## TECHNICAL SCIENTIFIC REPORT

# ENOXOLONE

### **PRODUCT INFORMATION:**

INCI Name: GLYCYRRHETINIC ACID

471-53-4

207-444-6

Relative molecular weight: 470.7 g/mol

CAS:

EINECS:

Enoxolone (18-β-Glycyrrhetinic Acid) is obtained from the licorice root (Glycyrrhiza glabra L.) by extraction and purification methods.

Definition: (20β)-3β-Hydroxy-11-oxo-olean-12-en-29-oic acid.

Enoxolone complies with the current monograph "1511: Enoxolone" of the European Pharmacopoeia with a content of 98.0 to 101.0 % (dried substance)

### STRUCTURE:

HO

H<sub>3</sub>C

0. CH3



Molecular formula: C<sub>30</sub>H<sub>46</sub>O<sub>4</sub>

- Appearance: White or almost white crystalline powder.
- Solubility: practically insoluble in water, soluble in ethanol, sparingly soluble in methylene chloride. Practically insoluble in glycerin and polyethylene glycol of low molecular weight. Soluble 1% in propylene glycol, alcohol and 5% in butylene glycol. Dispersible in oily phases.

### **PRODUCT PROPERTIES:**

Anti-inflammatory activity:

There are several studies showing the protective potential and anti-inflammatory effect of licorice extract and its derivatives inhibiting the production of NO and anti-inflammatory cytokines, what makes the licorice extract and its derivatives a new treatment in anti-inflammatory therapies based on the use of traditional medicinal herbs.

Studies have demonstrated the anti-inflammatory activity of 18-B-Glycyrrhetinic Acid:



H<sub>2</sub>C

CH3

СНз

н

COOH



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- **b** Recent studies show that 18-B-Glycyrrhetinic Acid is a potent inhibitor of the skin enzyme 11-Bhydroxysteroid dehydrogenase which catalyzes the conversion of cortisol to the inactive steroid cortisone.
- **s** Inhibiting the production of prostaglandin E2.
- **b** Inhibiting the movement of leucocytes towards the inflamed spot.
- Skin conditioning
- Skin-softening, anti-irritant, soothing and calming.

### **PRODUCT APPLICATIONS**

Given its anti-inflammatory, Enoxolone is indicated:

- In the treatment of affections of the upper respiratory tract such as aphonia and pharyngitis.
- Haemorrhoids and rectal disturbances associated to inflammation.
- Various skin diseases such as inflamed skin, eczemas, psoriasis, pruritus, and sensitive, fragile, and irritable skin.
- Buccal inflammation affections and sensitive gums

Enoxolone is an active ingredient for skin care and body care products. It can be formulated in creams, gels, ointments, emulsions, after sun products and toothpastes, among others.

### **DOSAGE AND FORMULATION:**

Recommended dosage: 0.5-1.5%

*Preventive measures:* Disperse Enoxolone in the oily phase of the emulsion.

### **BIBLIOGRAPHY AND OTHER REFERENCE SOURCES:**

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