



4MAN

Multifunctional skin care



CHEMYUNION

Inspiring Innovation

4MAN

Multifunctional active for male skin care that reduces excessive oiliness, provides soothing effect while reducing the signs of aging and promoting moisturization. **4MAN** is composed by the synergistic combination of hops, licorice, red algae extract, French rose, panthenol and menthol.

Male and female skin differences



Epidermis and stratum corneum

- Thicker in men
- Less cellular renewal
- Slower cellular differentiation



Sebaceous secretion

- More intense in men
- Greater amount of sebaceous glands



Pores and follicular plugging

- Larger pores in men
- Higher incidence of follicular plugging with likelihood of inflammation caused by acne



Derms

- Thicker in men - higher concentration of hyaluronic acid

How 4MAN works

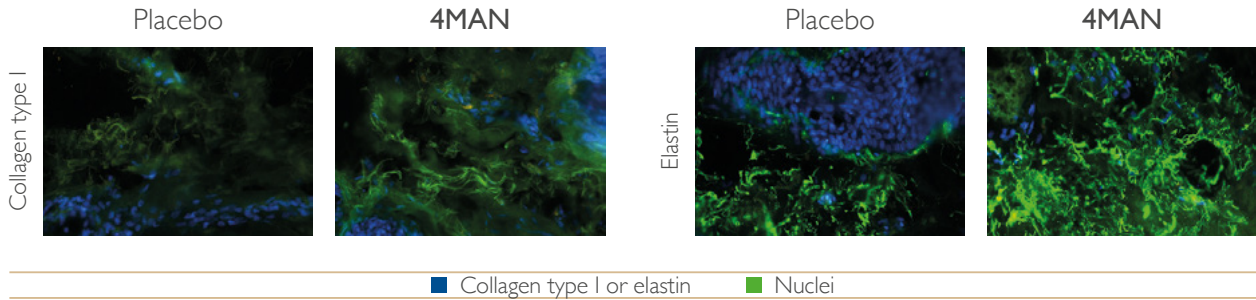
1. Promotes the reduction of TNF-alfa, pro-inflammatory mediator involved in the process caused by acne, providing soothing effect
2. Increases the production of structural proteins of the extracellular matrix, responsible for the firmness and elasticity of the dermis: collagen type I and elastin. In addition to stimulating cellular renewal and improving cutaneous micro-relief
3. Promotes the reduction and control of skin oiliness
4. Elevates and maintains the skin moisturization

Efficacy

Ex vivo

Smoothing of wrinkles, improvement of the firmness and elasticity of the skin

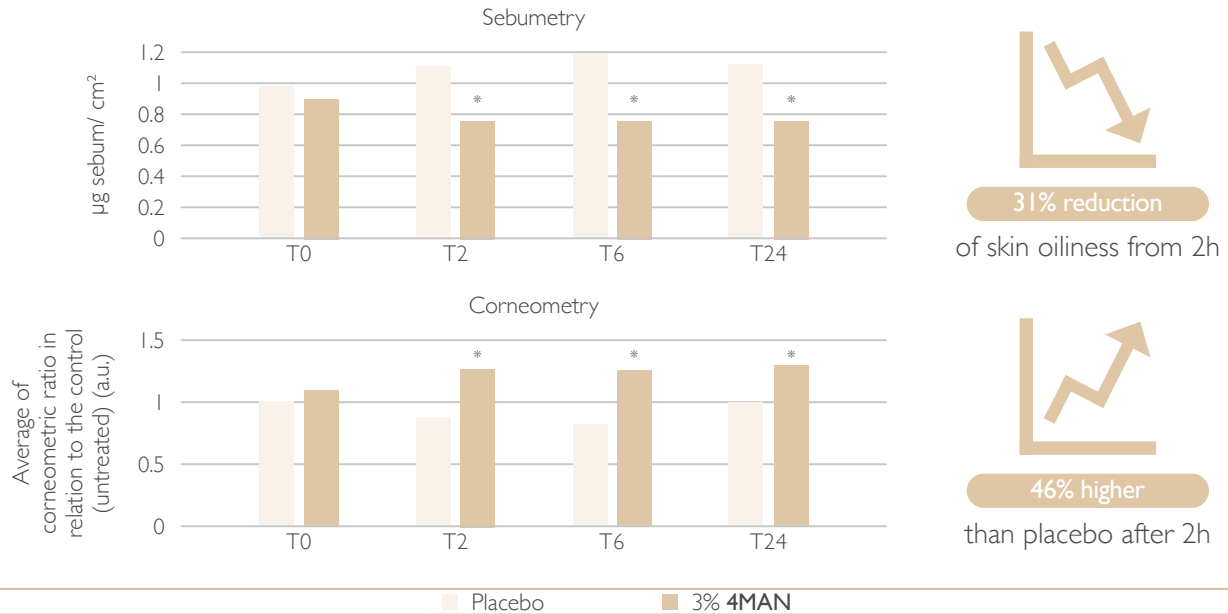
Human skin fragments treated with 1% 4MAN and incubated for 72 hours



In vivo

Clinical evaluation

- 22 volunteers
- Male
- 3% 4MAN
- Face - sebumetry
- Forearm - corneometry
- T = 0, 2, 6 and 24h



Note

* p<0.05 in comparison to the placebo and the untreated area (control).

Benefits

- Increased firmness and elasticity of the skin – increased production of collagen type I and elastin
- Stimulation of cellular renewal by up to 59%, which improves the appearance of the skin micro-relief and the potential of skin healing
- Soothing property with 67% reduction of the inflammatory mediator TNF-alfa
- Reduction of skin oiliness by 31% in relation to placebo after 2 hours of application
- Control of oil reduction for up to 24 hours after a single application
- Increase of 46% of superficial skin moisturization relative to placebo after 2 hours of application
- 24 hours of moisturization after a single application

Application

Emulsions, lotions, serums for male skin care.

Stability and compatibility

- Stable at pH 4-7
- It can be heated up to 45°C
- Water soluble

Concentration of use

1-3% (w/w)

INCI

Water (and) Glycerin (and) Glycyrrhiza Glabra (Licorice) Rhizome/Root (and) Rose Extract (and) Hydrolyzed Rhodophyceae Extract (and) Humulus Lupulus (Hops) Extract (and) Menthol (and) Panthenol

