

CLINICAL DATA – EPILOBIUM ANGUSTIFOLIUM (CANADIAN WILLOWHERB) FLOWER

Since time immemorial, Native Americans have used liquid extracts from Epilobium Angustifolium (Canadian Willowherb) Flower for numerous applications such as an intestinal astringent, healing burns and soothing skin irritations. Epilobium Angustifolium Flower comes from northern Canadian Prairie plants that have developed strong phytochemical properties to survive the harsh climate. Epilobium Angustifolium is a fire succession plant which means it is among the first plants to regrow after a fire. The plants that grow Epilobium Angustifolium Flower are harvested manually by local communities in the northern Canadian Prairies.

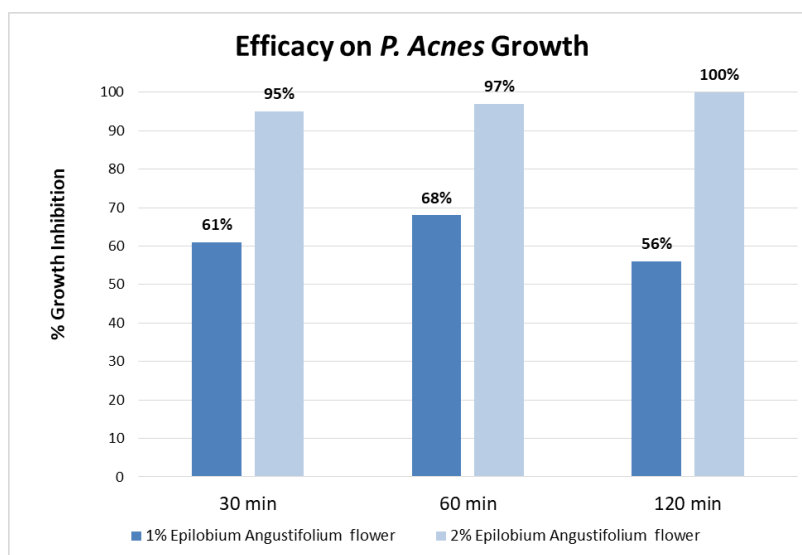
Epilobium Angustifolium Flower contains bioactive molecules such as oenothien B which has 5- α -reductase inhibitory activity, anti-oxidant and anti-bacterial properties.

Epilobium Angustifolium Flower is a multifunctional active. Its primary function is as a non-steroidal anti-irritant ingredient. *In vitro* experiments have demonstrated free radical scavenging ability. In addition, Epilobium Angustifolium Flower shows strong antibacterial activity on *P. acnes*. Its anti-irritant and redness reduction properties have been clinically demonstrated, showing a strong reduction of skin redness induced by chemicals or UV exposure within 30 minutes of use.

Antimicrobial Effect

The bacteria responsible for inflamed acne breakouts is *Propionibacteria acnes* (*P. acnes*). It is generally harmless but when pores become engorged with excess oil and dead skin cells, it creates an environment where *P. acnes* can excessively grow. *P. acnes* triggers inflammation within the pore, creating a papule, pimple, or cyst. Reducing the *P. acnes* population is an important step in controlling acne.

Epilobium Angustifolium Flower clearly inhibits *P. acnes* growth contributing to a better acne control.



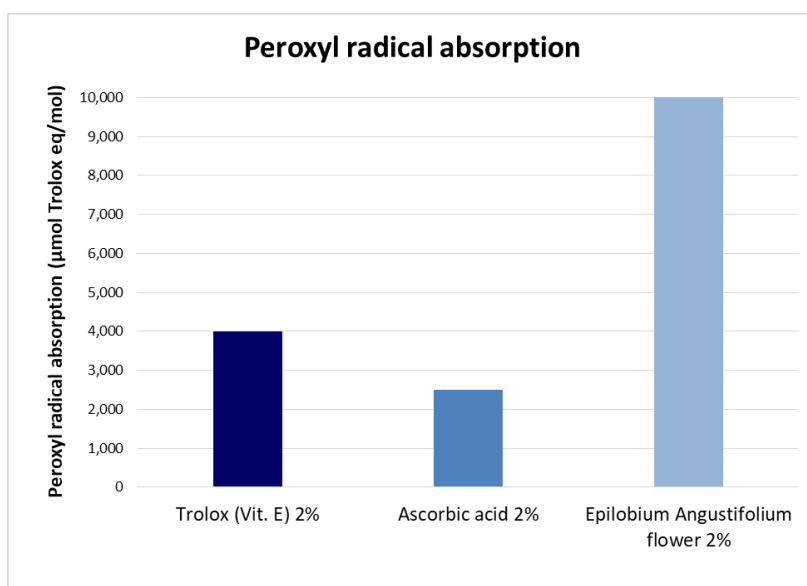
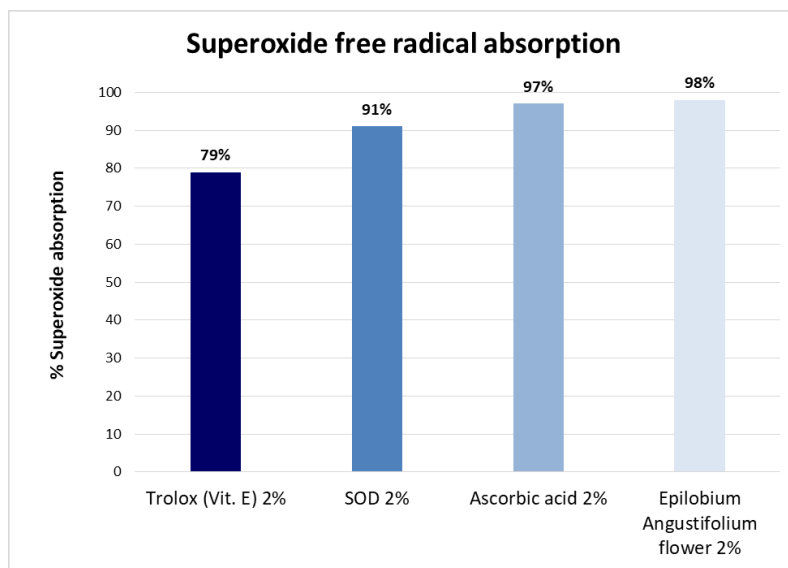
Effect on free radicals

The skin is regularly exposed to UV radiation and air pollution. These exposures induce the production of highly volatile molecules called free radicals. Oxidative stress breaks down protein (collagen), alters cellular renewal cycles, damages DNA giving rise to wrinkles and sagging skin, and promotes the release of pro-inflammatory cytokines, which trigger the generation of inflammatory skin diseases.

Epilobium Angustifolium Flower is a free radical scavenger. Its efficacy is comparable to the ascorbic acid on superoxide free radicals but without the unwanted side effects of formulating with ascorbic acid.

Compared to Trolox (hydrosoluble version of vitamin E) and ascorbic acid, Epilobium Angustifolium Flower has a greater scavenging efficacy on peroxy radicals.

Epilobium Angustifolium Flower reduces the formation of free radicals like superoxide and peroxy, thus reducing damages induced by oxidative stress.

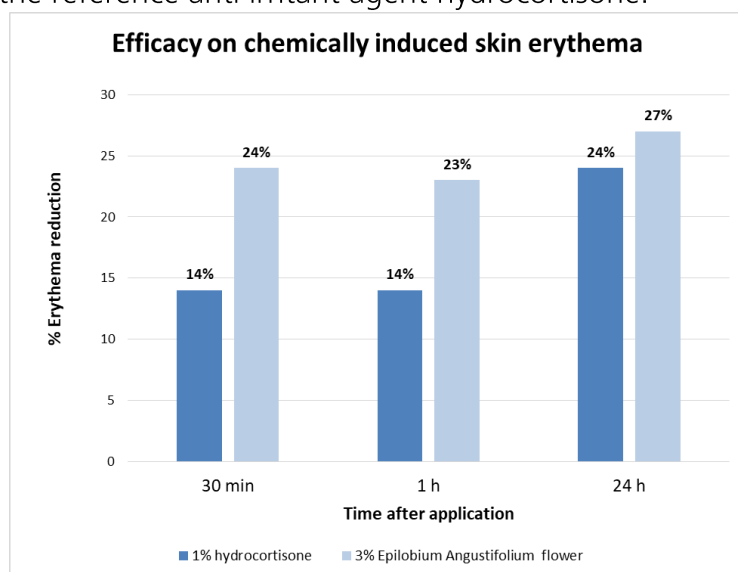


Reducing skin redness

Test protocol

- 8 consumers (women, 18 to 60 years old) with skin types I-III.
- Application of 15% lactic acid for 4 hours to induce redness and irritation.
- Application of 3% Epilobium Angustifolium Flower or 1% hydrocortisone lotion.
- Redness measurement after 30 minutes, 1 hour, and 24 hours. (a* value determination using chromametry)

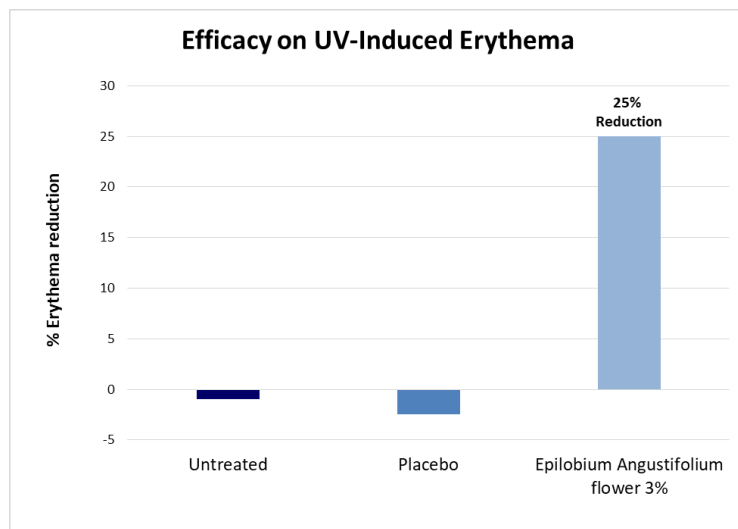
Epilobium Angustifolium Flower reduces skin redness within 30 minutes of use and has better results than the reference anti-irritant agent hydrocortisone.



Test protocol

- 7 consumers (women, 18 to 60 years old) with skin types I-III.
- Application of 3% Epilobium Angustifolium Flower or placebo 24 hours after UV irradiation (1.5 X MED).
- Redness measurement after 4 hours. (a* value determination using Chromametry)

Epilobium Angustifolium Flower reduces skin redness induced by UV exposure.



Improving acne-prone skin

Test protocol

- 63 consumers (18 to 40 years old) with acne-prone skin (not taking an anti-acne treatment during the study).
- Application of the “anti-acne cream” with 2% Epilobium Angustifolium Flower and 2% Kollaren, 2x/day, during 8 weeks.

Test results

Benefits	Results after 4 weeks
The product removes excess sebum	82%
The product provides a freshness sensation	80%
The skin is clearer	72%
The product prevents the occurrence of blemishes	72%
The product removes impurities	68%

Benefits	Results after 8 weeks
The skin is not shiny	76%
The skin is smoother	72%
The product leaves the skin more beautiful	72%
The skin looks healthier	70%
The skin is mattified	64%

Consumers experience a reduction in blemishes and their skin is clearer in just 4 weeks. Consumers agree that acne spots are less visible for a mattified, smoother, and healthier looking skin.

Epilobium Angustifolium Flower is the best active to rapidly soothe the skin and reduce redness.

Applications

- Anti-irritant
- Skin soothing
- Anti-acne
- Anti-redness
- Sensitive skin
- Post dermatological treatment

Features & Benefits

Features	Benefits
Unique Canadian plant	Harvested manually by local communities in the northern Canadian Prairies. Has developed strong phytochemical properties to survive the harsh climate.
Contains bioactive molecule oenothain B	Inhibits 5- α -reductase and <i>P. acnes</i> .
Multi-functional	Can be used for anti-irritant and soothing care, for acne-prone skin, after sun care
Strong clinical results	Fast relief of skin irritation within 30 minutes of use and has better results than the reference anti-irritant agent hydrocortisone.