

Luisant Mela X

Free from AGEs-Induced Epidermal Pigmentation



Find plant extract solution with

DermáLab

NEW APPROACH TO FIGHT AGAINST MELANOGENESIS

Skin Pigmentation

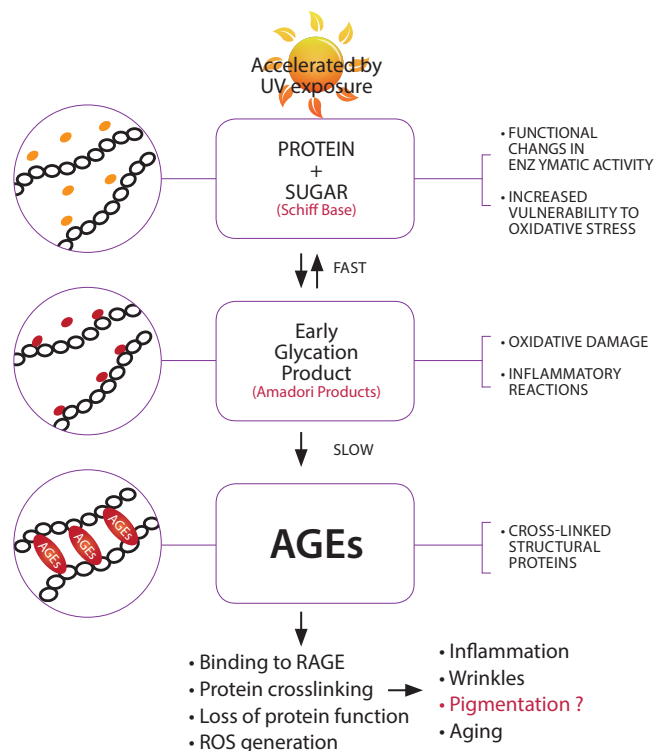
Many people have been striving to obtain lighter, brighter and healthier-looking facial skin. It can give us confidence and also give a good impression to our surroundings. Dark and dull skin can be caused by overexposure to the sun, external pollutants, poor lifestyle and internal disorders.

Melanocyte in the epidermis is basically responsible for melanin production and distribution when it is activated by UV sunlight. It has a crucial role to absorb ultraviolet radiation to protect skin. However, we are experiencing unwanted pigmentation due to internal disorders and inevitable consequences of defense mechanism against external dangers. Excessive secretion of melanin may bring dark spots, freckles, blemishes, hyperpigmentation and dark circles..

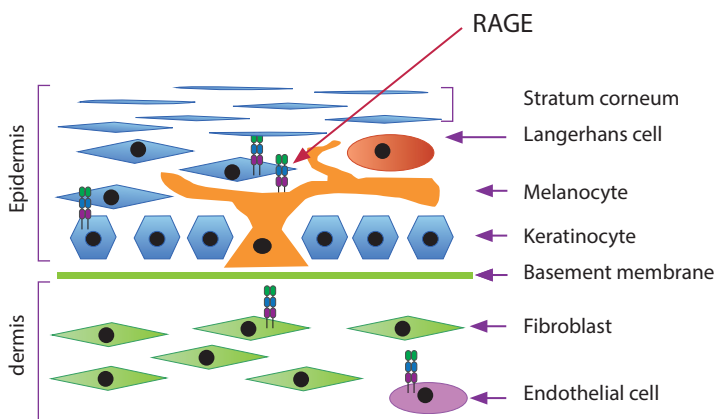
Formation of AGEs(Advanced Glycation End-products)

Advanced glycation end products (AGEs) are modifications of proteins or lipids that become non-enzymatically glycosylated and oxidized after contact with sugars.

The presence and accumulation of AGEs in skin affect extracellular and intracellular structure and function. It can activate a receptor site and form a complex known as Receptor-AGE (R-AGE), and contribute to accelerating the aging process such as fine wrinkles, loss of elasticity, reduced epidermal and dermal thickness, decreased cell differentiation and proliferation



Does RAGE Exist on Melanocyte and Can it Generate Melanogenesis?



- RAGE is a member of the immunoglobulin superfamily of receptors. It recognizes and binds AGEs, and initiates intracellular signaling that disrupts cellular function.
- In the epidermis, RAGE is expressed in keratinocytes, endothelial cells and melanocytes. In the dermis, RAGE is expressed on the surface of fibroblasts and endothelial cells.
- AGEs stimulate the RAGE pathway by upregulating RAGE expression and stimulate the melanogenesis-associated molecule expression including MITF and tyrosinase.
- Therefore, inhibiting the formation of AGEs and the expression of RAGE is an innovative and persistent solution for skin lightening/brightening together with additional anti-aging effects.

LUISANT MELA X

Club moss (*Lycopodium Clavatum L.*) is a spore-bearing evergreen fern grown in sunny spots in deep mountain areas.

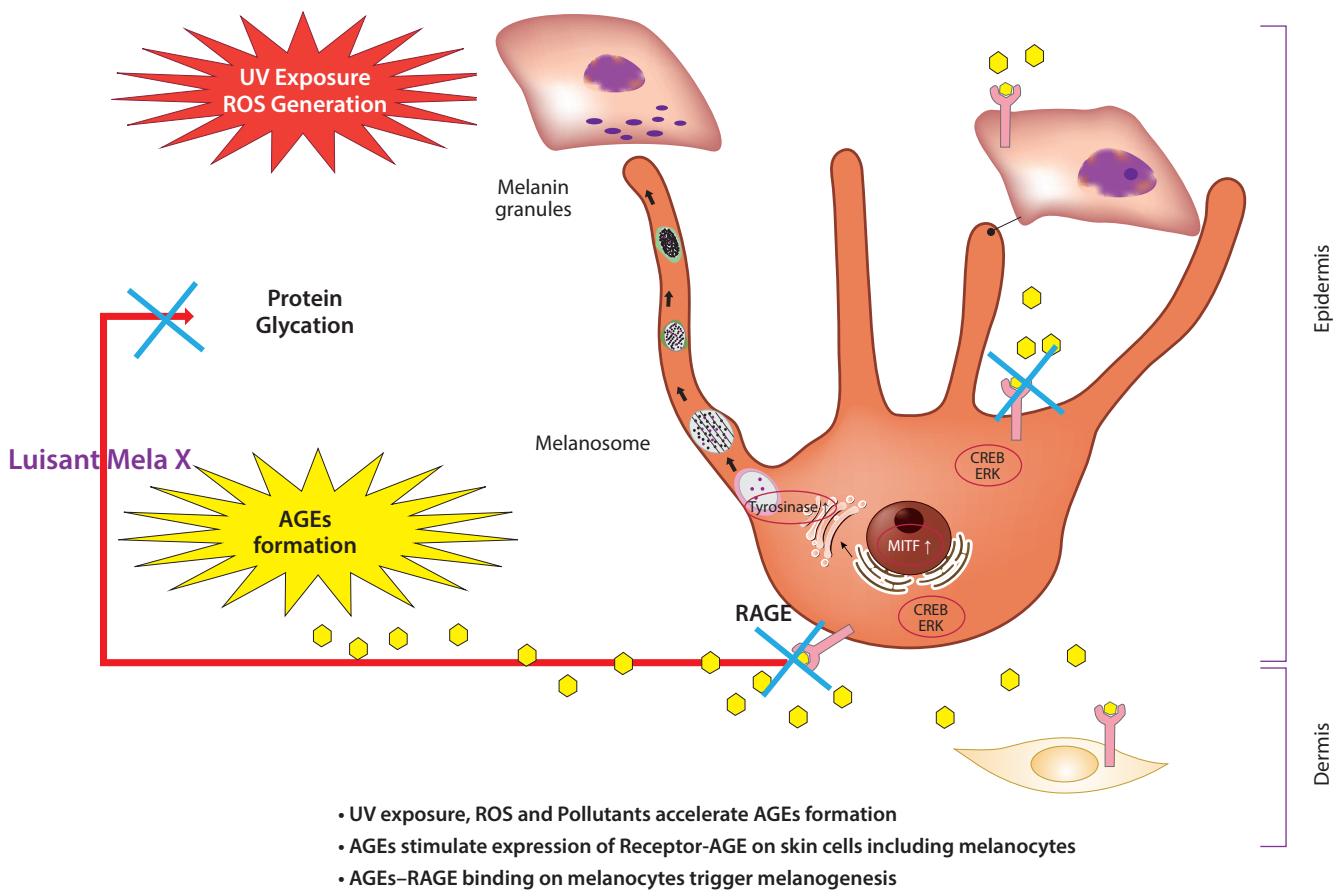
It has been widely used in oriental medicine due to its various remedial effects for many chronic disorders including inflammation, wound healing and diabetes.

High level of AGEs are found in patients suffering from diabetes due to the abnormal regulation of glucose concentration and also at sites of active inflammation.

Club moss extract has a high potential of AGEs inhibition activity resulting from its anti-inflammatory and anti-diabetic properties.



MECHANISM



Luisant Mela X

Blocks the Signaling Pathway of Melanogenesis by Inhibiting the Formation of AGEs and Expression of RAGE.

IN-VITRO TEST

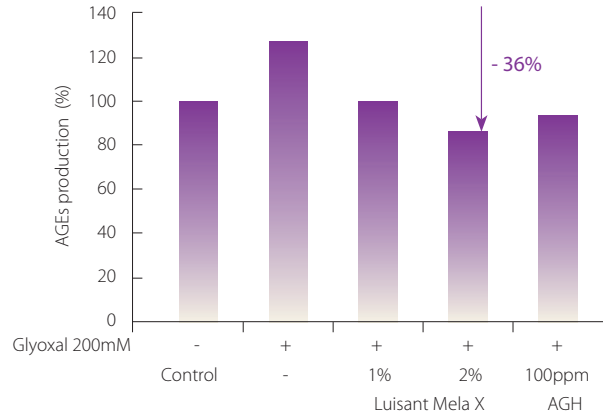
AGEs FORMATION INHIBITION EFFECT

LUISANT MELA X INHIBITS AGEs FORMATION

Advanced glycation end products (AGEs) promote melanogenesis through RAGE activation in melanocytes.

The production of AGEs : 36% ↓

Protocol: AGEs synthesis was prepared with bovine serum albumin and glyoxal at 37°C, 3days. AGEs were measured by ELISA Kit (Cell Biolabs,INC). AGH: Aminoguanidine hydrochloride, positive control.

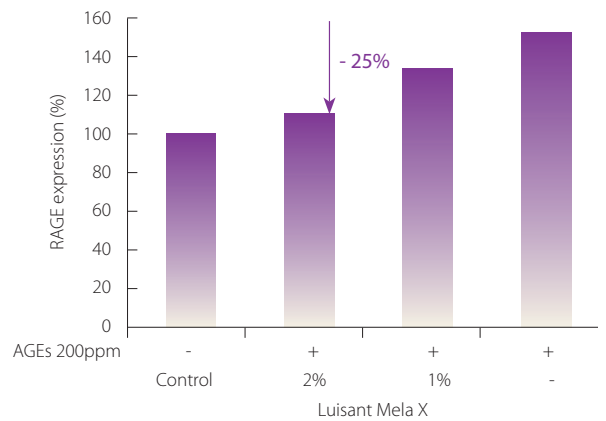
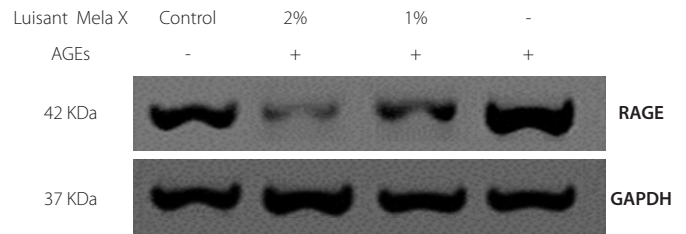


LUISANT MELA X INHIBITS RAGE EXPRESSION

AGEs-RAGE binding triggers both ERK and CREB signaling pathways. These increase MITF expression and tyrosinase activity, and ultimately boost melanin production in melanocytes.

The expression of RAGE : 25% ↓

Protocol: Mouse melanoma cell (B16F10) cultures were incubated during 36 hours (at 37°C, CO2: 5%) in presence of Luisant Mela X and AGEs 200ppm. The expression levels of protein were analyzed by western blot.



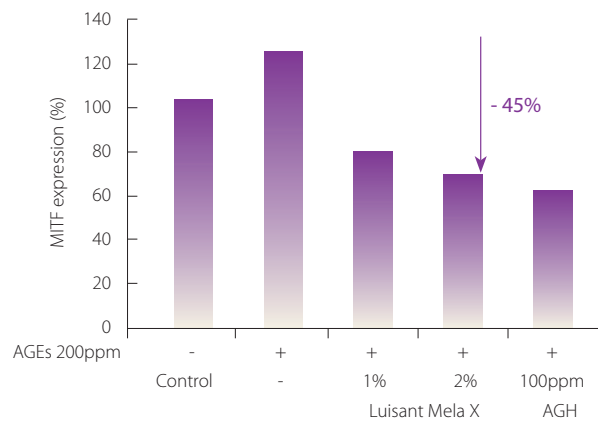
MELANOGENESIS INHIBITION EFFECT

LUISANT MELA X DECREASES MITF EXPRESSION

Microphthalmia-associated transcription factor (MITF) regulates the differentiation and development of melanocytes and is responsible for pigment cell-specific transcription of the melanogenesis enzyme genes.

The expression of MITF : 45% ↓

Protocol: Mouse melanoma cell (B16F10) cultures were incubated during 36 hours (at 37°C, CO2: 5%) in presence of Luisant Mela X and AGEs 200ppm. The expression levels of mRNA were analyzed by RT-PCR.



IN-VITRO TEST

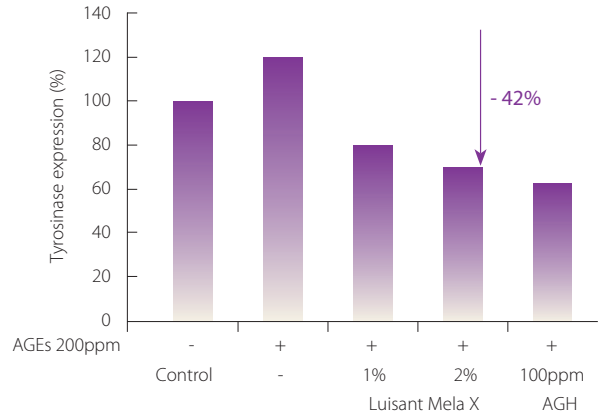
MELANOGENESIS INHIBITION EFFECT

LUISANT MELA X DECREASES TYROSINASE EXPRESSION

Tyrosinase catalyzes the oxidation of the amino acid tyrosine and is involved in the formation of the dark pigment melanin.

The expression of tyrosinase : 42% ↓

Protocol: Mouse melanoma cell (B16F10) cultures were incubated during 36 hours (at 37°C, CO2: 5%) in presence of Luisant Mela X and AGEs 200ppm. The expression levels of mRNA were analyzed by RT-PCR.

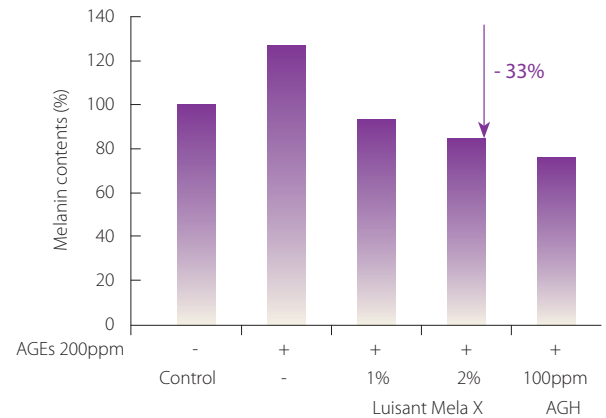


LUISANT MELA X DECREASES MELANIN SYNTHESIS

Melanin is essential for protecting human skin against radiation, but the accumulation of abnormal melanin induces pigmentation disorders.

The synthesis of melanin : 33% ↓

Protocol: Mouse melanoma cells (B16F10) were pre-incubated for 18 hours, and the melanin content was assayed after further incubation of the B16F10 cell treated with Luisant Mela X and AGEs 200ppm for 36 hours (at 37°C, CO2: 5%). The absorbance was measured at 405 nm by ELISA.



IN-VIVO TEST

LIGHTENING EFFECT

LUISANT MELA X LIGHTENS the skin pigmentation.

Protocol

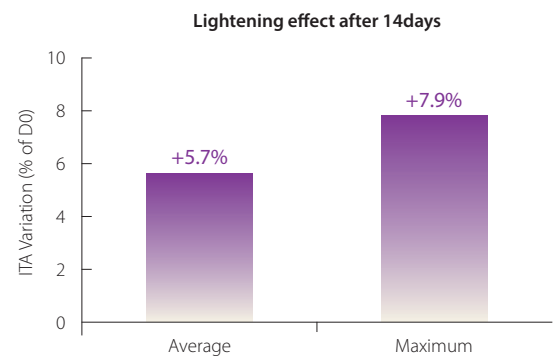
VOLUNTEERS : 7 Female (age 20 to 50).

APPLICATION : 2 % LUISANT MELA X Cream on faces, Twice daily during 2 weeks.

EVALUATION : Measurement of two parameters (L*,B*) using Antera 3D (Miravex Limited). These parameters are studied to convert the Individual Topographical Angle (ITA) %, which defines the degree of pigmentation of the skin of an individual.

Result 2% LUISANT MELA X cream has lightening effect.

Average + 5.7% Up to + 7.9%



PIGMENTATION REDUCTION EFFECT

LUISANT MELA X reduces the surface of dark spots

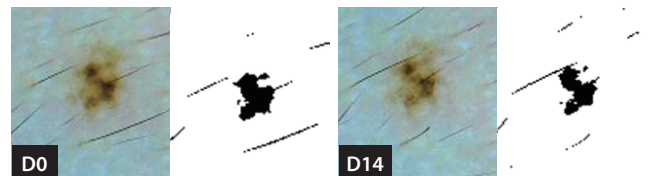
Protocol

VOLUNTEERS : 7 Female (age 20 to 50).

APPLICATION : 2 % LUISANT MELA X Cream on faces, Twice daily during 2 weeks.

EVALUATION : Measurement of Dark spots using ARAM 200 (Human Vision System).

Result 2% LUISANT MELA X cream decreases the size of dark spots.





Dermalab Co., Ltd.

231 Munmakgongdan-gil Munmak-eup Wonju-si Gangwon-do 26362 Rep. of Korea

TEL. +82-33-732-7561 FAX. +82-33-732-7563

info@dermalab.co.kr www.dermalab.co.kr

Cosmetic activities	<ul style="list-style-type: none">• Inhibit AGEs formation• Inhibit RAGE expression• Decrease MITF expression• Decrease Tyrosinase expression• Decrease Melanin synthesis
INCI name	<ul style="list-style-type: none">• Luisant Mela X Water (and) Dipropylene Glycol (and) Phenoxyethanol (and) Ethylhexylglycerin (and) Lycopodium Clavatum Extract• Luisant Mela X (HD) Water (and) Dipropylene Glycol (and) 1,2-Hexanediol (and) Lycopodium Clavatum Extract
Recommended % of use	Luisant Mela X 2% Luisant Mela X (HD) 2%