has been to identify surfactant combinations that exhibit excellent cosmetic cleansing properties in addition to an advantageous toxicological profile. At the same time, contrary to the prior art, surfactants derived from the fatty acids of palm oils, coconut, palm, babassu or palm kernel oil, or petroleum should be avoided as far as possible due to sustainability considerations. This is technically demanding in thatcommon surfactants based on palm kernel oil have a high proportion oflauric acid (C12) in their fatty acid composition, which gives the surfactant advantageous properties such as solubility, stability, wettability, compatibility, etc. The challenge, therefore, is to find a way to use a surfactant that is not based on palm kernel oil. The challenge is thus to produce caring and cleansing preparations of surfactants based on vegetable oils with a high content of fatty acids with chain lengths above **18** carbon atoms and predominantly unsaturated, and biosurfactant glycolipids. Furthermore, the surfactant combination should be applicable over a wide pH range.

[0023] The preparations according to the invention should preferably be based to the greatest possible extent on natural raw materials and be readily biodegradable.

Description of the invention

(0024] Surprisingly, it was found that binary combinations of glycolipid biosurfactants (B) with alkoxylated fatty acid amides based on C18 vegetable oils (A) as described in the claims solve one or more of the problems mentioned.

(0025] Unexpectedly, it was shown that the preparations according to the invention exhibit a cleansing effect on specific contaminants that is in no way predictable for the person skilled in the art. This allows the preparation of skin mild preparations even for stubborn soilings, such as staining or carbohydrate contamination.

(0026] It was found that the preparations according to the invention have a synergistic effect on the dissolving of carbohydrate contaminants, which is not predictable for the person skilled in the art. Here, synergistic is understood to mean that the cleaning power of the mixture is higher than the cleaning power of the individual components.

(0027] Surprisingly, a synergistic effect on colour contamination has also been found. Colour residues of different types can be removed by the composition according to the invention with only one agent, which proves advantageous, for example, in use as a make-up remover for fat-soluble and water-soluble cosmetics.

(0028] The invention also relates to further components which can be combined with the preparation according to the invention and which, surprisingly, do not impair the synergistic effect between (A) and (B). Surprisingly, the synergy remains fully intact - this is surprising in that the addition of a third component clearly- and mostly negatively- affects the interaction (A), (B) and the impurity to be dissolved.

(0029] A further subject matter of the invention is therefore the optional additional incorporation of an alkoxylated surfactant (C) as described in the claims. While maintaining a high cleaning power on carbohydrates, colours and pigments, the cleaning performance on specific stains such as makeup as well as the foaming properties of the preparation are also improved.

(0030] A significant reduction of colour staining is observed by the inventive preparations without the mandatory incorporation of additional solvents. Another subject matter of the invention is the optional additional incorporation of mild solvents, which further improves the removal of certain colour and pigment contaminants, such as eye shadow. The synergistic effect between (A) and (B) is surprisingly maintained.

(0031] Furthermore, it is an subject matter of the invention to optionally include additional chelating agents. Here, too, the synergistic effect between (A) and (B) is not impaired; on the contrary, the cleansing performance on makeup is improved and foam formation and foam stability are enhanced. Clear formulations are produced.

[0032] A further subject matter of the present application is the non-therapeutic use of the preparations according to the invention as or for the preparation of cleaning and care compositions for body, mouth and teeth, skin and hair as well as for animal care.

[0033] Within the scope of the invention, cleaning and care compositions also include auxiliary agents which are added to the actual composition during cleaning and care. Furthermore, cleaning and care agents in the context of the invention include pre- and post-treatment agents, i.e. agents which are applied before the actual cleaning, for example for dissolving stubbom soiling.

[0034] Another subject matter of the invention relates to a cleaning and care process comprising
a) providing a cleaning and care composition comprising a preparation according to the preceding subjects of the invention
b) bringing a biological or natural surface, e.g. teeth, gurus, hair, skin, fur, etc. into contact with the cleaning and care composition according to (a).

[0035] Solid substrates, such as wipes, represent a particular embodiment. These are impregnated with the cosmetic preparation and have the advantage that the preparation is already predefined in the correct dosage. This particularly meets the consumer's desire for convenience. Wipes are easy to handle, can be used directly without additional steps and can also be used well on the go, e.g. when travelling, even ifwater is not available.

[0036] Wipes are made from textiles, which may be woven, knitted, or warp-knitted, or may be composites in nonwoven, paper, wadding, or felt, with nonwovens usually being made from polypropylene, polyester, or viscose.

[0037] Substrates and wipes impregnated with the cosmetic preparations can be produced in different ways - dipping, wiping and spraying processes. The latter is used in particular for non-foaming or low-foaming preparations.

[0038] Advantageously, the preparations according to the invention can be used over the entire pH range, and they exhibit a high compatibility with other ingredients - be they anionic, cationic, amphoteric, or non-ionic ingredients.

[0039] In addition, the preparation exhibits a refatting effect combined with a pleasant skin feel.

[0040] The preparation according to the invention is also disclosed in a preservative-free embodiment.

[0041] A further advantage ofthe invention is that the preparations can also be produced without sulphate surfactants and thus take into account the cosmetic trend "sulphate-free".

[0042] Furthermore, the preparations surprisingly show such a good cleansing performance that the common surfactants lauryl sulphate, lauryl ether sulphate and cocoamide propyl betaine based on palm kernel oil, which can have a skin and mucous membrane irritating effect in higher doses, can be completely dispensed with.

[0043] Definitions:

Technically, vegetable oils from oil palms, babassu, palm kemels, or coconuts differ significantly in fatty acid composition from the C-18 vegetable oils of the invention:
In the present invention, the following vegetable oils, fats, waxes or resins are referred to as C-18

vegetable oils:
Preferably, the C-18 vegetable oils are natural triglycerides. C-18 vegetable oils have a mixture of saturated and unsaturated fatty acids, wherein the fatty acid distribution of fatty acids with 18 and more carbon atoms is above 60% by weight, more preferably above 72% by weight and most preferably above 77% by weight and wherein the proportion of unsaturated fatty acids is above 55% by weight, preferably above 65% by weight and most preferably above 72% by weight.

[0044] Preferably, the proportion offatty acids with 16 and fewer carbon atoms is below 30% by weight, preferably below 27% by weight and particularly preferably below 17% by weight.

[0045] Preferably, the C-18 vegetable oils contain a proportion of < 0.5%, more preferably > 0.05% fatty acids with 6 carbon atoms.

[0046] Preferably, the C-18 vegetable oils contain a proportion of < 75% by weight of hydroxy fatty acids, preferably < 25% by weight, more preferably < 5% by weight.

[0047] Preferably, C-18 vegetable oils contain saturated or unsaturated fatty acids having 20 or more carbon atoms, the content of which may be up to 96 % by weight. Preferably, C-18 vegetable oils contain a content of saturated or unsaturated fatty acids with 20 and more carbon atoms of> 0.01 % by weight and more preferably > 0.05 % by weight and most preferably > 0.1 % by weight and most preferably >= 0.2 % by weight.

[0048] Preferably, the C-18 vegetable oils contain less than 95% by weight oleic acid, more preferably less than 85% by weight oleic acid.

[0049] % by weight here in each case based on the total content of fatty acids in the vegetable oil.

[0050] C-18 vegetable oils can be obtained from the following plants or parts of plants, such as seeds, kemels, pulp, leaves, roots and others, hereinafter referred to as C-18 plants: Amaranth, anise, apple, apricot, argan, amica, avocado, cotton, borage, nettle, broccoli, canola, chia, hemp, hazelnut, beech, boxwood, thistle, spelt, peanut, tiger nut, lilac, garden cress, barley, pomegranate, oat, hemp, hazelnut, blueberry, elderberry, jasmine, currant, St. John's wort, jojoba, camellia, chamomile, caraway, cherry, coriander, mullein, crambe, spurge, cruciferous spurge, squash, Iberian dragonhead, lavender, camelina, linseed, privet, lupine, lucerne, macadamia, com, almond, marula, mirabelle, melon, poppy, mongongo, evening primrose, olive, oil radish, rocket, passion flower, pecan, peach, plurn, pistachio, cranberry, purging nut (Jatropha), rapeseed, rice, marigold, tumip rape, safflower, sage, sea buckthom, black curnin, sesame, sesame leaf, mustard, sunflower, soya, tobacco, walnut, grape, wheat, meadowfoam and wild rose; as well as their combinations.

[0051] Preferably, the oil is selected from the group: apricot, avocado, cotton, broccoli, beech, thistle, spelt, tiger nut, barley, hemp, hazelnut, jojoba, cherry, mullein, crambe, cruciferous spurge, squash, Iberian dragonhead, linseed, flaxseed, lupine, alfalfa, macademia, almond, com, poppy, evening primrose, olive, oil radish, rocket, peach, rapeseed, rice, marigold, tumip rape, safflower, sage, sea buckthom, black curnin, sesame, sesame leaf, mustard, sunflower, soybean, tobacco, walnut, grape and wheat, and combinations thereof.

[0052] Most preferably, the oil is selected from the group consisting of apricot, thistle, tiger nut, hemp, crambe, Iberian dragonhead, linseed, lupine, alfalfa, com, almond, olive, oil radish, peach, rapeseed, tumip rape, sesame, sesame leaf, sunflower, soybean, grape and wheat, and combinations thereof.

[0053] The term oils is used in the present invention as a proxy for fats, waxes and resins.

[0054] In the context of the present invention, surfactant refers to amphiphilic organic substances with surface active properties that adsorb to the interface between two liquids, such as oil and water, and have the ability to reduce the surface tension of water. In solution, surfactants tend to self-aggregate and form structures such as, for example, micelles, lamellar structures, etc. In the context of the present invention, emulsifiers are included under the term surfactants, but not vice versa.

[0055] In the context of the present invention, unless otherwise indicated, basedonor derived from vegetable oils, fats or waxes is representative of derivatives of fatty acids - purified or as a mixture - and/or reaction products thereof, such as addition products to the double bond, reactions at the fatty acid function, such as fatty alcohols and ethers and/or carboxyl ethers thereof, amines or fatty acid amides, fatty acid esters, and imines. Preferably, these fatty acid derivatives are present as a mixture according to the fatty acid distribution in the native oil oras they occur during the reaction of naturally occurring vegetable oils or fats.

[0056] In the context of the present invention, fatty acids or fatty alcohols or derivatives thereof are - unless otherwise stated - representative of branched or unbranched, saturated, mono- or polyunsaturated carboxylic acids or alcohols or derivatives thereof with preferably 6 to 24 carbon atoms.

[0057] PEGylated vegetable oils are ethoxylated vegetable oils as defined in "Safety Assessment of PEGylated Oils as Used in Cosmetics", International Journal of Toxicology November/December 2014, 33 . In the context ofthe present invention, the terminology for cosmetic ingredients is applied which describes the etherification and esterification products of glycerides and fatty acids with ethylene oxide. In the context of the present invention, representatives ofthe C-18 plants are particularly preferred; examples are listed under surfactants (C).

[0058] PEGylated fatty acid glycerides are mono-, di- and/or triglycerides which have been modified with a specific number of alkylene glycol units, usually ethylene glycol units, and may contain by-products of the reaction. In the context of the present invention, PEGylated fatty acid glycerides are defined as in" Safety Assessment of PEGylated Alkyl Glycerides as Used in Cosmetics", Cosmetic Ingredient Review (CIR) 2014. It should be noted that CIR also considers unsaturated fatty acids as part ofthe term "alkyl".

[0059] In particular, in the context of the present invention, alkoxylated fatty acid glycerides (PEGylated and others) of C-18 plants are preferred; examples of alkoxylated fatty acid glycerides of C-18 plants are listed under surfactants (C).

[0060] In the context of this application, "sulphur surfactants" is understood to mean anionic or amphoteric surfactants with a sulphur-containing hydrophilic moiety such as alkyl sulphates, alkyl ether sulphates, (alkoxylated) sulphosuccinates, (alkoxylated) sulphonates, (alkoxylated) isethionates, (alkoxylated) taurates, sulphobetaines and sultaines. Examples of sulphate-containing surfactants include sodium laureth sulphate, sodium lauryl sulphate, ammonium laureth sulphate, ammonium lauryl sulphate, sodium myreth sulphate, sodium coco sulphate, sodium trideceth sulphate or MIPA laureth sulphate.

[0061] In the context ofthe present invention, unless otherwise indicated, biosurfactant means biosurfactant glycolipids as defined in the invention.

[0062] Free of sulphur surfactants, phosphates, phosphonates means that the preparation does not contain any appreciable quantities of sulphur surfactants, phosphates, phosphonates. In particular, this is to be understood to mean that sulphur surfactants, phosphates, phosphonates are each present in quantities of less than 0.1% by weight, preferably less than 0.01% by weight, based on the total quantity of thepreparation, in particular no detectable quantities are present in the preparation.

[0063] "At least one" as used herein refers to 1 or more, for example 1, 2, 3, 4, 5, 6, 7, 8, 9 or more.

[0064] "Cleansing and care composition" as used herein refers to a cosmetic or non-therapeutic medical preparation for the care of skin and hair, teeth, gums, nails, as well as for the removal of unwanted contaminants, e.g., make-up, external contaminants, paint, soil, et al, metabolic products of biological processes, e.g., sweat, sebum, et al, or odours.
The preparations can be applied by rubbing, dosing, spraying, foaming and other methods (e.g. ointment, application, etc.) directly or via an auxiliary agent, diluted or concentrated, to the areas to be treated. The product can cleanse, enhance a person's attractiveness, maintain the health of skin and hair, including shaving, beautify and groom. Included in the term is animal grooming and cleaning.

[0065] In the context ofthe present invention, "cleansing power" or "washing power" means the removal of one or more contaminants, metabolites or odours.

[0066] The removal can be measured by a lightening or reduction of the soiling, assessed oleofactorily or visually.

[0067] The HLB (hydrophilic-lipophilic balance) value is a measure of the hydrophilicity, or lipophilicity, of a substance, usually a non-ionic surfactant. The value can be measured theoretically as described in relevant literature (e.g. according to the Griffin method) or experimentally by comparing the solubility behaviour of standard compositions with known HLB.

[0068] Substances that serve as ingredients of cosmetic products are designated below according to the International Nomenclature Cosmetic Ingredient (INCI) nomenclature, where applicable. The INCI designations are taken from the "International Cosmetic Ingredient Dictionary and Handbook, 13th Edition (2010)". Publisher: The Personal Care Products Council.

[0069] Unless explicitly stated otherwise, the amounts given in percent by weight (w/w %) refer to the total preparation. In this context, the percentage quantities refer to active contents.

[0070] A first subject matter of the invention is directed to a preparation containing at least one alkoxylated surfactant (A) from the group of alkoxylated fatty acid amides (I) and at least one glycolipid biosurfactant (B) comprising rhamnolipids; sophorolipids, mannosylerythritol lipids, cellobiose lipids and trehalose lipids.

Surfactant (A)

Alkoxylated fatty acid amides

[0071] Alkoxylated fatty acid amides suitable for the invention follow formula (I),

(I) R- CO-NH-(CmH2mO)n -H

where

mis the integer 2 or 3, preferably 2,
n is a number in the range 2-10, preferably in the range 2-8, most preferably 2-4,

where R = saturated, mono- or polyunsaturated hydrocarbon chain with 5-23 carbon atoms and RCO derived from a fatty acid mixture, wherein the proportion of 18 or more carbon atoms of the fatty acid residue RCO is above 60% by weight, preferably above 72% by weight and very particularly preferably above 77% by weight;

and wherein the proportion ofunsaturated fatty acid residues is above 55 wt.%, preferably above 65 wt.% and particularly preferably above 72 wt.%, in each case based on the total proportion of fatty acid residues RCO of the surfactant (I) used;

and wherein the surfactant (I) consists of a mixture of different chain lengths and degrees of saturation of the fatty acid residue RCO as defined above and is derived from a C-18 vegetable oil selected from the group comprising: amaranth, anise, apple, apricot, argan, arnica, avocado, cotton, borage, nettle, broccoli, canola, chia, hemp, hazelnut, beech, boxwood, thistle,spelt, peanut, tiger nut, lilac, garden cress, barley, pomegranate, oat, hemp, hazelnut, blueberry, elderberry, jasmine, currant, St. John's wort, jojoba, camellia, chamomile, caraway, cherry, coriander, mullein, crambe, spurge, squash, lberian dragonhead, lavender, linseed, lupine, lucerne, macadamia, corn, almond, marula, mirabelle, melon, poppy, mongongo, moringa, evening primrose, olive, oil radish, rocket, passion flower, pecan, peach, plum, pistachio, cranberry, purging nut (Jatropha), rapeseed, rice, marigold, turnip, safflower, sage, sea buckthorn, black cumin, sesame, sesame leaf, mustard, sunflower, soya, tobacco, walnut, grape, wheat, meadowfoam and wild rose; and combinations thereof;

and wherein preferably the proportion of fatty acid residues RCO of 20 or more carbon atoms is > 0.01 % by weight, more preferably > 0.05 % by weight and most preferably > 0.1 % by weight and most preferably 2: 0.2 % by weight;

and wherein preferably the proportion of fatty acid residues RCO with fatty acids of 16 and less carbon atoms is below 30% by weight, preferably below 27% by weight and most preferably below 17% by weight;

and wherein preferably the proportion of fatty acid residues RCO with fatty acids of 6 and fewer carbon atoms is< 0.5 wt.%, particularly preferably < 0.05 wt.%;

and wherein preferably the proportion of fatty acid residues RCO with hydroxy fatty acids is < 75%by weight, preferably < 25% by weignt, particularly preferably < 5% by weight;

and wherein preferably the proportion of fatty acid residues RCO of the oleic acid acyl residue RCO is less than 95% by weight, particularly preferably less than 85% by weight;

in each case based on the total proportion _of fatty acid residues RCO of the surfactant (I) used.

[0072] Particularly preferred are fatty acid amides of formula (I) derived from thistle, tiger nut, hemp, crambe, Iberian dragonhead, linseed, lupine, lucerne, com, olive, oil radish, rapeseed, turnip rape, sesame leaf, sunflower, soybean, grape and wheat, and combinations thereof.

[0073] Particularly preferred are fatty acid amides of formula (I) with an HLB > 10.5 and <12.0.

[0074] Extremely preferred according to the invention is the ethoxylated fatty acid amide based on rapeseed oil, IUPAC name: Amides, rape oil, N-(hydroxyethyl), ethoxylated; INCI name: PEG-4 rapeseed amide or PEG-4 canola amide. Trade name: Amidet® N from the company Kao.

[0075] Compared to the most commonly used surfactant sodium laureth sulphate, PEG-4 rapeseedamide exhibits a lower acute oral toxicity (rat> 2,000 mg/kg), a comparably low acute dermal toxicity (rat> 2,000 mg/kg), a comparable skin irritation (Cat.2), and a significantly lower eye irritation potential and is thus excellently suited for the uses according to the invention.

Use of fatty acid mixtures

[0076] For the purposes of this application, the alkoxylated surfactant (A) is based on a mixture of fatty acid derivatives based on C18 vegetable oils with different chain lengths and degreesof saturation. The mixture preferably follows the fatty acid distribution in the native oil or as obtained from the conversion of naturally occurring vegetable oils or fats. By using fatty acid amide mixtures for the synthesis ofthe surfactant class - as they occur in the reaction of naturally occurring vegetable oils or fats - the surfactants can be produced in a cost-effective, resource-efficient and environmentally friendly manner. Additional purification processes, such as the separation of fatty acids or fatty acid esters or fatty acid amides by fractional distillation, or additional synthesis steps, such as the production of fatty alcohol, are not required here.In addition to the ecological and environmental advantages of using natural fatty acid mixtures, the surfactant mixtures as used here show an increased cleaning performance.

[0077] The preparations preferably contain 0.1 to 50% by weight of one or more alkoxylated surfactants (A), more preferably 0.1 to 25% by weight, particularly preferably 0.1 to 10% by weight and most preferably 0.25% to 5% by weight. % by weight based on the total amount of the preparation.

Biosurfactants in general

[0078] Biosurfactants are generally defined as surfactants of biological origin. They are not produced by chemical reaction like the synthetic glycolipids, e.g. alkylpolyglycosides (APG). Biosurfactants can be found in living organisms or are formed during the cultivation of various microorganisms such as fungi, yeasts, viruses, bacteria or enzymes.

[0079] Glycolipid biosurfactants can be obtained directly from natural raw materials through microbiological processes, whereas the production of synthetic glycolipids usually requires further chemical steps, such as the reduction of the fatty acid to the fatty alcohol. Due to the biological modification of the sugar moiety, glycolipid biosurfactants have special properties, such as, for example, as known to the person skilled in the art, good skin tolerance and very low toxicity, which makes them preferably suitable for the uses according to the invention. The structure of the glycolipid biosurfactants and the chain lengths of the hydrophobic part vary depending on the microorganism or substrate used.

[0080] In the context of the present invention, glycolipid biosurfactants (B) comprise rhamnolipids, in particular mono-, di- or polyrhamnolipids, sophorolipids in their acid or lactone formor as mixtures thereof, diacetylated, acetylated or non-acetylated, trehaloselipids, mannosylerythritol lipids and cellobioselipids.

[0081] Suitable substrates for glycolipid biosurfactants include a wide variety of carbon sources known in the literature, such as vegetable oils and the glycerides or fatty acid methyl esters obtained therefrom, fatty acids, fatty alcohols, fatty acid methyl esters or fatty acid ethyl esters, carbohydrates, e. g. cellulose, glucose, starch, C4 sources such as succinates, butane, butyric acid, C1 sources such as CO2, CO or methane, waste water containing oil and/or carbohydrates from refineries or the food industry and also mixtures of these.

Biosurfactant microorganisms

[0082] Preferred microorganisms for the production of the biosurfactants are Bacillus, Candida, Pseudomonas, Trichosporan and/or Pseudocyma strains and others as described in relevant literature, in particular Arthrobacter spec., Bacillus licheniformis, Bacillus subtilis, Burkholderia, Candida apicola, Candida antarctica, Candida batistae, Candida bogoriensis, Candida bombicola, Candida sp., Cryptococcus humicola, Gordonia, Mycobacterium tuberculosis, Nocardia comynebacterium, Pichia anomala, Pseudomonas aeruginosa, Pseudocyma aphidis (MEL), Pseudomonas sp, Pseudocyma antarctica (MEL), Pseudocyma parantarctica, Pseudocyma fusiformata, Rhodococcus, Rhodococcus erythropolis, Rhodotorula bogoriensis, Sphingomonas sp. NM05, Starmerella bombicola, Trichosporon cutaneum, Trichosporan loubieri; Torulopsis magnoliae, Torulopsis bombicola, Tsukamurella spec, Yarrowia alipolytica, Yarrowia lipolytica, Ustilago maydis (MEL), Wickerhamiella domercqiae Y2A.

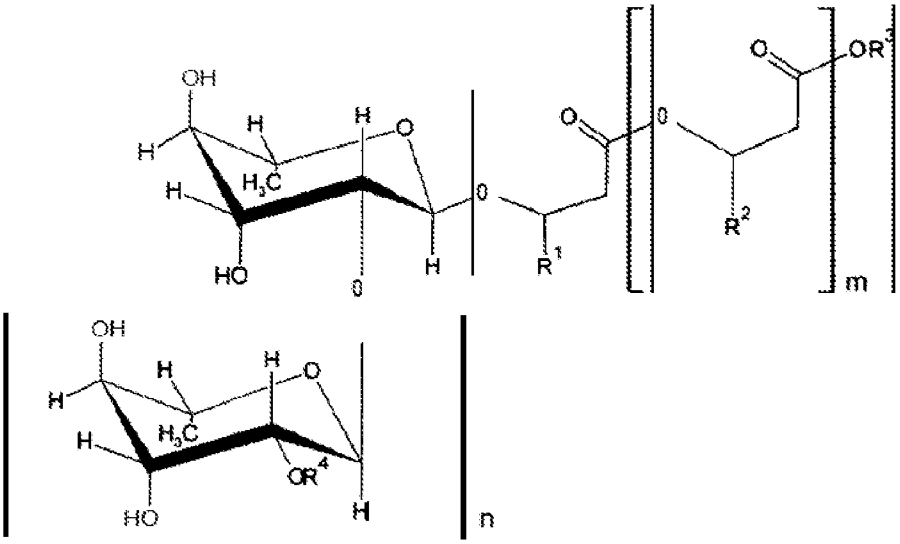
[0083] The glycolipid biosurfactants may be obtained, for example, as described in EP O 499 434, US 7,985 722, WO 03/006146, JP 60-183032, DE 19648439, DE 19600743, JP 01-304034, CN 1337439, JP 2006- 274233, KR 2004033376, JP 2006-083238, JP 2006-070231 , WO 03/002700, FR 2740779, DE 2939519, US 7,556,654, FR 2855752, EP 1445302, JP 2008-062179 and JP 2007-181789, mannosylerythritol: WO 2004/020647, JP 20042544595, or the literature cited therein.

Biosurfactants Structures

Rhamnolipids

[0084] The term rhamnolipid in the context ofthe present invention is understood to mean in particular compounds of the general formula (II) or salts thereof,

(li)



Wherein
m = 2, 1 or 0,
n = 1 or 0,

R^1 and R^2 independently of one another identical or different organic radical having 2 to 24 carbon atoms, in particular saturated, mono- or polyunsaturated, linear or branched, optionally substituted, in particular hydroxy-substituted hydrocarbon radical, preferably with 5 to 13 carbon atoms, preferably selected from the group consisting of pentenyl, heptenyl, nonenyl, undecenyl and tridecenyl and $-(CH_2)_o-CH_3$ with o = 1 to 23, particularly preferably o = 4 to 12, most preferably o= 6.

R^3 being - H, $-CH_3$, or cation, especially alkali cation, preferably H

R^4 being -Hor the group $CH_3(CH_2)_aCH=CH-CO-$, with a numbers between 4 and 10, preferably H.

[0085] The term "di-rhamnolipid" in the context of the present invention is understood to mean compounds of the general formula (II) or salts thereof in which n =1.

[0086] The term "mono-rhamnolipid" in the context ofthe present invention is understood to mean compounds ofthe general formula (II) or salts thereof in which n =0.

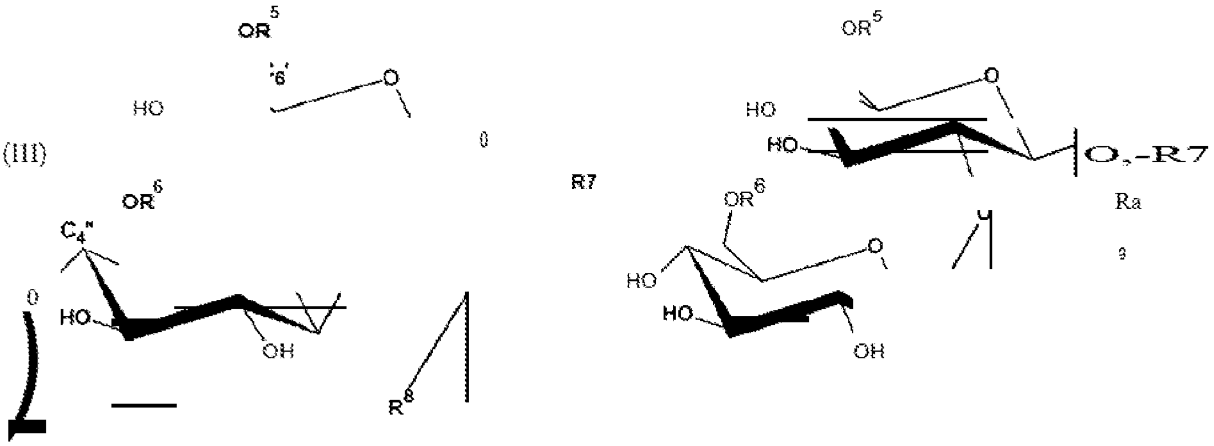
[0087] Rhamnolipids are accessible via organisms such as Pseudomonas and Burkholderia, both wild types. Furthermore, they are produced via recombinant cells. Commercially available rhamnolipids are available from Evonik under the trade name Rewoferm®, The Gene Biotech or from Jeneil Biosurfactant Co.LLC.

[0088] Particularly preferred in the present invention are the rhamnolipids from Evonik Rewoferm® and JBR 425 from Jeneil Biosurfactant, especially JBR 425.

<u>Sophorolipids</u>

[0089] The term sophorolipid in the context of the present invention is understood to mean in particular compounds of the open form or acid form, the ring or lactone form, or mixtures thereof, preferably following formula (III)

(III)



ring form

open form

wherein

R^5 and R^6 are independently of each other Hor acetyl groups

R^7 is Hor pure saturated or unsaturated, hydroxylated or non-hydroxylated hydrocarbon chain containing 1-9 carbon atoms, preferably H or -C;E-!3

R^8 is a saturated or unsaturated, hydroxylated or non-hldroxylated, linear or branched hydrocarbon chain of 1-22 carbon atoms, preferably R consists of a saturated hydrocarbon chain of 11 to 22 carbon atoms or of a mono- or di-unsaturated hydrocarbon chain of 13 to 22 carbon atoms, more preferably of a mono- or di-unsaturated hydrocarbon chain of 15 or 16 carbon atoms derived from rapeseed oil as substrate.

R^9 is -COOH or a cationic salt thereof, or $-COO(CH_2)mCH_3$ with m between O and 3,

[0090] In the lactone configuration, the lactone formation of the carboxyl group with the hydroxyl group can tak:e place at C4", as exemplified here in formula (III), or altematively at C6" or C6', at the C4" position there is then a hydroxyl group.

[0091] In addition, the sophorolipids may contain impurities, such as fatty alcohols, fatty acids, fatty acid esters, triglycerides or oils, sugars, especially glucose, sophorose, or organic acids.

[0092] According to the invention, a wide variety of substrates can be used, as described in C. Mulligan, Biosurfactants: Research Trends and Application, CRC Press 2014, p. 112. Examples of preferred substrates for sophorolipids from the literature are: Com oil (EP 0282942), oil of C22 fatty acids (KR20100022289), olive oil (ES 2018637, CN 1431312), rapeseed oil or esters (CN 102250790, US2008032383), sunflower or rapeseed fatty acid esters (DE4319540, FR 2692593) or waste oils or fats (JP 2004254595, JP 2007252279, CN 101845468, CN 101948786).

[0093] Sophorolipids are accessible by a variety of different organisms known to the person skilled in the art, such as Candida bombicola, Starmerella or Wickerhamiella.

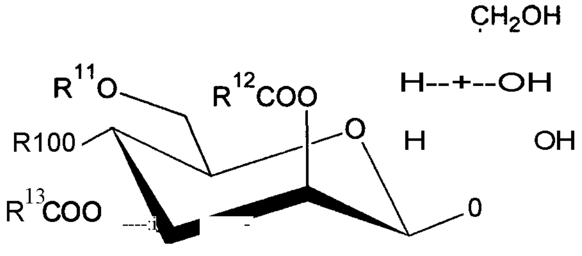
[0094] Furthermore, they are commercially available, e.g. from the company Evonik e.g. under the trade name Rewoferm SL 446 or from Soliance/Givaudan.

[0095] Particularly preferred in the present invention are the sophorolipids with the trade names Sophogreen, Sophoclean, Soliance S.

Mannosylerythritol lipids

[0096] The term mannosylerythritol lipids in the context of the present invention is understood in particular to mean compounds of the general formula (IV) or salts thereof,

(IV)



wherein

R^{10} and R^{11} are independently of one another -Hor -COCH3,

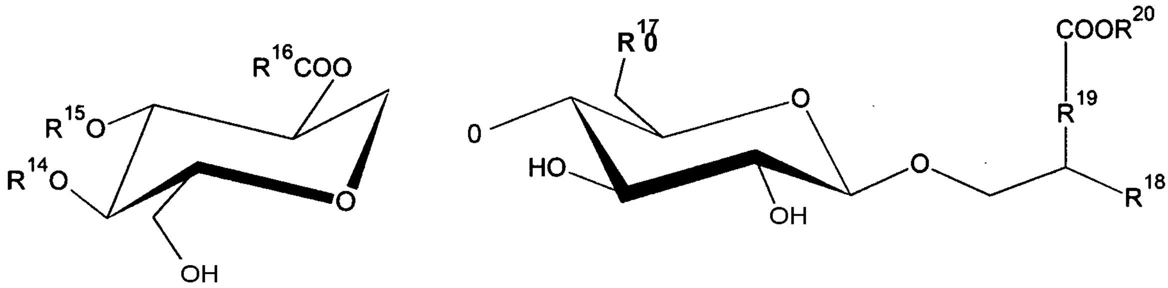
R^{12} and R^{13} independently of one another, linear or branched Cl to C23, preferably Cl to Cl 7, and particularly preferably C7 to C15 alkyl groups; or linear or branched C2 to C23, preferably C2 to C17, and particularly preferably C7 to C15 alkenyl groups; or linear or branched C5 to C23, preferably C5 to Cl 7, and particularly preferably C7 to C15 alkadienyl groups; or linear or branched C8 to C19, preferably C8 to Cl 7, and particularly preferably C8 to C15 alkatrienyl groups.

[0097] Mannosylerythritol lipids can be obtained by Pseudozyma Antarctica NBRC 10736 in a nutrient medium containing soybean oil, alternatively they are accessible by the smut fungus Ustilago maydis or Candida spec. or Antarctica, respectively.

Cellobiose lipid

[0098] The term cellobiose lipid in the context of the present invention is understood to mean, in particular, compounds of the general formula (V) or salts thereof

(V)



R^{14}, R^{15} and R^{17} independently of one another -Hor -COCH3,

R^{16} saturated or unsaturated, hydroxylated or non-hydroxylated hydrocarbon with 5 to 23 carbon atoms, or -CH3, preferably - CH3 or - CH2-CH(OH)-(CH2)n-CH3 with n= 2-4,

R^{18} -Hor-OH ,

R^{19} saturated or unsaturated, hydroxylated or non-hydroxylated hydrocarbon having 9 to 21 carbon atoms, preferably 13 carbon atoms, particularly preferably - (CH2)n- CH(OH)- with n= 12,

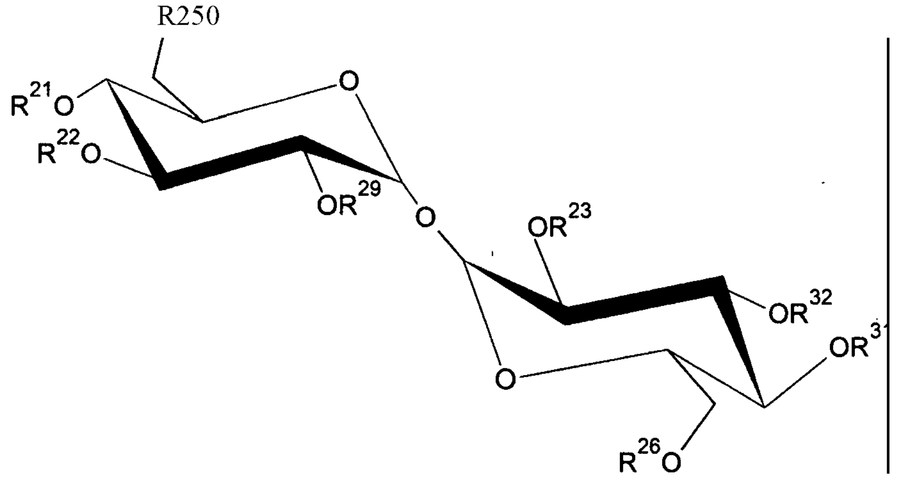
R^{20} -H, or a cation,

Cellobiose lipids can be obtained by literature described methods by Crypotcoccus humicola, Pseudozyma fusiformata or by the smut fungus Ustilago maydis.

Trehaloselipids

[0099] The term trehaloselipids in the context of the present invention is understood in particular to mean compounds of the general formula (VI) or salts thereof.

(VI)



R^{21}, R^{22}, R^{31} and R^{32} each independently of one another hydrogen or -COR^{27} with R^{27} saturated or unsaturated, hydroxylated or non-hydroxylated hydrocarbon having 5 to 23 carbon atoms;

R^{25} and R^{26} each independently of one another hydrogen or -COR^{28} with R^{28} saturated or unsaturated, branched or unbranched, hydroxylated or non-hydroxylated hydrocarbon having 5 to 23 carbon atoms or R^{28} -CH[(CH2)cCH3]CHOH(CH2)ctCH3 with c+d = 27;

R^{29} and R^{23} are each independently of one another hydrogen, -COR^{30} with R^{30} saturated or unsaturated, branched or non-branched, hydroxylated or non-hydroxylated hydrocarbon having 5 to 23 carbon atoms or R^{30}-(C H)2COOR ^{24} with R^{24} H or cation.

[0100] According to the invention, tetralose dimycolates, tetralose monomycolates, succinyl trehalose lipids and trehalose tetraesters or mixtures thereof are preferably suitable.

[0101] Trehalose lipids can be obtained by methods described in the literature by Rhodococcus erythropolis, Arthobacter spec., Gordonia, Mycobacterium tuberculosis, Nocardia Cornynebacterium spec. or Tsukamurella spec.

[0102] The preparations preferably contain 0.1 to 50% by weight of one or more glycolipid biosurfactants, more preferably 0.1 to 25% by weight, particularly preferably 0.1 to 10% by weight and most preferably 0.3 to 8% by weight, based on the total amount ofthe preparation.

Ratio of surfactant (A): biosurfactant-glycolipid (B)

[0103] The alkoxylated surfactant(s) (A) and the glycolipid biosurfactant(s) (B) may be combined in any ratio.

[0104] Preferably, the surfactant(s) (A) to the glycolipid biosurfactant(s) (B) are present in a ratio between (A) :(B) :'.S 20:1 and 1:20; for example 20:1, 9:1, 8:1 and so on. Particularly preferably, the surfactants (A) to the glycolipid biosurfactants (B) are present in a ratio between (A) :(B) :'.S 10: 1 and 1: 10 and most preferably, the surfactants (A) to the glycolipid biosurfactants (B) are present in a ratio between (A) : (B) :'.S 2:1 and1:6, most preferably (A) :(B) :'.S 1: 1 and 1 :6; in each case based on weight percent active content in the total composition.

Additional surfactant (C)

[0105] Another subject matter of the invention is directed to a preparation additionally containing at least one alkoxylated surfactant (C). In this further embodiment, the preparation additionally comprises one or more alkoxylated surfactants (C) selected from the group consisting of alkoxylated fatty acid esters, alkoxylated fatty acid glyceride esters, or alkoxylated vegetable oil esters preferably following formula (VIII),

$$\text{(VIII) } RCO\text{-}O(C_mH_{2m}O)_o\text{-}\{CH_2\text{-}CH[O(C_mH_{2m}O)_pR'']\text{-}CH_2O\}_w\text{-}(C_mH_{2m}O)_q\text{-}R'''$$

wherein R and RCO are as defined in formula (I), i.e. R being a saturated, mono- or polyunsaturated hydrocarbon chain having 5-23 carbon atoms and RCO derived from a fatty acid mixture, wherein the proportion of 18 and more carbon atoms of the fatty acid residue RCO is above 60% by weight, preferably above 72% by weight and most preferably above 77% by weight;

and wherein the proportion ofunsaturated fatty acid residues RCO is above 55 wt.%, preferably above 65 wt.% and particularly preferably above 72 wt.%, in each case based on the total proportion of fatty acid residues RCO ofthe surfactant (C) used;

and wherein the surfactant (C) consists of a mixture of different chain lengths and degrees of saturation of the fatty acid residue RCO as defined above and is derived from a C-18 vegetable oil.

mis 2, 3 or 4, preferably 2 or 3, particularly preferably 2,

o, p, q are independently from one another numbers from O to 75, preferably 0-10, more preferably 0-8, where o+p+q /- 0. The numbers o, p, q represent the degree of alkoxylation. Although at the molecular level these numbers can only take integers including zero, the total degree of alkoxylation x can be expressed asa decimal number since this represents the stoichiometric equivalents of alkylene oxide,

R" is H, or COR,

R"' is H, COR, or a linear or branched alkyl radical with 1-8 C atoms.

w is an integer between O and 1O;

[0106] Surprisingly, combinations (A), (B) and (C) show unchanged high or even better cleaning power on carbohydrate stains or dye stains and pigment stains.

[0107] This is surprising because the combination (A)/(B) also works synergistically with a third surfactant (C) on carbohydrate stains or dye stains and pigment stains. In addition, an even betler cleaning power, which is not predictable for the person skilled in the art, was found in the removal of dyes and pigments from makeup on skin.

[0108] Another advantage ofthe combinations (A), (B) and (C) is a stronger foam formation than with the pure combination (A) and (B), in particular it was surprising that the foam also remains stable for a significantly longer time. The foamy embodiment is desirable for some applications and is exemplified in the embodiments.

[0109] Surprisingly, the preparations comprising the surfactant(s) (A) and the glycolipid biosurfactant(s) (B) can additionally be combined with a surfactant (C) at any pHvalue.

[0110] Exemplary representatives ofthe surfactants (C) suitable according to the invention are PEG-6 almond oil, PEG-8 almond oil, PEG-8 apricot kernel oil, PEG-8 Buxus Chinensis oil, PEG-6 apricot kernel oil, PEG-40 apricot kernel oil, PEG-8 argan oil, PEG-8 avocado oil, PEG-11 avocado oil, PEG-8 borage seed oil, PEG-8 Macademia Tenuifolia oil, PEG-6 Corn oil, PEG-8 Corn oil, PEG-8 Grape seed oil, PEG-8 Hazelnut oil, PEG-8 Linseed oil, PEG-6 Olive oil, PEG-7 Olive oil, PEG-8 Olea Europaea oil, PEG-7 Olive oil, PEG-7 Olive oil, PEG-8 Olive oil, PEG-IO Olive oil, PEG-8 Oryza Sativa oil, PEG-8 Prunus Dulcis oil, PEG-8 Persea Gratissma oil, PEG-8 Passiflora edulis seed oil, PEG-6 Peanut oil, PEG-45 Crambe Absyssinica Seed oil, PEG-75 Meadowfoam oil, PEG-8 Pumpkin seed oil, PEG-3 Rapeseed oil, PEG-20 Rapeseed oil, PEG-8 Thistle oil, PEG-8 Schinziophyton Rautaneii seed oil, PEG-8 Sesame seed oil, PEG-8 Senum Indicum oil, PEG-8 Soybean oil, PEG-20 Soybean oil, PEG-36 Soybean oil, PEG-8 Sunflower oil, PEG-32 Sunflower oil, PEG-8 Sweet almond oil, PEG-8 Watermelon seed oil, PEG-8 Wheat germ oil, PEG-8 Zea corn oil

[0111] PEG-6 almond glyceride, almond oil glycereth-8 ester, PEG-20 almond glyceride, PEG-35 almond glyceride, PEG-60 almond glyceride, avocado oil glycereth-8 ester, PEG-11 avocado glyceride, argan oil glycereth-8 ester, almond oil glycereth-8 ester, PEG-14 almond glyceride, corn oil glycereth-8 ester, PEG-20 corn glyceride, PEG-60 corn glyceride, PEG-20 evening primrose glyceride, PEG-60 evening primrose glyceride, grape seed oil glycereth-8 ester, cannabis sativa seed oil glycereth-8 ester, jojoba oil glycereth-8 ester, PEG-16 macademia glyceride, PEG-25 moringa glyceride, PEG-2 olive glyceride, PEG-6 olive glyceride, PEG-7 olive glyceride, olive oil glycereth-8 ester, PEG-IO olive glyceride, PEG-40 olive glyceride, peach kernel oil glycereth-8 ester, PEG-60 Passiflora edulis seed glyceride, PEG-60 Passiflora incamata seed glyceride, PEG-40 diestel glyceride, soya oil glycereth-8 ester, PEG-35 soya glyceride, PEG-75 soya glyceride ester, PEG-2 sunflower glyceride, PEG-7 sunflower glyceride, sunflower oil glycereth-8 ester, PEG-10 sunflower glyceride, PEG-13 sunflower glyceride, PEG-7 canola glyceride, PEG-4 canola glyceride, PEG-10 canola glyceride, PEG-5 tsubakiateglyceride, PEG-10 tsubakiateglyceride, PEG-20 tsubakiateglyceride, PEG-60 tsubakiateglyceride, cotton oil glycereth-8 ester, rice oil glycereth-8 ester, sesame oil glycereth-8 ester, wheat germ oil glycereth-8 ester.

[0112] Ethoxylated rapeseed methyl esters (EO 7-15), ethoxylated rapeseed ethyl esters (EO 7-15), ethoxylated soya methyl esters (EO 7-15), ethoxylated soya ethyl esters (EO 7-15).

[0113] Particularly preferred are alkoxylated surfactants with an HLB > 10.5 and <12.0. Examples of these representatives are rapeseed methyl ester oxylate 7 EO, olive oil glycereth-PEG-8 ester, almond oil PEG-7 ester, PEG-IO olive glycerides. Very particularly preferred are the representatives vegetable oil glycereth-y ester, plant PEG-y ester, ethoxylated rapeseed methyl ester (y EO), with plant = apricot (kernel), avocado, cotton, thistle, hemp, jojoba, flaxseed, macademia, almond, corn, olive, peach kernel, rice, sesame, soybean, sunflower, grape(seed), wheat(germ), canola, rapeseed oil with y= 6-10, preferably 7-8.

[0114] Preferred in this embodiment are preparations which are characterized in that they contain 0.1 to 50% by weight, preferably 0.1 to 20% by weight and particularly preferably 0.2 to 10% by weight of one or more additional alkoxylated surfactants; % by weight based on the total amount of the preparation.

[0115] The surfactant(s) (C) may be combined with (A) and (B) in any ratio.

[0116] Preferably, the ratio of the surfactant(s) (C) to the surfactant (A)/glycolipid-biosurfactant (B) mixture is between (C): (A/B) :S 20:1 and 2'.:1:20; for example 20:1, 9:1, 8:1 and so on.

Particularly preferably the surfactants (C) are present in a ratio between (C) : (A/B) :S 10:1 and 2'.:1:10 and very particularly preferably the surfactants (C) are present in a ratio between (C) :

(A/B) :S 2:1 and 1 :6, most preferably (C): (A/B) :S 3:1 and 1:10; in each case based on weight percent active content in the total preparation. (For any ratios of A:B).

Other optional surfactants and emulsifiers (D)

[0117] In this context, surfactants are amphiphilic organic substances with surface-active properties that adsorb to the interface between two liquids, such as oil and water, and have the ability to reduce the surface tension of water. In solution, surfactants tend to self-aggregate and form structures such as micelles, lamellar structures, etc. In the context of the present invention, emulsifiers are included in the term surfactants, but not vice versa.

[0118] Preferably, those surfactants are suitable which have the ability to reduce the surface tension ofwater to below 45 mN/m at 20°C and at a concentration of 0.5% by weight based on the total amount of the preparation.

Soaps and fatty acids

[0119] Ina further embodiment, it has been shown to be advantageous ifthe preparation Soaps are alkali or ammonium salts of saturated or unsaturated fatty acids of 6 to 24 carbon atoms.

[0120] Surprisingly, the preparations comprising the surfactant(s) (A) and the glycolipid biosurfactant(s) (B) may additionally be combined with a soap at neutral or alkaline pH, respectively with the corresponding fatty acid at acidic pH, so that the overall result is further improved, i.e. showing a high cleaning power on carbohydrate stains or dye stains. Fatty acids can also be added, for example in a later process step to produce the cleaning and care product. For this reason, fatty acids are treated as surfactants in the context of the present invention. Furthermore, the addition of fatty acids or soap may be desirable for other properties of the formulation such as consistency, stability, skin feel and, last but not least, cost.

[0121] Particularly preferred in the present invention are salts of fatty acids of formula (X)

RCOOM (X)

M is an alkali or ammonium cation or H

Ror RCO as defined in formula (I) and derived from C-18 vegetable oils; that is: R = saturated, mono- or polyunsaturated hydrocarbon chain with 5-23 carbon atoms and RCO derived from a fatty acid mixture, wherein the proportion of 18 and more carbon atoms of the fatty acid residue RCO is above 60 wt.%, preferably above 72 wt.% and most preferably above 77 wt.%;

and wherein the proportion ofunsaturated fatty acid residues is above 55 wt.%, preferably above 65 wt.% and particularly preferably above 72 wt.%, in each case based on the total proportion of fatty acid residues RCO of the surfactant (X) used;

and wherein the surfactant (X) consists of a mixture of different chain lengths and degrees of saturation of the fatty acid residue RCO as defined above and is derived from a C-18 vegetable oil.

[0122] Exemplary representatives of products suitable according to the invention are:

Sodium olive oil soaps, potassium rapeseed oil soaps, ammonium thistle oil soaps, sodium linseed oil soaps, sodium sunflower oil soaps, sodium soybean oil soaps, linseed fatty acid, olive oil fatty acids and others.

[0123] In accordance with the invention, salts of the fatty acids are preferred.

[0124] Preferred in this embodiment are preparations which are characterized in that they contain - based on their weight - 0.001 to 50% by weight soaps or fatty acids, more preferably 0.01 to 20% by weight and particularly preferably 0.1 to 20% by weight and very particularly preferably 0.5 to 10% by weight soaps or fatty acids; percent by weight based on the total amount ofthe preparation.

Further optional surfactants

[0125] Furthermore, the preparation may additionally be combined with further surfactants well known to the person skilled in the art, whereby according to the invention there are no restrictions on the origin, chain length or degree of saturation of the selected surfactants. However, surfactants derived from C-18 vegetable oils are preferably used.

[0126] In this context, surfactant refers to amphiphilic organic substances with surface-active properties that adsorb to the interface between two liquids, such as oil and water, and have the ability to reduce the surface tension of water. In solution, surfactants tend to self-aggregate and form structures such as micelles, lamellar structures, etc. Preferably, those surfactants (D) are suitable which have the ability to lower the surface tension of water to below 45 mN/m at 20°C and at a concentration of 0.5% by weight based on the total amount ofthe preparation.

Additional anionic surfactants

[0127] Suitable optional anionic surfactants, which can be freely combined by the person skilled in the art with the preparation according to the invention, are further soaps, fatty alcohol carboxylate, alkyl polyglycol ether carboxylates, acyl lactylate, etc., and mixtures thereof.

[O128] In addition, the less preferred sulphur surfactants, phosphates or phosphonates may optionally be used. Examples are alkyl benzene sulphonates, alkane/alkene sulphonates, alkyl sulphates resp. fatty alcohol sulphates, alkyl polyglycol ether sulphates with 2 to 6 ethylene oxide units (EO) in the ether moiety, as well as sulphosuccinates, carboxylic acid amide ether sulphates, sulphosuccinic acid mono- and dialkyl esters, a-olefin sulphonates, alkyl isethionate, acyl isethionate, alkyl sulfoacetates, sulfonated fatty acids, sulfonated fatty acid esters, such as sulfonated fatty acid glycerol esters and sulfonated fatty acid methyl esters, N-acylamino sulfonic acids, alkyl phosphates and alkyl ether phosphates, phosphoric and polyphosphoric acid esters.

Surprisingly, the preparations according to the invention show a comparable cleaning performance to conventional agents with sulphur surfactants, even without their use. For environmental reasons and the increasing sulphate contents in drinking water as well as consumer preference for sulphate-free cosmetic products, a preferred embodiment isfree of all sulphur surfactants.

[0129] Likewise, the water-polluting surfactants based on phosphates and phosphonates can be dispensed with without compromising cleaning performance and care properties. Another preferred embodiment is phosphate- and phosphonate-free.

Further non-ionic surfactants

(0130] Suitable further optional non-ionic surfactants which the skilled person may freely combine with the preparation according to the invention are, for example, alcohol polyglycol ethers, i.e. ethoxylated and/or propoxylated alcohols with 1-40 ethylene oxide (EO) and/or propylene oxide (PO) units, amine oxides, amidoamines, amidopropyl dimethylamines, polyethylene glycol mercaptans, glycolipids, such as alkyl polyglycosides with 1-10 glycoside units, polyhydroxy fatty acid amides, polyhydroxy fatty acid esters, carboxylic acid esters, sorbitan esters, as well as alkoxylated sorbitan esters, alkanolamine-carboxylic acid condensates, N-alkylpyrrolidones, amidoalkyl-2-pyrrolidones.

Optional amphoteric surfactants

(0131] Furthermore, optional amphoteric surfactants, which can be freely combined with the preparation according to the invention by the person skilled in the art, may additionally be present, such as for example N-alkylbetaines, alkylamidobetaines, imidazolinium betaines, amine oxides, and less preferably sulfobetaines, phosphobetaines and sultaines.

Optional cationic surfactants

(0132] Furthermore, the preparation may optionally additionally contain cationic surfactants, for example primary, secondary, tertiary or quaternary alkylammonium salts ofthe formula (RI)(RII)(RIII)(RIV)N+x-, in which RI to RVI, independently of one another, are identical or different organic radicals, branched d unbranched, saturated or unsaturated, unsubstituted, mono- or polysubstituted or H, where at least one of the radicals RI - RIV is not H; and X<-> represents an anion.

(0133] Other additional optional surfactants can be found in the relevant literature, e.g. Richard J. Fam, Chemistry and Technology of Surfactants, Blackwell Publishing, and can be freely combined with the preparation according to the invention by the person skilled in the art.

Emulsifiers

(0134] Furthermore, the preparation according to the invention may additionally contain compounds as optional surfactants (D), which are sometimes listed in the literature under emulsifiers.

(0135] Suitable are, for example, addition products of 2 to 30 moles of ethylene oxide and/or 0 to 5 moles of propylene oxide to linear fatty alcohols having 8 to 22 carbon atoms, to fatty acids having 12 to 22 carbon atoms, to alkylphenols having 8 to 15 carbon atoms in the alkyl group and alkylamines having 8 to 22 carbon atoms in the alkyl radical; Ethoxylated analogues of alkyl and/or alkenyl oligoglycosides with 8 to 24 carbon atoms in the alk(en)yl radical; addition products of 1 to 15 mol ethylene oxide to castor oil and/or hardened castor oil; adducts with 1 to 30 moles of ethylene oxide of partial esters of glycerol and/or sorbitan with unsaturated, linear or saturated, branched fatty acids with 12 to 24 carbon atoms and/or hydroxycarboxylic acids with 3 to 18 carbon atoms; alkoxylated sterols, i.e. steroids which carry a hydroxyl group at C-atom 3 of the steroid skeleton and which are derived both from animal tissue (zoosterols, e.g. cholesterol, lanosterol) and from the human body, cholesterol, lanosterol) as well as fromplants (phytosterols, e.g. ergosterol, stigmasterol). ergosterol, stigmasterol, sitosterol) and from fungi and yeasts (mycosterols) and which may be low ethoxylated (1 - 5 EO); low ethoxylated (1 - 4 EO) alkanols and carboxylic acids with 8 - 24 C atoms, polyethylene glycol (molecular weight 400to 5000); Alkoxylated partial esters of polyglycerol (average degree of self-condensation 2 to 8), as well as partial esters of trimethylolpropane, pentaerythritol, with saturated and/or unsaturated, linear or branched fatty acids with 12 to 24 carbon atoms and/or hydroxycarboxylic acids with 3 to 18 carbon atoms; mono-, di- and trialkylphosphates as well as mono-, di- and/or tri-PEG-alkylphosphates and their salts; polysiloxane-polyalkyl-polyether-copolymersor corresponding derivatives; block copolymers, e.g. polyethylene glycol-30 dipolyhydroxy stearates; polymeric emulsifiers, e.g. pemulene types; polyalkylene glycols; lanolin alcohols; mixtures thereof; fatty alcohols, partial esters of polyglycerol (average degree of autocondensation 2 to 8), pentaerythritol, sugar alcohols (e.g. sorbitol), alkyl glucosides as well as polyglucosides (e.g. cellulose) with saturated and/or unsaturated, linear or branched fatty acids with 12 to 24 carbon atoms and/or hydroxycarboxylic acids with 3 to 18 carbon atoms; polyglycerol esters, polyol esters, converted mono-, di- and tri-esters of trimethylolpropane or pentaerythritol with C8-C24 fatty acids,

[0136] alkyl and/or alkenyl oligoglycosides with 8 to 24 carbon atoms in the alk(en)yl radical, acylglutamines, partial esters of glycerol and/or sorbitan with unsaturated, linear or saturated, branched fatty acids with 12 to 22 carbon atoms and/or hydroxycarboxylic acids with 3 to 18 carbon atoms, glycerides such as tartaric acid monoglyceride, tartaric acid diglyceride, citric acid monoglyceride, citric acid diglyceride, malic acid monoglyceride, malic acid diglyceride and their technical mixtures, which may also contain small amounts of triglyceride from the production process. Mixed esters of pentaerythritol, fatty acids, citric acid and fatty alcohol and/or mixed esters of fatty acids with 6 to 24 carbon atoms, methyl glucose and polyols, preferably glycerol or polyglycerol, glycerol carbonate, mixtures thereof. Particularly suitable examples are glyceryl stearate citrate, glyceryl stearate tartrate.

[O137] Dicarboxylic acids with 12 to 24 carbon atoms, such as azelaic acid or sebacic acid.

[0138] Further emulsifiers suitable according to the invention are generally known to the person skilled in the art and can be found in the relevant literature, for example Kirk-Othmer, "Encylcopedia of Chemical Technology", 5th ed. 2007.

[0139] Some preferred examples are given below:

Preferred emulsifiers are linear saturated alkanols with 12 - 30 carbon atoms, especially with 16 - 22 carbon atoms. Typical examples are caprylic alcohol, gaprylic alcohol, 2-ethylhexyl alcohol, capric alcohol, lauryl alcohol, isotridecyl alcohol, myristyl alcohol, cetyl alcohol, palmoleyl alcohol, stearyl alcohol, isostearyl alcohol, oleyl alcohol, elaidyl alcohol, petroselinyl alcohol, linolyl alcohol, linolenyl alcohol, elaeostearyl alcohol, arachidyl alcohol, gadoleyl alcohol, behenyl alcohol, erucyl alcohol and brassidyl alcohol, as well as mixtures of these alcohols, as obtainable in the technical hydrogenation of vegetable and animal fatty acids.

[0140] According to the invention, fatty alcohols derived from Cl8 plants are particularly preferred, especially mixtures of fatty alcohols which correspond to the natural composition of the vegetable oil or the mixture obtained by reaction of the vegetable oil to the fatty acid or fatty acid ester mixture with subsequent reduction to the fatty alcohol mixture.

[0141] Preferably, the surfactants (D) are selected from soap resp. fatty acids, polyhydroxy fatty acid amides, polyhydroxy fatty acid esters, as well as glyceryl esters and polyglyceryl esters with 1-20 glycerol units, carboxylic acid esters, sorbitan esters, as well as alkoxylated sorbitan esters, acylated amino acids or peptides, N-alkyl betaines, amidoamines, alkylamidobetaines, imidazolinium betaines, amine oxides, fatty alcohols. The preferred preparations according to the invention may contain one or more additional surfactants (D) in a total amount of 0.05-50% by weight, preferably 0.2-20% by weight, in particular 0.5-10% by weight, based on the total amount of the preparation.

[0142] Particularly preferably, the preparations contain surfactants (D) derived from C-18 vegetable oils with the lipophilic residues R derived from fatty acids RCOOH as defined under (I). The residues Rare preferably present as a mixture according to the fatty acid distribution in the native oil or as they are formed during the reaction of native oils.

Further biosurfactants / bioemulsifiers (E)

[0143] The preparation according to the invention may additionally contain further optional biosurfactants (E), in particular lipopeptides, which preferably consist of a cycloheptapeptide, with saturated, unsaturated, substituted or unsubstituted fatty acid residues of chain lengths of 2-30 carbon atoms, which are bonded to the amino acid residues, for example surfactin, iturin, fengycin.

[0144] Bioemulsifiers (E) are produced by microorganisms. Bioemulsifiers belong to the biosurfactants, but are understood in the literature as higher molecular weight compounds than the classical glycolipid biosurfactants (Chibuzo Uzoigwe et al., Front. Microbiol. 2015; 6; 245), which consist of complex mixtures of heteropolysaccharides, lipopolysaccharides, lipoproteins and proteins. Other examples ofbioemulsifiers (E) include emulsan produced by Acinetobacter calcoaceticus, alasan produced by A. redioresistens, or mannoprotein bioemulsifiers from Kluyveromyces marxianus, Saccharomyces cerevisiae, or Acinetobacter sp.

[0145] Furthermore, bioemulsifiers (E) are understood to be biosurfactants which are characterised in that the biosurfactant glycolipid (B) or the bioemulsifier (E) has been chemically or enzymatically derivatised in such a way that the assignment under (B) is no longer possible, such as, for example, amidation, glycosylation, deglycosylation, esterification, oxidation of the hydroxyl~groups or C,C-double bonds, additions to the-C,C-double bonds (e.g. nucleophilic or cylcoadditions), and others.

[0146] An example of a modification is the sophorolipid of formula (III) with R^9 -COO(CH2)m,Z with m= 2-8 and Z being-OH, -CH3, -N(CH3)2, -N(CH3)3\- NH2, -NH/, (1-pyrrolinyl), (2-imidazolyl), or -CONH(CH2)mZ with m= 2-8 and Z being -NH2, -NH $(CH2)_4NH(CH2)_3$ NH2, (1-lmidazole), as well as, theirammonium salts.

[0147] The preferred preparations according to the invention may contain one or more additional bioemulsifiers (E) in a total amount of 0.05-50% by weight, preferably 0.2-20% by weight, in particular 0.5-10% by weight, based on the total amount ofthe preparation.

[0148] Particularly preferably, the preparations contain surfactants and emulsifiers (E) derived from C-18 vegetable oils with the lipophilic radicals R derived from fatty acids RCOOH as defined under (I). The residues R are preferably present as a mixture according to the fatty acid distribution in the native oil or as they are formed during the conversion of native oils.

Total surfactant composition

[0149] Preferably, the preparation contains a proportion of surfactants consisting of surfactant (A), surfactant (C) and optionally surfactants (D) and (E), with the proviso that. the surfactant or surfactants (D) and (E) are derived from a C-18 vegetable oil, and biosurfactant glycolipid (B), which in total is 2: 30%, preferably 2: 60%, particularly preferably 2: 95% and most preferably 2: 99%, based on the total surfactant content in wt. % in the preparation.

[0150] This proportion in% represents the proportion of surfactants in the preparation which is derived from C-18 plants and is determined according to the formula:

Proportion= [(A) + (B) + (C) +(D cis)+ (E cis)] / [(A) + (B) + (C) +(D) + (E)]

Where

(A), (B), etc. in each case indicate the quantity of the surfactant or surfactants (A), (B), etc., based on % by weight relative to the total composition,

wherein (C), (D) and (E) each independently may be zero,

wherein (D) and (E) represent further optional surfactants (RX with X= hydrophilic moiety) as defined above, with the proviso that they have the ability to reduce the surface tension of water to below 45 mN/m at 20°C and at a concentration of 0.5% by weight based on the total amount of the preparation.

(D) and (E) may either be derived from C-18 plants (herein called DCJs, Ec1s) - with R derived from the fatty acids RCOOH with R, respectively RCO defined as under formula (I) - or derived from other oils or fats such as petroleum, palm kernel oil, coconut oil, animal fats, castor oil or silicone surfactants, among others (herein called $D_{\text{remainder}}$ and $E_{\text{remainder}}$, respectively).

Le. **(E)** = (Ec1a + ERemainder **).bzw. (D)** = (Dc1a + DRemainder).

[(A) + (B) + (C) +(D) + (E)] represents the total surfactant content in% by weight in the preparation.

Other additives & properties of the cosmetic preparation

Chelating agents

[0151] Chelating agents increase the stability ofthe preparations, but may also be effective against tartar.

[0152] Surprisingly, the chelating agents combined with the preparations according to the invention show an equally high or even improved cleaning performance on carbohydrates, colour and pigment stains and thus do not impair the synergistic effect between the biosurfactant glycolipids and surfactant (A). This is surprising in that the chelating agents compete structurally with the hydrophilic part of the biosurfactant glycolipid due to theirnucleophilicity.

Surprisingly, the addition of chelating agents to the preparations according to the invention significantly increases the cleansing power for makeup on the skin and significantly increases the foaming ofthe preparation as well as the foam stability. Furthermore, it was found that the addition of chelating agents clarified the preparations in an unpredictable way. Asa result, transparent formulations are also possible.

Exemplary preparations containing chelating agents are disclosed in the embodiments.

[0153] Suitable chelating agents according to the invention are all those commonly used in cleaning and care preparations, e.g. from the groups of phosphates and phosphonates, phyllosilicates, zeolites, carbonates and polycarboxylates, aminopolycarboxylic acids, such as aminoacetic acids and polyaminoacetic acids and salts thereof, hydroxycarboxylic acids and salts thereof, polyglycosides and gluconic acids and salts thereof.

[0154] Suitable chelating agents are, for example, the following compounds designated according to INCI:

Aminotrimethylene phosphonic acid, beta-alanine acetoacetic acid, calcium disodium EDTA, chitosan, citric acid and its salts and hydrates, cyclodextrin, cyclohexanediamine tetraacetic acid, diammonium citrate, diammonium EDTA, diethylenetriaminepentaacetic acid, diethylenetriamine pentamethylene phosphoric acid, dipotassium EDTA, disodium azacycloheptane diphosphonate, disodium EDTA, disodium pyrophosphate, EDTA, ethylenediamine- N,N'-disuccinic acid (EDDS), etidronic acid, galactaric acid, Θ-glucan, gluconic acid, glucuronic acid, glucoheptonic acid, HEDTA, hydroxypropyl cyclodextrin, methyl cyclodextrin, pentapotassium triphosphate, pentasodium aminotrimethylene phosphonate, phosphonobutane tricarboxylic acid (PBTC), pentasodium ethylenediamine tetramethylene phosphonate, pentasodium pentetate, pentasodium triphosphate pentetic acid (DTPA), phytic acid, potassium citrate, potassium EDTMP, potassium gluconate, potassium polyphosphate, potassium trisphosphonomethylamine oxide, ribonic acid, sodium chitosan methylene phosphonate, sodium citrate, sodium diethylenetriamine pentamethylene phosphonate, sodium dihydroxyethylglycinate, sodium EDTMP, sodium glucoheptate, sodium gluconate, sodium glycereth-1 polyphosphate, sodium hexametaphosphate, sodium metaphosphate, sodium metasilicate, sodium phytate, sodium polydimethylglycinophenolsulfonate, sodium trimetaphosphate, TEA-EDTA, TEA polyphosphates, tetrahydroxyethyl ethylenediamine, tetrahydroxypropyl ethylenediamine, tetrapotassium etidronate, tetrasodium iminodisuccinate (IDS), tetrapotassium pyrophosphate, tetrasodium EDTA, tetrasodium etidronate, tetrasodium pyrophosphate, tricalium EDTA, tricalium dicarboxymethyl alaninate, trisodium EDTA, trisodium HEDTA, trisodium methylglycine dieacetic acid (MGDA- Na3), trisodium NTA and trisodium phosphates, phytic acid, plant extracts such as e.g. Lupinus Albus, e.g. Lupinus Albus Seed Extract, Carnosine, Bambusa Arundinacea LeafExtract, Citrus Paradisi (Grapefruit) Peel Extract, Sambucus Nigra Extract; or in the case of acids, their salts. These chelating agents may be freely combined by the skilled person with other ingredients mentioned herein.

[0155] Ina preferred embodiment, the preparations according to the invention contain chelating agents that are biodegradable. Preferably, the preparations according to the invention therefore contain no phosphates, no phosphonates, no EDTA and no polycarboxylates.

[0156] Preferred in the present invention are therefore the following chelating agents based on renewable raw materials, resp. with a very good biodegradability: Beta-alanine, beta-glucan, chitosan, diacetic acid, cyclodextrin, ethylenediamine- N,N'-disuccinic acid (EDDS), galactaric acid, gluconic acid, glucuronic acid, glucoheptonic acid, methylcyclodextrin, hydroxypropyl cyclodextrin, phytic acid, polyaspartic acid, sodium carbonate, carboxy methyl inulin and sodium carboxymethyl inulin (NaCMI), sodium dihydroxyethylglycinate, sodium iminodisuccinate, sodium lignosulfate, tetrasodium iminodisuccinate (IDS), tetrasodium glutamate diacetate (GLDA; L-glutamic acid, N,N-diacetic acid, tetrasodium salt), trisodium methylglycinediacetic acid (MGDA-Na3), citric acid, lactic acid and their respective salts, plant extracts such as e.g. Lupinus Albus Seed Extract, Carnosine, Bambusa Arundinacea Leaf Extract, Citrus Paradisi (Grapefruit) Peel Extract, Sambucus Nigra Extract, or in the case of acids, their salts.

[0157] Most preferred are the chelating agents tetrasodium glutamate diacetate (GLDA; L-glutamic acid, N,N-diacetic acid, tetrasodium salt), tetrasodium iminodisuccinate (IDS), ethylenediamine-N,N'-disuccinic acid (EDDS), trisodium methylglycinediacetic acid (MGDA-Na3), gluconic acid, glucuronic acid, glucoheponic acid, polyaspartic acid, and salts thereof.

[0158] Preferred preparations according to the invention contain at least one chelating agent in a total amount of 0.1-20% by weight, preferably 0.2-15% by weight, in particular 0.5-10% by weight, based on the total amount of the preparation.

[0159] In the embodiments, exemplary preparations comprising tetrasodium GLDA, MGDA-Na3, IDS, chitosan, sodium carbonate, beta-glucan, Citrus Paradisi (grapefruit) Peel Extract and sodium gluconate as chelating agents are disclosed.

Abrasives and polishing agents

[0160] The preparations according to the invention exhibit a good cleaning performance, so that the addition of abrasives is dispensable. Nevertheless, the preparations, particularly in the field of oral and dental care or in the field of coarse cleaners, may contain abrasives as components for certain specific cleaning applications. These may include plastic abrasives based on polyethylene or polyurethane, organic polymers, mineral abrasives such as silicic acids e.g. gel silicas, hydrogel silicas and precipitated silicas, aluminium hydroxide, aluminium oxide, magnesium sulphate, sodium aluminium silicates, calcium carbonate, kaolin, sand, chalk, calcium pyrophosphate, dicalcium phosphate dihydrate and others, as well as vegetable-based abrasives such as cellulose derivatives, wood flour or kernel flours and shell flours, and mixtures thereof.

[O161] Particularly preferred for use as coarse cleaning agents are abrasives based on natural kernel and/or shell flours, in particular walnut shells, almond shells, hazelnut shells, olive kernel, apricot kernel and cherry kernel flours or beads of waxes (e.g. jojoba waxes).

[0162] Preferred polishing components suitable for use in dental care are low calcium such as silicas, aluminium hydroxide, aluminium oxide, sodium aluminium silicates, organic polymers or mixtures of such abrasives.

[0163] The concentration ofthe abrasives may be up to 50% by weight, preferably 0-30% by weight, based on the total amount of the preparation.

Solvents

[0164] The preparation according to the invention may contain all solvents commonly used in cosmetics. They serve to stabilise the formulation, to solubilise poorly soluble ingredients, to keep skin moist and consequently to improve sensory properties and to increase cleansing power, especially on fat and oil.

[0165] Surprisingly, the addition of a mild organic solvent does not impair the synergy of surfactant (A) with the biosurfactant glycolipids (B) in the preparations according to the invention. Even a better removal of specific impurities is observed, exemplified in the embodiment examples of eye shadow. Herein, part ofthe water was replaced by a mild organic solvent without impairing the synergistic effect of surfactant (A) with the biosurfactant glycolipids (B). This is not self-evident insofar as the surfactant-water interactions are strongly controlled by hydrogen bonding, which is significantly altered by the addition of a solvent. It is well known that this leads to altered solubilisation or dispersion properties, the impact and characteristics of which, however, cannot be predicted a priori.

[0166] In the case ofbiosurfactant glycolipids (B) with surfactant (A), an improved cleansing for pigmentary impurities is shown, as disclosed here on eye shadow. Further tests have confirmed this effect on other substrates as well.

[0167] The subject matter ofthe invention is therefore the preparation according to any one of the preceding claims additionally comprising one or more mild organic solvents.

[0168] Ina preferred liquid orgel embodiment, the preparation contains water as solvent, wherein it contains more than 5% by weight, preferably more than 15% by weight and particularly preferably more than 25% by weight of water, in each case based on the active content in the total amount of the preparation. Particularly preferred preparations contain - based on their weight - 5 to 99.5% by weight, preferably 15 to 90% by weight, particularly preferably 25 to 75% by weight of water.

[0169] Alternatively, the preparations may be low-water or water-free preparations, wherein the water content in a preferred embodiment is less than 10% by weight, particularly preferably less than 8% by weight, in each case based on the total amount of the preparation.

[0170] Ina further liquid orgel embodiment, the preparation is anhydrous, wherein the preparation comprises a mild organic solvent as main solvent. It is preferred that the agent contains 5 to 99.5% by weight, preferably 10 to 90% by weight, particularly preferably 25 to 75% by weight of solvent, based on the total amount ofthe preparation.

[O171] Exemplary representatives of suitable organic solvents are the following compounds named according to INCI: Alcohol (ethanol), alcohols, buteth-3, butoxydiglycol,butoxyethanol, butoxyisopropanol, butoxypropanol, n-butyl alcohol, t-butyl alcohol, butyl-3-hydroxybutyrate, butylene glycol, butyloctanol, Cl-C6 alkanes, C7-C15 alkanes, diethylene glycol, diethylene glycol monobutyl ether, dimethoxydiglycol, dimethyl ether, dimethyl 2-methylglutarate, dipropylene glycol, dipropylene glycol phenyl ether, ethyl lactate, 2-ethyl lactate, ethyl levulinate glycerol ketal, ethyl levulinate propylene glycol ketal, ethyl levulinate ethylene glycol ketal, ethoxydiglycol, ethoxyethanol, ethyl hexanediol, fatty acid methyl ester, e.g. based on C18 plants, gamma-laverolactone, glycol, glycerol, hexanediol, 1,2,6-hexanetriol, hexyl alcohol, hexylene glycol, isobutoxypropanol, isopentyldiol, isopropyl alcohol (iso-propanol), levulinic acid ester, 3-methoxybutanol, methoxydiglycol, methoxyethanol, methoxyisopropanol, methoxymethylbutanol, methoxy PEG-IO, methylal, methyl alcohol, methyl-9-dodecenoate, methyl hexyl ether, methylpropanediol, 2-methyl THF, neopentyl glycol, N,N-dimethyl-9-decenamide, polyols, PEG-4, PEG-6, PEG-7, PEG-8, PEG-9, PEG-6 methyl ether, pentylene glycol, PPG-7, PPG-2-buteth-3, PPG-2 butyl ether, PPG-3 butyl ether, PPG-2 methyl Ether, PPG-3 methyl ether, PPG-2 propyl ether, 1,2-propanediol, 1,3-propanediol, propyl alcohol(n-propanol), propylene glycol, propylene glycol butyl ether, propylene glycol propyl ether, terpenes, e.g. limonene, thymol, and others, preferred of natural origin such as lemon oil, lavender oil, thyme oil, and others, tetrahydrofurfuryl alcohol, trimethylhexanol. According to the invention, these solvents can be freely combined with other components in a manner well known to the person skilled in the art.

[O172] In a preferred embodiment, solvents selected from the group consisting of solvents obtained from vegetable raw materials and which are biodegradable are used. Preferred according to the invention are mild organic solvents selected from the group consisting of ethanol, C1-C6 alkanes, C7-C15 alkanes, dimethyl 2-methylglutarate, ethyl lactate, 2-ethyl lactate, ethyl levulinate glycerol ketal, ethyl levulinate propylene glycol ketal, ethyl levulinate ethylene glycol ketal, fatty acid methyl esters based on C18 plants, gamma-laverolactone, glycerol, 2-methyl THF, polyols, pentylene glycol, 1,2-propanediol, 1,3-propanediol,pentylene glycol, fatty acid alkyl esters of C-18 plants, in particular rapeseed methyl ester, sunflower methyl ester, soybean methyl ester, terpenes, e.g. D-limonene, tetrahydrofurfuryl alcohol.

[0173] Very particularly preferred is the embodiment comprising ethanol, glycerol, 1,2-propanediol, 1,3-propanediol, pentylene glycol, or a fatty acid alkyl ester of C-18 plants, in particular rapeseed methyl ester and soybean methyl ester as mild organic solvent.

[0174] The solvent may be present in the aqueous, the low-water or the anhydrous embodiment, it being preferred that the preparation contains 0.2 - 99.5% by weight of solvent, particularly preferably 0.5 - 98% by weight, the concentration in each case being based on the active content in the entire preparation.

pH regulators and buffer substances

[0175] The pH value ofthe preparation according to the invention can be adjusted by means of conventional pH regulators, whereby, depending on the application, different pH ranges known to the person skilled in the art are adjusted from acidic (pH 1-4) to neutral (pH 5-7) to basic (pH 8-11).

pH adjusting agents and buffer substances, the selection of which is not a problem for the person skilled in the art, are, for example, carboxylic acids, mineral acids, ammonia and amines, e.g. sodium bicarbonate, sodium citrate, sodium benzoate, citric acid, lactic acid, glycolic acid, phosphoric acid or acidic salts, e.g. NaH_2PO_4, alkali or alkaline earth hydroxides or organic amines such as monoethanolamine, monoisopropanolamine, 2-amino-2-methyl-propanol, 2-amino-2-methyl-1,3-propanediol, 2-amino-2-ethyl-1,3-propanediol, 2-amino-2-methylbutanol and triethanolamine. It is also possible to use omega-amino acids such as omega-aminocaproic acid as alkalizing agents.

[0176] The preparation is stable over a wide pH range, thus different embodiments are made possible, such as hair colouring in the range between 5 and 11, shaving/ hair removal between 3 and 10, soaps and facial tonics pH 5-9, in particular the skin neutral embodiment at pH 5.5.

Preferably, the preparation has a pH between 0-14, more preferably between 3 and 11.

Antioxidants

[0177] Preferably, antioxidants are added to the cosmetic preparation, on the one hand to protect the unsaturated hydrocarbon chains ofthe inventive preparation and on the other hand to reduce harmful oxidative influences on skin or hair during application. The antioxidants may for example be selected from the group consisting of amino acids (e.g. glycine, histidine, tyrosine, tryptophan) and their derivatives, imidazoles (e.g. urocanic acid) and their derivatives, peptides such as D,L-carnosine, D-carnosine, L-carnosine and their derivatives (e.g. anserine), carotenoids, carotenes and their derivatives, chlorogenic acid and its derivatives, lipoic acid and its derivatives, aurothioglucose, propylthiouracil and other thiols (e.g. thioredoxin, glutathione, cysteine, cystine, cystamine and their glycosyl-, N-acetyl-, methyl-, ethyl-, propyl-, amyl-, butyl- and lauryl-, palmitoyl-, oleyl-, [gamma]-linoleyl-, cholesteryl- and glyceryl esters) and their salts, dilauryl thiodipropionate, distearyl thiodipropionate, thiodipropionic acid and derivatives thereof (esters, ethers, peptides, lipids, nucleotides, nucleosides and salts) as well as sulphoximine compounds (e.g. buthionine sulphoxide), (e.g. buthionine sulphoximines, homocysteine sulphoximines, buthionine sulphones, penta-, hexa-, heptathionine sulphoximines) in very low tolerated doses, furthermore (metal) chelators (e.g. [alpha]-hydroxy fatty acids, palmitic acid, phytic acid, lactoferrin), [alpha]-hydroxy acids (e.g. citric acid, lactic acid, malic acid), humic acid, bile acid, bile extracts, bilirubin, biliverdin, EDTA, EGTA and their derivatives, unsaturated fatty acids and their derivatives (e.g. [gamma]-linolenic acid, linoleic acid, oleic acid), folic acid and derivatives thereof, ubiquinone and ubiquinol and derivatives thereof, vitamin C and derivatives (e.g. ascorbyl palmitate, Mg-ascorbyl phosphate, ascorbyl acetate), tocopherols and derivatives (e.g. vitamin E acetate), vitamin A and derivatives (vitamin A palmitate) as well as coniferyl benzoate of benzoic resin, rutinic acid and its derivatives, [alpha]-glycosylrutin, ferulic acid, furfurylidene glucitol, carnosine, butylated hydroxytoluene, butylated hydroxyanisole, nordihydroguaiak resin acid, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid and its derivatives, mannose and its derivatives, zinc and its derivatives (e.g. ZnO, ZnSO4), selenium and its derivatives (e.g. selenomethionine), stilbenes and their derivatives (e.g. stilbene oxide, trans-stilbene oxide), superoxide dismutase and the respective derivatives (salts,esters, ethers, sugars, nucleotides, nucleosides, peptides and lipids) of these substances suitable according to the invention.

[0178] Preferred according to the invention are antioxidants based on raw materials from plants, preferably C-18 plants, such as antioxidants from the groups of amino acids, peptides, cartinoids, chelators, plant extracts and hydroxy acids, as well as mixtures thereof.

[0179] The amount of antioxidants (one or more compounds) in the preparations is preferably 0.001 to 30% by weight, more preferably 0.05-20% by weight, in particular 1-10% by weight, based on the total amount of the preparation. These antioxidants may be combined by the skilled person with other ingredients mentioned herein.

Conditioning agent

[0180] The preparation according to the invention may contain usual conditioning agents known to the skilled person, such as monographed in the " International Cosmetic Ingredient Dictionary and Handbook", 14th edition, K. Schrader, or the" Fundamentals and Formulations of Cosmetics", 2nd edition (Hilthig Verlag, Heidelberg, 1989), pp. 782-815.

Deodorising agents

[0181] The preparation may contain deodorant active ingredients. These include odour absorbers, deodorising ion exchangers, germ-inhibiting agents, prebiotically active components and enzyme inhibitors or combinations of the active substances mentioned.

[0182] Silicates which can also simultaneously favourably support the viscosity of the preparations according to the invention serve as odour absorbers. These include layered silicates, in particular montmorillonite, kaolinite, ilite, beidellite, nontronite, saponite, hectorite, bentonite, smectite and talc. Other preferable odour absorbers include zeolites, zinc ricinoleate, cyclodextrins, certain metal oxides, such as aluminium oxide, and chlorophyll.

[0183] They are used in an amount of .1 - 10% by weight, preferably 0.5 - 7% by weight and in particular 1 - 5% by weight, in each case based on the total weight of the preparation.

Germicidal, fungicidal and antimicrobial agents

[0184] Optionally, the preparation according to the invention may contain active ingredients against microorganisms such as fungi or bacteria in order to prevent odour, dandruff, caries, acne and the like.

[0185] Suitable germ-inhibiting or antimicrobial agents according to the invention are organohalogen compounds as well as organohalogenides, quaternary ammonium compounds, a number of plant extracts and zinc compounds. These include, among others triclosan, chlorhexidine and chlorhexidine gluconate, 3,4,4'-trichlorocarbanilide, bromochlorophene, dichlorophene, chlorothymol, chloroxylenol, hexachlorophene, dichloro-m-xylenol, dequalinium chloride, domiphene bromide, ammonium phenolsulphonate, benzalkonium halides, benzalkonium cetyl phosphate, benzalkonium saccharinates, benzethonium chloride, cetylpyridinium chloride, laurylpyridinium chloride, laurylisoquinolinium bromide, methylbenzenium chloride. Furthermore, phenol, phenoxyethanol, disodium dihydroxyethylsulfosuccinylundecylenate, sodium bicarbonate, zinc lactate, sodium phenolsulfonate, ketoglutaric acid, terpene alcohols such as farnesol, chlorophyllin-copper complexes, a.-monoalkyl glycerol ethers with a branched or linear saturated or unsaturated, optionally hydroxylated C6 - C22 alkyl radical, particularly preferably a.-(2-ethylhexyl)glycerol ethers, carboxylic acid esters of mono-, di- and triglycerol (e.g. glycerol monolaurate, diglycerol monocaprinate), lantibiotics and plant extracts (e.g. green tea and components of lime blossom oil).

[0186] Further preferred active ingredients are selected from so-called prebiotically active components, by which, according to the invention, those components are to be understood which only or at least predominantly inhibit the undesirable germs of the skin microflora, but not the desirable ones, i.e. those which belong to a healthy skin microflora. These include conifer extracts, in particular from the group of Pinaceae, and plant extracts from the group of Sapindaceae, Araliaceae, Lamiaceae and Saxifragaceae, in particular extracts from Picea sp., Paullinia sp., Panax sp., Lamium album or Ribes nigrum, as well as mixtures ofthese substances.

[O187] Further preferred active substances are selected from the germ-inhibiting perfume oils or essential oils.

[0188] Furthermore, the preparation may contain enzyme inhibitors which inhibit the enzymes responsible for sweat decomposition, in particular arylsulphatase, Ø-glucuronidase, aminoacylase, ester-cleaving lipases and lipoxigenase, e.g. trialkylcitric acid esters, in particular triethyl citrate, or zinc glycinate.

[O189] The amount of deodorant active ingredients in the preparations according to the invention is 0.1 - 10% by weight, preferably 0.2 - 7% by weight, in particular 0.3 - 5% by weight and exceptionally preferably 0.4 - 1.0% by weight, based on the total weight ofthe preparation.

Antiperspirant active ingredients

[0190] Optionally, antiperspirant actives such as water-soluble astringent inorganic and organic salts of aluminium, zirconium and zinc or any mixtures of these salts may also be included. These include aluminium chlorohydrates, for example aluminium sesquichlorohydrate, aluminium chlorohydrex-propylene glycol (PG) oraluminium chlorohydrex polyethylene glycol (PEG), aluminium sesquichlorohydrex-PG or -PEG, aluminium-PG-dichlorohydrex or aluminium-PEG-dichlorohydrex, aluminium hydroxide, furthermore aluminium zirconium chlorohydrates, such as aluminium zirconium trichlorohydrate, aluminium zirconium tetrachlorohydrate, aluminium zirconium pentachlorohydrate, aluminium zirconium octachlorohydrate, the aluminium zirconium chlorohydrate glycine complexes such as aluminium zirconium trichlorohydrexglycine, aluminium zirconium tetrachlorohydrexglycine, aluminium zirconium pentachlorohydrexglycine, aluminium zirconiumoctachlorohydrexglycine, potassium aluminium sulphate ($K.Al(SO_4)2$-12 H_2O, alum), aluminium undecylenoyl collagen amino acid, sodium aluminium lactate + aluminium sulphate, sodium aluminium chlorohydroxylactate, aluminium bromohydrate, aluminium chloride, the complexes of zinc and sodium salts, the complexes of lanthanum and cerium, the aluminium salts of lipoamino acids, aluminium sulphate, aluminium lactate, aluminium chlorohydroxyallantoinate, sodium aluminium chlorohydroxylactate, zinc chloride, zinc sulphocarbolate, zinc sulphate and zirconium chlorohydrate.

[0191] The amount of antiperspirant actives in the preparation according to the invention may be up to 10% by weight, preferably 0.2 - 7% by weight, more preferably 0.3 - 5% by weight and exceptionally preferably 0.4 - 1.0% by weight, based on the total weight of the preparation.

[0192] A preferred embodiment does not contain any antiperspirant actives.

Preservatives

[0193] The preparation according to the invention may contain all preservatives commonly used in cosmetics. Some of these also have antimicrobial properties.

[0194] Suitable according to the invention are, for example, active ingredients from the groups of alcohols, aldehydes, antimicrobial acids or their salts, carboxylic acid esters, acid amides, phenols, phenol derivatives, diphenyls, diphenylalkanes, urea derivatives, oxygen and nitrogen acetals as well as oxygen and nitrogen formals, benzamidines, isothiazoles and their derivatives such as isothiazolinones, phthalimide derivatives, pyridine derivatives, surface-active compounds, guanidines, antimicrobial amphoteric compounds, quinolines, 1,2-dibromo-2,4-dicyanobutane, iodo-2-propynyl butyl carbamate, iodine, iodophores and peroxides. Such substances may for example be selected from p-hydroxybenzoic acid methyl ester, ethyl ester or propyl ester, sodium sorbate, sodium benzoate, bromochlorophene, triclosan, phenyl salicylic acid ester, biguanides, e.g. chlorhexidine and thymol.

[0195] Preferred preservatives for cosmetics include benzoic acid and derivatives thereof (e.g. propyl benzoate, phenyl benzoate, butyl benzoate, ammonium benzoate, sodium benzoate, potassium benzoate, magnesium benzoate), propionic acid and derivatives thereof (e.g. ammonium propionate, sodium propionate, potassium propionate, magnesium propionate), salicylic acid and its derivatives (e.g. sodium salicylate, potassium salicylate and magnesium salicylate), 4-hydroxybenzoic acid and its esters and alkali metal salts (e.g. methyl paraben, ethyl paraben, propyl paraben, isopropyl paraben, butyl paraben, isobutyl paraben, isodecyl paraben, phenyl paraben, phenoxyethyl paraben and benzyl paraben, hexamidine paraben and hexamidine diparaben, sodium and potassium paraben, sodium and potassium methyl paraben, potassium butyl paraben, sodium and potassium propyl paraben), alcohols and their salts (e.g. ethanol, propanol, isopropanol, benzyl alcohol, phenethyl alcohol, phenol, potassium phenolate, phenoxyethanol, phenoxyisopropanol, o-phenylphenol), guaiacol and derivatives thereof, chlorhexidine and derivatives thereof (e.g. chlorhexidine diacetate, chlorhexidine digluconate and chlorhexidine dihydrochloride), hydantoin and its derivatives (e.g. DEDM and DMDM hydantoin, DEDM hydantoindilaurate), urea and urea derivatives (e.g. diazolidinyl urea, imidazolidinyl urea), ferulic acid and its derivatives (e.g. ethyl ferulate), sorbic acid and its derivatives (e.g. isopropyl sorbate, TEA sorbate, sodium sorbate, potassium sorbate and magnesium sorbate), isothiazole and oxazole derivatives (e.g. methylisothiazolinone, methylchloroisothiazolinone, dimethyloxazolidine), quaternary ammonium compounds (e.g. polyquaternium-42, quaternium-8, quaternium-14, quaternium-15), carbamates (e.g. iodopropynyl butylcarbamate), formaldehyde and sodium formate, glutaraldehyde, glyoxal, hexamidine, dehydroacetic acid, 2-bromo-2-nitropropane-1,3-diol, isopropylcresol, methyldibromoglutaronitrile, polyaminopropylbiguanide, sodium hydroxymethylglycinate, sodium phenolsulfonate, triclocarban, thymol, triclosan, zinc pyrithione and various peptide antibiotics (e.g. nisin).

[O196] According to the invention, a mild preservation of the preparation is preferred based on active ingredients selected from ethanol, benzyl alcohol, dehydroacetic acid and its salts, vegetable organic acids, glycerol, citric acid, lactic acid, benzoic acid, salicylic acid, potassium sorbate.

[0197] The ingredients mentioned herein may be combined by the person skilled in the art with other cosmetic ingredients.

[0198] The amount of preservatives in the preparations according to the invention is 0.001 - 10% by weight, preferably 0.01 - 5% by weight and in particular 0.1 - 3% by weight, based on the total amount of the preparation. Ina preferred embodiment, the preparation ispreservative-free.

UV filters

[O199] It is also possible and advantageous in the context of the present invention to include UV-protective substances. The preparation according to the invention is particularly well suited because the pigments are extraordinarily well dispersed in the combination of surfactants as disclosed. In addition to the effect that pigments can be easily dissolved from a substrate, it also has the benefit that preparations with colour or pigments can be stabilised. Examples of pigmentary UV filters are zinc oxide, titanium dioxide, methylene bis-benzotriazolyl tetramethylbutylphenol, and others.

[0200] Hence, preparations according to the invention may contain advantageously substances which absorb UV radiation in the UVA and UVB range, whereby the total amount of filter substances in the entire preparation may preferably be between 0.1 wt.% to 30 wt.%. Commercially available water- or oil-soluble UV filters are preferred. Typically, combinations of UV filters are used, which may be combined by the person skilled in the art with other ingredients mentioned herein.

Anti-dandruff agents

[0201] T e cosmetic composition may contain components effective against dandruff. Examples include zinc pyrithione, selenium disulphide, piroctone olamine, climbazole or plant extracts such as Vitis Vinifora Seed Extract, Thymus Serpyllum Extract, Rosmarinus officialis Leaf Extract, Leuconostoc / Radish Root Ferment Filtrate, Leptospermone/ Isoleptospermone/ Flavesone, Leptospermum Scoparoi, Branch/ Leaf Oil, Fragaria ananassa (Strawberry) Seed oil, Adianthum Capillus Veneris LeafExtract, Nettle Extract, Juniper Extract, Thyme Extract and others.

[0202] In the preparations according to the invention containing anti-dandruff active ingredients, these are used in concentrations of up to 7% by weight, preferably 0.1 - 4% by weight, particularly preferably 0.1 - 2% by weight, in each case based on the total quantity of the preparation.

Colouring, perfuming and flavouring agents

[0203] In order to improve the aesthetic or organoleptic impression of the preparations according to the invention, all fragrances customary in cosmetics may be added.

Preferred fragrances, the selection of which presents no difficulty to the person skilled in the art, have a high storage stability and insensitivity to other ingredients of the cosmetic preparation.

[0204] Individual fragrance compounds, such as esters, ethers, aldehydes, ketones, alcohols and hydrocarbons, may be used as perfume oils.

[0205] Fragrance compounds based on esters include, for example, phenoxyethyl isobutyrate, benzyl acetate, p-tert-butyl cyclohexyl acetate, dimethyl benzyl carbinyl acetate, linalyl acetate, phenyl ethyl acetate, linalyl benzoate, ethyl methyl phenyl glycinate, benzyl formate, allyl cyclohexyl propionate, styrallyl propionate and benzyl salicylate. The ethers include, for example, benzyl ethyl ether, the aldehydes include, for example, the linear alkanals with 8 to 18 C atoms, citral, citronellal, citronellyloxyacetaldehyde, cyclamenaldehyde, hydroxycitronellal, lilial and bourgeonal, and the ketones include, for example, the ionones a-isomethylionone and methyl cedryl ketone, the alcohols include anethole, citronellol, eugenol, geraniol, linalool, phenylethyl alcohol and terpineol, and the hydrocarbons mainly include terpenes and balsams. Preferably, however, mixtures of different fragrances are used.

Suitable perfume oils can also be natural fragrance mixtures from plant or animal sources, e.g. pine, citrus, jasmine, lily, rose or ylang ylang oil. Essential oils are also suitable as perfume oils, e.g. sage oil, chamomile oil, clove oil, lemon balm oil, mint oil, cinnamon leaf oil, lime blossom oil, juniper berry oil, vetiver oil, olibanum oil, galbanum oil and laudanum oil.

[0206] Particular preference is given to colourants and fragrances which are not described in the literature as allergens and which are based on natural raw materials, such as extracts from plants.

[0207] All common natural and synthetic flavours are suitable as flavouring oils. Preferred in the embodiment of the dental care products are aroma oils from the group peppermint oil, spearmint oil, anise oil, caraway oil, eucalyptus oil, fennel oil, cinnamon oil, geranium oil, sage oil, thyme oil, marjoram oil, basil oil, citrus oil, gaultheria oil or one or more synthetically produced components ofthese oils isolated therefrom. The major components of said oils are, for example, menthol, carvone, anethole, cineole, eugenol, cinnamaldehyde, geraniol, citronellol, linalool, salvene, thymol, terpinene, terpinol, methyl chavicol and methyl salicylate. Other suitable flavourings include menthyl acetate, vanillin, ionone, linalyl acetate, rhodinol and piperitone. Suitable sweeteners are either natural sugars such as sucrose, maltose, lactose and fructose or synthetic sweeteners such as sodium salt of saccharin, sodium cyclamate or aspartame.

[0208] In another preferred embodiment ofthe invention, no fragrances are added, for example for applications to consumers with allergies and/or sensitive skin.

[0209] In the perfumed embodiment, the preparations according to the invention contain the fragrance component(s) in amounts ofup to 5% by weight, preferably 0.1 - 3% by weight, particularly preferably 0.2 - 2% by weight; in each case based on the total quantity ofthe preparation; in the unscented embodiment, no fragrances are present.

Active ingredients

Anti-caries

[021O] Another preferred group of ingredients that may be included in the preparations according to the invention are anti-caries agents. These may be selected, for example, from organic or inorganic fluorides, e.g. sodium fluoride, potassium fluoride, sodium monofluorophosphate, sodium fluorosilicate, zinc fluoride and stannous fluoride. Preferably, an amount of 0.01 - 0.5% by weight of fluorine should be present in the form of the above compounds.

Wound-healing and anti-inflammatory agents

[0211] The cosmetic preparation may contain further active substances, e.g. against inflammation of the gums, inflammation of the skin, especially in the case of diseased or stressed skin, such as during shaving. Such substances may be selected, for example, from acetylsalicylic acid derivatives, allantoin, aloe vera, azulene, urea, camomile extracts, tocopherol, panthenol, pantothenic acid, bisabolol, propolis, rhodanide, retinol and sage extracts. Suitable non-cationic bactericidal components include for example phenols, resorcinols, bisphenols, salicylanilides and their halogenated derivatives, halogenated carbanilides and p-hydroxybenzoic acid esters. Furthermore, halogenated diphenyl ethers, e.g. 2,4-dichloro-2-hydroxydiphenyl ether, 4,4-dichloro-2-hydroxydiphenyl ether, 2,4,4-tribromo-2-hydroxydiphenyl ether and2,4,4-trichloro-2-hydroxydiphenyl ether (triclosan) can be used. Numerous plant extracts can be used, some representative examples of the class of plant extracts are disclosed in theembodiments.

[0212] These active ingredients are preferably used in amounts of 0.01- 5 wt¾ in the preparations according to the invention, wt¾ based on the total quantity of thepreparation.

Anti-acne active ingredients

[0213] The composition may further contain common anti-acne active ingredients, such as azelaic acid, antibiotics, retinoids, zinc oxide, a-hydroxy acids, linoleic acid, plant extracts such as chamomile extracts, tea tree oil, green tea and others.

They are preferably used in amounts of 0.01- 5% by weight in the preparations according to the invention, % by weight based on the total quantity of the preparation.

Other active ingredients

[0214] Furthermore, other active ingredients may be contained in the cosmetic preparation, such as anti-ageing active ingredients, peptides, UV absorbers, vitamins & minerals (e.g. ascorbic acid, biotin, tocopherol or rutin, niacin), mineral salts such as manganese salts, zinc salts or magnesium salts, other plant extracts.

[0215] They are preferably used in the preparations according to the invention in amounts of 0.01 - 5 wt.%, wt.% based on the total quantity ofthe preparation.

Hair dyes

[0216] The preparations according to the invention may also contain <lyes for direct or oxidative colouring of hair. The colouring preparations should protect the hair and cause as little damage as possible. Hair dyeing compositions as well as tinting shampoos can be prepared on the basis of the preparations according to the invention.

[0217] In a further preferred embodiment according to the invention, the preparation contains at least one dye precursor and/or at least one dye for colouring keratinous fibres, in particular for colouring human hair.

[0218] The preparation is particularly suitable for this purpose, since the pigments and <lyes are extraordinarily well dissolved or dispersed in the combination of surfactants as disclosed.The

excess of dyes and pigments remaining on the hair and scalp after the dyeing process can be washed out in one step thanks to the preparation according to the invention without the need for additional rinsing to wash out the residual <lyes.

[0219] As dye (precursors)

- oxidation dye precursors of the developer and coupler type,
- natura! and synthetic direct dyestuffs,
- and precursors of natura! analogous dyes, such as indole and indoline derivatives,

as well as mixtures of representatives of one or more of these groups can be used.

Oxidation dye precursors of the developer type are usually primary aromatic amines with a further free or substituted hydroxy or amino group located in the para or ortho position, diaminopyridine derivatives, heterocyclic hydrazones, 4-aminopyrazole derivatives and 2,4,5,6-tetraaminopyrimidine and its derivatives. Suitable developer components are, for example, p-phenylenediamine, p-toluylenediamine, p-aminophenol, o-aminophenol, 1-(2'-hydroxyethyl)-2,5-diaminobenzene, N,N-bis-(2-hydroxy-ethyl)-p-phenylenediamine, 2-(2, 5-diaminophenoxy)-ethanol, 4-amino-3-methylphenol, 2,4,5,6-tetraaminopyrimidine, 2-hydroxy-4,5,6-triaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 2,4-dihydroxy-5,6-diaminopyrimidine, 2-dimethylamino-4,5,6-triaminopyrimidine, 2-hydroxymethylamino-4-amino-phenol, bis(4-aminophenyl)amine, 4-amino-3-fluorophenol, 2-aminomethyl-4-aminophenol, 2-hydroxymethyl-4-aminophenol, 4-amino-2-((diethylamino)-methyl)-phenol, bis-(2-hydroxy-5-aminophenyl)-methane, 1, 4-bis-(4-aminophenyl)-diazacycloheptane, 1,3-bis(N(2-hydroxyethyl)-N(4-aminophenylamino))-2-propanol, 4-amino-2-(2-hydroxyethoxy)-phenol, 1,10-bis-(2,5-diaminophenyl)-1,4,7,10-tetraoxadecane and 4,5-diaminopyrazole derivatives such as e. g. 4,5-diamino-1-(2'-hydroxyethyl)-pyrazole. Particularly advantageous developer components are p-phenylenediamine, p-toluylenediamine, p-aminophenol, 1-(2'-hydroxyethyl)-2,5-diaminobenzene, 4-amino-3-methylphenol, 2-aminomethyl-4-aminophenol, 2,4,5,6-tetraaminopyrimidine, 2-hydroxy-4,5,6-triaminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine.

[0220] As coupler-type oxidation dye precursors, m-phenylenediamine derivatives, naphthols, resorcinol and resorcinol derivatives, pyrazolones and m-aminophenol derivatives are generally used. Examples of such coupler components are

- m-Aminophenol and its derivatives such as 5-amino-2-methylphenol, 5-(3-hydroxypropylamino)-2-methylphenol, 3-amino-2-chloro-6-methylphenol, 2-hydroxy-4-aminophenoxyethanol, 2,6-dimethyl-3-aminophenol, 3-trifluoroacetylamino-2-chloro-6-methylphenol, 5-amino-4-chloro-2-methylphenol, 5-amino-4-methoxy-2-methylphenol, 5-(2'-hydroxyethyl)-amino-2-methylphenol, 3-(diethylamino)-phenol, N-cyclopentyl-3-aminophenol, 1,3-dihydroxy-5-(methylamino)-benzene, 3-(ethylamino)-4-methylphenol and 2,4-dichloro-3-aminophenol,
- o-aminophenol and its derivatives,
- m-diaminobenzene and its derivatives such as 2,4-diaminophenoxyethanol, 1,3-bis-(2,4-diaminophenoxy)propane, 1-methoxy-2-amino-4-(2'-hydroxyethylamino)benzene, 1,3-bis-(2,4-diaminophenyl)propane, 2,6-bis-(2-hydroxyethylamino)-1-methylbenzene and 1-amino-3-bis-(2'-hydroxyethyl)aminobenzene,
- o-diaminobenzene and its derivatives such as 3,4-diaminobenzoic acid and 2,3-diamino-1-methylbenzene,

- di- or trihydroxybenzene derivatives such as resorcinol, resorcinol monomethyl ether, 2-methylresorcinol, 5-methylresorcinol, 2,5-dimethylresorcinol, 2-chlororesorcinol, 4-chlororesorcinol, pyrogallol and 1,2,4-trihydroxybenzene,
- pyridine derivatives such as 2,6-dihydroxypyridine, 2-amino-3-hydroxypyridine, 2-amino-5-chloro-3-hydroxypyridine, 3-amino-2-methylamino-6-methoxypyridine, 2,6-dihydroxy-3,4-dimethylpyridine, 2,6-dihydroxy-4-methylpyridine, 2,6-diaminopyridine, 2,3-diamino-6-methoxypyridine and 3,5-diamino-2,6-dimethoxypyridine,
- naphthalene derivatives such as 1-naphthol, 2-methyl-1-naphthol, 2-hydroxymethyl-1-naphthol, 2-hydroxyethyl-1-naphthol, 1,5-dihydroxynaphthalene, 1,6-dihydroxynaphthalene, 1,7-dihydroxynaphthalene, 1,8-dihydroxynaphthalene, 2,7-dihydroxynaphthalene and 2,3-dihydroxynaphthalene,
- morpholine derivatives such as 6-hydroxybenzomorpholine and 6-aminobenzomorpholine,
- quinoxaline derivatives such as 6-methyl-1,2,3,4-tetrahydroquinoxaline,
- pyrazole derivatives such as 1-phenyl-3-methylpyrazol-5-one,
- indole derivatives such as 4-hydroxyindole, 6-hydroxyindole and 7-hydroxyindole,
- methylenedioxybenzene derivatives such as, for example, 1-hydroxy-3,4-methylenedioxybenzene, 1-amino-3,4-methylenedioxybenzene and 1-(2'-hydroxyethyl)amino-3,4-methylenedioxybenzene.

[0221] Particularly suitable coupler components are 1-naphthol, 1,5-, 2,7- and 1,7-dihydroxynaphthalene, 3-aminophenol, 5-amino-2-methylphenol, 2-amino-3-hydroxypyridine, resorcinol, 4-chlororesorcinol, 2-chloro-6-methyl-3-aminophenol, 2-methylresorcinol, 5-methylresorcinol, 2,5-dimethylresorcinol and 2,6-dihydroxy-3,4-dimethylpyridine. Direct <lyes are usually nitrophenylenediamines, nitroaminophenols, azo <lyes, anthraquinones or indophenols. Particularly suitable direct <lyes are those known under the international designations or trade names HC Yellow 2, HC Yellow 4, HC Yellow 5, HC Yellow 6, Basic Yellow 57, Disperse Orange 3, HC Red 3, HC Red BN, Basic Red 76, HC Blue 2, HC Blue 12, Disperse Blue 3, Basic Blue 99, HC Violet 1, Disperse Violet I, Disperse Violet 4, Disperse Black 9, Basic Brown 16 and Basic Brown 17 as well as 1, 4-bis-(0-hydroxyethyl)-amino-2-nitrobenzene, 4-amino-2-nitrodiphenylamine-2'-carboxylic acid, 6-nitro-1,2,3,4-tetrahydroquinoxaline, hydroxyethyl-2-nitro-toluidine, picramic acid, 2-amino-6-chloro-4-nitrophenol, 4-ethylamino-3-nitrobenzoic acid and 2-chloro-6-ethylamino-:1-hydroxy-4-nitrobenzene.

[0222] Naturally occurring direct <lyes include, for example, henna red, henna neutral, henna black, chamomile flower, sandalwood, black tea, glossy buckthom bark, sage, bluewood, madder root, catechu, sedre and alcanna root.

It is not necessary that the oxidation dye precursors or the direct <lyes each represent uniform compounds. On the contrary, the hair dye preparations according to the invention may contain other components in subordinate amounts due to the manufacturing processes for the individual <lyes, provided that these do not adversely affect the dyeing result or have to be excluded for other reasons, e.g. toxicological reasons.
For example, indoles and indolines as well as their physiologically compatible salts are used as precursors of natura! analogous <lyes. Preferably, indoles and indolines are used which have at least one hydroxy or amino group, preferably as a substituent on the six-membered ring. These groups may carry further substituents, e.g. in the form of an etherification or esterification of the hydroxy group or an alkylation ofthe amin6 group. Particularly advantageous properties have 5,6-dihydroxyindoline, N-methyl-5 ,6-dihydroxyindoline, N-ethyl-5,6-dihydroxyindoline, N-propyl-5,6-dihydroxyindoline, N-butyl-5,6-dihydroxyindoline, 5,6-dihydroxyindoline-2-carboxylic acid, 6-hydroxyindoline, 6-aminoindoline and 4-aminoindoline as well as 5,6-

dihydroxyindole, N-methyl-5,6-dihydroxyindole, N-ethyl-5,6-dihydroxyindole, N-propyl-5,6-dihydroxyindole, N-butyl-5,6-dihydroxyindole, 5,6-dihydroxyindole-2-carboxylic acid, 6-hydroxyindole, 6-aminoindole and 4-aminoindole. Particularly noteworthy within this group are N-methyl-5,6-dihydroxyindoline, N-ethyl-5,6-dihydroxyindoline, N-propyl-5,6-dihydroxyindoline, N-butyl-5,6-dihydroxyindoline and especially the 5, 6-dihydroxyindole as well as N-methyl-5,6-dihydroxyindole, N-ethyl-5,6-dihydroxyindole, N-propyl-5,6-dihydroxyindole, N-butyl-5,6-dihydroxyindole as well as in particular the 5,6-dihydroxyindole.

[0223] The indoline and indole derivatives can be used both as free bases and in the form of their physiologically compatible salts with inorganic or organic acids, e.g. the hydrochlorides, the sulphates and the hydrobromides.

[0224] When using dye precursors ofthe indoline or indole type, it may be preferred to use them together with at least one amino acid and/or at least one oligopeptide. Preferred amino acids are aminocarboxylic acids, in particular alpha-aminocarboxylic acids and omega-aminocarboxylic acids. Among the alpha-aminocarboxylic acids, again arginine, lysine, ornithine and histidine are particularly preferred. A particularly preferred amino acid is arginine, especially in free form, but also used as a hydrochloride.

[0225] Hair dyeing preparations, in particular when the colouring is carried out oxidatively, whether with atmospheric oxygen or other oxidising agents such as hydrogen peroxide, are usually adjusted to slightly acidic to alkaline pH values, i.e. to pH values in the range from about 5 to 11, by means of pH adjusting agents.

[0226] If the formation of the actual hair colours takes place within the framework of an oxidative process, common oxidising agents can be used. However, oxidatio with atmospheric oxygen as the sole oxidant may be preferred. Furthermore, it is possible to carry out the oxidation with the aid of enzymes. Preferred are oxidases such as tyrosinase, ascorbate oxidase and laccase but also glucose oxidase, uricase or pyruvate oxidase.

[0227] Expediently, the composition of the oxidizing agent is mixed with the dye precursors immediately prior to dyeing the hair with the preparation according to the invention. The resulting ready-to-use hair dye preparation should preferably have a pH value in the range of 6 to 10. After an exposure time of about 5 to 45, in particular 15 to 30, minutes, the hair dye preparation is removed from the hair to be dyed by rinsing it out.

[0228] A further advantage of the preparation according to the invention is that rinsing with a shampoo can be omitted, since the dye preparation already contains surfactants.

[0229] Particularly preferred embodiments according to the invention are characterised in that the preparation does not simultaneously contain oxidising agents and reducing agents (different therefrom).

Binder/ consistency regulator

[0230] The preparation according to the invention may contain binders or consistency regulators, e.g. natural and/or synthetic water-soluble polymers such as alginates, carrageenates, tragacanth, starch and starch ethers, cellulose ethers such as, e.g. carboxymethylcellulose (Na salt), hydroxyethylcellulose, methylhydroxypropylcellulose, guar, acacia gum,agar-agar, xanthan gum, succinoglycan gum, locust bean gum, pectins, water-soluble carboxyvinyl polymers, polyvinyl alcohol, polyvinylpyrrolidone, polyethylene glycols.

[0231] They are preferably used in amounts of 0.01- 10% by weight in the preparations according to the invention, % by weight based on the total quantity of the preparation.

Viscosity

[0232] The preparation according to the invention can contain all viscosity regulators commonly used in cosmetics and known to the person skilled in the art, and can be combined withother cosmetic ingredients in the preparation according to the invention. Depending on the application, the viscosity is adjusted to the values known to the person skilled in the art and customary in the market.
Suitable viscosity regulators are, for example, organic modified natural substances (carboxymethyl cellulose and other cellulose ethers, hydroxyethyl cellulose and hydroxypropyl cellulose and the like, kernel flour ethers), organic fully synthetic thickening agents (polyacrylic and polymethacrylic compounds, vinyl polymers, polycarboxylic acids, polyethers, polyimines, polyamides) and inorganic thickeners (polysilicas, phyllosilicates, clay minerals such as montmorillonites, zeolites, silicas), as well as organic natural thickeners (agar-agar, carrageenan, xanthan, tragacanth, gum arabic, alginates, pectins, polyoses, guar flour, locust bean gum, starch, dextrins, gelatine, casein) and mixtures thereof.

[0233] Preferred viscosity regulators are natural organic thickeners from plant raw materials - including algae - for example polysaccharides such as pectins or starch. Also preferred are biotechnologically produced thickeners using non-GMO organisms, such as xanthan gum. Mineral thickeners such as poly silicic acids, phyllosilicates, clay minerals such as montmorillonites, zeolites, silicic acids are also preferred.

[0234] Preferably, up to 5% by weight ofthe thickening agents are used in the cosmetic preparations, particularly preferably 0.01- 3% by weight, based on the total quantity ofthe preparation.

Foam

[0235] In general, the preparations according to the invention show lower foaming than conventional products based on short-chain surfactants. Low foaming is desirable for many uses, such as facial care.

[0236] A particularly preferred embodiment with foaming is obtained by the addition ofthe alkoxylated surfactant (C) or the addition of a chelating agent, as set out above.

[0237] Furthermore, additional foaming agents may be added to the preparations according to the invention. The foaming of shower and wash preparations is influenced by the choice of surfactants, for example surfactant (C). Also suitable are known combinations with strongly foaming surfactants, for example amino acid derivatives of fatty acids, such as glycinates, alaninates, taurates or sarcosinates. Also suitable for good foaming are amphoteric surfactants, such as betaines, imidazole carboxylates or alkenylaminopropionic acids.

[0238] A further preferred embodiment ofthe cosmetic preparation according to the invention contains saponins as foaming agents. Saponins are natural glycosides that are widely used as plant ingredients. Suitable are, for example, saponins from the Indian soap nut (Sapindus mukorossi), Korean ginseng (Panax ginseng), agave plants, Inca cucumber (Cyclanthera pedata), liquorice (Glycyrrhiza glabra) and soap bark (Quillaja saponaria Molina) and mixturesthereof.

[0239] Saponins which do not require long transport routes due to their occurrence are particularly preferred in the preparation according to the invention. These are saponins from the following preferred plants: ivy (Hedera), cowslip (Primula veris), chickweed (Stellaria media), forest-sanickel (Sanicula europaea), spiny restharrow (Ononis spinosa), legumes (Leguminosae), spinach (Spinacia), asparagus (Asparagaceae), oat (Avena), (Ononis spinosa), May lily (Maianthemum bifolium), soapwort (Saponaria officinalis), walnut (Aesculus hippocastanum), red chickweed (Anagallis arvensis), downy hempnettle (Galeopsis segetum), carthusian pink (Dianthus carthusianorum), common horsetail (Equisetum arvense) and mixtures theteof.

[0240] The amount of saponins is usually up to 5% by weight, preferably 0.001 to 3% by weight, more preferably 0.01 to 2% by weight, based on the total quantity ofthe preparation.

Emollients

[0241] The preparation according to the invention may contain usual emollients known to the person skilled in the art. Emollients include water-insoluble, organic compounds, wherein water-insolubility is understood according to the invention as a solubility of less than 10% by weight at 20°c.

[0242] Emollients that may be used according to the invention include, for example, glycerides, hydrocarbons, silicone oils, dialkyl ethers, dialkyl carbonates, wax esters, etc. Any mixtures of emollients may also be used according to the invention. Glycerides are fatty acid esters of glycerol, which may be of natural (animal, microbial, algae-based and vegetable) or synthetic origin. A distinction is made between mono-, di- and triglycerides. These are known substances that can be produced by relevant methods of preparative organic chemistry. Synthetically produced glycerides are usually mixtures of mono-, di- and triglycerides obtained by transesterification of the corresponding triglycerides with glycerol or by selective esterification of fatty acids. Triglycerides or glyceride mixtures with a high triglyceride content (> 90% by weight) are preferred. According to the invention, C6-C30 fatty acids are suitable as fatty acids. The fatty acids may be branched or unbranched, hydroxylated or non-hydroxylated, saturated or unsaturated. Preferred according to the invention is the use of glycerides of vegetable origin, particularly preferred are glycerides of C-18 plants, e.g. soybean oil, cottonseed oil, sunflower oil, linseed oil, almond oil, corn oil, olive oil, rapeseed oil, sesame oil, safflower oil, wheat germ oil, peach kernel oil and the like. Some preparations with emollients are exemplarily disclosed in the embodiments.

[0243] Emollients that can be used according to the invention also include natural and synthetic, aliphatic and/or naphthenic hydrocarbons, such as squalane, squalene, paraffin oils, isohexadecane, isoeicosane or polydecenes, and dialkycyclohexanes.

[0244] According to the invention, silicone oils are also suitable as emollients. These include, for example, dialkyl and alkyl aryl siloxanes, such as cyclomethicone, dimethyl polysiloxane and methylphenyl polysiloxane, as well as their alkoxylated and quaternised analogues. Suitable non-volatile silicone fluids, such as polyalkylsiloxanes, polyalkylarylsiloxanes and polyethersiloxane copolymers can be found in Cosmetics: Science and Technology, ed.: M. Balsam and E. Sagarin, vol. 1, 1972, pp. 27-104.

Silicone oils are not preferred in the preparations according to the invention due to sustainability considerations.

[0245] Further suitable oils preferred according to the invention are branched saturated or unsaturated fatty alcohols with 6-30 carbon atoms. These alcohols are often also referred to as

Guerbet alcohols, since they are obtainable after the Guerbet reaction. Examples of preferred alcohol emollients are hexyldecanol, octyldodecanol, 2-ethylhexyl alcohol and the commercial products Guerbitol® 18, Isofol® 12, Isofol® 16, Isofol® 24, Isofol® 36, Isocarb® 12, Isocarb® 16 oder Isocarb® 24.

[0246] Other suitable emollients are mixtures of Guerbet alcohols and Guerbet alcohol esters, e.g. hexyldecanol and hexyldecyl laurate.

[0247] Suitable emollients are also esters of linear, saturated or unsaturated C6-C30 fatty acids with linear or branched, saturated or unsaturated C6-C30 fatty alcohols or esters of branched C6-C30 carboxylic acids with linear or branched, saturated or unsaturated C6-C30 fatty alcohols, which may be hydroxylated (so-called wax esters).

[0248] Among the wax esters, the following representatives may be mentioned by way of example: Myristyl myristate, myristyl palmitate, myristyl stearate, myristyl isostearate, myristyl oleate, myristyl behenate, myristyl erucate, cetyl myristate, cetyl palmitate, cetyl stearate, cetyl isostearate, cetyl oleate, cetyl behenate, cetyl erucate, stearyl myristate, stearyl palmitate, stearyl stearate, stearyl isostearate, stearyl oleate, stearyl behenate, stearyl erucate, isostearyl myristate, isostearyl palmitate, isostearyl stearate, isostearyl isostearate, isostearyl oleate, isostearyl behenate, isostearyl oleate, oleyl myristate, oleyl palmitate, oleyl stearate, oleyl isostearate, oleyl oleate, oleyl behenate, oleyl erucate, behenyl myristate, behenyl palmitate, behenyl stearate, behenyl isostearate, behenyl oleate, behenyl behenate, behenyl erucate, erucyl myristate, erucyl palmitate, erucyl stearate, erucyl isostearate, erucyl oleate, erucyl behenate and erucyl erucate. Preferably, mono- or polyunsaturated wax esters such as oleyl oleate and oleyl erucate are used. Particularly preferred are these wax esters derived from C18 plants. Also suitable are esters of linear C6-C22 fatty acids with branched alcohols, in particular 2-ethylhexanol, esters of C2-C38 alkyl hydroxycarboxylic acids with linear or branched C6-C22 fatty alcohols, esters of linear and/or branched fatty acids with polyhydric alcohols (such as e.g. propylene glycol, <limer diol or trimer triol) and/or Guerbet alcohols, and esters of C6-C22 fatty alcohols and/or Guerbet alcohols with aromatic carboxylic acids, in particular benzoic acid, esters of C2-C12 dicarboxylic acids with linear or branched alcohols having 1 to 22 carbon atoms (e.g. dioctyl malates) or polyols having 2 to 10 carbon atoms and 2 to 6 hydroxyl groups.

Other exemplary representatives are: Hexyl decyl stearate, hexyl decyl laurate, isodecyl neopentanoate, isononyl isononanoate, 2-ethylhexyl palmitate and 2-ethylhexyl stearate, isopropyl myristate, isopropyl palmitate, isopropyl stearate, isopropyl isostearate, isopropyl oleate, isooctyl stearate, isononyl stearate, isocetyl stearate, isononyl isonanoate, isotridecyl isononanoate, cetearyl isononanoate, 2-ethylhexyl laurate, 2-ethylhexyl isostearate, 2-ethylhexyl cocoate, 2-octyl dodecyl palmitate, butyloctanoic acid 2-butyloctanoate, diisotridecyl acetate, n-butyl stearate, n-hexyl laurate, n-decyl oleate, ethylene glycol dioleate and ethylene glycol dipalmitate, linoleyl myristate, linoleyl palmitate, linoleyl myristate, linoleyl palmitate, isostearyl oleate, isostearyl behenate, isostearyl oleate, linoyl stearate, linoleyl stearate, oleyloleate, oleyllinolate, oleyllinolenate, oleyl rizinate, oleylerucate, linoleyl oleate, linoleyl linolate, linoleyl ricinoate, linoleyl erucate, linolenyl oleate, linolenyl linolate, linolenyl linoleate, linolenyl ricinoate, linolenyl erucate, erucyl linolate, erucyl linolenate, erucyl ricinolate, , wherein the linolenic derivatives include alpha-, as well as gamma-linolenic derivatives.

[0249] Suitable emollients are linear or branched, symmetrical or asymmetrical, saturated or unsaturated di-n-alkyl(ene) ethers with 12 to 24 C atoms per alkyl(ene) group, such as e.g. di-n-octyl ether, di-(2-ethylhexyl) ether, lauryl methyl ether or octyl butyl ether, didodecyl ether or dibehenyl ether, preferably ethers derived from C18 plants being used.

[0250] Particularly preferably, linear or branched, saturated or unsaturated C6-C40 fatty alcohol carbonates are suitable as emollients. These compounds can be prepared by transesterification of dimethyl or diethyl carbonate with the corresponding hydroxy compounds by prior art methods; a review ofwhich can be found in Chem. Rev. 96, 951 (1996). Typical examples of dialkyl(ene) carbonates are complete or partial transesterification products of dimethyl carbonate and/or diethyl carbonate with caprylic alcohol, capryl alcohol, 2-ethylhexyl alcohol, capric alcohol, lauryl alcohol, isotridecyl alcohol, myristyl alcohol, cetyl alcohol, palmoleyl alcohol, stearyl alcohol, isostearyl alcohol, oleyl alcohol, elaidyl alcohol, petroselinyl alcohol, linolyl alcohol, linolenyl alcohol, elaeostearyl alcohol, arachidyl alcohol, gadoleyl alcohol, behenylalcohol, erucyl alcohol and brassidyl alcohol as well as their technical mixtures, which are obtained, for example, in high-pressure hydrogenation of technical methyl esters based on fats and oils. Dialkyl carbonates derived from C-18 vegetable oils are preferably used.

[0251] Other emollients suitable according to the invention are selected from the dicarboxylic acid esters oflinear or branched C2-C10 alkanols, in particular diisopropyl adipate, di-n-butyl adipate, di-(2-ethylhexyl)adipate, dioctyl adipate, diethyl sebacate/ di-n-butyl sebacate/dioctyl sebacate, diisopropyl sebacate, dioctyl malate, dioctyl maleate, dicaprylyl maleate, diisooctyl succinate, di-2-ethylhexyl succinate and di-(2-hexyldecyl)succinate.

[0252] Further suitable are emollients consisting of linear or branched, saturated or unsaturated fatty alcohols having 2-30 carbon atoms with linear, or branched saturated or unsaturated fatty acids having 2-30 carbon atoms, which may be hydroxylated.

Further emollients, are selected from the addition products of ethylene oxide and/or propylene oxide to mono- or polyvalent C3-20 alkanols such as butanol, butanediol, myristyl alcohol and stearyl alcohol, for example PPG-14 butyl ether, PPG-9 butyl ether, PPG-10 butanediol, PPG-3 myristyl ether and PPG-15 stearyl ether.

[0253] Preferably, emollients based on C-18 plants are used, such as vegetable oils and corresponding mono-/di- /triglyceride mixtures based on C6-C24 saturated and unsaturated fatty acids, esters of C6-C24 fatty alcohols and/or fatty alcohols with carboxylic acids or polyols, such as sugars with 2 to 10 carbon atoms and 2 to 6 hydroxyl groups.

In a preferred embodiment, no silicones are used.

Oils, fats and waxes

[0254] Typical examples of fats and oils are glycerides, i.e. solid or liquid vegetable or animal products consisting essentially of mixed glycerol esters ofhigher fatty acids. Waxes include, among others, natural waxes such as e.g. beeswax, brushing fat, candelilla wax, carnauba wax, ceresin, esparto grass wax, guaruma wax, Japan wax, cork wax, lanolin (wool wax), micro waxes, montan wax, ozokerite (earth wax), petrolatum, paraffin waxes, ouricoury wax, rice germ oil wax, shellac wax, sunflower wax, fruit waxes such as orange waxes, lemon waxes, grapefruit waxes, sugar cane wax, chemically modified waxes (hard waxes), e.g. Montan ester waxes, sasol waxes, hydrogenated jojoba waxes, hydrogenated castor oil and synthetic waxes such as polyalkylene waxes and polyethylene glycol waxes.

[0255] In addition to fats, fat-like substances such as lecithins and phospholipids can also be considered as additives. Examples of natural lecithins are cephalins. Sphingosines and sphingolipids are also possible. Furthermore, mixtures of the oils and waxes mentioned are also possible. Preferred in the invention are vegetable oils or triglycerides,such as can be isolated from plants of the temperate zones. Particularly preferred are oils of the plants and plant families as described in the application in the section "C18 plants".

[0256] The emollients may be present in the preparations according to the invention in an amount of 0.2 to 80% by weight, preferably amounts of 0.2 to 70% by weight, based on the total quantity of the preparation.

Pearlescent waxes

[0257] Suitable pearlescent waxes are, for example: Alkylene glycol esters, especially ethylene glycol distearate; fatty acid alkanolamides, partial glycerides, esters of polyvalent, optionally hydroxy-substituted carboxylic acids with fatty alcohols having 6 to 24 carbon atoms, fatty substances such as, for example, fatty alcohols, fatty ketones, fatty aldehydes, fatty ethers and fatty carbonates which in total have at least 24 carbon atoms; fatty acids such as stearic acid, hydroxystearic acid or behenic acid, ring-opening products of olefinic epoxides having 12 to 24 carbon atoms with fatty alcohols having 12 to 24 carbon atoms and/or polyols having 2 to 15 carbon atoms and 2 to 10 hydroxyl groups, and mixtures thereof.

[0258] Preferred according to the invention are pearlescent waxes based on C18 plants.

[0259] The amount of pearlescent waxes used - based on the total quantity ofthe preparation - may be 0.1 to 5, preferably 0.5 to 3 and in particular 1 to 1.5% by weight.

Further ingredients

[0260] In addition to the components mentioned so far, the preparations according to the invention may contain further usual ingredients for cosmetics, which are well known to the person skilled in the art.

[0261] The cosmetic and dermatological preparations according to the invention may accordingly further contain cosmetic excipients as are commonly used in such preparations; for example, desensitising additives (e.g. hydroxyapatite, arginine with calcium carbonate, stannous chloride, potassium chloride, strontium chloride, potassium nitrate and others), consistency enhancers, cationic polymers, film formers, superfatting agents, stabilisers, biogenic active ingredients, opacifiers, furthermore protein derivatives such as gelatine, collagen hydrolysates, amino acids, oligo- or polypeptides on a natural and synthetic basis, DNA or RNA oligonucleotides, polysaccharides containing deoxy sugars or deoxy sugar building blocks, creatine, xanthine derivatives, e.g. caffeine, theophylline, theobromine, or aminophylline; egg yolk, honey, lanolin and lanolin derivatives, substances with keratolytic and keratoplastic effect, enzymes and carrier substances, plant extracts, vitamins, provitamins and their esters, anti-ageing agents, fillers, pigments, suspending agents, buffer mixtures, surface-active substances, emollients, moisturising and/or humectant substances, anti-inflammatory substances, meristem active substances, flavonoids and flavonoid-rich plant extracts, isoflavonoids and isoflavonoid-rich plant extracts, ubiquinone and ubiquinone-rich plant extracts, silymarin, self-tanning active substances, hair-removing active substances and hair growth-stimulating or hair growth-regulating active substances, sebum regulating actives, skin whitening actives or whitening agents in toothpastes (e.g. phosphates or papain), sunscreens, insect repellents, bactericides, salts, antimicrobial or proteolytic active substances, drugs or other usual ingredients of a cosmetic or dermatological formulation such as alcohols, polyols, polymers, foam stabilisers, organic solvents or also electrolytes, as well as mixtures thereof.

[0262] These are preferably present in the preparation in an amount of 0.001 - 20% by weight.

Process

[0263] Another subject matter of the invention is directed to a process for cleaning and/or care.

Processes for cleaning and care are generally characterised by the fact that, in several process steps, differently active substances are applied to the body, of the body part, or to a substrate, e.g. a textile, a cloth, a brush, etc., and are washed off after the exposure time, or that the body, the mouth, the teeth, the hair, the fur or the skin is treated in some other way with the preparation according to the invention.

[0264] The cleaning and/or care process comprising the steps of:

a) providing a composition comprising a cleansing or care preparation according to the foregoing descriptions

b) contacting the body, teeth, gums, hair or fur with the cleaning or care preparation according to a).

[0265] In a further process, the preparation is applied to solid substrates, such as cloths made of textile, composite, non-woven, fleece, paper, cotton wool or felt, and others. These are impregnated with the preparation by a pressing, dipping, wiping or spraying process.

[0266] All facts, subjects and embodiments described for the preparation are also applicable to the cleaning and care process and their use, and vice versa.

Uses

[0267] The subject matter of this application is the non-therapeutic use of the preparations according to the invention as or for the preparation of cleaning and care products for body, mouth and teeth, skin and hair as well as for animal care.

[0268] As described above, the invention particularly relates to the use of the preparation for removing colour or carbohydrate stains.

[0269] In a preferred embodiment, the preparation is used in at acidic pH between 0 and 7, preferably between 1 and 6, and most preferably at a pH between 2 and 5.5. Surprisingly, the preparation according to the invention shows a markedly good suitability in acidic conditions. The preparation according to the invention is thus suitable for use in hair removers, medical products such as for example products against psoriasis or neurodermatitis, in particular for the prevention of the same, furthermore for hair colouring products and for use in the intimate area.

[0270] In another preferred embodiment, the preparation is used at neutral pH between 5 and 8, e.g. when a skin neutral pH is desirable, such as in a band soap, facial care, facial toner, eye makeup remover, makeup remover, shampoo, shower preparations, contact lens cleaning and others.

[0271] In another preferred embodiment, the preparation is used at alkaline pH between 7 and 14, preferably between 8 and 12. Typical examples of uses at alkaline pH are shaving soap, hair dye, soap-based skin cleanser.

[0272] The preparations according to the invention are used as or for the preparation of cleansing and care products, preferably as cosmetic, non-therapeutic dermatological or medical cleansing and/or care products which come into direct or indirect contact with the human body. These are for example: Showei preparations, bath additives, hand soaps, also for rough cleaning, hand pastes, intimate cleansing, cleansing of the eye area, contact lens cleansing, make-up remover, eye make-up remover, body cleansing, oral and dental care, hair shampoos, conditioning shampoos, anti-dandruff shampoo, baby shampoo, cleansing and care products for psoriasis, cleansing and care products for neurodermatitis, cleansing and care products for acne: in particulär for prevention, body, resp. facial tonic, facial lotion, wet wipes, also with caring or other active ingredients, e.g. deodorising, anti-ageing etc., hair removal and shaving products, hair tonics, hair colouring shampoos, hair colouring and hair styling preparations, oral care product (oral hygiene product), in particular in the form oftoothpaste, dental cream, tooth gel, tooth powder, tooth brushing liquid, tooth brushing foam, mouthwash, mouthwash concentrate, toothpaste and mouthwash as a 2-in-1 product, mouth spray.

[0273] Included according to the invention is animal care and cleaning.

[0274] For the purposes of this application, the preparation may be used as a liquid, solution or dispersion, emulsion, lotion, gel, spray or foam. For example, they may be a solution, an emulsion (0/W), or a multiple emulsion, for example ofthe water-in-oil-in-water (W/0/W) type, a gel, a hydrodispersion, a lamellar phase, a liquid isotropic solution phase or a micellar phase; the liquid or gel embodiment with water or organic solvent is preferred, and the aqueous embodiment is particularly preferred.

[0275] In this context, the preparations are suitable for dilute application, for direct application and for application via an auxilliary.

[0276] They can be formulated as leave-on or rinse-off products.

In a particularly preferred embodiment, the preparations according to the invention are rinse-off formulations. Modem rinse-off products often have a high content of conditioning agents, which may also consist of oil components. Consequently, these preparations may be in the form of emulsions.

[0277] Further aspects ofthe present invention will be apparent from the following examples and the appended patent claims.

Examples of embodiments:

[0278] In the examples, the surfactants are designated as follows. All concentration data refer to the active content of the ingredients in the entire preparation.

Surfactant Al: Alkoxylated fatty acid amide, Rapeseed PEG-4 amide, Kao
Biosurfactant 1: Sophorolipid Sophoclean, active, Soliance
Biosurfactant 2: Sophorolipid Soliance S, Soliance
Biosurfactant 3: Sophorolipid Sophogreen, Soliance
Biosurfactant 4: Rhamnolipid JBR 425 Jeneil
Biosurfactant 5: Mannosylerythritollipids via Ustilago maydis
Biosurfactant 6: Cellobioselipid via Ustilago maydis
Biosurfactant 7: Trehalose lipid via Rhodococcus

Carbohydrate washing power

[0279] Procedure: The washing power of carbohydrates was tested using a 1% surfactant solution in a sodium citrate/citric acid buffer at pH 5.5. For this purpose, a defined amount of sucrose/glucose mixture was compressed and dyed, placed in the test solution at 20°C and the time determined after which the tablet is completely dissolved without stirring or other mechanical action(= washing power).

[0280] Evaluation: For the comparative determination ofthe washing power of carbohydrates, the test series are each standardised to the washing power of a single surfactant. For comparability, biosurfactant glycolipid 1 was chosen as the standard in Table 1 and surfactant A as the standard for Table 2. The test value of the surfactant mixtures is given relative to the washing power of the standard, whereby the listed result is in each case the mean value of the individual results per test series (Table 1).

[0281] In Table 1, the results ofthe combination with biosurfactant 1 at pH= 3 for the carbohydrate dissolving power are disclosed as an example. Here, the carbohydrate dissolving power of the test solutions is based on the carbohydrate dissolving power of glycolipid biosurfactant 1 as 100%. For the comparative tests, cocamide DEA was chosen, a surfactant which comes closest to surfactant A in terms ofuse and behaviour. Cocamide DEA is derived from coconut or palm oil.

Table 1: Carbohydrate dissolving power at pH= 3. 1% surfactant solution

Carbohydrate dissolving power	1% solution biosurfactant 1	1% solution surfactant A resp. R	surfactant A resp. R combined with biosurfactant 1, 0.5 wt. % each
Surfactant A	100%	94%	108%
Surfactant R	100%	100%	93%

[0282] Result: Synergies are evident in the agent according to the invention in combination with surfactant A, while a negative synergy occurs with the coconut fatty acid surfactant R (deterioration of the cleaning performance by 7%).

[0283] The washing power for preparations at pH= 6 with additional biosurfactant glycolipid is shown as an example in Table 2.

Table 2: Synergistic washing power for carbohydrates 1% total surfactant concentration in citrate buffer, pH = 6, values relative to washing power of surfactant A

Carbohydrate dissolving power	**Surfactant A**	**Biosurfactant B**	**A:B=1:1**
Biosurfactant 2	100%	106%	123%
Biosurfactant 3	100%	106%	110%
Biosurfactant 4	100%	110%	125%

[0284] Result: All test solutions A: B according to the invention show an increased washing power on carbohydrates, which is clearly above the washing power of the individual components.

[0285] Further tests confirmed that the synergy is maintained even at a basic pH of 9.7. Combinations with A:B::; 2:1 are preferred. Likewise, the synergy is maintained after addition of the surfactants (C) or solvents or chelating agents according to the invention. Exemplary examples of some embodiments are disclosed in the uses.

Cleaning power dyes, pigments, make-up

[0286] Test procedure: The make-up is applied to the skin (arm or leg) of several test persons as a spot of approx. 1 cm diameter and dried for 5 min. Typical eye and face make-up was used as test substances (eye shadow L'Oreal, luminous; Mascara L'Oreal Volume Million Lashes extra black, water-soluble; Eraser Make-up, silicone base; Maybelline, Kajal Expression Maybelline). Subsequently, a cosmetic tissue is soaked with 1 ml test solution and the stain is wiped once without pressure and assessed. An attempt is then made to remove the stain completely. The tests are evaluated according to the following evaluation scale from O to 4 (Table 3) and statistically evaluated. The averaged and rounded results are shown in Table 4.

Table 3: Evaluation scale make-up remover

Rating scale	**Result with a single wipe**	**Necessary steps for complete removal**
4	Colour not dissolved	Not possible
3	Colour slightly dissolved, stripes	Vigorous rubbing with pressure necessary
2	Colour clearly dissolved	Light rubbing with pressure necessary
1	Colour almost completely removed	Gentle 2-3 times rubbing without pressure
0	Colour completely removed	Gentle rubbing 1 time without pressure

Table 4: Synergistic cleansing effect on make-up, total surfactant concentration 8% in water

	SurfactantA	Biosurfactant B	A/B1=l:1
Eye shadow	3	2	1
Make-up	3	3	2
Mascara (water-based)	2	4	1
Eyeliner Kajal	3	4	1
Total	2,75	3,25	1,25

[0287] Result: Surprisingly, a synergistic effect between surfactant A and biosurfactant B (here exemplarily biosurfactant Bl) is found. For all representative make-up categories, a significantly betler cleansing effect was found for the combination of both surfactants according to the invention. These results are particularly striking for mascara and eyeliner based on dyes and pigments, despite the different bases, water-soluble and fat-soluble. Even with make-up based on silicone, the effect is clearly visible.

Looking at the averaged overall result, the combination according to the invention ranks 1.5-2 evaluation points above the evaluation ofthe individual surfactants, this corresponds to an improvement ofthe overall cleansing effect of 30-40%.

[0288] The comparison with other biosurfactants yielded analogous results, e.g. the biosurfactant glycolipid 4 yields an overall result of 3.3 as an 8% solution, whereas the 1:1 mixture with surfactant (A) shows an overall washing power of 1.32. In further tests, it was further confirmed that the synergy for cleaning other colour or pigment stains, such as ballpoint pens, soil, etc., is also given on different surfaces. Some exemplary embodiments are disclosed.

Addition of a further alkoxylated surfactant (C)

[0289] Exemplary test results for makeup removal after the further addition of alkoxylated surfactant (C) are shown in Table 5. Total surfactant concentration here 12% in water, ratio surfactant (A) : biosurfactant glycolipid (B1) : surfactant (C) = 1:1:1, using biosurfactant 1 as an example.

Table 5: Cleaning effect on make-up after additional addition of a 3rd surfactant (C) to A/B1

	A/Bl=1:1	Almond Oil PEG-8 Esters	Peach Kernel Oil Glycereth-8 Esters	Rape seed methyl ester oxylate 7EO
Make-up	2	1	0	0
Total	1,25	1,38	1,25	0,81

Rating according to scale Table 3

[0290] Result: The addition of the 3rd surfactant significantly improves the cleaning effect on silicone-based make-up. It can be clearly seen that the

[0291] synergistic effect is maintained and the changes in the overall cleaning power vary only in a relatively small range.

[0292] Furthermore, the addition of a 3rd surfactant (C) increases the foam formation. As an example, the test results for foam height and foam stability after addition of alkoxylated surfactants (C) to a 1:1 mixture of surfactant (A) and biosurfactant glycolipid Bl are shown in Table 6. Total surfactant concentration here 3.5%, ratio surfactant (A) : biosurfactant glycolipid (B): surfactant (C) = 1:1:1, using biosurfactant 1 as an example. Foam formation is determined by directly measuring the foam height after shaking the test mixture. The indicated foam height is relative to the mixture surfactant (A)/biosurfactant 1 = 1:1 as 100%. The foam stability is determined by measuring the foam height after 15 min. The indicated foam stability is again relative to the foam height ofthe mixture surfactant (A)/biosurfactant 1 = 1:1 as 100% (Table 6).

Table 6: Increased foam formation and foam stability after adding surfactant (C) to A/B1

	Surfactant A	Bio-surfactant Bl	A/B 1 = 1:1	Almond Oil PEG-8 Esters	Peach Kernel Oil Glycereth-8 Esters	Rapeseed methyl ester oxylate 7EO
Foam formation	53%	100%	100%	133%	127%	120%
Foam stability	133%	0%	100%	217%	167%	217%

[0293] Result: The foam formation of the mixtures is improved by the additional addition of the 3rd surfactant. All tertiary mixtures are above 100%, i.e. they have a stronger foam formation than the binary mixture of surfactant (A) and biosurfactant-glycolipid (B). At the same time, all tertiary mixtures show significantly higher foam formation than the single surfactants. The binary mixture further demonstrates a positive effect with regard to foam formation compared to the single surfactants.

[0294] The foam-stabilising effect of surfactant (A) on surfactant mixtures is known. As expected, the foam stability of the biosurfactant is improved by surfactant A in the binary mixture (A)/(B). Surprisingly, however, the tertiary mixtures with surfactant (C) exceed the foam stability of the binary mixture by about twice.

Addition of a mild solvent

[0295] As an example, the test results for make-up removal for the synergistic mixture A/B in water and A/B in water with the further addition of mild solvents are shown in Table 7. Total surfactant concentration here 8% in water, solvents are 4% each; based on the total amount ofthe preparation, here shown with the example of biosurfactant 1. Evaluation according to the evaluation scale as indicated above.

Table 7: Cleaning effect on make-up after addition of an additional mild solvent to A/Bl

	A/Bl=l:1	Rapeseed methylester	Glycerol	Pentylen-glycol	Propandiol
Eye shadow	1	0	0	0	0
Total	1,25	1,10	1,38	1,19	1,20

[0296] Result: The addition of the mild solvent only slightly influences the synergistic overall cleaning effect on decorative cosmetics. However, an improvement is observed for individual colour categories, exemplarily eye shadow is disclosed here; the results are shown in Table 7. Part of the water is replaced by a solvent without influencing the synergistic effect. This is not self-evident insofar as the surfactant-water interactions are strongly controlled by hydrogen bonding, which is significantly altered by the addition of a solvent. It is known that this leads to altered solubilisation or dispersing properties, the characteristics and intensity of which, however, cannot be predicted a priori.

Addition of a chelating agent:

[0297] Exemplary test results for make-up removal for the synergistic mixture A/B1 in water and A/B1 in water after further addition of chelating agents are shown in Table 8. Total surfactant concentration here 8% in water, chelating agents at 4% each; based on the total amount ofthe preparation, using biosurfactant 1 as an example. Evaluation according to the evaluation scale (Table 3) as indicated above.

Table 8: Cleansing effect on make-up after further addition of a chelating agent to A/B1

	A/B1=1:1	Tetrasodium Glutamate Diacetate	Tetrasodium Iminodisuccinate
Eye shadow	1	0	0
Makeup	2	0	0
Total	1,25	1,00	1,13

[0298] Result: The addition of the chelating agent slightly improves the overall cleansing effect, as well as the cleansing performance on make-up (silicone-based) and eye shadow. It can be seen that the synergistic effect is maintained and the overall cleaning power is also slightly improved. This effect could generally be confirmed for colours and pigments, also on other substrates.

[0299] Furthermore, the addition of a chelating agent increases foam formation. As an example, the test results for foam height and stability after addition of chelating agents are shown in Table 9. Total surfactant concentration here 3.5%, the chelating agent is added to the mixture A/B, ratio surfactant (A): biosurfactant-glycolipid (B) = 1:1, in the example biosurfactant Bl. Foam formation is determined by directly measuring the foam height after shaking the test mixture. The indicated foam height is compared to the mixture surfactant (A)/biosurfactant 1 = 1:1 as 100%. The foam stability is determined by measuring the foam height after 15 min. The indicated foam stability is again compared to the foam height of the mixture surfactant (A)/biosurfactant B1 = 1:1 as 100% (Table 9).

Table 9: Increased foam formation and stability by adding additional chelating agents to A/B1

	Surfactant A	Biosurfactant Bl	A/Bl = 1:1	Tetrasodi um Glutamate Diacetate	Tetrasodium Imino-disuccinate
Foam formation	53%	100%	100%	233%	233%

Foam stability	133%	0%	100%	417%	417%

[0300] Result: The foam formation ofthe mixtures is significantly enhanced by the further addition of a chelating agent. The mixtures with chelating agent are above 200%, i.e. they produce about twice as much foam as the binary mixture of surfactant (A) and biosurfactant Bl.

[0301] In addition, the chelating agents have a foam-stabilising effect. As expected, the foam stability of biosurfactant (B) is improved by surfactant A in the binary mixture (A)/(B). Surprisingly, however, it turns out that the mixtures with an additional chelating agent exceed the foam stability of the binary mixture by about four times.

[0302] Furthermore, it was surprisingly found that the addition of chelating agent results in a clarification of the preparation. While the binary mixtures (A) and (B) are not transparent, even after addition of a further surfactant (C), the mixture with chelating agents, e.g. with tetrasodium glutamate diacetate or tetrasodium iminosuccinate, becomes transparent. This is often desirable for optical or marketing reasons.

Embodiments

[0303] Table 10 shows examples of shampoo preparations according to the invention, concentrations indicated in each case as active substance. Examples of shampoo 1-8, examples of conditioning shampoos 9-11.

[0304] Table 11 shows embodiments of body cleansing preparations according to the invention, concentrations indicated in each case as active substance. Examples of mild shampoo and shower gels/baby shampoo, tearless shampoos and intimate cleansing 12-15, examples ofhand washing pastes 16-18, foam and oil bath 19-20, hand soap 21-22.

[0305] Table 12 shows embodiments of facial preparations according to the invention, concentrations indicated in each case as active substance. Examples of facial milks and lotions, e.g. for facial cleansing or the removal of make-up or eye make-up, on a water or oil basis, as well as 2-phase mixtures, and for facial cleansing in the case of acne.

[0306] A further advantage of facial cleansing with biosurfactant glycolipids and surfactant A according to the invention is in particular that the preparations are not or only slightly foaming and, since the preparations according to the invention are not or only slightly irritating to the eyes, they can also be used for sensitive areas, as shown here by way of example for the removal of eye make-up.

[0307] Table 13 shows embodiments of rinse-off hair care preparations according tothe invention, concentrations indicated in each case as active substance. Examples ofhair conditioner 33, conditioner 34-35, hair <lyes and shampoos 36-40.

[0308] Table 14 shows embodiments of preparations according to the invention, preferably for wet wipes, concentrations indicated in each case as active substance. Examples of different cleaning wipes with actives 41-44, preparations with care ingredients 45-46, preparationsfor coarse cleaning with solvents 47-49, preparations for baby care and cleaning wipes50-53.

[0309] Table 15 shows embodiments of preparations for oral care and hygiene according to the invention. Concentrations indicated in each case as active substance. Examples for dental care products 54-58 and mouth wash 59-62. In addition to the low toxicology ofthe preparation according to the invention, a further advantage is the avoidance of sodium laureth sulphate as a common surfactant in the oral care sector, which shows incompatibility with some common cationic active ingredients, such as chlorhexidine.

[031O] Table 16 shows embodiments of preparations for shaving and hair removal according to the invention. Concentrations indicated in each case as active substance. Examples of shaving creams, shaving lotions, shaving soaps and 2-in-1 shaving & cleansing preparations

Table 10: Examples for shampoo (concentrations in wt.% active substance)

	1	2	3	4	5	6	7	8	9	10	11
Biosurfactant 1											1
Biosurfactant 2			2,5								
Biosurfactant 3	3,5			3,5	3,5			4			
Biosurfactant 4		2,5		1,5					4		
Biosurfactant 5						2,5				1	
Biosurfactant 6											
Biosurfactant 7							2,5				
Surfactant A	1,5	2,5	2,5	1,5	1,5	2,5	2,5	1	2	0,3	0,3
Oliveamido propyl betaine					2						
Brassicamidopropyl dimethylamine									1,5	2	2
Almond oil Glycereth-8-ester				0,5			2				
Saponin						2					
Brassica alcohol									0,4	0,5	0,5
Glycerol				0,5	0,5	0,5					
1,2-propanediol							0,5	0,5			
EDTA	0,2	0,2									
Zinc omadine	2	2									
Piroctone Olamine			2								
Tea tree oil					0,5	0,5					

Nettie Extract				2							
Rosmarinus Officinalis (rosemary) leaf extract							5	5			
Panthenol										0,1	0,1
Optional: thickener, perfume, preservative, silicones, pH adjuster, active ingredients											
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Table 11: Examples for body cleansing products (concentrations in wt.% active substance)

	12	13	14	15	16	17	18	19	20	21	22
Biosurfactant 1			5								
Biosurfactant 2		3					0,2				3
Biosurfactant 3							0,6				
Biosurfactant 4				6	6	6					
Biosurfactant 5									3		
Biosurfactant 6	3							4,5			
Biosurfactant 7										3	
Surfactant A	0,3	0,3	0,3	1,5	1,5	1,5	4	8	3	1,5	1,5
Sodium olive oil fatty acids							0,5			5	5
Sunflower oil PEG-20					4	4			5		
Oliveamido propylbetaine			2					2			
Sunflower oil Glycereth-8 ester			0,5	3	1,5	1,5			10		
Almond oil PEG-7 ester				2,5						2	
Ethoxylated rapeseed methyl ester (7EO)							5				
Apricot kernel oil									10		

Saponin		3									
Ethanol						7				2	
Glycerol				2,5						1	
1,2-propanediol		2		0,5							
Rapeseed methyl ester					0,3						
Soy methyl ester						0,3					
Limonene						0,5					0,1
Walnut shell flour					15						
Quartz sand							35				
Aloe Vera extract			0,1							0,2	
Hydrolysed wheat protein								4			
Lecithin									0,5		
Carboxymethyl cellulose					0,6	0,6					
Sodium carbonate							0,5				
Tetrasodium iminodisuccinate (IDS)						0,2					
Ethylenediamine-N,N'-disuccinic acid (EDDS)							0,2				
Panthenol		0,2	0,2								
Optional: thickener, perfume, preservative, silicones, pH adjuster, actives											
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Table 12: Examples for facial cleansing products (concentrations in wt.% active substance)

	23	24	25	26	27	28	29	30	31	32
Biosurfactant 1		3								
Biosurfactant 2	0,5									
Biosurfactant 3				0,3	0,3					

Biosurfactant 4							15	15		
Biosurfactant 5						5				15
Biosurfactant 6			3							
Biosurfactant 7									15	
Surfactant A	0,5	0,5	0,5	0,5	0,5		5	10	5	5
Apricot kernel oil				5	5					
Evening primrose oil							30		30	30
Cathamus tinctorius oil								40		
Almond oil				5	5					
Sunflower oil PEG-20										
Oliveamido propyl betaine										
Sunflower oil Glycereth-8 ester							30	20	30	30
Almond oil Glycereth-8 ester	1,75	5	5							
Alcohol denat.				20	20	20				
Glycerol	2			10	10		10		10	10
Pentylene glycol	6						5		5	5
1,2-Propanediol				5	5			5		
Limonene				0,001	0,001					
Aloe Barbadensis Gel	0,05			0,05	0,05					
Lecithin				0,5	0,5			0,5		
Hydrolyzed Wheat Protein				0,2	0,2					
Bentonite				0,1	0,1					
Panthenol		0,5	0,5	0,1	0,1					

Optional: thickener, perfume, preservative, silicones, pH adjuster, actives										
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Table 13: Examples for hair care products (concentrations in wt.% active substance)

	33	34	35	36	37	38	39	40
Biosurfactant 1		2						4
Biosurfactant 2				10				
Biosurfactant 3	0,5							
Biosurfactant 4					15			
Biosurfactant 5			2			15		
Biosurfactant 6							3	
Biosurfactant 7								
Surfactant A	2	0,5	0,5	5	5	5	0,5	2
Hydrolysed almond protein	0,6							
Hydrolysed wheat protein	0,2							0,2
Wheat germ oil PEG-8 ester	0,5	0,3	0,3					
Brassicamidopropyl dimethylamine		0,9	0,9	1,5	1,5	1,5		
Ethanol	10						7	
Glycerol								
Tocopherol	0,2							
Propylene glycol		2	2	5	5	5	2	

Almond oil PEG-7 ester				2	2	2		
Soybean oil PEG-20 ester				3	3	3		
p-Aminophenol				0,35	0,35	0,35		
p-Toluylenediamine				0,85	0,85	0,85		
2-methylresorcinol				0,14	0,14	0,14		
6-methyl-m-aminophenol				0,42	0,42	0,42		
Sodium sulphite				0,6	0,6	0,6		
Tetrasodium GLDA				0,2	0,2	0,2		
Ammonia (28%)				5				
Ethanolamine					3	3		
Herbasec Henna							5	
Beta Vulgaris root extract							0,2	
Juglans Regia peel extract								0,2
Mignonette Tree extract							0,4	0,2
Optional: thickener, perfume, preservative, silicone, pH adjuster, actives, other actives								
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Table 14: Examples of compositions for wet wipes and cleaning wipes (concentrations in wt.% active substance)

	41	42	43	44	45	46	47	48	49	50	51	52	53
Biosurfactant 1							5						
Biosurfactant 2	3		2		2								

Biosurfactant 3										3			
Biosurfactant 4		2		5		2		5			3		
Biosurfactant 5									5				
Biosurfactant 6													3
Biosurfactant 7												3	
Surfactant A	0,5	0,5	0,5	1	0,5	0,5	5	5	5	0,3	0,3	0,3	0,3
Olive oil glycereth-8 esters					3	3			10				
Rapeseed methyl ester								10					
Oenothera Biennis oil										10	10	10	10
Alcohol	25	40					40	40					
Glycerol							10		40	5	5	5	5
Pentylene glycol				ad 100									
1,2-Propanediol		3	ad 100		ad 100	5				2	2	2	2
Chitosan	0,2												
Glycolic acid	0,08	0,04											
Triethyl citrate		2											
Niacinamide			0,1	0,1									
Salicylic acid			0,1	0,1									
Aloe Barbadensis Gel										0,2	0,2	0,2	0,2
Hydroxy Propyl Methyl Cellulose	0,8												
Matrixyl Synthe 6					2								

Glycerol (and) Aqua (and) Malpighia Glabra (Acerola) Fruit Extract						3							
Dimethyl glutarate							40	40	40				
Potassium sorbate					0,1	0,2				0,2	0,2	0,2	0,2
Panthenol													
Optional: Thickener, Parfum, Preservative, Silicone, pH Adjuster, Actives													
Water	ad 100	ad 100	-	-	ad 100	ad 100				ad 100	ad 100	ad 100	ad 100

Table 15: Examples for oral care products (concentrations in wt.% active substance)

	54	55	56	57	58	59	60	61	62
Biosurfactant 1									
Biosurfactant 2	3					0,8			
Biosurfactant 3							0,5		
Biosurfactant 4		3							
Biosurfactant 5			3					0,5	
Biosurfactant 6				1,5					0,5
Biosurfactant 7					3				
Surfactant A	0,1	0,05	0,3	0,05	0,05	0,2	0,05	0,05	0,1
Glycerol	60	10			10		13		
Hydrated silica	20	25	25	25	25				
Sodium fluoride		0,2	0,1	0,2					0,2
Sorbitol		35	35	20	20				5
Sea salt			7						

Plant extracts (e.g. camomile, peppermint, myrrh, thyme, sage, etc.)	1,2		0,8			3,5			
Alcohol	0,3							15	
1,2-propanediol									5
Xanthan gum		1	0,8						
Hydroxycellulose		1		1,3	1				
Sodium gluconate		0,8							
Titanium dioxide		0,8							
Saccharin		0,7		0,1	0,5				0,2
Chitosan					0,1		0,1		
B-glucan					0,3				
Citrus Paradisi (Grapefruit) Peel Extract			0,1					0,2	
Saccharin		0,1		0,1					
Sodium benzoate		0,2				0,2			0,2
optional: flavourings, colourings, pH adjuster									
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Table 16: Example for shaving products and hair removal (concentrations in wt.% active substance)

	63	64	65	66	67	68	69
Biosurfactant 1				10			
Biosurfactant 2							0,3
Biosurfactant 3			3				
Biosurfactant 4	3,5						

Biosurfactant 5		6					
Biosurfactant 6					2		
Biosurfactant 7						2	
Surfactant A	1,5	3	1		5	1	0,3
Olive oil Fatty acids						5	
Sodium/potassium Olive oil soap	18						25
Monoethanolamine						1,3	
Evening primrose oil	5	10	0,3		0,5		
Arnica Oil		10					
Camellia Oleifera Seed Oil		10					
Oliveamido propyl betaine				3	2	2	
Brassicamidopropyl dimethylamine			0,5				
PEG-20 sun:flower oil					4		
Grape seed oil Glycereth-8 ester				1,5			
Saponin							
Brassica alcohol			0,5				
Glycerol	5		1	3		5	10
1,2-propanediol			2				
Sodium glucoheptonate						0,2	
Sodium glucuronate							0,2
Panthenol	0,5		0,05		0,2		

Allantoin	0,5		0,1				10
Aloe Vera					0,2		
Hydroxypropyl Methylcellulose						0,7	
Optional: thickener, perfume, preservative, silicones, pH adjuster, actives,							
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

List of raw materials used
[0311]
Cocamide DEA Rewomid DC 212 S, Evonik Industries
Xanthan Gum, Keltrol, CP Kelco
Panthenol, BASF
Tocopheryl Acetate, BASF
Sodium Lactate, Evonik Industries
Hydrolyzed Wheat Protein, Gluadin WLM, BASF
Climbazole Crinipan AD, Symrise
Octopirox Clariant
Zinc Pyrithione, Lonza
Glycerol, Cremer
Hydroxypropylmethylcellulose, Evonik
Oliveamidopropylbetaine, Soliance
Brassicoamidopropyldimethylamine, Kao
Saponins, Baja YE, Desert King
Almond oil- PEG glyceride ester, Mulsifan, Zschimmer & Schwarz
Peg-20 sunflower oil, Levenol, Kao
1,2-Propanediol, Dow
EDTA,Dow
Tea Tree Oil, Lucas Meyer
Nettle Extract, Phytotex Nettle, Crodarom
Rosemary Officinalis, Rosmary Eco, Provital
Sunflower oil Glycereth-8-ester
Soy methyl ester, Stepan
Limonene, Symrise
Walnut Shell Powder 40/100, Elementis Specialties
Carboxmethylcellulose, BASF
Tetrasodium Iminodisuccinate, Lanxess
Ethylenediamine-N,N-disuccinic acid, Natrlquest E30, Innospec
Apricot kernel oil, Refined Apricot Kernel Oil - BCE1021, Biocosmethic
Evening Primrose Oil, Refined Evening Primrose Oil - BCE1014, Biocosmethic
Cathamus Tinctorius Oil, Seatons Safflower Oil, Croda
Almond Oil, Refined Sweet Almond Oil - BCE1082, Biocosmethic
Aloe Barbadensis Gel, Aloe Vera Gel - Eco Provital Group
Lecithin, Bergasom sun 75, Berg & Schmidt
Bentonite, Gelwhite H, Eckart Effect Pigments

PEG-20 soybean oil
Hair <lyes, BASF
Sodium GLDA, Akzo Nobel
Herbasec Henna, Lipoid Cosmetics
Beta Vulgaris Root Extract, Day Moist CLR, CLR Chemisches Laboratorium Dr. Kurt Richter GmbH
Oenothera Biennis Oil, Organic Evening Prim.rose Oil - BCE1516, Biocosmethic
Chitosan, Marine Biopolymer, Lucas Meyer
Triethyl Citrate, Jungbunzlauer
Salicylic Acid, A& E Connock
Niacinamide, Lonza
Matrixyl Synthe 6, Sederma
Glycerin (and) Aqua (and) Malpighia Glabra (Acerola) Fruit Extract, Fruitliquid, Crodarom
Dimethyl glutarate, Solvay
Potassium Sorbate, Tri-K Industries
Hydrated Silica, Evonik
Sorbitol 70% Food Grade, Global Starch
Zinc lactate, Jungbunzlauer
Xylitol, Foodchem
Sodium Gluconate, Jungbunzlauer
Titanium dioxide, AEROXIDE<®> TIO2 P 25, Evonik Corporation Silica
Sodium saccharinate/ saccharine, I.H.C. Chempharm
Beta Glucan, Clariant
Citrus Paradisi (Grapefruit) Peel Extract, Solid Extract Grapefruit FR-O, Frutarome Industries Ltd.
Sodium Benzoate, I.H.C. Chempharm
Camellia Oleifera Seed Oil, Organic Camellia Oil - BCE1542, Biocosmethic
Sodium Glucoheptonate, Akzo Nobel

Krav EP 3290020

1. Kosmetik præparat indeholdende mindst et alkoxyleretfedtsyreamid (A) med formlen (I) og mindst en glycolipidbiosurfaktant (B) omfattende rhamnolipider med formlen (II), sophorolipider med formlerne (III), mannosylerythritollipider med formlen (IV) og cellobioselipider med formlen (V) og trehaloselipider med formlen (VI):

alkoxylerede fedtsyreamid (I)

(I) $R\text{-}CO\text{-}NH\text{-}(C_mH_{2m}O)_n\text{-}H$

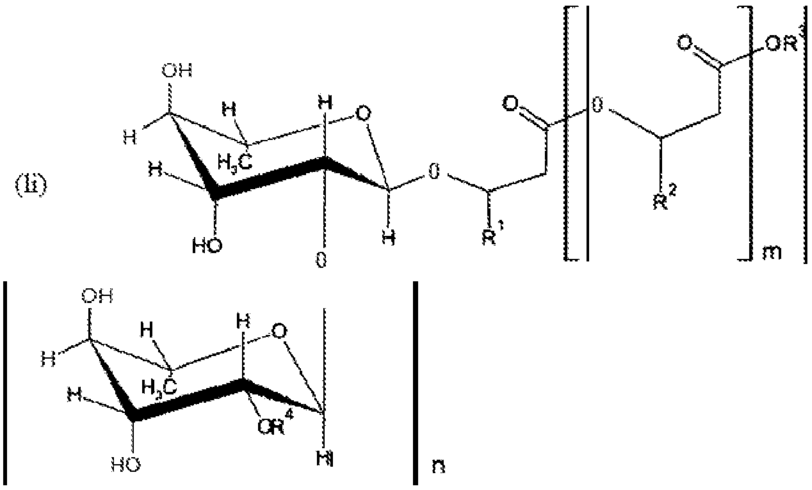
med
m hele nummeret 2 eller 3, fortrinsvis 2,
n et tal i området 2-10, fortrinsvis i intervallet 2-8,
R en mættet, mono- eller flerumættet kulbrinte med 5-23 carbonatomer;

og hvor overfladeaktive stof (I) er til stede som en blanding af forskellige kædelængder og mætningsniveauer af fedtsyreresterne RCO med en andel af RCO på 18 og flere carbonatomer over 60 vægt.-%, fortrinsvis over 72 vægt.-% og mest fortrinsvis på mere end 77 vægt.-%;
og hvor andelen af umættede fedtsyrerester RCO over 55 vægt.-%, fortrinsvis over 65 vægt.-% og særdelses fortrinsvis over 72 vægt.-% ligger,

til hver en tid baseret på den samlede andel af fedtsyrerester RCO i det overfladeaktive stof (I);
og hvor RCO er afledt af en vegetabilsk olie (her C-18 vegetabilsk olie) valgt fra gruppen omfattende: amarant, anis, æble, abrikos, argan, arnica, avocado, bomuld, borage, brændenælde, broccoli, canola, chia, hamp, hasselnød, bøg, buksbom, tidsel, spelt, jordnød, fladaks, lilla, karse, byg, granatæble, havre, hamp, hasselnød, blåbær, hyldebær, jasmin, ribs, perikum, jojoba, kamelia, kamille, kommen, gulerod, kirsebær, koriander, kongelys, crambe, korsvortemælk, græskar, iberisk dragehoved, lavendel, sæddodder, hørfrø, liguster, lupin, lucerne, macadamia, majs, mandel, marula, mirabelle, melon, valmue, mongongo, moringa, natlys, oliven, olieradise, oliearugula, passionsblomst, pekannød, fersken, blomme, pistacie, tranebær, purgernød Uatropha), raps, ris, ringblomst, rybs, saflor, salvie, havtorn, sort spidskommen, sesam, sesamblad, sennep, solsikke, soja, tobak, valnød, vindrue, hvede, engkarse og vildrose; og kombinationer heraf;

Rhamnolipid af formlen (Ii)

(Ii)



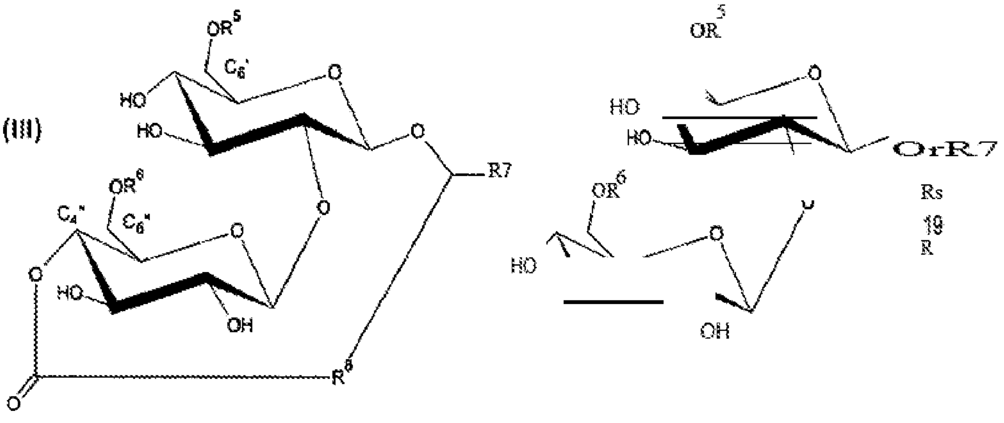
hvor:

m = 2, 1 elle
n = 1 eller 0,
R^1 og R^2 = uafhængigt af hinanden identisk eller forskelligt organisk radikal med 2 til 24 carbonatomer, især forgrenet eller lineær, mættet, enkelt, dobbelt eller tredobbelt umættet, eventuelt substitueret, især hydroxysubstitueret carbonhydridradikal, der fortrinsvis har 5 til 13 carbonatomer,

R^3 - CH_3, kation eller H, fortrinsvis H,
R^4 - H eller gruppen $CH_3(CH_2)_aCH=CH-CO$, med a et tal mellem 4 og 10, fortrinsvis H;

Sophorolipider af formlerne (III)

(III)



Ringform

Åben form

hvor:

R^5 og R^6 uafhængigt af hinanden H eller acetylgrupper,
R^7 er H eller mættet eller umættet, hydroxyleret eller ikke-hydroxyleret carbonhydridkæde med

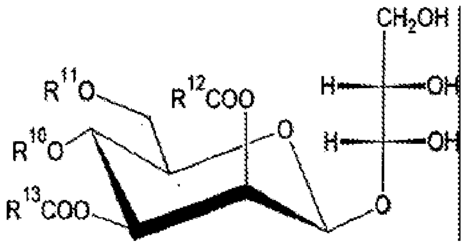
1-9 carbonatomer, fortrinsvis CH_3,

Ra er en mættet eller umættet, hydroxyleret eller ikke-hydroxyleret, lineær eller forgrenet carbonhydridkæde med 1-22 carbonatomer,

R^9 er COO(CH $_2$)mCH $_3$ med m mellem 0 og 3 eller COOH eller et kationisk salt deraf,

Mannosylerythritollipider af formlen (IV)

(IV)

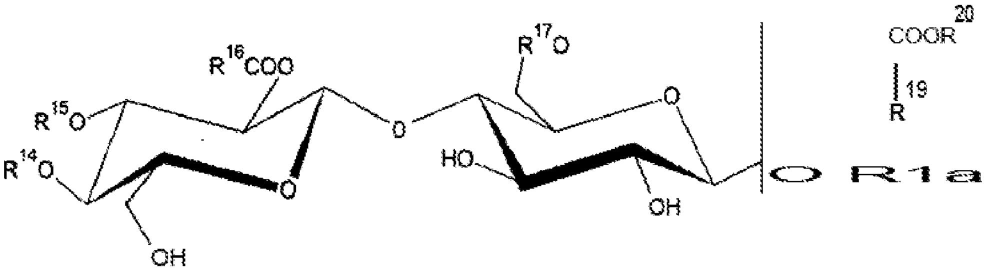


hvor

R^{10} und R^{11} uafhængig af hinanden er H oder -$COCH_3$,

R^{12} og R^{13} uafhængig af hinanden, lineære eller forgrenede C_1 til C 23, foretrukket C_1 til C_{11}, og især foretrukket C_7 til C_{15}alkylgrupper; eller lineære eller forgrenede C_2 til C 23, foretrukket C2 til C 17, og især foretrukket C_7 til C_{15} alkenylgrupper; eller lineære eller forgrenede C_5til C 23, foretrukket C_5til C 17, og især foretrukket C_7 til C_{15}alkadienylgrupper; eller lineære eller forgrenede Ca til C 23, foretrukket Ca til C 17, og især foretrukket Ca bis C_{15}alkatrienylgrupper;

Cellobioselipid af formlen (V)



(V)

R^{14}, R^{15}og R^{17} uafhængigt; (V) n H eller -COCH3,

R^{16} er en mættet eller umættet ,hydroxyleret eller ikke-hydroxyleret kulbrinte mit 5 bis 23 carbonatomer, eller - CH_3, foretrukket - CH_3 eller CHr CH(OH)-(CH2)n- CH_3 med n= 2-4,

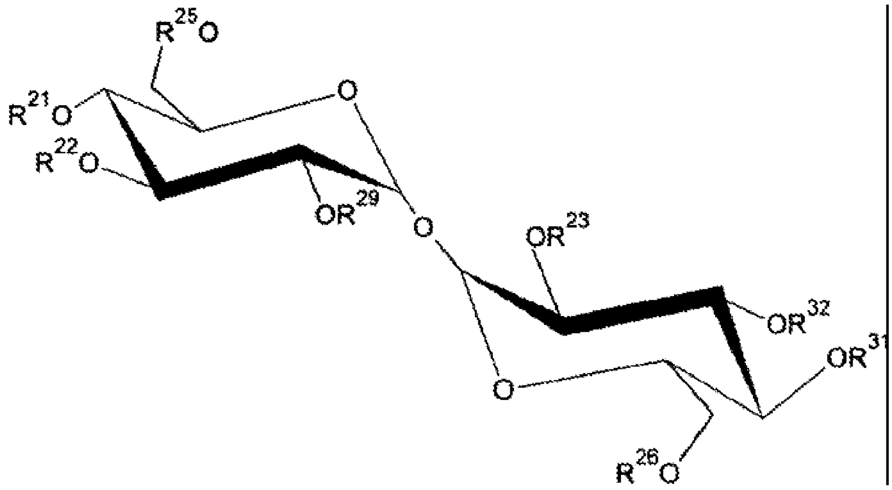
Ra^1 er Heller-OH,

R^{19} er en mættet eller umættet, hydroxyleret eller ikke-hydroxyleret kulbrinte med-9 bis 21 kulstofatomer, fortrinsvis 13 carbonatomer, især foretrukket -(CH_2)n-CH(OH)- mit n= 12,

R^{20}= H eller en kation.

Trehaloselipid af formlen (VI)

(VI)



R^{21}, R^{22}, R^{31} og R^{32}= hver uafhængigt af hinanden hydrogen eller COR^{27} med R^{27} mættet eller umættet, hydroxyleret eller ikke-hydroxyleret carbonhydrid med 5 til 23 carbonatomer,

R^{25} og R^{26} hver uafhængigt af hinanden hydrogen eller COR^{28} med R^{28} mættet eller umættet, forgrenet eller uforgrenet, hydroxyleret eller ikke-hydroxyleret carbonhydrid med fra 5 til 23 carbonatomer eller
R^{28} = CH[(CH2)cCH3] CHOH(CH2)dCH3 med c+d = 27,

R^{29} og R^{23} hver uafhængigt af hinanden hydrogen eller COR^{30} med R^{30} mættet eller umættet, forgrenet eller uforgrenet, hydroxyleret eller ikke-hydroxyleret carbonhydrid med fra 5 til 23 carbonatomer eller R^{30} = $(CH)2COOR^{24}$ med R^{24}= H eller kation.

2. Præparat ifølge krav 1 kendetegnet ved, at det mindst ene alkoxyleret overfladeaktive stof (A) er indeholdt som en blanding af forskellige kædelængder og mætningsniveauer af fedtsyrerester RCO, hvor andelen af mættet og umættede fedtsyrerester RCO med 20 eller flere carbonatomer
> 0,01 vægt.-% og især fortrinsvis> 0,05 vægt.-% og meget særligt> 0,1 vægt.-% og meget fortrinsvis> = 0,2 vægt.-%, baseret på den samlede andel fedtsyrerester RCO i det overfladeaktive stof (A).

3. Præparat ifølge et af de foregående krav, der yderligere indeholder mindst et yderligere overfladeaktive stof (C) valgt fra gruppen bestående af de alkoxylerede fedtsyreestere, de alkoxylerede fedtsyreglyceridestere og de alkoxylerede vegetabilske olieestere med formlen (VIII) eller i hvert tilfælde blandinger deraf;

hvor

$(VIII)\ RCO\text{-}O(C_mH_{2m}O)_o\text{-}\{CH_2\text{-}CH[O(C_mH_{2m}O)_pR'']\text{-}CH_2O\}_w\text{-}(C_mH_{2m}O)_q\text{-}R'''$

m er 2, 3 eller 4,

o, p, q er uafhængigt af hinanden tal fra 0 til 75, hvor o + p + q /- 0, med en total grad af alkoxylering x = 2-75,

R" er H, eller COR,

R"' er H, COR eller et lineært eller forgrenet alkylradikal med 1-8 C-atomer,

w er 0 eller 1;

og hvor det overfladeaktive stofeller de overfladeaktive stoffer (C) er til stede som en blanding af forskellige kædelængder og mætningsniveauer af fedtsyreresterne RCO, og RCO er afledt af en C-18 vegetabilsk olie med R og RCO som defineret i formel (I).

4. Præparat ifølge et af de foregående krav, der yderligere indeholder et eller flere chelateringsmidler.

5. Præparat ifølge et af de foregående krav, der yderligere indeholder et eller flere organiske opløsningsmidler

6. Præparat ifølge et af de foregående krav, kendetegnet ved, at andelen af overfladeaktive stoffer bestående af overfladeaktive stof (A), det overfladeaktive stof (C) og eventuelt overfladeaktive stoffer (D) og (E), med det forbehold at det overfladeaktive stof eller overfladeaktive stoffer (D) og (E) af afledt af en C-18 vegetabilsk olie, og biosurfaktant glycolipider (B) i alt 30 vægt-%, fortrinsvis 60 vægt.-%, mere fortrinsvis 95 vægt.-% og mest fortrinsvis 99 vægt.-%, er baseret på det samlede indhold af overfladeaktive stoffer i vægt.-% i de præparatet.

7. Præparat ifølge et af de foregående krav, kendetegnet ved, at overfladeaktive stof (A) er PEG-4 rapsfrøamid.

8. Præparat ifølge et af de foregående krav, kendetegnet ved, at glycolipidbiosurfaktant(er) (B) er en sophorolipid og/eller en rhamnolipid.

9. Præparat ifølge et af de foregående krav, kendetegnet ved, at det blev påført et substrat efter en proces ved påsmøring, sprøjtning og / eller nedsænkning.

10. Rengørings- og plejeprocedurer omfattende procestrinnene:

a) Fremstilling af et rengørings- og plejemiddel omfattende et præparat ifølge et af de foregående krav 1-9

b) Direkte eller indirekte kontakt af en overflade, især tænder, tandkød, hår, hud og pels, med rengørings- og plejemiddel i henhold til (a).

11. Ikke-terapeutisk anvendelse af præparatet ifølge et hvilket som helst af de foregående krav 1-9 som et kosmetisk middel til kropsrensning og pleje og mundhygiejne.