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(19)

(54) COSMETIC COMPOSITIONS

(71) We, BEECHAM GROUP LIMITED, a British company, of Beecham House, Great West Road, Brentford, Middlesex, England, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to topical compositions containing vitamin A acetate, such compositions being of value in the care of the skin.

Although high doses (25,000 I.U.g^{-1}) of vitamin A (retinol) have been used in the topical treatment of psoriasis, as far as we know there has been no previous publication of the biological effect we have discovered and upon which this invention is partly based, namely the topical activity of retinol in stimulating epidermal mitosis. We have further found that the chemical form in which retinol is applied has a marked effect on the level of activity. We find that retinol acetate is especially suitable at low doses in promoting epidermal mitosis in that it is active following topical application, when formulated as an emulsion.

Accordingly, the present invention provides a liquid, semi-liquid, or gel composition comprising a topically acceptable oil-in-water or water-in-oil emulsion base and retinol acetate in an amount from 1,000 to 15,000 I.U.g^{-1}, preferably 1,000 to 10,000 and more preferably 1,000 to 2,500 I.U.g^{-1}.

Since retinol acetate is almost insoluble in water, it is normally solubilised with the aid of a non-ionic surfactant before incorporation into the emulsion base.

The compositions of this invention will normally include a suitable emulsifier to improve the uniformity of the emulsion. The composition can range from liquid through semi-liquid to gel types according to the type of emulsion and quantity of any thickening agent which may be present. The compositions may also include anti-oxidants such as, for example, vitamin E or vitamin C. Other conventional cosmetic cream ingredients such as preservatives, perfumes and alcohol may also be present.

The following Examples illustrate the invention:—

Typical Water-in-Oil Emulsion

	% w/w
Distearyldimethyl ammonium chloride	0.50
Light mineral oil	17.30
Beeswax	3.00
Liquid lanolin	5.00
Borax	0.50
Magnesium sulphate	0.20
Demineralised water	73.30
Perfume	0.20
	100.00
Retinol acetate (solubilised)*	1,000—2,500 I.U.g^{-1}

Typical Oil-in-Water Emulsion

	% w/w
Non-ionic emulsifying wax	2.00
Cetyl alcohol	8.00
Light mineral oil	10.00
Beeswax	0.60
Demineralised water	79.06
Mixed esters of p - hydroxybenzoic acid	0.14
Perfume	0.20
	100.00
Retinol acetate (solubilised)*	1,000—2,500 I.U.g^{-1}

*Retinol acetate 1 × 10^6 I.U.g^{-1}	10% w/w
Tween 80 ("Tween" is a Registered Trade Mark)	50% w/w
Glycerine	15% w/w
Propylene glycol	15% w/w
Water to	100% w/w

In both cases the compositions are made up in any convenient manner, the order of mixing not being particularly critical. Preferably, however, the solubilised retinol acetate is added at relatively low temperatures to a previously prepared emulsion base.

(16)

WHAT WE CLAIM IS:—

1. A liquid, semi-liquid, or gel composition comprising a topically acceptable oil-in-water or water-in-oil emulsion base and retinol acetate in an amount from 1,000 to 15,000 $I.U.g^{-1}$.

2. A composition as claimed in claim 1 wherein a non-ionic surfactant is included.

3. A composition as claimed in claim 1 or claim 2 containing 1,000 to 10,000 $I.U.g^{-1}$ of retinol acetates.

4. A composition as claimed in claim 1 or claim 2 containing 1,000 to 2,500 $I.U.g^{-1}$ of retinol acetate.

5. A composition as claimed in claim 1, substantially as hereinbefore described in the Examples.

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