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PILOMOTOR SHAVING COMPOSITIONS AND METHOD OF USING SAME

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This invention relates to shaving compositions, and especially to improved shaving compositions adapted for use in conjunction with blade razors as distinguished from electric razors.

More particularly, the present invention relates to alkaline blade razor shaving compositions, such as shaving soaps, shaving sticks, brush-type shaving creams, brushless shaving creams and aerosol shaving foams, which are composed of the customary ingredients for such compositions and, in addition, contain a compound which is stable under alkaline conditions and produces a temporary pilomotor effect upon the hairs of the facial beard.

Compositions comprising an ingredient which produces a pilomotor effect on the facial beard are well known. However, the concept of such compositions has heretofore been capable of application exclusively to pre-shave lotions adapted for use prior to shaving with electric dry-shavers. The pilomotor action of such pre-shave lotions is caused by the fact that the arrecuts pilorum (hair follicle muscle) is contracted upon contact with the lotion and remains contracted for a period of time sufficient to last through the shaving operation or a little longer. This contraction of the arrectus pilorum causes the hair stubble to be pushed further above the skin surface line by about 0.2–0.3 mm., so that the beard hair can be cut in this position by the electric razor. When the contracting effects of the lotion wear off after completion of the shaving operation and the tonus of the hair follicle muscle returns to normal, the cut beard hair retracts to a point substantially below the skin surface line, giving the effect of what is commonly referred to as a "close shave." There is the further advantage that men with a heavy beard and rapid beard growth can maintain a presentable appearance for longer periods of time and need to shave only once a day instead of twice.

A number of compounds having a pilomotor effect have been proposed and investigated (Arzneimittelforschung, 4 (1954), 63–66). However, the common disadvantage of those investigated compounds is that they are highly unstable under even mildly alkaline conditions. Hence, their employment as pilomotor ingredients has been necessarily confined to compositions which are acidic in character, notably to acidic pre-shave lotions adapted for use in conjunction with electric dry-shavers. Any attempt to incorporate them into blade razor shaving compositions, such as shaving soaps or shaving creams of the brush or brushless type, which are alkaline in character, has met with failure because they decompose under the alkaline conditions existing in blade razor shaving compositions, forming decomposition products having no pilomotor effect whatsoever.

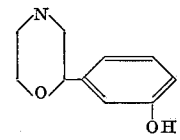
It is therefore an object of the present invention to provide a stable, alkaline shaving composition which produces not only the beard-softening effect of ordinary alkaline shaving compositions but also a pilomotor effect.

Another object of the present invention is to provide

a stable ingredient having a pilomotor effect for alkaline shaving compositions, such as shaving soaps and creams of the brush or brushless type.

Other objects and advantages of the present invention will become apparent as the description thereof proceeds.

I have discovered that 2-(3′-hydroxy-phenyl)-morpholine, that is, the compound of the formula



and its dermatologically acceptable, non-toxic acid addition salts produce excellent pilomotor effects and are stable under alkaline conditions, and that the above objects and advantages may be achieved by incorporating 2-(3′-hydroxy-phenyl)-morpholine or its non-toxic acid addition salts into customary alkaline shaving compositions, such as shaving soaps and creams of the brush, brushless or aerosol foam type.

By "customary alkaline shaving compositions" I mean those blade razor shaving compositions which are essentially based on fatty acid soaps, that is, those described on pages 422–437 and 833 of "Cosmetics, Science and Technology," edited by Edward Sagarin, Interscience Publishers, Inc., New York (1957). However, it should be understood that my invention may be practiced in conjunction with any alkaline shaving composition, regardless of whether the composition is based on fatty acid soaps or not. The 2-(3′-hydroxy-phenyl)-morpholine or its non-toxic acid addition salts are advantageously added to and blended into customary alkaline shaving compositions in amounts of 0.01 to 10%, preferably 0.1 to 1%, by weight based on the total weight of the shaving composition.

Alkaline shaving compositions thus modified with 2-(3′-hydroxy-phenyl)-morpholine or its non-toxic acid addition salts have the advantage of being completely stable even over long periods of storage. Moreover, the morpholine derivative component imparts to such compositions pilomotor properties in addition to the inherent beard-softening properties. The pilomotor effect of alkaline shaving compositions modified in accordance with the present invention is characterized by an extraordinarily rapid onset and satisfactory duration throughout the blade shaving operation.

The following examples shall further illustrate the present invention and enable others skilled in the art to understand it more completely. It should be understood, however, that my invention is not limited to these particular examples. The parts are parts by weight.

EXAMPLE I

Shaving soap in stick form

The shaving soap stick is compounded in the usual manner from the following ingredients:

	Parts
2-(3′ - hydroxy-phenyl)-morpholine - hydrochloride	0.5
Stearic acid	50.0
Coconut fatty acids	12.0
Aqueous KOH (density 1.5)	20.0
Aqueous NaOH (density 1.5)	4.0
Perfume	0.3
Water, q.s. ad	100.0.

EXAMPLE II

Shaving soap in cream form

The shaving soap cream is compounded in the usual manner from the following ingredients:

	Parts
2-(3'-hydroxy - phenyl)-morpholine hydrochloride	0.5
Stearic acid	38.8
Coconut oil	9.7
Potassium hydroxide	8.0
Sodium hydroxide	1.6
Glycerin	11.6
Perfume	0.3
p-Hydroxy-benzoic acid methyl ester	0.01
p-Hydroxy-benzoic acid propyl ester	0.02
Water, q.s. ad 100.00.	

EXAMPLE III

Brushless shave cream

The brushless shave cream is compounded in the usual manner from the following ingredients:

	Parts
2-(3'-hydroxy - phenyl) - morpholine hydrochloride	0.5
Stearic acid	20.6
Diglycol stearate, self-emulsifying	2.5
Paraffin oil	3.0
Wool grease, anhydrous	1.0
Isopropyl myristate	1.0
Triethanolamine	1.3
Borax	0.9
Propylene glycol	4.0
Carboxymethyl cellulose (2% aqueous solution)	50.0
Perfume	0.4
p-Hydroxy benzoic acid methyl ester	0.02
p-Hydroxy benzoic acid propyl ester	0.02
Water, q.s. ad 100.00.	

EXAMPLE IV

Pre-shave cream

The pre-shave cream is compounded in the usual manner from the following ingredients:

	Parts
2-(3' - hydroxy-phenyl) - morpholine hydrochloride	0.3
Paraffin oil	30.0
Wool grease, anhydrous	3.0
Stearic acid	12.0
Isopropyl myristate	3.0
Triethanolamine	1.5
p-Hydroxy benzoic acid methyl ester	0.02
p-Hydroxy benzoic acid propyl ester	0.02
Perfume	0.2
Water, q.s. ad 100.00.	

The mildly alkaline wet-shave compositions illustrated above containing 2-(3'-hydroxy-phenyl)-morpholine hydrochloride as the active pilomotor ingredient are stable over extended periods of time and exhibit excellent beard-softening and pilomotor effects. Of course, the quantity of pilomotor ingredient in these compositions may be varied within the percentage limits set forth above to meet particular requirements. Moreover, the active pilomotor ingredient according to the present invention may be incorporated into other alkaline shaving compositions with equal success. Finally, the hydrochloride may be replaced by the free base or by other non-toxic, dermatologically or pharmacologically acceptable acid addition salts of 2-(3'-hydroxy-phenyl)-morpholine. Examples of such other acid addition salts are the hydrobromide, hydrogen iodide, sulfate, nitrate, succinate, maleate, tartrate, citrate and the like.

While I have illustrated my invention with the aid of certain specific embodiments thereof, it will be readily apparent to others skilled in the art that my invention is not limited to these embodiments and that various changes and modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. An alkaline shaving composition selected from the group consisting of shaving creams and shaving soaps, said composition having uniformly dispersed therethrough from 0.01 to 10% by weight, based on the total weight of said composition, of a pilomotor acting compound selected from the group consisting of 2-(3'-hydroxy-phenyl)-morpholine and its dermatologically acceptable, non-toxic acid addition salts.

2. An alkaline shaving composition selected from the group consisting of shaving cream and shaving soaps, said composition having uniformly dispersed therethrough from 0.01 to 10% by weight, based on the total weight of said composition, of 2-(3'-hydroxy-phenyl)-morpholine hydrochloride.

3. The method of producing a pilomotor effect on the skin which comprises applying to the skin a compound selected from the group consisting of 2-(3'-hydroxy-phenyl)-morpholine and its dermatologically acceptable, non-toxic acid addition salts.

4. The method of producing a pilomotor effect on the skin which comprises applying to skin 2-(3'-hydroxy-phenyl)-morpholine hydrochloride.

5. The method of producing a pilomotor effect on the skin which comprises applying to the skin an alkaline shaving composition selected from the group consisting of shaving soaps and shaving creams, said composition having uniformly dispersed therethrough from 0.01 to 10% by weight, based on the total weight of said composition, of a pilomotor acting compound selected from the group consisting of 2-(3'-hydroxy-phenyl)-morpholine and its dermatologically acceptable, non-toxic acid addition salts.

6. The method of producing a pilomotor effect on the skin which comprises applying to the skin an alkaline shaving composition selected from the group consisting of shaving soaps and shaving creams, said composition having uniformly dispersed therethrough from 0.01 to 10% by weight, based on the total weight of said composition, of 2-(3'-hydroxy-phenyl)-morpholine hydrochloride.

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