COMPOSITIONS FOR TREATMENT OF THE HAIR

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This invention relates to compositions suitable for application to the human hair for cleansing and other purposes.

It is known that the presence of thioglycolic acid, which often exists as an impurity in thioglycolic acid solutions employed for permanently deforming the hair, is considered as harmful from the dermatological viewpoint. In this connection, the article by E. H. Graul in "Dermatolog. Wochenschrift 121, 579—87 (1950)" may be consulted; see also "American Chemical Abstracts (1923), 9573 1."

It has now surprisingly been found that the presence of thioglycolic acid or of an ester of or of an amide derived from this acid in a hair tonic composition or lotion for the care of the hair reduces irritation of the scalp even in particularly sensitive persons and is more particularly advantageous for persons suffering from seborrhea.

According to the present invention therefore, there are provided hair tonic compositions or lotions suitable for application to human hair which comprise an aqueous or alcoholic solution containing from 0.2% to 10% and preferably from 0.5% to 5% of a compound of the general formula:

$$\text{CH}_2\text{COX}$$

wherein X designates OH, NH$_2$ or a —OR group, where R represents an alkyl or hydroxalkyl group comprising at most three carbon atoms, and one or more adjuvants known per se for inclusion in compositions for application to the hair.

The hair tonic compositions according to the invention may thus constitute a simple lotion for the care of the hair e.g., one containing as the adjuvant an essential oil, perfume or the like or it may constitute a shampoo containing detergent materials of known types.

Where the composition is in the form of a shampoo containing a cationic detergent and having an acid pH, it is preferable to use thioglycolic acid or its amide rather than an ester.

The compositions just defined eliminate or substantially reduce scalp irritation in persons having a sensitive scalp and more particularly in those suffering from seborrhea. Moreover, the substances of the aforesaid general formula are manufactured on a large scale in the chemical industry for other purposes and are consequently obtainable at relatively low cost.

Among the products which may be included in the hair tonic compositions according to the invention are:

(a) Cationic-active materials, more especially quaternary ammonium derivatives,
(b) Amino compounds, such as glutamic acid and cystine,
(c) Products derived from vitamins, such as calcium pantothenate, ethyl nicotinate and pantothenol alcohol,
(d) Certain essential oils such as cedar oil, cade oil and lavender oil.

The compositions of the present invention may also contain superfatting products for imparting suppleness and lustre to the hair, such for example as glycol oleate and glycerol stearate.

The following examples, in which the percentages are given by weight, will serve to illustrate the invention:

**Example I**

Hair tonic lotion containing:
- 0.50% of thioglycolic acid
- 0.05% of calcium pantothenate
- 0.01% of salicylic acid
- 0.50% of trimethylcetyl-ammonium chloride
- Alcohol (25°), q.s. for 100

**Example II**

Hair tonic lotion containing:
- 1% of diglycolic ester of thioglycolic acid
- 2% of cade oil
- 5% of cedar oil
- 92% of lavender alcoholic (90°)

**Example III**

An aqueous alcoholic hair tonic lotion containing, in 45° alcohol:
- 0.50% of thioglycolic acid diamide
- 1.00% of alcohol-soluble ethoxylated derivatives of Inolin alcohols
- 0.25% of salicylic acid

**Example IV**

A shampoo composed of:
- 3.0% of triethanolamine salt of thioglycolic acid
- 2.0% of cedar oil
- 15.0% of triethanolamine laurylsulphate
- 0.5% of a 50% aqueous emulsion of methylmethacrylate
- Water, q.s. for 100

**Example V**

A shampoo composed of:
- 4% of ethyl ester of thioglycolic acid
- 10% of sodium laurylsarcosinate
- 2% of glycerol monostearate
- 1% of magnesium stearate
- Water, q.s. for 100

What I claim is:

1. A method for treating the human hair and scalp, which consists in applying a hair tonic consisting of an aqueous solution containing from 0.2% to 10% by weight of a compound of the general formula:

$$\text{CH}_2\text{COX}$$

wherein X is selected from the group consisting of OH, NH$_2$ and a —OR grouping, where R is selected from the group consisting of an alkyl and a hydroxalkyl group containing at most three carbon atoms, rinsing the hair and drying the same.

2. A method according to claim 1, said tonic containing additionally a quaternary ammonium cationic detergent and formulated as a shampoo of acid pH.

3. A method according to claim 1, said tonic containing additionally a natural amino acid.

4. A method according to claim 1, said tonic containing additionally an essential oil.

5. A method according to claim 1, said tonic containing additionally glycerol monostearate.

6. A method according to claim 1, wherein the compound of the said formula is present in a proportion of 0.5% to 5% by weight.

7. A method of treating the human hair and scalp, which consists in applying a hair tonic consisting essentially of an alcoholic aqueous solution containing from
0.2% to 10% by weight of a compound of the general formula

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\text{CH} - \text{COX}
\]

wherein X is selected from the group consisting of OH, NH₂ and an -OR grouping, where R is selected from the group consisting of an alkyl and a hydroxyalkyl group containing at most three carbon atoms, rinsing and drying the hair.

8. A method according to claim 7, said tonic containing additionally a vitamin derivative selected from the group consisting of pantothenate of calcium, pantotenonic alcohol and ethyl nicotinate.

9. A method according to claim 7, said tonic containing additionally an essential oil.

10. A method according to claim 7, wherein said tonic is the compound of the said formula present in a proportion of 0.5% to 5% by weight.

References Cited in the file of this patent


Oesch: Schweizerische Medizinische Wochenschrift, January 5, 1946, pp. 5 and 6.