Depigmentation Factor Bioflavonoids – A safe and effective skin lightener based on encapsulated citrus bioflavonoids.

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Abstract

Depigmentation Factor Bioflavonoids consists of citrus bioflavonoids encapsulated in nanospherical liposomes. These citrus bioflavonoids are obtained by aqueous extraction, nebulisation and fractionation to produce a product high in hesperidine, eriodictyol and naringenin, which is then encapsulated in nanospheres to stablilise the actives during delivery to the skin. An independent in vitro evaluation has shown that Depigmentation Factor Bioflavonoids totally inhibits tyrosinase activity and thus pigment formation in the skin to the same extent as hydroquinone, the reference substance. This product is designed for use in skin lightening products and anti-age skin care products to prevent age spots and irregular skin pigmentation.

Introduction

Variations in skin colour are caused by different levels of a pigment called melanin in the skin. Melanin is synthesised in organelles called melanosomes, in melanocyte cells, by the action of an enzyme, tyrosinase which hydroxylates the amino acid tyrosine to DOPA* and catalyses its oxidation to DOPA*-quinone. Most skin lightening products target tyrosinase inhibition because it is one of the first steps in the pigment formation and can therefore block all pigment producing pathways[1]. Many of the traditionally used skin lightening products such as hydroquinone, corticosteroids and mercury-containing products are still used in many countries[2,3,4] , inspite of serious health concerns[13], including irreversible cutaneous damage[5], ochronosis[5,6,7,13], accumulation of mercury[8,10,11] in the body and poisoning[7,9,12]. These adverse[13] effects have lead to the search for safer, plant-based skin lightening products.

The ideal skin lightening agent for cosmetic products is one that inhibits melanogenesis without cytotoxicity, preferably by tyrosinase inhibition, reduces pigmentation in cells and is of “natural” or “plant” origin.

Cosmetochem International Ltd. have developed a botanical-derived active that is able to both inhibit tyrosinase activity and reduce pigmentation in cells and which is not only not cytotoxic nor sensitizing but is also based on citroflavonoids which are known to be anti-inflammatory and anti-irritant.

***Dihydroxyphenylalanine**