

CLINICAL DATA – TRIFOLIUM PRATENSE (CLOVER) FLOWER EXTRACT

Titrated in Biochanin A, Trifolium Pratense Flower extract reduces the appearance of conspicuous and unsightly enlarged pores with a complete mechanism of action to rapidly recover a refined high definition skin.

Biochanin A from red clover extract

Native to Europe, Western Asia and Northwest Africa, red clover is also planted and naturalized in several other regions. Globally available in the wild, red clover is still traditionally used in many countries for its purifying and rebalancing properties.

Extracted from red clover flower, Trifolium Pratense Flower extract is a plant-derived pore minimiser designed to rebalance skin conditions responsible for pore enlargement. With a titrated content of bioactive polyphenol Biochanin A (\geq 0.4%), Trifolium Pratense Flower extract acts effectively and simultaneously on different biological targets to refine the skin with a fast action.

As a skin treatment, Trifolium Pratense Flower extract has a complementary effect compared to pore filling silicone-based primer, which has only a short-lasting immediate physical action.

3-in-1 Pore shrinking action

Trifolium Pratense Flower extract globally acts on the 3 main skin mechanisms behind excessive pore dilation in order to tighten them up and to reach a flawless and even complexion.

Keratinization improvement

Pore enlargement is linked to an incomplete keratinocyte differentiation, characterized by the retention of nuclei in corneocytes that prevents normal desquamation process. Accumulated at the surface of the pore, these skin barrier dead cells clog the orifice leading to a mechanical pore dilation.

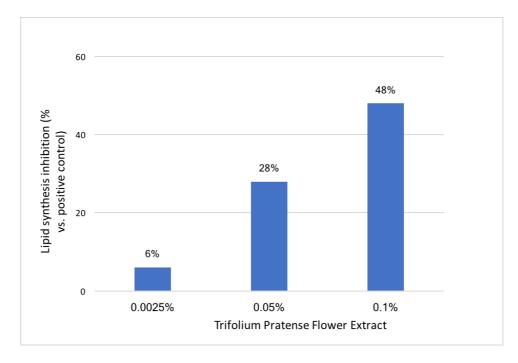
The increase in the synthesis of markers such as filaggrin, involucrin and keratin 10 confirms the normalization of the differentiation process of keratinocytes into nucleus free corneocytes to preserve a healthy skin barrier and eliminate cell debris.

QUANTIFICATION OF DIFFERENTIATION MARKERS BY IMMUNOFLUORESCENCE Involucrin Filaggrin Keratin 10 Untreated D4 Trifolium Pratense Flower Extract 0.1% D4



Seborrhea regulation

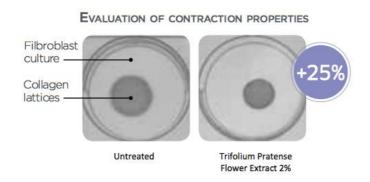
Pore enlargement is observed in all skin types but is amplified with oily skin and acne prone skin since the pore has to expand to accommodate the outpouring of excess sebum.



The reduction in sebum accumulation in sebocytes, due to the inhibition of 5α -reductase, prevents the opening of pores.

Astringent action

Loss of skin firmness and tonicity induces tissue relaxation and collapse of the pore wall, which lead to a larger pore opening.



The increase in the skin's contraction properties maintains optimal pore structure and close pores.

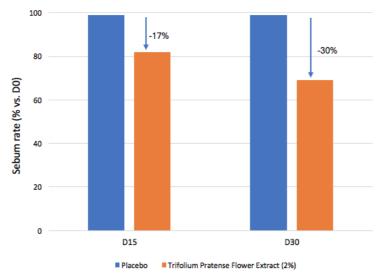
Regulation of sebum production

Test protocol

• 2 groups of 20 men & women with oily or combination skin (18 to 55 years old)



- CLEAN SCIENCE
- 2x/D application of a cream with 2% Trifolium Pratense Flower extract for one group vs. a placebo for the other group, during 30 days
- Seboregulation measurement at D0, D15 and D30 with Sebumeter®
- Self-assessment

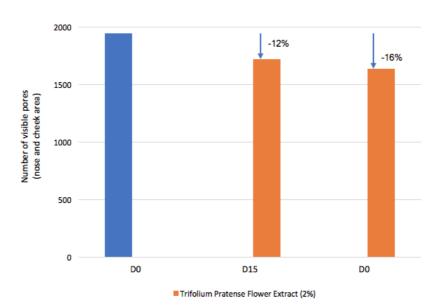


The inhibition of 5α -reductase induces a decrease in sebum production in the sebaceous glands. The oily flow is reduced and a lower amount circulates in the pore channel, preventing its enlargement.

Reduction in pore size

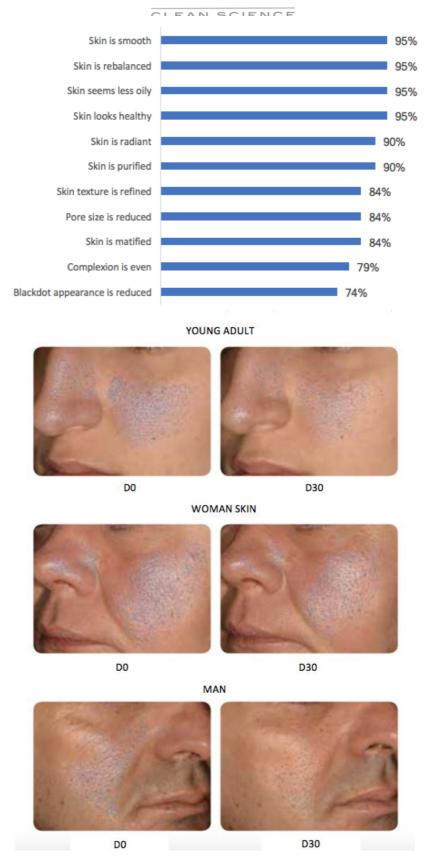
Test protocol

- 2 groups of 20 men & women (18 to 55 years old)
- 2x/D application of a cream with 2% Trifolium Pratense Flower extract for one group vs. a placebo for the other group, during 30 days
- Quantification of conspicuous pores on cheeks and nose by image analysis
- Self-assessment



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Trifolium Pratense Flower extract visibly reduces the appearance of pores to recover a "porefect" skin texture at any age!



Feature	Benefit
Red clover flower extract	Titrated in Biochanin A, highly bioactive polyphenol
 3-in-1 action: keratinization improvement seboregulation astringent action 	Fights globally against pore enlargement causes for an optimal result
Fast action results	Reduces the appearance of pore size for a refined and perfect skin in only 15 days!
Proven effective for men, women and young adults	Multi-usage (any gender, any age)