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Application of Plant Oil in Cosmetics

Plant extract, such as plant oil, is generally believed to inhibit the evaporation of water, rehydrate the dry skin and hardened cuticle, restore the softness and elasticity of the stratum corneum, and make the skin smooth, soft and elastic. It can be used as an emollient. Oils are also cosmetically modified agents that determine the skin status such as spreadability, lubricity, moisture, moisture and breathability. With the in-depth study of cosmetic botany, consumers are increasingly demanding non-toxic and non-irritating cosmetics. As high-efficiency additives, many plant oils have been added to a variety of new cosmetics for their special functions to meet the needs of consumers.

What is plant oil

Plant oil is a compound obtained by combining unsaturated fatty acids and glycerin. It is widely distributed in nature and obtained from the fruits, seeds and germs of plants. Plant oil that are commonly used as materials of cosmetics includes peanut oil, soybean oil, linseed oil, castor oil, rapeseed oil, and so on. In addition to palmitic acid, stearic acid and oleic acid, it also contains various unsaturated acids such as erucic acid, tung oil, ricinoleic acid. Plant oil mainly contains minerals such as vitamins E, K, calcium, iron, phosphorus and potassium, and fatty acids.

Applications

As a matrix material, oil occupies a large proportion in the cosmetic formulation. Its role is to make the skin soft, lubricated and clean. The oil can form a hydrophobic film on the skin surface to protect the skin from harmful substances of the outside. In cold weather, it can also inhibit the evaporation of water from the skin surface. The oily materials used in general cosmetics are classified into three types: animal and plant oily materials, mineral oily materials, and chemically processed synthetic raw materials. Plant oils can be classified according to their sources and properties: first, dry oils such as linseed oil, sunflower oil; second, semi-dry oils such as cottonseed oil and flax oil; third, non-drying oils such as olive oil, castor oil, and eucalyptus oil. The following is a brief introduction of the applications of coconut oil and camellia oil in cosmetics.

Coconut oil in cosmetics

The main components of coconut oil are lauric acid (45 ~ 56%), and the fatty acid (15~18%) of triglyceride. In addition, it also contains a small amount of octanoic acid (7~10%), citric acid (5~7%), oleic acid (2~10%), palmitic acid and, and sodium lauryl sulfate and polyoxyethylene dodecyl ether sodium sulfate, which are commonly used to make surfactants. In skin care, coconut oil has a detoxifying function that makes the skin translucent. Coconut oil can replace the cream to effectively lock the water, because its main component is saturated fatty acid, which is a unique characteristic of coconut oil. Coconut oil can effectively protect the skin from sun damage and relieve pain after sun exposure. In haircare, coconut oil is the only plant oil that boosts hair keratin, which makes hair smoother and brighter. In terms of weight loss, coconut oil can increase our metabolic efficiency and allow calories to be consumed more quickly. Coconut oil is rich in medium-chain fatty acids, which are immediately absorbed by the intestines without hoarding into fat. In terms of skin care, when we wash our face with soap and water, the skin-specific chain fatty acids are easily washed away, and the skin is easily infected by bacteria. The medium-chain triglyceride contained in the coconut oil is contacted by the lipophilic bacteria
to form a medium chain fatty acid having an antibacterial sterilization function. Therefore, after bathing, applying a proper amount of coconut oil to the face or body is a good way to restore the body’s natural chemical protective film. And, in the long run, the skin will become smooth and fine.

Camellia oil in cosmetics
Camellia oil contains more than 90% of unsaturated fatty acid, 80-83% of oleic acid, 7-13% of linoleic acid, and it is rich in protein and vitamins A, B, D, E, especially it contains linolenic acid, which is essential for the human body and cannot be synthesized within the body. According to scientific identification, the content of oleic acid and linoleic acid of camellia oil is higher than that of olive oil. Camellia oil is rich in nutrients, including camellia, tea polyphenols, saponins, tannins and squalene with antioxidant and anti-inflammatory effects. Squalene and flavonoids have an excellent effect on cancer. Camellia oil can resist UV rays, prevent sunburn and reduce wrinkles, and is very effective for chloasma and sunburn. Camellia oil is rich in natural vitamin E, tea polyphenols, squalene and some antioxidants, which all have anti-aging effect. Therefore, it can protect the skin, prevent skin damage and aging, and also make the skin shiny. The content of unsaturated fatty acids in camellia oil is as high as 93%. Unsaturated fatty acids can neutralize saturated fatty acids in foods such as fish, meat, eggs, and milk that people often eat, and achieve the effect of inhibiting obesity. Camellia oil has the function of moisturizing and nourishing, and can also be used for hair care to prevent hair breakage and hair loss.

Conclusion
The application of plant oil as a natural raw material in cosmetics is beneficial to the human body, but it should be noted that the plant oil often contains free fatty acids, especially unsaturated fatty acids, which are unstable to heat and oxygen, and easily cause oily rancidity and deterioration of the cosmetics. Therefore, the plant oil used in cosmetics needs to be refined in advance to remove various impurities and free fatty acids. In addition to adding an appropriate amount of preservative, a suitable amount of antioxidant should be added in the preparation of the cosmetics.