



Pure Cover

Common name: Comfrey

Scientific name: *Symphytum officinale*

INCI name: Symphytum Officinale Leaf Extract

IECIC 2015 name: SYMPHYTUM OFFICINALE LEAF EXTRACT

Symphytum officinale (Comfrey)

Pure Cover

Symphytum

Syn (Greek)
: Together

Phyo (Greek)
: Growth

Comfrey

Comfima (Latin)
: to make firm
to boil together

The meanings of the comfrey name refer its ability to **heal broken bones** and **reconnect wounded flesh**.



Reference: Staiger, C. (2007). Comfrey: ancient and modern uses. *Pharmaceutical Journal*, 279(7483), 732.

Uses of Ancient Comfrey

In *Naturalis Historia* (by Pliny the Elder)

- One of the most important testimonies of ancient phytomedicine

Chapter 137] A syrup of the Comfrey or a decoction of its root are used for **bruises and sprains**.

Chapter 148] Comfrey ensures rapid **healing of wounds**.

Chapter 161] Comfrey is an **emmenagogue** when ground into dark wine.

In *Materia Medica* (by Dioscorides)

- The oldest materia medica in Europe

“The roots below are black on the outside and white and slimy on the inside. ... Finely ground and then drunk they are **beneficial for those spitting blood and those suffering from internal abscesses**. Used as a compress they also **seal fresh wounds**. They have a joining together effect when cooked with pieces of flesh. They act as cataplasm in the case of **inflammation, especially in the anal area**.”

Pure Cover

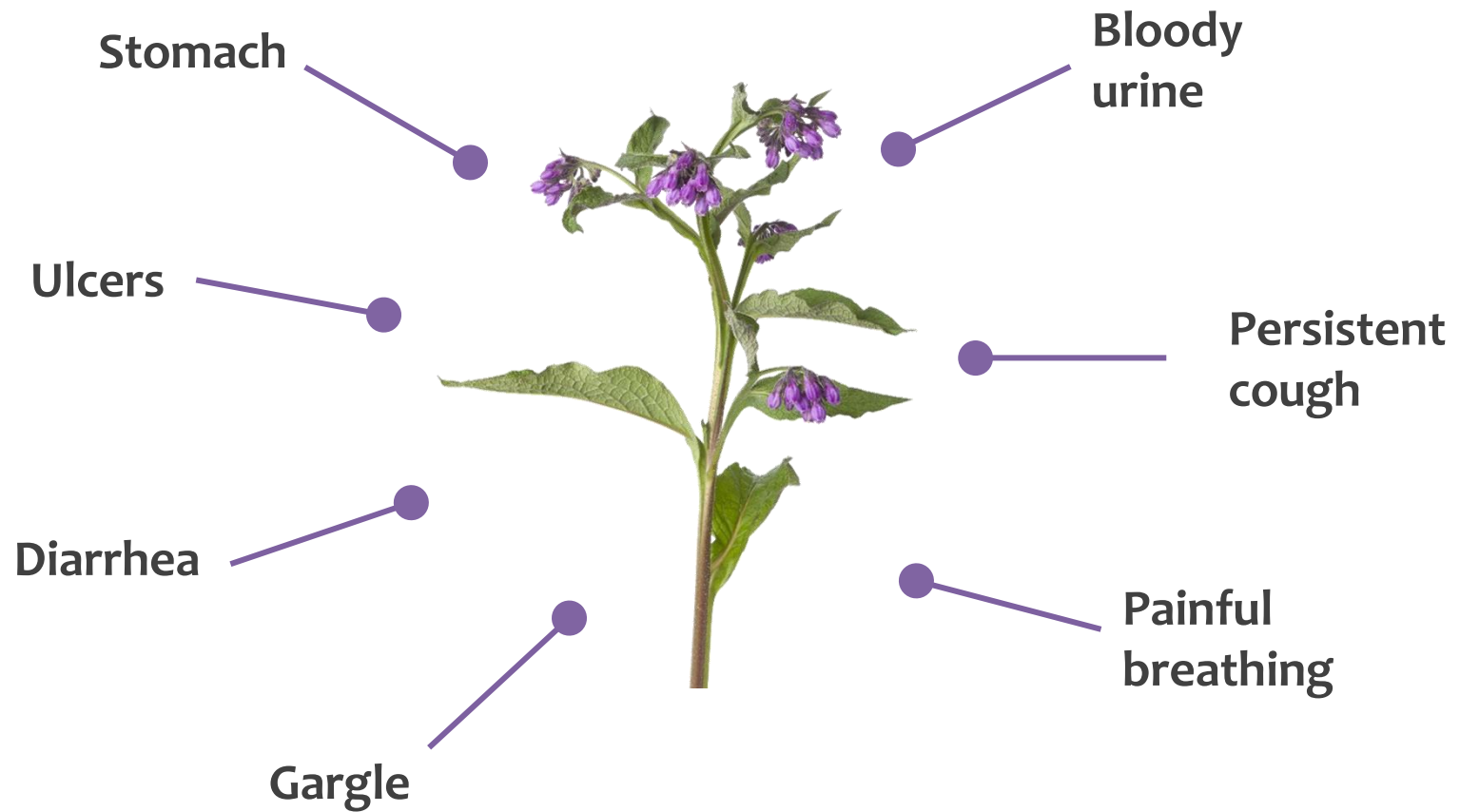


Reference: <https://pharmaceutical-journal.com/article/news/comfrey-ancient-and-modern-uses>

Health Benefit

Pure Cover

Comfrey is used as a tea for upset stomach, ulcers, heavy menstrual periods, diarrhea, bloody urine, persistent cough, painful breathing (pleuritis), bronchitis, cancer, and chest pain (angina). It is also used as a gargle for gum disease and sore throat.



Reference: <https://www.rxlist.com/comfrey/supplements.htm>

Comfrey on Skin

Pure Cover

In recent years, many studies have proven that this comfrey's healing power is due to its **allantoin** properties which stimulate **cell proliferation** and **promote wound healings** when applied topically.



Cell proliferation

Wound healing

References:

- Araujo, L. U., Reis, P. G., Barbosa, L. C. O., Grabe-Guimarães, A., Mosqueira, V. C. F., Carneiro, C. M., & Silva-Barcellos, N. M. (2012). In vivo wound healing effects of Symphytum officinale L. leaves extract in different topical formulations. Die Pharmazie-An International Journal of Pharmaceutical Sciences, 67(4), 355-360.
- Staiger, C. (2012). Comfrey: a clinical overview. Phytotherapy Research, 26(10), 1441-1448.

Multi Efficacy Product

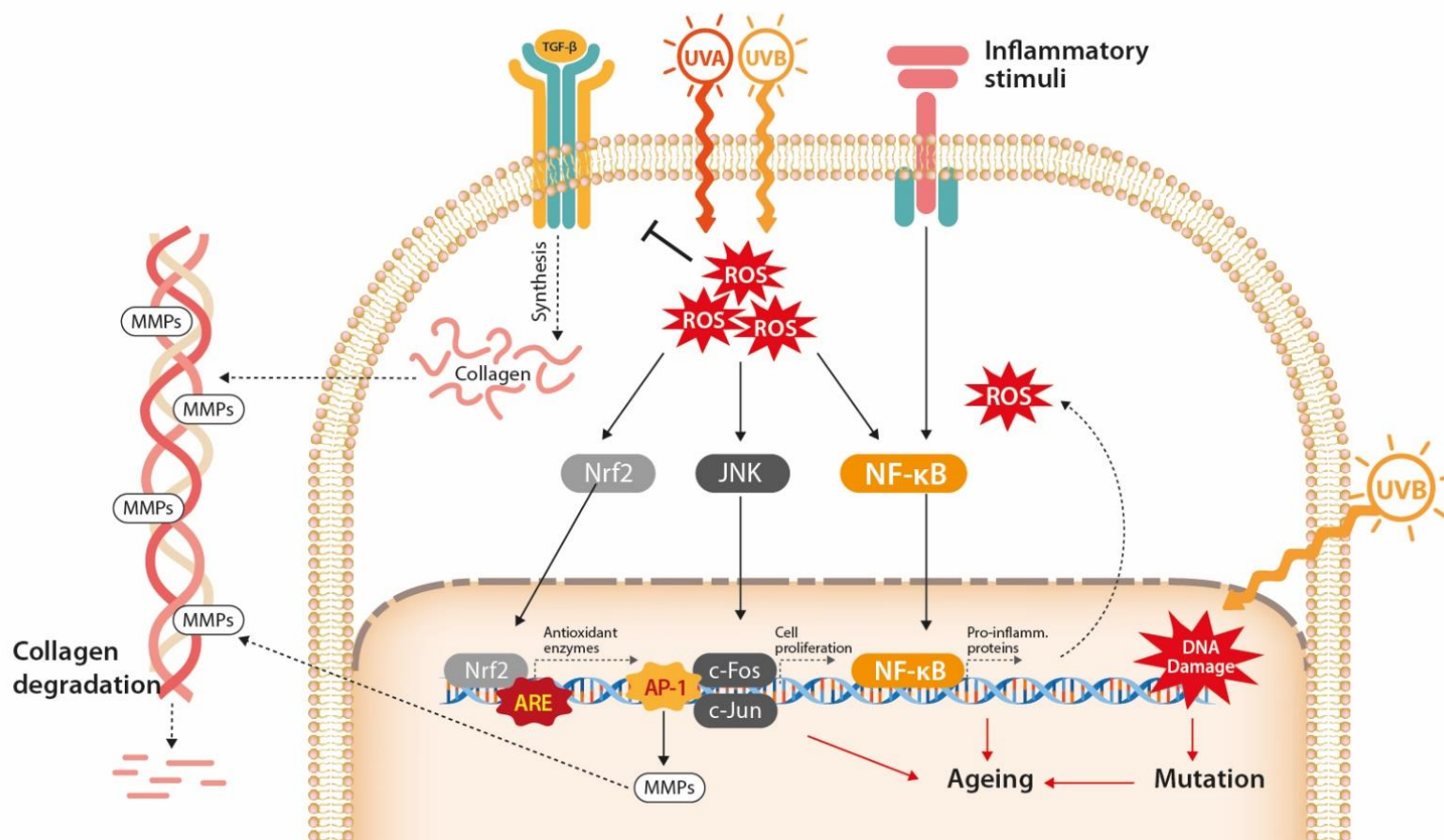
Antioxidant / Skin Brightening / Hair Growth



Oxidative Stress Mechanism

Pure Cover

Our skin is under attack from many factors in daily life, such as UV, pollution and stress. These factors increase the Reactive Oxygen Species (ROS), which plays a major role in the skin aging process.

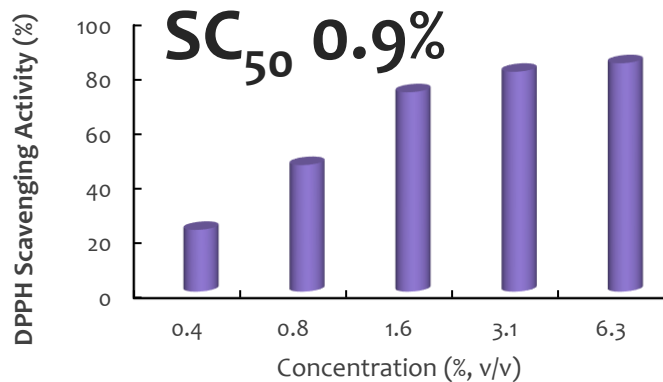


Antioxidant Effects of Pure Cover

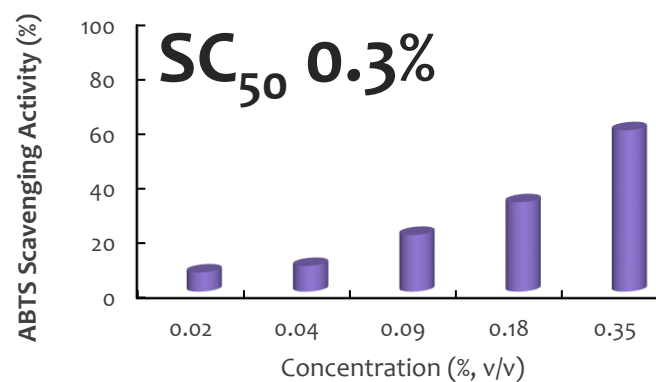
Pure Cover

The excellent antioxidant efficacy of Pure Cover was verified through DPPH assay, ABTS assay, and ORAC assay.

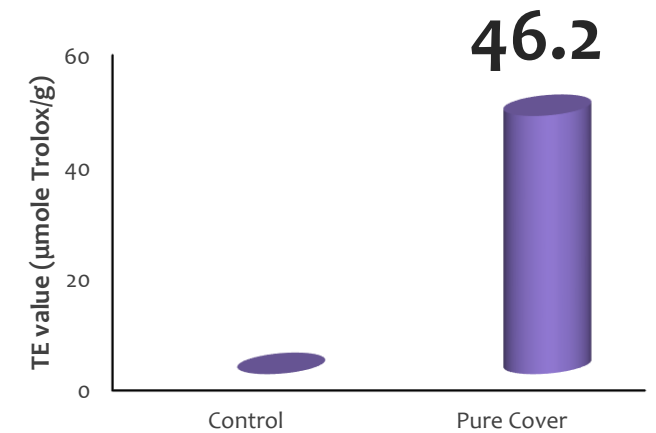
Free Radical Scavenging Activity (in tubo)



ABTS Radical Cation Scavenging Activity (in tubo)



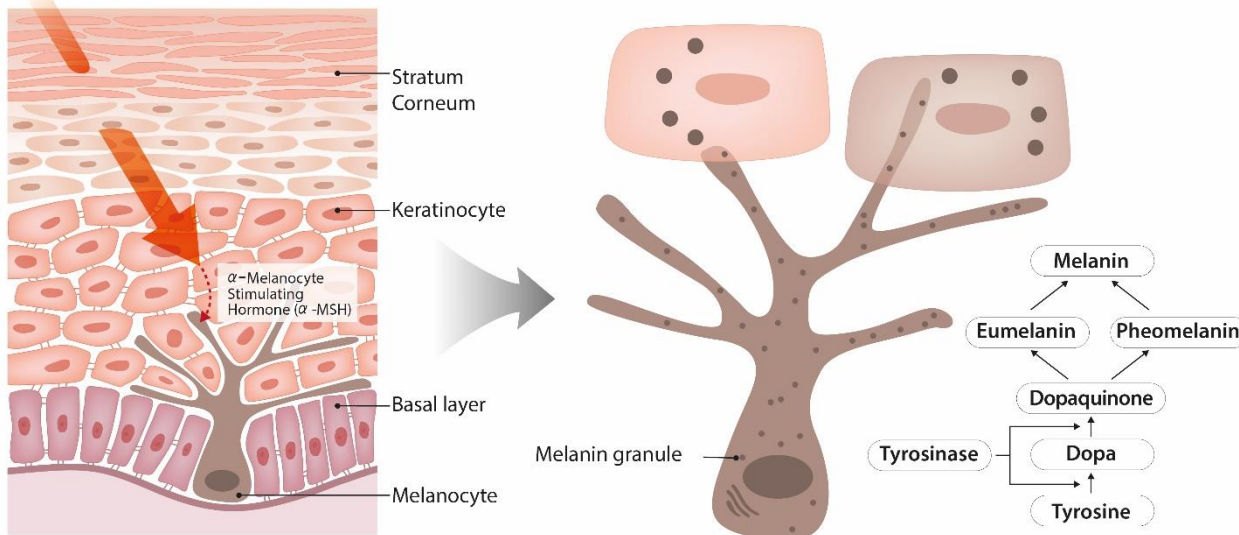
Oxygen Radical Absorbance Capacity (in tubo)



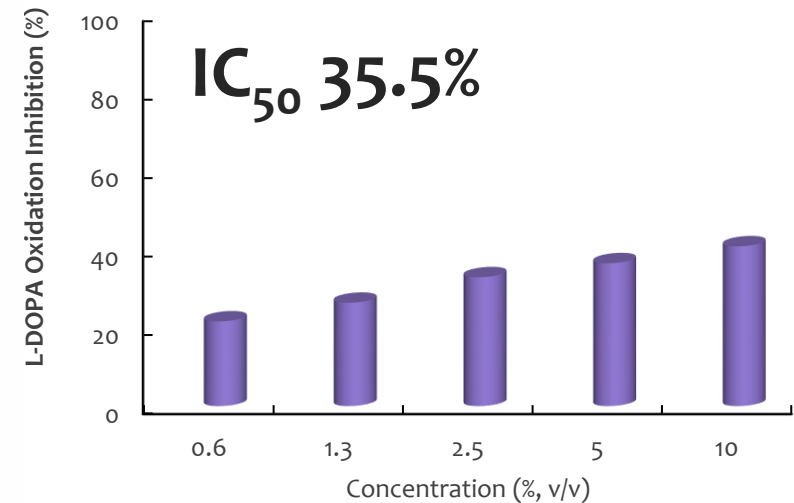
Skin Brightening Effects of Pure Cover

Pure Cover

In the melanin biosynthesis pathway in the human skin, Tyrosinase reacts with DOPA to promote skin melanin synthesis through the production of DOPA-quinone. Pure Cover have a skin brightening efficacy by inhibiting of L-DOPA oxidation.



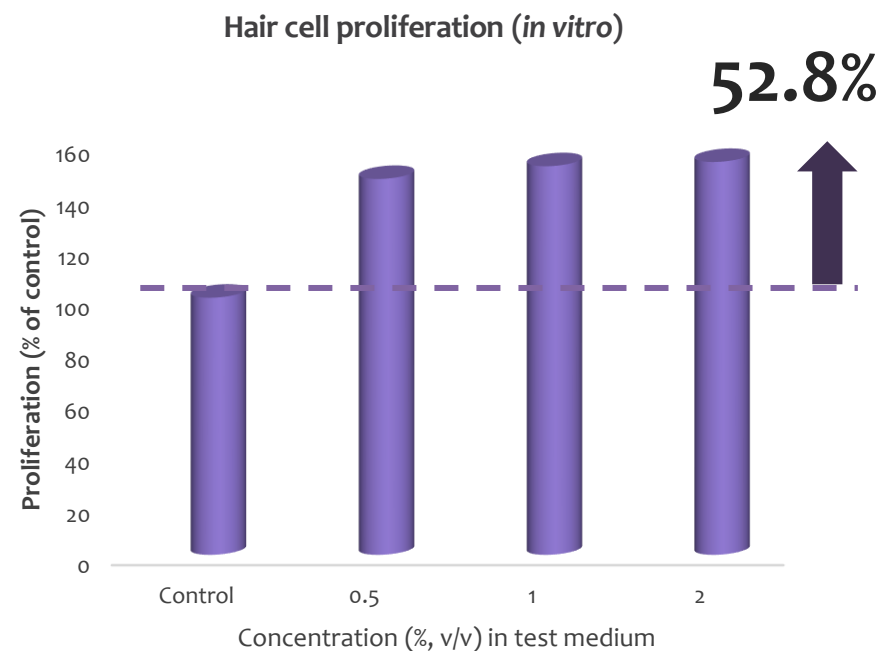
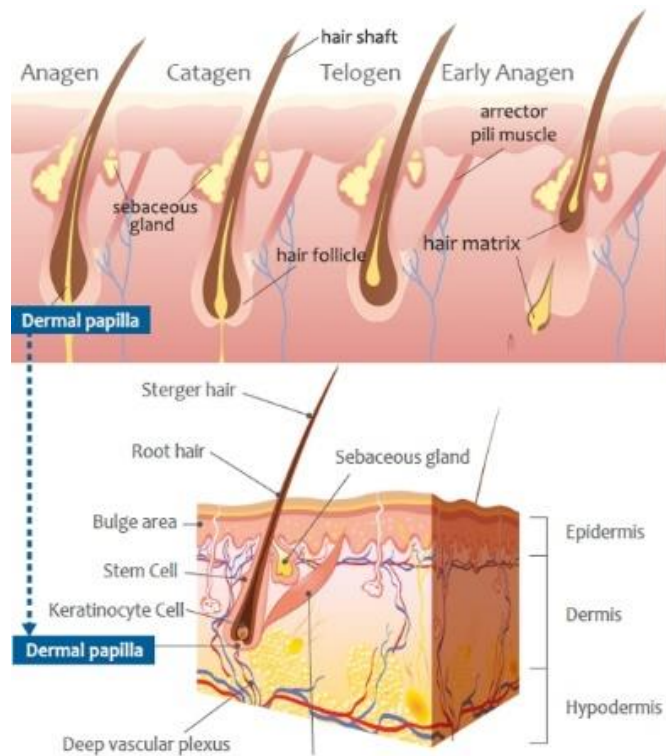
L-DOPA Inhibition Activity (*in tubo*)



Hair Growth Effects of Pure Cover

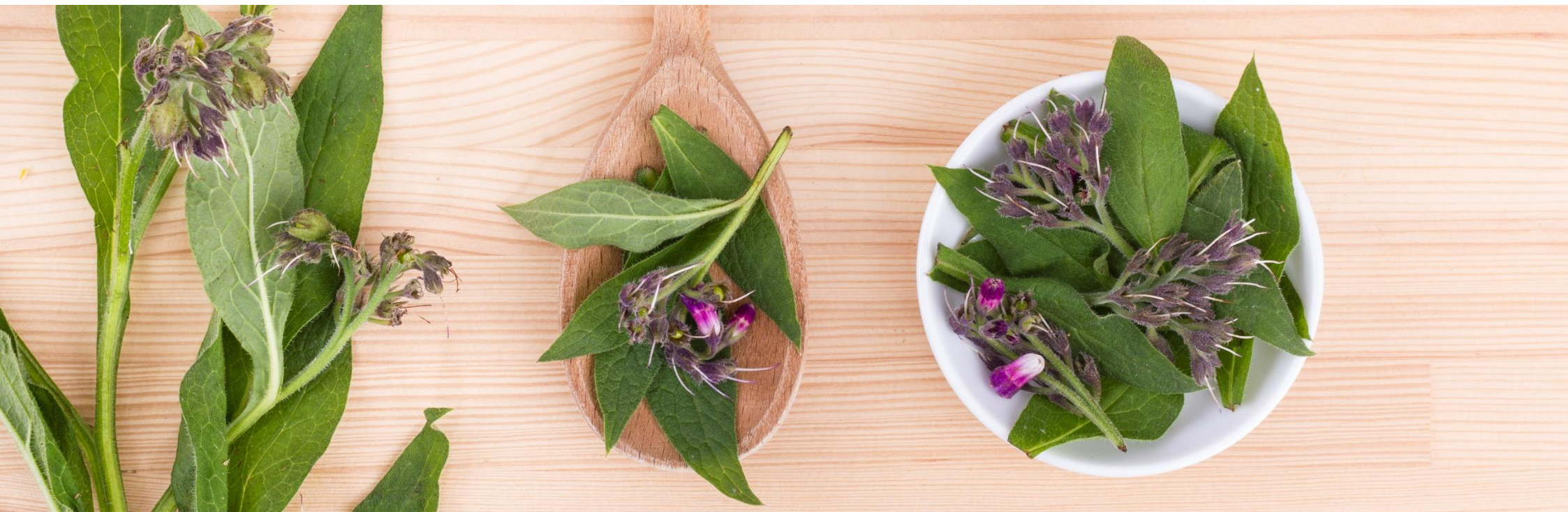
Pure Cover

Human hair growth has a unique repetitive cycle composed of the anagen, catagen, telogen phases, and early anagen. And in this hair growth, Human Dermal Papilla (HDP) cells play a critical role in regulating hair follicle development and period regeneration. Therefore, this cycle clearly shows the importance of hair cell regeneration, which is the fundamental method to restore lost hair cells. Pure Cover was shown to have excellent hair-growth efficacy by increasing hair cells to 52.8%.



Summary

- Antioxidant
- Skin brightening
- Hair growth



Product Information

Product Name : Pure Cover

INCI name : Symphytum Officinale Leaf Extract

IECIC 2015: Symphytum Officinale Leaf Extract

CAS No: 84696-05-9

EINECS (I) / ELINCS (L): 283-625-3 (I)

Dosage : 1 – 3%

Formulation : Add to the formulation
when the temperature is lower than 55°C.
Recommended to add after the cooling process

Efficacy: anti-oxidant, skin brightening, and hair growth effects





The Secrets of Caledonia

The Secrets of Caledonia (TSOC) is a supplier of natural cosmetic ingredients inspired by Scottish traditional herbal medicine. Taking advantage of Scotland's biodiversity and working in collaboration with established Scottish herbalists, we aim to provide the most effective and innovative natural ingredients at the highest quality.



Tel
+44 (0)131 629 9584



E-mail
marketing@tsocalledonia.co.uk



Address
Unit 8F Edgefield Road Industrial Estate,
Loanhead, EH20 9TB