hexandiol, 1,2-octandiol, 1,8-octandiol, methyl propane diol, ethyl hexyl glycerine and/or hexylene glycol that is different from a),

c) 0.5 to 10% w/w, preferably 1 to 5% w/w, and particularly preferably 1.5 to 3% w/w of at least one alcohol selected from lauryl alcohol, cetyl alcohol and/or stearyl alcohol,

d) 0.1 to 5% w/w, preferably 0.2 to 3% w/w, and particularly preferably 0.3 to 2% w/w of at least one further compound selected from bisabolol, and/or phenoxy ethanol, alpha-tocopherol, 1,2-tropolone and/or phenethyl alcohol,

e) 1 to 25% w/w, preferably 2 to 15% w/w, more preferably 4 to 12% w/w of an emulsifier mixture consisting of a combination of polyolpoly-12-hydroxy stearates with an alkyl and/or alkylene glucoside and a fat alcohol and/or partial glycerindene and possible further co-emulsifiers, particularly preferably at least one ethoxylated dipolyhydroxy stearate,

f) 30 to 90% w/w, preferably 50 to 85% w/w, more preferably 60 to 80% w/w, and particularly preferably 68 to 78% w/w water,

g) further components in a quantity of 100% w/w - (sum of the quantities of components a) to f)),

whereby the % w/w each relate to the total weight of the skin protection agent and add up to the sum of all component weights (% w/w), i.e. 100% w/w.

The skin protection agents according to the invention can comprise further optional components normally used in cosmetic and/or dermatologic formulations. Preferred further components can be selected from the group of fragrances and perfumes, preservatives and/or pH adjusting agents such as for example aqueous sodium hydroxide.

The skin protection agents according to the invention can comprise further components for adjustment purposes, which serve for the treatment, care, cleaning and the protection of the skin, such as for example active cosmetic skin substances (active ingredients). The term active cosmetic skin substances in the sense of this invention includes, for example, ceramides, pseudoceramides, protein hydrolysates of a vegetable or animal origin on a keratin basis, collagen, elastin, wheat, rise, soya, milk, silk, maize, amino acids and amino acid derivatives, inflammation inhibiting active substances, anti-microbial active substances, common antioxidants, vitamins,

CLAIMS

1. Skin protection agent, in the form of a water - in oil- in water (W/O/W) emulsion, comprising:
   a) at least one aliphatic unbranched diol with 2 to 4 carbon atoms in the hydrocarbon chain;
   b) at least one further branched or unbranched aliphatic diol with 4 to 12 carbon atoms in the hydrocarbon chain that is different from a), whereby the hydrocarbon chain may be interrupted by an oxygen atom;
   c) at least one single-value aliphatic alcohol with 12 to 30 carbon atoms in the hydrocarbon chain.

2. Skin protection agent according to claim 1, characterised in that the same comprises at least one further compound d) in addition to a), b) and c), which carries at least one OH function.

3. Skin protection agent according to one of the claims 1 or 2, characterised in that the diols of component a) are selected from at least one aliphatic, unbranched diol with 2 to 4 carbon atoms in the hydrocarbon chain, and with two functional OH groups that comprise no further functional groups.

4. Skin protection agent according to one of the claims 1 to 3, characterised in that the diols of component b) are selected from: 1,2-alkan diols with 6 to 12 carbon atoms; and/or 1,3-alkan diols with 4 to 12 carbon atoms; and/or α-ω-alkan diols with 6 to 12 carbon atoms; and/or monoalkyl glycerines with 4 to 12 carbon atoms.

5. Skin protection agent according to one of the claims 1 to 4, characterised in that the alcohols of component c) are selected from linear, saturated, preferably primary alkanols with 12 to 30 carbon atoms in the hydrocarbon chain.

6. Skin protection agent according to one of the claims 1 to 5, characterised in that it further comprises component d), and in that compounds of component d) are selected

from compounds that comprise at least one unsaturated hydrocarbon ring with 6, 7 or 8 carbon atoms.

7. Skin protection agent according to one of the claims 1 to 6, characterised in that it comprises a combination of components a) 1,2-propandiol, b) a mixture of 1,2-hexandiol and 1,2-octandiol, c) ceteary alcohol and optionally a compound of the component d), preferably at least bisabolol.

8. Skin protection agent according to one of the claims 1 to 7, characterised in that it further comprises an emulsifier mixture e) consisting of a combination of polyolpoly-12-hydroxy stearates with an alkyl and/or alkylene glucoside and a fat alcohol and/or partial glycerindene and possible further co-emulsifiers, particularly preferably at least one ethoxylated dipolyhydroxy stearate.

9. Skin protection agent according to one of the claims 1 to 8, characterised in that it comprises:

a) 0.2 to 10% w/w of at least one aliphatic, unbranched diol with 2 to 4 carbon atoms in the hydrocarbon chain;

b) 0.1 to 1.9% w/w of at least one further aliphatic diol with 4 to 12 carbon atoms in the hydrocarbon chain that is different from a);

c) 0.5 to 10% w/w of at least one single-value aliphatic alcohol with 12 to 30 carbon atoms in the hydrocarbon chain;

d) 0.1 to 5% w/w of at least one further compound with 3 to 30 carbon atoms that carries at least one OH function;

e) 1 to 25% w/w of an emulsifier mixture selected from: PEG-30 glyceryl cocoate, PEG-6 caprylic/capric glyceride, sorbitan sesquicaprylate, sucrose cocoate, isoamyl cocoate polyglyceryl-3 caprate, PPG-3 myristyl ether, PPG-11 stearyl ether, cetearyl isononanoate, cetyl ethyl hexanoates, caprylic/capric triglyceride, decal cocoates, diethylhexyl carbonate, decyl oleate, PPG-15 stearyl ether, octyl dodecanol, isocetyl palmitate, isohexadecane, cetearyl ethyl hexanoate, isopropyl myristate, oleyl erucate, ethyl hexyl palmitate, ethyl hexyl stearate, isopropyl palmitate, PPG-14 butyl ether, triisostearine, C12-15 alkyl benzoate, cetyl ricenoleate, glyceryl ricenoleate, glyceryl

stearate, isocetyl palmitate, isocetyl stearate, tocopheryl linoleate, methylheptyl isostearate and mixtures of the same;

f) 30 to 90% w/w water; and

g) further components of a quantity of 100% w/w - (sum of quantities of the components a) to f));

whereby the % w/w each relate to the total weight of the skin protection agent and add up to the sum of all component weights (% w/w), i.e. 100% w/w.

10. Skin protection agent according to one of the claims 1 to 9, characterised in that it comprises:

a) 0.2 to 10% w/w of at least one diol selected from: 1,2-propandiol; 1,3-propandiol; 1 ,2-ethandiol; 1,2-butandiol; 1,3-butandiol and/or 1,4-butandiol;

b) 0.1 to 1.9% w/w of at least one further aliphatic diol selected from: 1,2-hexandiol; 1,3-hexandiol; 1,6-hexandiol; 1,2-octandiol; 1,3-octandiol; 1,8-octandiol; 1,2-decandiol; 1,10-decandiol; 1,2-dodecandiol; glyceryl caprylate; methyl propane diol; ethyl hexyl glycerine; hexylene glycol that is different from a);

c) 0.5 to 10% w/w of at least one alcohol selected from: lauryl alcohol; cetyl alcohol; stearyl alcohol; ceryl alcohol and/or myricyl alcohol;

d) 0.1 to 5% w/w of at least one further compound selected from: bisabolol; 1,2-tropolone; capryl hydroxamic acid; glycerine; phenoxy ethanol; alpha-tocopherol; phenethyl alcohol and/or trideceth-8;

e) 1 to 25% w/w of an emulsifier mixture consisting of a combination of: polyolpoly-12-hydroxy stearates with an alkyl and/or alkylene glucoside and a fat alcohol and/or partial glycerindene and possible further co-emulsifiers; particularly preferably at least one ethoxylated dipolyhydroxy stearate;

f) 50 to 85% w/w water;

g) further components of a quantity of 100% w/w - (sum of quantities of the components a) to f));

whereby the % w/w each relate to the total weight of the skin protection agent and add up to the sum of all component weights (% w/w), i.e. 100% w/w.

11. Skin protection agent according to one of the claims 1 to 10, characterised in that it is free from preservatives, whereby components a), b) and c) are not included under the term preservatives.

12. Methods for the production of stable multiple emulsions according to one of the claims 1 to 11, comprising the components of:
a) at least one aliphatic unbranched diol with 2 to 4 carbon atoms in the hydrocarbon chain;
b) at least one further aliphatic diol with 4 to 12 carbon atoms in the hydrocarbon chain that is different from a), whereby the hydrocarbon chain may be interrupted by an oxygen atom; and
c) at least one single-value aliphatic alcohol with 12 to 30 carbon atoms in the hydrocarbon chain; and
d) optionally at least one further compound with 3 to 30 carbon atoms that carries at least one OH function.

13. Use of a combination of:
a) at least one aliphatic unbranched diol with 2 to 4 carbon atoms in the hydrocarbon chain;
b) at least one further branched or unbranched aliphatic diol with 4 to 12 carbon atoms in the hydrocarbon chain that is different from a), whereby the hydrocarbon chain may be interrupted by an oxygen atom;
c) at least one single-value aliphatic alcohol with 12 to 30 carbon atoms in the hydrocarbon chain; and
d) optionally at least one further component that carries at least one OH function,
in a skin protection agent for the stabilisation of W/O/W emulsions.