INGREDIENTS BIO-ACTIVITY

LUMISKIN™

Patent N° WO 024695/2004

FUNCTION:
Skin lightening

DEFINITION:
Diacetyl Boldine (DAB) in C_8 C_{10} triglycerides.

PROPERTIES:
Diacetyl Boldine (DAB) works via α-adrenergic antagonist recept[o] calcium flow regulation.

POINT OF INTEREST:
Tyrosinase is not directly inhibited by competition, tyrosinase is stabilised in its inactive form.

INCI NAME:
Caprylic/Capric Triglyceride – Diacetyl Boldine.

APPLICATIONS:
Emulsions, soaps, make-up products with lightening or whitening properties.

FORMULATION:
OIL SOLUBLE.

RECOMMENDED USE LEVEL:
%4

IN VITRO TESTS
TEST ON MELANOCYTE B16 LINE
WITH %4 LUMISKIN™

Inhibition of tyrosinase activity	%53
Decrease in melanin quantity	%70

TEST ON HUMAN MELANOCYTES
With %4 Lumiskin™

Decrease in melanin synthesis	%51

Effect on melanin production

The efficacy of DAB (Diacetyl Boldine) on melanogenesis is visible to the naked eye. DAB is up to 30 times more active than Kojic acid.
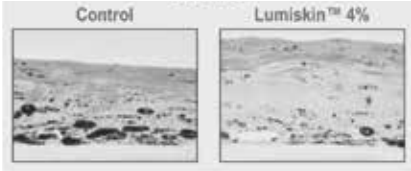
DAB   Control   Kojic acid

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EX VIVO TEST
SKIN ETHIC® 3D MODEL OF EPIDERMIS TYPE VI
With %4 Lumiskin™

Visible and significant decrease of the epidermic pigmentation

Control   Lumiskin™ 4%

N VIVO TESTS ON ASIAN VOLUNTEERS
COLORIMETRIC TEST
Study on 20 Asian Volunteers.
Twice daily application of a cream containing %4 Lumiskin™ (40 ppm DAB) for 2 months.
Measurement of ITA° (clarity) by chromameter and Melanin Index by mexameter on one homogeneous area (two sites), one hyperpigmeted area and one untreated zone (chin).

SELF-EVALUATION

Lightening of the skin	%71+
Lessening of the hyperpigmented areas	%54+
Complexion more even	%65+
Skin more radiant	%74+

MELANIN INDEX	ZONES	NORMAL	HYPER PIGMENTATION	CONTROL
Vaiation (D-56D0)		17-[1]	20-[1]	6- (ns)
Maximum Variation		%18-	%25-	%50
Volunteers With Improvement		%85	%90	%50

ITA° (clarity)	ZONES	NORMAL	HYPER PIGMENTATION	CONTROL
Vaiation (D-56D0)		2+ °[3]	2.9+ °[2]	1.2+ ° (ns)
Maximum Variation		11.2+°	9.6+°	ns
Volunteers With Improvement		%65	%80	%50

(1) Highly significant / D0: p<<2) ; 0.01) Significant / D0: p<0.01 ;   (3) Significant / D0: p<0.05 ; ns: Non significant