

Ammonium Glycyrrhizinate

Description

Monoammonium glycyrrhizinate is the main component of glycyrrhizin, the characteristic ingredient of licorice roots from the plant *Glycyrrhiza glabra*. 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. Ammonium Glycyrrhizinate is highly suitable as anti-irritant in hair and skin care products as well as for oral hygiene 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 Ammonium 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. In oral hygiene products the sweet licorice like taste is highly welcomed beside the anti-irritant efficacy.

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 Ammonium Glycyrrhizinate, are also good radical scavengers and therefore ideal for anti-aging 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
- sweetens oral care products

Appearance

white crystalline powder

INCI

Ammonium Glycyrrhizate

Registration

CAS-No.....53956-04-0

EC-No.....258-887-7



Nature needs no cosmetics,
but cosmetics need nature

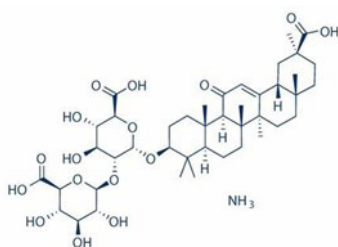
Ammonium Glycyrrhizinate

Preservatives / Stabilizers

none

Characteristics

purity (assay).....>= 98.0 %
loss on drying.....<= 6.0 %
residue on ignition.....<= 0.1 %



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molecular formula.....C₄₂H₆₁O₁₆NH₄
molecular weight.....839.96 g/mol⁻¹
synonym.....Glycyrrhizinic acid, ammonium salt,
(3-beta, 20-beta)-20-carboxy-11-oxo-30-norole-
an-12-en-3-yl 2-O-beta-D-glucopyranuronosyl-
alpha-D-glucopyranosiduronic acid, monoammo-
nium salt

Application

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

Application concentration

skin care formulations.....0.5 - 4 %
dental care.....0.5 - 1 %
shampoo.....1 - 2 %

Incorporation

Ammonium Glycyrrhizinate can easily be incorpo-
rated in the water phase of the formulation. It is
slightly soluble in water, very slightly soluble in an-
hydrous ethanol, practically insoluble in acetone.

Toxicology

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

Storage & Shelf life

Ammonium Glycyrrhizinate should be stored in
sealed containers at a dry place (R.H. < 50 %)
with good ventilation at 10 - 25°C.

In closed original containers the shelf life is 48
months.