

### Sunflower Oil Research Paper

#### **APPEARS INS**



Sunflower Seed Oil is a hero ingredient in the <u>Three Ships Buttercream Lip Mask</u>. It's an emollient that is high in linoleic acid that helps to soften the texture of the skin and smooth out any cracks or flakes. Sunflower Oil is also rich in vitamin E, which is known to have antioxidant properties, and also helps to stabilize the shelf life of the formulation. This means that when topically used, Sunflower Oil has the properties of an emollient that softens and hydrates the skin, as well as antioxidant properties that defend the skin against external damage.

## HAS ANTIOXIDANT PROPERTIES THAT DEFEND THE SKIN AGAINST EXTERNAL DAMAGE

The main chemical compounds in Sunflower Oil are linoleic acid, oleic acid, palmitic acid, and stearic acid. Not to be confused with strong acids, these compounds are all lipids with a carboxylic group and a slightly low pH and therefore have the word "acid" attached to it.

Like other oils, Sunflower Oil is a lightweight emollient that helps support the skin's native lipid barrier, and smooths the texture of the skin. In addition, the benefits of Sunflower Oil go beyond topical skin applications and can also be used in products to moisturize and soften the hair.





Traditionally, the process to extract the Sunflower Oil starts from seeds, which are essentially crushed up and refined to isolate the solid components from the oil. The raw seed is first vetted for selection and then goes through a seed mill. This seed mill crushes the seeds up into a pulp before being cold-pressed.

The cold pressing stage isolates the oils from the solid seeds, which go through further refinement before its distribution. The exact process of extraction method for the Sunflower Oil that Three Ships sources is proprietary information.



## SUNFLOWER OIL IS AN EMOLLIENT RICH IN FATTY ACIDS SUCH AS LINOLEIC AND OLEIC ACID

Sunflower Oil is rich in linoleic acid, oleic acid, palmitic acid, and stearic acid. Linoleic and oleic acid are essential fatty acids that our bodies cannot produce. All four chemical constituents are known to help facilitate wound-healing, exhibit anti-inflammatory properties, promote moisture retention in skin and hair, and help sustain skin elasticity and softness. It also contains high levels of vitamin E, an antioxidant that has been shown to protect the skin against UV-photo damage, demonstrated in-vivo on human skin cells.

### **SCIENTIFIC STUDY**

# The Effects of Topical Application of Sunflower Seed Oil on the Human Skin Barrier

In this study, researchers investigated the effects of sunflower seed oil on stratum corneum (SC) integrity, erythema, and skin hydration.

12 volunteers applied 6 drops of olive oil to one arm and 6 drops of sunflower seed oil to the other arm, twice daily for 28 days. No occlusive was applied on top of the oils. Parameters measured included pH, SC hydration. erythema, trans-epidermal water loss, and SC thickness.

Of the 12 volunteers, 6 had a history of atopic dermatitis and 6 did not. Olive oil was found to decrease the integrity of the SC in both healthy volunteers and those with a history of skin disease. It also increased trans-epidermal water loss and decreased the skin barrier function.

In comparison, the SC integrity and barrier function was not affected on the skin treated with sunflower seed oil. It also decreased trans-epidermal water loss and did not affect the SC thickness.

Sunflower Oil is an emollient rich in fatty acids such as linoleic and oleic acid. The oil has moisturizing properties that support smoother skin texture, and the oil has also been shown to promote wound healing effects. Sunflower Seed Oil can be found in Three Ships' Buttercream Lip Mask and works alongside other ingredients to combat issues such as dry, chapped lips.