United States Patent Office 2,898,269 Patented Aug. 4, 1959

2,898,269

COSMETIC LOTION

Günter Felletschin, Dusseldorf-Wersten, Germany, assignor to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany

No Drawing. Application January 14, 1954
Serial No. 404,121

Claims priority, application Germany January 22, 1953

3 Claims. (Cl. 167—90)

The present invention relates to cosmetic preparations.

It has been discovered that vary valuable preparations for cosmetic purposes can be obtained by the incorporation, in a base, of higher molecular branched primary aliphatic alcohols or a mixture of such alcohols. These may for instance be obtained by condensing aliphatic alcohols in the presence of an alkali according to the Guerbet reaction (M. Guerbet, Compt. rend. 128, 511 (1899)).

These alcohols are distinguished by having a considerably lower turbidity point than alcohols with a straight chain, that they are insensitive to alkali, and that they are stable even upon long-time storage, i.e. they do not exhibit any change in odor or any tendency to rancidity. Consequently, the alcohols are adapted for the use as solvents for perfumes and other active substances, as bases for ointments, as thickening agent in the production of cosmetic preparations, and the like.

It is a further advantage that these compounds impart to preparations made therewith a particular suppleness and lubrication. They are capable of fixing the active substances and perfumes which are contained in the preparations, more particularly after they have been applied to the body.

In the preparation of the higher molecular branched alcohols I may start from natural or synthetic fatty acids with a chain length of C_4 or over, preferably a chain length of C_8–C_{18}; these are subjected to catalytic reduction which yields the corresponding straight-chain alcohols. The latter are then condensed in the presence of alkalies to the corresponding branched alcohols. The condensation may be carried out on a single alcohol or a mixture of alcohols of different chain length. In this way, a large variety of different products may be obtained, which vary in consistency and turbidity point.

As examples for such alcohols, I may name the following: 2-ethylhexanol, 2-butyloctanol, 2-hexyldecanol, 2-octyldodecanol, 2-decyldodecanol, 2-hexyloctadecanol, or the like, or mixtures thereof. Accordingly the alkyl group in the 2 position may vary from ethyl-2 carbon atoms, to decyl-10 carbon atoms in the primary aliphatic chain varying upwards from hexanol-6 carbon atoms.

Another method for obtaining higher molecular branched primary alcohols consists for instance in converting higher molecular polymer olefins, such as polymerization products of propylene, isobutylene and the like, into primary alcohols by way of oxosynthesis.

The cosmetic preparations to which the branched alcohols may be added, include soap preparations for cosmetic purposes, such as toilet soap, shaving preparations, hair lotions, hair shampoos, and the like; other preparations for grooming the hair, such as lotions, oils, fixatives, dyeing preparations, permanent wave preparations, depilatories, toilet water, after-shave lotion, skin oils and creams, ointments of all kinds, deodorants, insect repellents, and so on.

The amounts in which the branched alcohols may be used in the above described cosmetic preparations, depend largely on the respective field of application. In general, amounts from 0.5 to 35% will be used, in skin creams and ointments from 5–30%, in shampoos for instance 0.5–5%, in shaving sticks or creams 1–20%, in permanent wave preparations, more particularly in setting solutions, 0.5–10%.

It is possible to add the higher molecular branched alcohols to the cosmetic preparations while compounding the same; however, they may also be added to the finished cosmetic preparations.

The invention will now be described in a number of examples, but it should be understood that these are given by way of illustration and not of limitation and that many changes in the details may be made without departing from the spirit of the invention.

The parts are by weight.

Example 1

Liquid vanishing cream:
- 10% paraffin oil
- 10% 2-hexyldecanol
- 10% triethanolamino stearate
- 69% distilled water
- 1% perfume

Example 2

Cold cream:
- 14% mixture of saturated higher molecular fatty alcohols with 10% sodiumalkylsulfate (alkyl radicals C_{14}–C_{18})
- 7% 2-decyldodecanol
- 7% glycerol
- 72% distilled water

Example 3

Skin oil:
- 10% paraffin oil
- 20% almond oil
- 69% 2-butyloctadecanol
- 1% perfume

Example 4

Powder:
- 50% talcum
- 40% kaolin
- 5% magnesium stearate
- 1% zinc oxide
- 4% 2-decyldodecanol

Example 5

Hair oil:
- 50% 2-hexyldecanol
- 30% paraffin oil
- 20% isopropyl alcohol
- 0.5% perfume

Example 6

Hair oil:
- 10% 2-hexyldecanol
- 70% paraffin oil
- 30% isopropylalcohol
- 0.5% perfume

What I claim is:

1. An aqueous liquid cosmetic lotion comprising (1) a cosmetic softening liquid selected from the group consisting of paraffin oil, almond oil and glycerol; (2) a detergent material selected from the group consisting of triethanolamine stearate and a sodium alkyl sulfate having from 14 to 18 carbon atoms in the alkyl group of said sulfate; (3) water; (4) a fixative providing a storage stable lotion resistant to alkali and to change of odor or rancidity on standing, said fixative consisting of a 2 alkyl substituted primary aliphatic alcohol having from

6 to 18 carbon atoms in the aliphatic hydrocarbon chain of said primary alcohol, said alkyl group in the 2 position having from 2 to 10 carbon atoms.

2. The cosmetic lotion of claim 1 in which said softening liquid is glycerol in amount of 7% of the total weight of the lotion, said detergent material is sodium alkyl sulfate in an amount of 10% by weight of said lotion, and said fixative is 2-decyldodecanol in an amount of 7% by weight of said lotion.

3. The cosmetic lotion of claim 2 containing a small amount of perfume.

References Cited in the file of this patent

UNITED STATES PATENTS

2,609,397	Gresham	Sept. 2, 1952

FOREIGN PATENTS

874,751	France	June 25, 1940
476,261	Germany	May 13, 1929

OTHER REFERENCES

Gregory: Uses and Applications of Chem. and Related Materials, Reinhold Pub. Co., N.Y., 1939, vol. 1, pp. 164, 165; vol. 2, 1944, pp. 236, 237.

Wertheim: Textbook of Organic Chem., Blakiston Co., Phil., 2nd ed., 1945, p. 107.

Goodman: 100 Dermatologic Formulas, Med. Lay Press, N.Y., 1949, p. 35.

Spalton: Pharm. Emulsions, The Chemist and Druggist, London, 1950, pp. 12, 13.

J. Am. Pharm. Asso., vol. 38, 1949, pp. 283–286.

Mastagli: Chem. Abst., vol. 33, 1939, p. 1292.

Mfg. Chem., April 1935, p. 129.