

Coffee Seed Oil Research Paper

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Coffea arabica, also known as coffee, is well known for its energizing properties when consumed, but it also has amazing skin benefits. Coffee Seed Oil contains high concentrations of polyphenols and tocopherols that act as effective antioxidants. It also contains palmitic acid and linoleic acid which support skin hydration and strengthen the skin barrier. Three Ships sustainably sources Coffee Seed Oil in First Light Vitamin C + Caffeine Eye Cream.

SUPPORTS SKIN HYDRATION AND STRENGTHEN THE SKIN BARRIER.

Coffea arabica accounts for approximately 60% of the world's coffee output. 99% of spent coffee grounds are treated as waste and sent to landfills where they contribute to greenhouse gas emissions, emitting 340 m3 of methane for every tonne of coffee waste. By upcycling the spent coffee grounds and extracting their seed oil, we can reduce the amount of coffee grounds being sent to the landfill, and reap the benefits of Coffee Seed Oil on our skin.



Our Coffee Seed Oil is upcycled! Spent ground coffee is converted to the oil which would otherwise go to waste after being used to make coffee. Coffee Seed Oil is made via a CO₂ supercritical extraction using no residual solvent. The coffee is also ascertained to originate from sustainable sources that are verified in sustainability programs. The exact method of extraction of Coffee Seed Oil that Three Ships sources is proprietary information.

ANTIOXIDANTS, SUCH AS COFFEE SEED OIL, CONTAIN MOLECULES THAT NEUTRALIZE FREE RADICALS

The free radical theory, first proposed in 1954, postulates that aging is caused by free radical reactions. These reactions are irreversible and may be a result of environment, disease, and intrinsic aging. The theory suggests that an individual's lifespan can be increased by slowing the rate of initiation of random free radical reactions. A free radical is a chemical species possessing an unpaired electron. Reactive oxygen species are a type of free radicals that contain oxygen. Oxidative stress occurs when there is an imbalance between the generation of free radicals and the activity of antioxidant defense. Too much oxidative stress can result in cell damage; hence, the generation of too many free radicals can be harmful. Intracellular mechanisms can often reduce the damaging effects of free radicals; however, with age, endogenous antioxidative mechanisms may not work as effectively and oxidative stress is a more likely occurrence.

Antioxidants, such as Coffee Seed Oil, are molecules that neutralize free radicals, caused by extrinsic and intrinsic aging, by accepting or donating electrons. Antioxidants can directly react with free radicals by delocalizing the unpaired electron, or inhibit the activity of free radicals by generating enzymes (e.g. NAD(P)H) that provide an important defense against free radicals. As the name suggests, antioxidants prevent oxidative stress thereby reducing collagen degradation and reducing the appearance of fine lines and wrinkles. Coffee Seed Oil is rich in polyphenols and tocopherol which act as antioxidants and fight against free radical damage and help boost the formation of collagen and skin tissue.

SCIENTIFIC STUDY

From coffee industry waste materials to skin-friendly products with improved skin fat levels

One study compared the skin benefits of coffee oils from spent coffee grounds, green coffee, and a placebo. They found that both types of coffee oil were rich in fatty acids, particularly palmitic acid and linoleic acid which naturally occur in the skin. Furthermore, the researchers tested the effects of emulsions containing the oils on 10 volunteers over 28 days. The coffee oil creams were found to be non-irritating, reduced trans-epidermal water loss, and improved the concentration of lipids on the skin's surface.

Coffee consumption is deeply rooted in world culture and is consumed by millions of people worldwide, generating tons of waste every year. Upcycled Coffee Seed Oil from spent grounds is gaining traction for its effective skin benefits including acting as an antioxidant and supporting the skin barrier with important fatty acids. Coffee Seed Oil can be found in [Three Ships' First Light Vitamin C + Caffeine Eye Cream](#).