

**18β-Glycyrrhetinic Acid Phytosome®**

**Soothing, anti-irritant, anti-inflammatory**

**Proven efficacy on humans**

18β-Glycyrrhetinic Acid Phytosome® was tested for its anti-erythema activity on 20 healthy volunteers. The erythema was induced by exposing the subjects to a 1.0 or 1.5 MED (Minimal Erythemal Dose) radiation for 4 minutes, being MED the amount of UV energy necessary to induce a measurable erythema. 18β-Glycyrrhetinic Acid Phytosome®, incorporated at 3% concentration in an oil/water emulsion, and the control formulation were applied on two different areas of the back immediately after radiation, and covered with an occlusive patch for 24 hours. The reddening of the skin was then evaluated by using a chromometer. Statistically significant lowering of the skin reddening (measured as a* parameter) was observed in the 18β-Glycyrrhetinic Acid Phytosome® treated area compared to the placebo at both MED dosages 1.0 and 1.5.

**Anti-inflammatory activity**

18β-Glycyrrhetinic Acid Phytosome® was tested for its ability to reduce inflammation cellular response. In fact, inflammation, in particular during the acute phase, causes the migration of granulocytes towards the inflammation site by chemotaxis. It is also known that the degree of peroxidase activity is directly proportional to the number of granulocytes present in the tissue. By measuring a reduced activity of myeloperoxidase, one can conclude that the cellular response to inflammation is reduced accordingly. Still after 24 hours, the enzymatic activity of peroxidase was almost 75% lower than the activity measured with the control product.

**Mechanism of action**

18β-Glycyrrhetinic Acid Phytosome® is the complexed form of 18β-Glycyrrhetinic Acid with soy phospholipids. The passage of the compound through the skin takes place through the interaction with cutaneous structures. In the reticular layer of the dermis, the complex is thought to undergo a slow and progressive decomplexation resulting in the in situ release of the free active constituent. The active component 18β-Glycyrrhetinic Acid is structurally similar to cortisol, and potentiates the anti-inflammatory activity of cortisol by inhibiting its intracellular inactivation.

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Did you know...

18ß-Glycyrrhetinic Acid is a metabolite of Glycyrrhizin, a saponin found in licorice (Glycyrrhiza glabra) root. The licorice plant is a legume related to beans and peas and derives its name from the word “liquorice”, the ancient Greek for “sweet root”. The sweet principle is Glycyrrhizin, a sweetener 50 times sweeter than sucrose.