

Dipotassium Glycyrrhizinate

Description

Since decades the natural extracts of licorice root are used as additives or active ingredients in food, cosmetics and pharmaceutical products. The ammoniated salt is manufactured by acid treatment of the aqueous extracts, followed by neutralization of the precipitated material with diluted ammonia. By addition of potassium hydroxide solution, the potassium salt is formed after complete removal of water. Dipotassium Glycyrrhizinate is highly suitable as anti-irritant in hair and skin care products. At the same time this active ingredient has self-emulsifying properties and is able to stabilize an emulsion. Due to its sebum regulating properties Dipotassium Glycyrrhizinate is inhibiting excessive release of skin lipids through sebaceous glands. Therefore, it is appreciated in preparations for fatty hair and skin. The combination with its anti-irritant efficacy makes it an ideal anti-acne active ingredient.

Pentacyclic triterpenoic acids like glycyrrhetic acid and their derivatives have an excellent anti-inflammatory efficacy. The use in after sun preparations is especially recommended as the increased amount of messenger molecules (like histamine, prostaglandin, interleukin and serotonin) cause an aneurysm of blood vessels and induce erythema and swelling of the skin with burning and itching sensation. This is one reason why especially in after sun preparations anti-irritant active ingredients should be incorporated. Also, in other applications like shaving or depilation, where an irritation of the skin can occur, we recommend the use of glycyrrhizinic derivatives. They are highly recommendable for sensitive skin and skin that is prone to allergic reactions. Triterpenoic acids, like Dipotassium Glycyrrhizinate, are also good radical scavengers and therefore ideal for anti-ageing cosmetics.

Efficacy

- reduces inflammations
- reduces erythema and supports wound healing
- acts soothing and refreshing
- acts as an anti-irritant
- reduces itching and allergic reactions
- shows self-emulsifying properties
- regulates sebum production

Appearance

white or almost white powder

INCI

Dipotassium Glycyrrhizate

Registration

CAS-No.....68797-35-3
 EC-No.....272-296-1

Raw material approved by ECOCERT GREENLIFE, conform to the COSMOS Standard.



Nature needs no cosmetics,
but cosmetics need nature

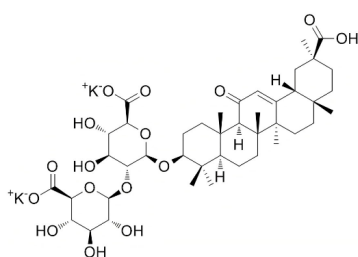
Dipotassium Glycyrrhizinate

Preservatives / Stabilizers

none

Characteristics

purity (assay).....>= 98.0 %
loss on drying.....<= 8.0 %
residue on ignition.....16.0 – 20.0 %



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molecular formula.....C₄₂H₆₀K₂O₁₆
molecular weight.....899.14 g/mol⁻¹
synonym.....Glycyrrhizic acid dipotassium salt;
(3-beta,20-beta)-20-carboxy-11-oxo-30-norolean-12-en-3-yl 2-O-beta-D-glucopyranuronosyl-alpha-D-glucopyranosiduronic acid, dipotassium salt

Application

creams and lotions
face masks
gels and ampoules
dermatological treatments
sensitive care

Application concentration

skin care formulations.....0.1 - 0.2 %
depilatory, hair dye.....0.4 - 1.0 %
dermatological care.....1 - 2 %
shampoo.....0.5 - 1 %

Incorporation

Dipotassium Glycyrrhizinate can easily be incorporated in the water phase of the formulation. In aqueous solution and in presence of mineral acids it forms a gel below pH 4. Due to its surface active (self-emulsifying) less emulsifier might be needed.

Toxicology

non hazardous in normal use concentration

Storage & Shelf life

Dipotassium Glycyrrhizinate should be stored in sealed containers at a dry place with good ventilation at 10 - 25°C. Dipotassium Glycyrrhizinate is hygroscopic!

In closed original containers the shelf life is 48 months.