

smartCrystal[®] Glabridin MB

Description

smartCrystal[®] are crystalline cosmetic actives with a size in the submicron range, typically 0.2 to 0.5 µm mean diameter. These "submicron crystals" are a novel, patent-protected formulation to enhance the performance and hence bioactivity of active ingredients used in cosmetical, dermatological and pharmaceutical applications. With this innovative technology the solubility of actives can be optimized, and their penetration can be improved, leading to an enhanced bioavailability in the skin. The smartCrystal[®] can be easily incorporated into regular cream or gel formulations.

smartCrystal[®] Glabridin MB is an innovative cosmetic ingredient with enhanced performance and hence bioactivity of the active component glabridin, from the plant glycyrrhiza glabra (licorice roots), well-known for its skin tone lightening properties. Glabridin is significantly more effective in inhibiting tyrosinase activity and melanin production than e.g. kojic acid. It has been shown to impact melanogenesis in multiple ways. It inhibits tyrosinase expression significantly, decreases the catalytic activity of tyrosinase, inhibits the release of Endothelin-1, a UVB-induced mediator that stimulates melanocyte proliferation and migration, and enhances melanocyte dendricity. It also decreases the activity of Phospholipase A2. This enzyme up-regulates the expression of tyrosinase and TRP-1 and stimulates tyrosinase activity and is also involved in melanosome transfer and melanocyte dendricity. Glabridin is also known to be a potent antioxidant that inhibits superoxide release from macrophages and elevates glutathione levels, as well as protecting mitochondria from oxidative damage.

Efficacy

- lightens the skin
- reduces age spots
- acts soothing
- acts as an antioxidant
- acts anti-microbial
- reduces inflammations

Appearance

off-white, aqueous suspension

INCI

Aqua, Glycerin, Glycyrrhiza Glabra Root Extract, Caprylyl/Capryl Glucoside

Registration

CAS-No.:

Aqua.....	7732-18-5
Glycerin.....	56-81-5
Glycyrrhiza Glabra Root Extract.....	84775-66-6
or	
Glabridin.....	59870-68-7
Caprylyl/Capryl Glucoside.....	68515-73-1



Nature needs no cosmetics,
but cosmetics need nature

smartCrystal[®] Glabridin MB

EC-No.:

Aqua.....231-791-2
Glycerin.....200-289-5
Glycyrrhiza Glabra Root Extract.....283-895-2
or
Glabridin.....-/-
Caprylyl/ Capryl Glucoside.....500-220-1

Application

daily cosmetic products
creams and lotions
face masks
gels and ampoules
body care

Preservatives / Stabilizers

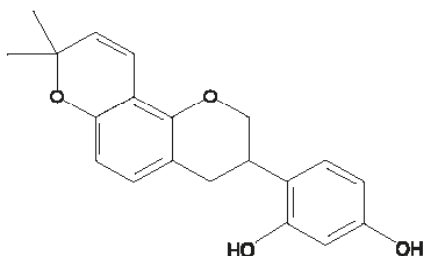
none

Application concentration

skin care formulations.....0.4 - 2 %

Characteristics

glabridin content.....4 - 6 %
mean particle size.....> 200 nm - < 1 µm
polydispersity index (PDI).....< 0.5
pH-value.....6.7 - 10



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molecular weight glabridin.....324.37 g/mol
molecular formula glabridin.....C₂₀H₂₀O₄

Incorporation

smartCrystal[®] Glabridin MB is unsolvable. Instead, it is dispersible. It is incompatible with oxidizing agents. Avoid extended exposure to high heat.

Toxicology

non hazardous in normal use concentration
pure raw material can cause serious eye irritation

Storage & Shelf life

smartCrystal[®] Glabridin MB should be stored in original sealed containers in a dry and well-ventilated, cool place at temperatures between 2 - 8°C. Brief exposure up to 40°C possible.

Shake before use!

In closed original containers the shelf life is 12 months.