

TRICOVER



Plant part: Aerial parts

Plant name: Red Clover

Scientific name: *Trifolium pratense*

INCI name: Trifolium Pratense Extract

**IECIC 2015 name: TRIFOLIUM PRATENSE
(CLOVER) EXTRACT**

Uses of Red Clover

- In Western herbal medicine, red clover is used to as a skin remedy, especially for managing eczema and skin itchiness
- Infusions of the plant with water have helped in alleviating whooping cough.
- Many parts of red clover are edible, such as, leaves and flowers can be added to salads, seeds can be sprouted, and flowers and seed pods blended to create flour.
- Red clover was used in agriculture for crop-rotation as it fixed nitrogen and produced hay.





Plant Story

- Trifolium pratense is a perennial flowering herb found throughout the world, which is important in nitrogen fixing in soil.
- The plant has trifoliate leaves with pinkish-red flowers, which flower from May – September. It grows to around 30 – 50cm tall and can be found in grasslands and waysides. It was traditionally found in hay meadows.
- The plant has a long history of being thought to bring good luck.

Scientific Research



- Isoflavones in red clover has been reported to increase collagen production and improve the skin barrier.
- Red clover may have potential anticancer properties with poultices of the herb being used on cancerous growths.
- Biochanin, isolated in red clover extracts has been shown to have skin brightening activity by reducing melanin synthesis.
- Moreover, polysaccharides from the aerial parts can inhibit nitric oxide production, suggesting anti-inflammatory activity.
- Our own studies have shown positive results for antioxidant effects, anti-inflammatory effects and skin brightening.

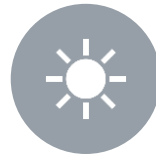
Key Functions



ANTIOXIDANT



**ANTI-
INFLAMMATOR
Y**



**SKIN
BRIGHTENING**

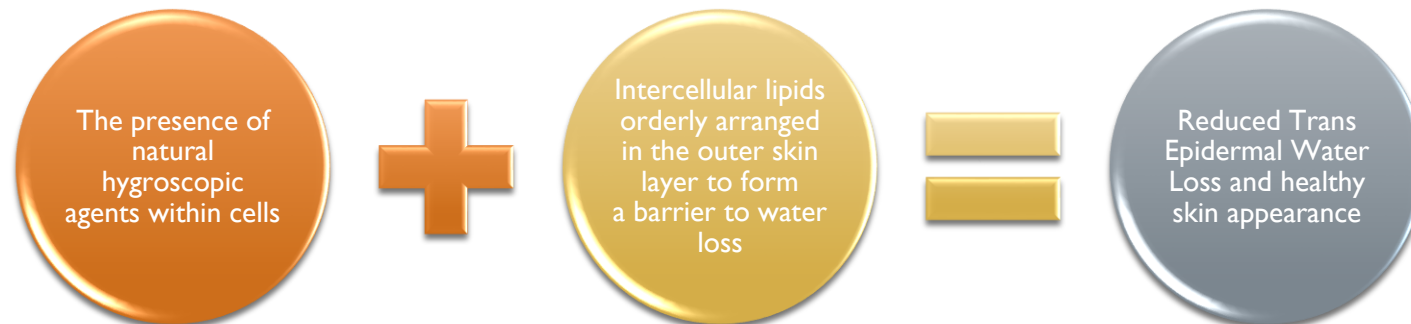


Skin Structure

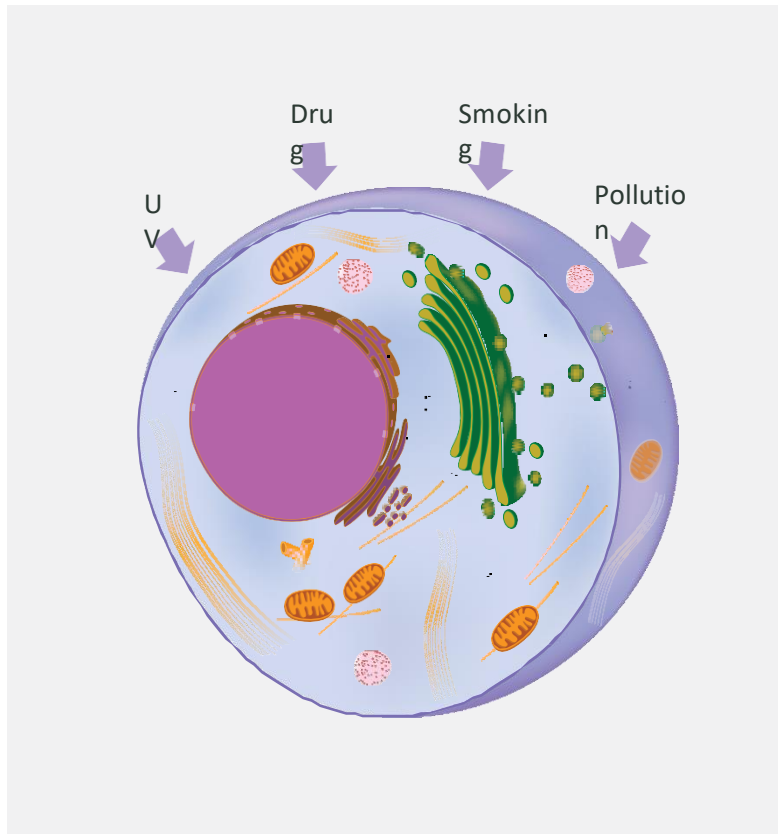
Four Layers

- Stratum corneum
- Stratum lucidum
- Stratum granulosum
- Stratum spinosum

➤ Retention of water in the skin



Antioxidants

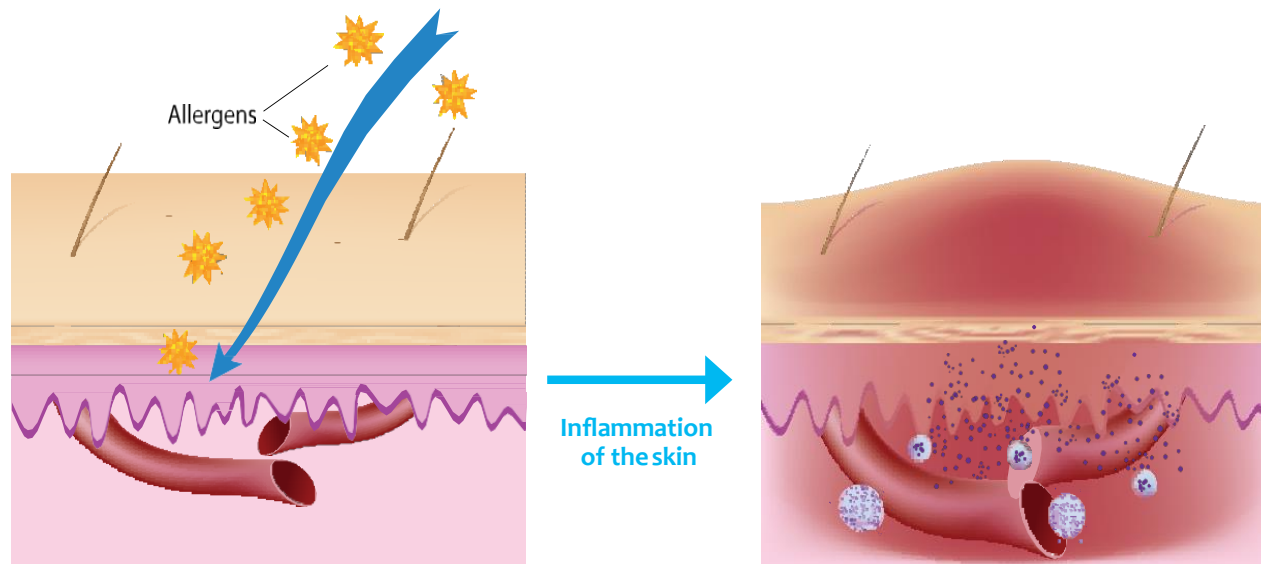


Our skin is under attack from many factors in daily life, such as UV, pollution and smoking. These factors increase the Reactive Oxygen Species (ROS).



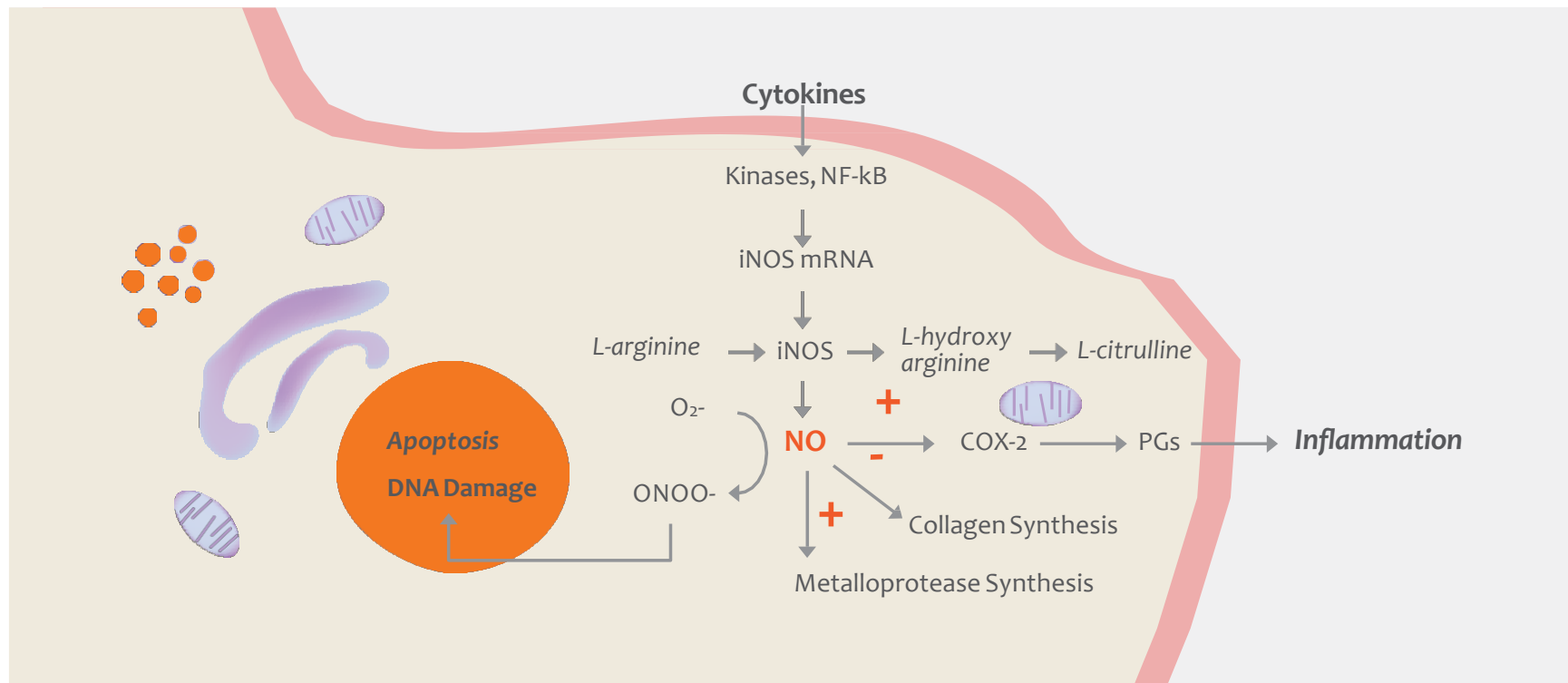
Antioxidants from Tricover can inhibit the generation of ROS and in turn inhibit cellular damage.

What is Inflammation?



Inflammation is part of the complex biological responses to wide range of harmful stimuli including injury, tissue necrosis, infection, and irritants. The purpose of inflammation is to destroy (or contain) the damaging agent, initiate repair processes and return the damaged tissue to useful function. The symptoms of inflammation are redness, swelling, heat, and pain, which are caused by increased blood flow into tissue. The immune system is responsible of protecting our body from the harmful stimuli and of maintaining homeostasis. Disorders of the immune system can result in autoimmune diseases, inflammatory diseases, and cancer. In an attempt to protect the body, the immune system might overreact to the stimuli, and this might cause allergy or inflammatory reactions.

Inflammation Mechanism



Reported Functions

Trifolium Pratense (Clover) Flower Extract


- **INCI Name:** Trifolium Pratense (Clover) Flower Extract
- **INCI Monograph ID:** 9111
- **VCRP Reported Name:** Trifolium Pratense (Clover) Flower Extract
- **VCRP Frequency of Use as of 02/2018 :** 30
- **CAS No:** 85085-25-2
- **EINECS (I) / ELINCS (L):** 285-356-7 (I)
- **Definition:** Trifolium Pratense (Clover) Flower Extract is the extract of the flowers of *Trifolium pratense*.
- **SAFETY/REGULATORY INFORMATION**
- **Information Source(s):** [21CFR182.20](#), [21CFR582.20](#), RIFM, UNII: 4JS0838828
- **Chemical Class(es):** [Botanical Products and Botanical Derivatives](#)
- **Reported Functions:** [Antioxidants](#); [Cosmetic Astringents](#); [Fragrance Ingredients](#)
- **Reported Product Categories:** [Body and Hand Preparations \(Excluding Shaving Preparations\)](#); [Eye Lotions](#); [Eye Makeup Preparations, Misc.](#); [Face and Neck Preparations \(Excluding Shaving Preparations\)](#); [Foundations](#); [Hair Conditioners](#); [Hair Preparations \(Non-coloring\), Misc.](#); [Moisturizing Preparations](#); [Night Skin Care Preparations](#); [Shampoos \(Non-coloring\)](#); [Skin Care Preparations, Misc.](#); [Tonics, Dressings, and Other Hair Grooming Aids](#)
- **Ingredient Source(s):** Plant
- **Technical Name(s):**
 - Clover Blossom Extract
 - Clover Extract
 - Clover Flower Extract
 - Clover tops red extract solid (Trifolium pratense L.) (RIFM)
 - Trifolium Extract
 - Trifolium Pratense Extract
- **Trade Name Mixture(s):** [Click here to view full list of Trade Name Mixtures](#)



Product Information

- **Product Name :** Tricover
- **INCI name :** Trifolium Pratense Extract (China Compliant)
- **Dosage :** 1 – 3%
- **Formulation :** Add to the formulation
 - when the temperature is lower than 55°C.
 - Recommended to add after the cooling process.
- **Storage :** Avoid direct light or UV.
 - Keep it in a cool and dry area.





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.



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