

Blueberry Seed Oil Research Paper

APPEARS IN



Blueberries are a fruit native to North America and are known for its high antioxidant content and unique taste. Blueberries help prevent premature aging given its high amounts of antioxidants. As such, blueberries are powerhouse fruits which are not only beneficial to consume but are also beneficial to apply topically in order to achieve healthy looking skin. Three Ships' Replenish utilizes this ingredient that is packed with hydrating and antioxidant properties.

BLUEBERRIES HELP PREVENT PREMATURE AGING GIVEN ITS HIGH AMOUNTS OF ANTIOXIDANTS

Blueberries are a potent source of antioxidants; not to mention, they are also backed with vitamins and omega-3 and omega-6 fatty acids. Antioxidants protect the skin against free radical damage and fatty acids help to keep the skin moisturized and keep the skin feeling soft and hydrated.



Vaccinium Myrtillus (Bilberry) Seed Oil is derived from blueberry pomace from the Blueberry juicing industry. 800,000 blueberries are pressed into approximately 1.2 T of juice, leaving behind 500 kg of unused blueberry pulp. This pulp is then dried to separate the blueberry seeds from the pomace. The oil is then extracted and filtered via cold press to create 1kg of blueberry seed oil. Further, the remaining dried blueberry skin is upcycled again to the nutritional industry.

ANTIOXIDANTS, SUCH AS BLUEBERRY SEED OIL, ARE 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 blueberry 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.

SCIENTIFIC STUDY

Study on Blueberry Oils Antioxidant Properties

In this study, the skin, seed, and juice of organic and conventionally grown blueberry extract were analyzed for its antioxidant content through hydrophilic and lipophilic oxygen radical absorbance capacity assays (ORAC). The hydrophilic ORAC demonstrated that conventionally grown blueberries had higher antioxidant capacity while the lipophilic ORAC assay showed that the antioxidant concentration of organically cultivated blueberry juice was highest. Moreover, vitamin C content of both organic and conventionally grown blueberries were analyzed with organic blueberries displaying higher vitamin C content through High Performance Liquid Chromatography. Overall, the study demonstrated that both organic and conventionally grown blueberries exhibit high antioxidant activity and vitamin C concentration which help improve the overall appearance of skin and protect against photodamage.

All in all, the research shows that blueberries are more than just a scrumptious snack! It is packed with lots of vitamins and hydrating properties to help against signs of aging and keep the skin looking youthful and hydrated. The blueberry seed oil used by Three Ships is GMO-Free.