

Patented Nov. 23, 1937

2,100,090

UNITED STATES PATENT OFFICE

2,100,090

COSMETIC PRODUCTS

Fritz Sommer, Berlin-Charlottenburg, and Max Nassau, Berlin-Wilmersdorf, Germany, assignors to firm: Chemische Fabrik Grünau Landshoff & Meyer A. G., Berlin-Grünau, Germany, a company of Germany

No Drawing. Application September 18, 1935, Serial No. 41,024. In Germany September 20, 1934

15 Claims. (Cl. 167—90)

The invention relates to cosmetic products, such as toilet soap, liquid soaps, hair-washing agents, shaving soaps, shaving creams, salves, creams, toothpastes, and similar products.

The cosmetic products according to the invention contain albumen decomposition products of high molecular weight acylated at the nitrogen with higher fatty acid residues.

As higher fatty acid residues there come into consideration those that contain eight or more carbon atoms, preferably however the saturated or unsaturated fatty acid residues with 12-18 carbon atoms such as are contained in the natural fatty acids. Accordingly for example suitable substituents of the albumen decomposition products of high molecular weight are the residues of the following acids: lauric acid, palmitic acid, stearic acid, oleic acid, ricinoleic acid, soyabean acid, linoleic acid, linolenic acid, the acids of talloil.

As albumen decomposition products of high molecular weight there come into consideration chiefly those of the type of lysalbinic acid and protalbinic acid.

The new cosmetic products have numerous advantageous properties on account of the content of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues. Thus for example the soaps according to the invention can be used also without difficulty in hard water, because the albumen decomposition products of high molecular weight acylated at the nitrogen with higher fatty acid residues are not only themselves lime-stable, but also permit a better emulsification of lime soap. The emulsifying property of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues is especially very strongly marked. Precisely on account of this property, these compounds are suitable as additions to salves, creams, and toothpastes, if desired with other salve bases which are known per se.

It is further of importance that the lathering power of the soap is not reduced by the albumen decomposition products of high molecular weight acylated at the nitrogen with higher fatty acid residues. Therefore the new products are suitable as additions to soaps of all kinds, for example also as an addition to shaving soap. Since the albumen decomposition products of high molecular weight acylated at the nitrogen with higher fatty acid residues are somewhat hygroscopic, the lather of soaps that contain this addition is less inclined to dry up than the lather of

ordinary shaving soap. When the shaving soap containing the addition according to the invention is made with a sufficiently large addition of water, there is obtained a stable and non-decomposing shaving cream in consequence of the great emulsifying capacity of the albumen decomposition products of high molecular weight acylated at the nitrogen with higher fatty acid residues.

The said acylated albumen decomposition products have also proved very satisfactory as an addition to liquid soaps. By means of this addition the liquid soaps are sometimes somewhat thickened; if it is desired to counteract this, sulphonated oils may also be added to the liquid soap.

The said albumen decomposition products are also suitable as hair washing agents or as additions to hair washing agents. If it is desired to avoid the presence of soap there may be obtained a well-lathering and soap- and alkali-free hair washing agent. For the making of emulsions, such as are used for example for salves and creams, the acylated products can be used directly. If on the contrary it is desired to have a clear solution, there are advantageously used the water-soluble alkali or ammonium salts of the acylated products.

The production of the albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues is effected in a known way by causing the halides of higher fatty acids to react in alkaline solution with albumen decomposition products. By carrying out this reaction in a suitable concentration there is obtained a viscous oil which is an approximately 30 per cent solution of the alkali salts of the albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues. Quite neutral-reacting products can be obtained by correct measuring of the amount of alkali or by supplementary addition of acid or buffer salts.

The following examples may serve to illustrate the invention:—

Example 1

30 grammes of fatty acid with an average acid number of 222 and an average iodine number of 30 are converted into the potassium salt by means of caustic potash. With this are mixed 5 grammes of potassium oleyl-lysabinate, which is dissolved in 10 grammes of water. Finally the mixture is made up to 100 grammes with water, and perfumed. There is thus obtained a heavily

lathering shaving cream the lather of which has no tendency to dry up.

Example 2

- 5 To 100 parts of an ordinary liquid hair soap there are added 8 parts of a 30 per cent solution of the condensation product of soya fatty acid chloride and lysalbinic acid and two parts of a sulphonated castor oil. The liquid soap provided
10 with this addition is quite lime-stable.

Example 3

- 10 grammes of colloidal sulphur are mixed with 40 grammes of a 40 per cent emulsion of stearyl
15 lysalbinic acid in water. There is obtained in this way a very stable and efficacious sulphur salve.

Example 4

- 20 30 grammes of acetic acid alumina solution "DAB VI" are mixed with 70 grammes of a 50 per cent emulsion of oleyl lysalbinic acid in water. The acetic acid alumina salve thus obtained is practically indefinitely stable.

Example 5

- 25 1000 grammes of a 30 per cent solution of the sodium salt of the condensation product of soya-oil acid chloride and albumen decomposition
30 products of the type of lysalbinic acid and protalbinic acid are mixed with 100 grammes of 30 per cent hydrogen peroxide, 40 grammes of tartaric acid, 10 grammes of crystalline disodium phosphate, 50 grammes of water, 5 grammes of
35 sweetening material, 50 grammes of peppermint oil, and 100 grammes of alcohol. There is obtained in this way a tooth paste that is gelatinous, stable, and very efficacious in consequence of its oxygen content.

Example 6

- 40 280 grammes of the condensation product of oleic acid chloride and albumen decomposition products, which is neutralized with ammonia and standardized to 40 per cent dry content, 140
45 grammes of prepared chalk, 125 grammes of sugar, 15 grammes of peppermint oil and 20 grammes of alcohol are mixed together. Water is added until the desired consistency is reached and there is obtained in this way a toothpaste
50 containing very finely divided calcium carbonate.

We claim:—

1. A cosmetic product containing albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid
55 residues.
2. A cosmetic product containing the alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues.
60 3. A cosmetic product containing albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.
65 4. A cosmetic product containing the alkali salts of albumen decomposition products of high

molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.

5. A cosmetic washing agent consisting of alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues.

6. A cosmetic washing agent containing soap and alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues.

7. A cosmetic washing agent containing soap, alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, and sulphonated oils.

8. A cosmetic washing agent containing soap and alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.

9. A cosmetic washing agent containing soap, alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid, and sulphonated oils.

10. A preparation for application to the skin containing medicaments and albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid
35 residues.

11. A preparation for application to the skin containing medicaments and alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty
40 acid residues.

12. A preparation for application to the skin containing medicaments and albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid
45 residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.

13. A preparation for application to the skin containing medicaments and alkali salts of albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.

14. A tooth paste containing albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues.

15. A tooth paste containing albumen decomposition products of high molecular weight substituted at the nitrogen by higher fatty acid residues, said albumen decomposition products being selected from the group consisting of lysalbinic acid and protalbinic acid.

FRITZ SOMMER,
MAX NASSAU.