



## **Product Story**

A pale variety of the species, *Papaver somniferum*, has white petals with purple staining and produces White Poppy seeds. The plant is popular as decorative flowers with origins in South-East Europe and Asia but produced worldwide now. *Papaver somniferum* has over 40 alkaloids present which are used to create opium and derivatives, such as, morphine.

Poppy seeds are a popular food item and is the source of a healthy and edible Poppy seed oil, that has many uses, due to having analgesic properties.

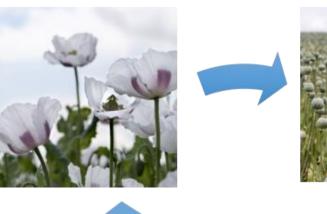




# Harvesting Wholesoothe

Per year roughly 80,000 tonnes of poppy seeds can be legally harvested with most of the yield from countries, such as, Czech Rebublic, Turkey, and Spain. Although this plant is grown over a wide range of areas in both the northern and southern hemispheres from Scandinavia to Argentina and Ethiopa.

Papaver somniferum blooms in around early-mid summer with rapid growth from seed in around 120 days. These plants reach around three feet in height and petals only lasting several days before revealing an ovoid seed capsule. This capsule is left behind and can hold a maximum of one thousand seeds. Capsules are removed from the stem with seeds then extracted from within and dried.









## **Key Functions**

Antioxidant

**DPPH Scavenging Activity** 

Anti-Wrinkle

Elastase Inhibition

Skin Brightening

Melanin Biosynthesis Inhibition



## Skin Structure

#### **Four Layers**

- Stratum corneum
- Stratum lucidum
- Stratum granulosum
- Stratum spinosum
- > Retention of water in the skin

The presence of natural hygroscopic agents within cells

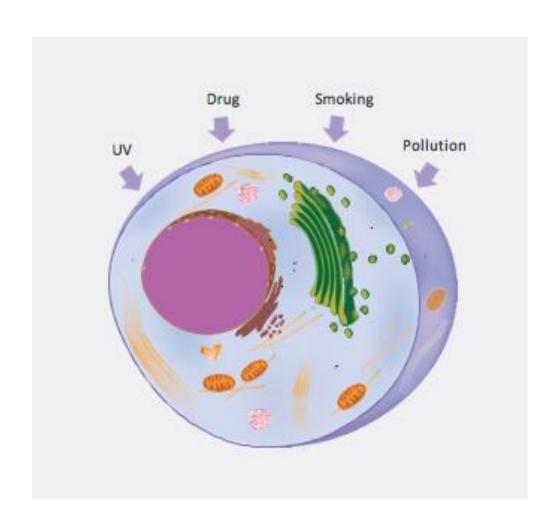


Intercellular
lipids orderly
arranged in the
outer skin layer
to form a barrier
to water loss



Reduced Trans Epidermal Water Loss and healthy skin appearance





## Antioxidants

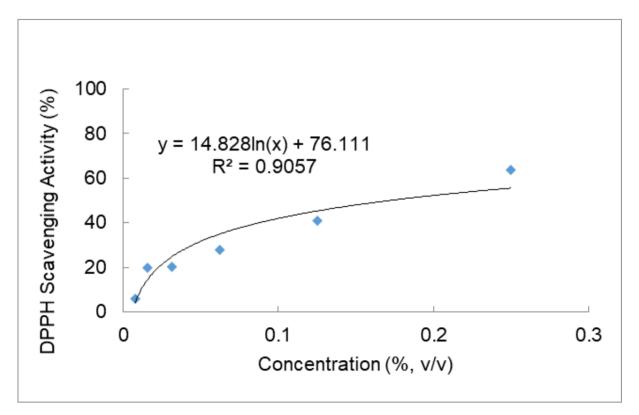
Our skin is under attack from many factors in daily life, such as UV, pollution and smoking. These factors increase the Reactive Oxygen Species (ROS).

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



## In vitro efficacy test: Anti-Oxidation

DPPH Scavenging Activity



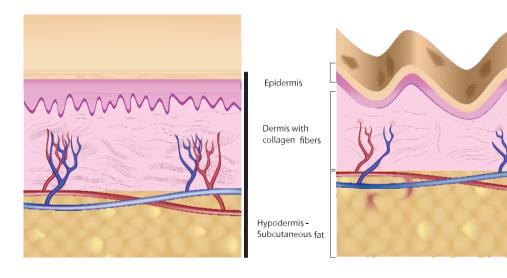
SC<sub>50</sub>: 0.17%



o.17% of Wholesoothe product removed 50% of the free radicals in this antioxidant test. Good antioxidant activity is critical for anti-ageing agents in skin care products.

## Skin Ageing and Wrinkle Formation

#### Younger Skin



#### Older Skin

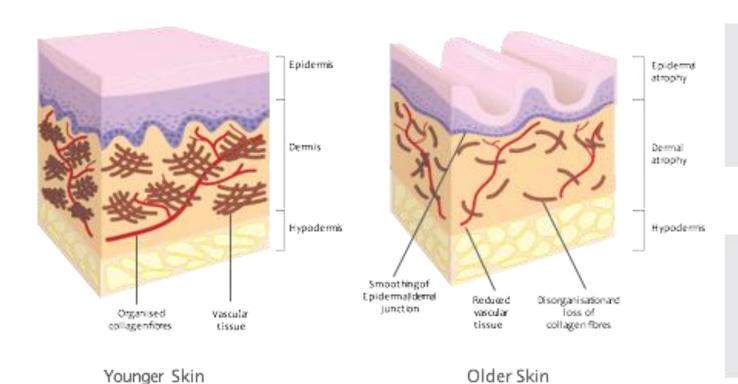
#### \*\* Skin ageing is noted by

- a decrease of elasticity
- formation of wrinkles and fine lines
- degradation of collagen
- thinner and weakerskin
- damaged connective tissues

Skin changes with increasing age due to both intrinsic and extrinsic factors. Intrinsic skin aging is determined by genetic factors, hormonal status and metabolic reactions such as oxidative stress. One of the most important extrinsic skin aging factors is induced by UV radiation by sun exposure, referred to as photoaging. Smoking cigarettes and environmental pollution are also essential factors in premature skin aging and wrinkle formation.



### Anti-wrinkle Mechanism



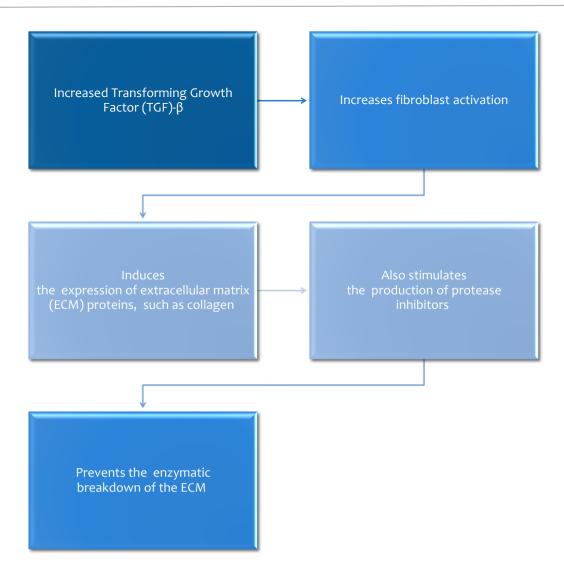
- · Stimulation of collagen synthesis
- · Inhibition of collagen degradation
- · Inhibition of elastin degradation
- · Stimulation of fibroblast proliferation



- · Preventing wrinkle formation
- . Increasing skin elasticity
- Wrinkle improvement



## Mechanism of Collagen Synthesis





## Reported Functions

#### Papaver Somniferum Seed Extract

- INCI Name: Papaver Somniferum Seed Extract
- INCI Monograph ID: 13159
- VCRP Reported Name:

Papaver Somniferum Seed Extract

VCRP Frequency of Use as of 02/2018:

3

- Definition: Papaver Somniferum Seed Extract is the extract of the seeds of Papaver somniferum.
- SAFETY/REGULATORY INFORMATION
- Information Source(s): UNII: 60RO23IR87
- Chemical Class(es): Botanical Products and Botanical Derivatives
- Reported Functions: Skin-Conditioning Agents Miscellaneous
- Ingredient Source(s): Plant
- Technical Name(s):
  - Opium Poppy Seed Extract
- Trade Name Mixture(s): Click here to view full list of Trade Name Mixtures





### **Product Information**

**Product Name: Wholesoothe** 

**INCI name: Papaver Somniferum Seed Extract** 

**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.











