

Green Tea Extract Research Paper

APPEARS INS



Green Tea has been a staple in east Asian diets for centuries, and has been praised for its overall health benefits and taste. This has led researchers, cosmetic formulators, and manufacturers to research the potential skincare applications and benefits of Green Tea Extract. Green Tea Extract is made from the leaves of the Green Tea plant, which is an evergreen tree native to southeastern Asia. It can be found in [Three Ships' Detox Green Tea Antioxidant Clay Mask.](#)

HIGH IN ANTIOXIDANTS, WHICH HELPS TO “DETOX” THE SKIN FROM DAY TO DAY ACTIVITIES

Green Tea is widely consumed in China, Japan, and other Asian nations, and is becoming more popular in Western nations. Minimal fermentation is done during processing so maximum amounts of polyphenols and antioxidants are retained.

The polyphenols in Green Tea are believed to be responsible for the majority of the chemoprotective, antiproliferative and antioxidant activity.



Traditionally to make Green Tea Extract, the Green Tea leaves are first freshly harvested and cut into smaller grains to increase surface area for hydro-alcoholic extraction. The solution is filtered, concentrated, and sprayed dried on an inert powder. The powder is further refined through sifting before being sent for packaging. The Green Tea Extract used by Three Ships is sourced from China. The exact process of extraction method for the Green Tea Extract that Three Ships sources is proprietary information.

GREEN TEA EXTRACTS PROVIDES ANTIOXIDATIVE EFFECTS TO PROTECT AGAINST OXIDATIVE STRESS

Green Tea Extract is a powdered botanical extract and is a potent, polyphenol-rich metabolic antioxidant called EGCG, which is short for (-)-epigallocatechin-3-gallate. The topical application of Green Tea Extracts provides antioxidative effects to protect against oxidative stress. Oxidative stress occurs as the result of free radicals reacting on the surface of the skin. Free radicals have an unstable unpaired electron that takes an electron from a stable compound.

Antioxidants stabilize the free radical, however, the compound that lost the electron becomes a new unstable free radical. Even with an unpaired electron, antioxidants are stable and stop this chain reaction by donating an electron to free radicals. Green Tea also shows anti-microbial and anti-inflammatory properties, which make it well suited for the treatment of acneic, sensitive, or inflamed skin.

SCIENTIFIC STUDY

Dual Mechanism of Green Tea Extract-Induced Cell Survival in Human Epidermal Keratinocytes

In this study, researchers investigated the effects of Green Tea Extract on skin cells. The sample size of this study was 11 men. From the sample, the men were divided into two groups, one group consisted of 5 men with a mean age of 78.5 years old and the second group consisted of 6 men with the mean age of 21.7 years old. Both groups were asked to apply a placebo lotion (70% propylene glycol, 30% ethanol) on one buttocks, and the lotion with 10% EGCG on the other. The elderly men were instructed to apply the lotions 3 times weekly for 6 weeks, while the younger men only needed the lotion on for 48 hours under an occlusion. Skin samples for all the participants were taken after irradiation with UV.

The researchers tested the skin samples before and after UV irradiation, and then tested the skin samples through multiple methods.

The results showed 10% EGCG lotion on the older men test group showed proliferation of living skin cells that was significantly higher than the placebo skin sample. These results indicated regular topical application of EGCG, which is a constituent found in Green Tea Extract, stimulated skin cell regeneration, and made the epidermis layer of the skin thicker. The results from post UV irradiation showed overall less damage on the EGCG treated skin samples than the placebo. Therefore the researchers concluded that EGCG had skin proliferation and antioxidant potential, however more testing had to be done with a larger sample size.

Green Tea Extract is derived from the Camellia Sinensis plant, sourced from China. Green Tea is widely consumed in Asia and has been growing in popularity across other regions as well. Green Tea is a powerful antioxidant and also shows anti-microbial and anti-inflammatory properties. Green Tea Extract is used in Three Ships products such as the Detox Green Tea Antioxidant Clay Mask.