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DERMATOLOGICALLY HARMLESS HAIR DYEING CREAMS

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The present invention relates to the dyeing of hair, and more particularly to a stable cream-like hair dye.

In attempting to dye directly hair by means of a dissolved true hair dyeing agent, it has been found that a major amount of said dyeing agent remained in the solution, even in cases where the concentrations of said dyeing agent in the solution were very high. It was found that the hair after having been dried only presented a momentary shading, which was subject to vanishing upon subsequent shampooing or merely rinsing the hair.

To overcome this inconvenience solutions including agents adapted to generate a dye in the hair itself subsequent to a supplementary oxidizing treatment have been substituted for direct dye solutions, in an attempt to improve the stability of the hair dyeing. Such dye solutions, which may be termed "indirect dye solutions," could be used in the form of creams to facilitate their handling. Creams of this type, however, have met with difficulty, when containing only conventional reducing agents, and, in order that stable dyeing creams be obtained, it has been proposed previously to disperse thio-reducing agents in such indirect dyeing creams.

In contradistinction to said indirect dyeing creams, the present invention has for one of its objects to provide means facilitating the use of direct hair dyeing creams which employ carrying creams of conventional type.

Another object of the invention is to provide means affording direct hair dyeing creams with considerably improved characteristics.

A further object of the invention is to provide direct hair dyeing creams containing only harmless dyeing agents.

Yet another object of this invention is to provide improved hair dyeing creams which may be applied more easily than vegetable dyes such as natural henna, which are used in the form of water-containing pastes.

A further object of the invention is to provide an improved hair dyeing cream having improved efficiency.

A hair dyeing cream in accordance with the present invention comprises in combination: a carrying cream of a type, such as used for skin beauty treatment, a harmless dyeing agent directly acting on the hair keratin, which agent does not require any further chemical modification to generate the dyeing agent, and a wetting agent facilitating the hair swelling and the transfer of said harmless dyeing agent to the hair.

Thus, an improved hair dyeing cream according to this invention includes a harmless dyeing agent distributed homogeneously in a carrying cream, together with a swelling agent intended to improve the permeability of the hair to the said dyeing agent; further, with any specific dyeing agent, a physico-chemical equilibrium must be obtained in order that the affinity of the dyeing agent with respect to the carrying cream does not exceed its affinity with respect to the hair material.

In such a hair dyeing cream, the harmless dyeing agent may be dissolved in the carrying cream, or finely suspended in said cream, or else partially dissolved and partially suspended in the cream.

It is to be observed that the dyeing products blended with the cream, whether dissolved or finely suspended, are true dyeing agents, in contradistinction to the insoluble pigments such as used for make-up creams.

A hair dyeing cream according to the present invention enables the dyeing agent to be transferred easily to the hair by virtue of the three following effects:

The dyeing agent is dissolved partially or totally in the cream which is brought into contact with the hair to be dyed;

The dyeing agent is dispersed in the form of fine particles which are suspended in the cream, and this agent is brought into direct contact with the hair to be treated;

The swelling agent present in the cream containing the dyeing agent improves the permeability of the hair to said dyeing agent.

Because of the above features, the affinity of the dyeing agent to a living hair is considerably increased as compared with the affinity obtained through the use of an aqueous or other solution and the ratio of increase in affinity may amount up to 10/1.

A dyeing cream according to the invention is applied easily and does not affect the scalp; such a dyeing cream actually dyes the hair instead of merely shading it; moreover the cream becomes dissolved and washed out easily when the hair is rinsed. Further, since dermatologically harmless dyeing agents are used, no detrimental reaction to the scalp is manifested.

According to the specific dyeing agent used the pH value of the cream may be either acid, or neutral, or alkaline. An acidity of the medium, if necessary, may be obtained by means of an organic or mineral acid.

A dyeing cream according to the invention further may include supplementary conventional treating and keeping up hair products, such as cholesterol, lecithin, etc.

Some specific formulations of dyeing creams in accordance with the present invention will now be described, but it is to be clearly understood that the specific examples disclosed are given as being illustrative only and are intended in no manner to limit the scope of the invention. In the following examples, all parts are by weight.

Example I

Alkaline dyeing cream for dyeing agents acting in an alkaline medium:

Carrying cream: emulsifiable glycol stearate	10
Wetting agent: sulfonated lauryl alcohol	1
Dyeing agent: rhodamine	4
Treatment products:	
Cholesterol	.1
Lecithin	.1
Ammonia 22° Baumé (20% solution)	5
Perfume	.5
Water	79.3

Example II

Acidic cream for dyes acting in an acidic medium:

Carrying cream:	
Glycerine monostearate	10
Sapamine base	2
Wetting agent: "Nekal BX" (dibutyl naphthalene sodium sulfonate)	1
Dyeing agent: "Lawsone" (naphthoquinone)	2
Treatment products:	
Cholesterol	.1
Lecithin	.1
Acetic acid	1
Perfume	.5
Water	83.3

Example III

Neutral cream for dyes acting in a neutral medium:

Carrying cream:	
Emulsifiable glycol stearate	10
Glycol	3
Wetting agent: sulfonated lauryl acid	.5
Dyeing agent: nitrated picramic acid	.2
Treatment products:	
Cholesterol	.1
Lecithin	.1
Ammonium acetate	.2
Perfume	2
Water	83.9

Creams having the above formulations have an agree-

able commercial appearance. They may be applied easily by reason of their consistency without requiring any dilution or heating. When the hair has been dyed conveniently, the cream carrying the dyeing agent is washed away by a mere rinsing or shampooing. In view of the fact that such creams do not comprise any mineral charge, the hair keeps its brilliancy and flexibility.

The dyeing creams according to this invention enable strong hair shades to be obtained resistant to any shampooing, whatever strong it may be. They may be used alone or incorporated with para or henna dyes to which very pleasant hues are given. No inconveniences result from the mixing of decoloring creams with para dyes, if in such a case alkaline creams are used.

Further, the dyeing creams according to the present invention may be applied before, during or after any conventional hair dye.

The dyeing agents are generally those which are present in henna leaves, Persian seed, walnut leaves and the like, or in the derivatives thereof.

On the other hand, owing to the nature of the carrying agent and to the fineness of dispersion, dyeing agents may be used which in conventional solution conditions did present only a little affinity, if any, with the hair keratin; such dyeing agents are found particularly in the following groups: naphthoquinone, phthaleine, acridin and thiazinic dyes, triphenylmethan, azoic and nitrated pyrazolone dyes, quinolein, resindulin, indigoid, indulin, thiobenzenylic dyes, oxazines, azosafranin, and stilbenic, thiazolic, azothiazolic, oxyquinonic, anthraquinonic, oxyanthraquinonic dyes. The above-mentioned specific dyeing agents have been given merely as illustrations, however, and obviously other dyeing agents could be used in practicing the invention.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A creamy hair dyeing medium comprising in a homogeneous intimate blend; a carrying cream made of a substance selected from the group consisting of glycol-monoester, polyglycol-monoester, glycerol monoester of a fatty acid having high molecular weight; sulfonated lauryl alcohol as swelling agent for the hair, and a dermatologically harmless, synthetic, direct acting, non-oxidation dyestuff having hair substantivity at room temperature, said dyestuff being relatively insoluble in water, the pH of said blend being at the value required by said synthetic dyestuff for dyeing hair.

2. A medium according to claim 1, wherein said dyestuff consists of nitrated picramic acid, with the addition of ammonium acetate for required pH value of said dyestuff.

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