

## TECHNICAL DATA SHEET

**Product Name:** Gotu Kola Powder 10:1

**INCI Name:** Centella asiatica extract

**CAS:** 84696-21-9

**Botanical Name:** Centella asiatica (L.) Urban

**Synonyms:** Hydrocotyle asiatica L., Indian pennywort, Hydrocotyle asiatique, Asiatischer Wassernabel, Tiger Grass, Asiatic pennywort, Indian pennywort, Spade leaf.

**Product Quality:** The product is concentrated at a 10:1 ratio, meaning the amount of plant material used to obtain the extract is 10 times greater than the final extract quantity. This ratio is used to emphasize the strength of the extract and its efficacy.

**Origin of Raw Material:** China

**Description:** Centella asiatica, also known as Asian rice or gotu kola, is a small, herbaceous, perennial plant. Its habitat includes wetlands in Asia, and it also grows in India, Japan, Indonesia, South Africa, Sri Lanka, and the South Pacific. It belongs to the Umbelliferae (Apiaceae) family. It has a thin, creeping stem that roots at the nodes. The leaves are green, rounded, and smooth with a kidney-like shape and are found on long petioles. It produces small, pink to white flowers in small, rounded umbels. The fruit is a small, reticulate inedible drupe. This plant is known for its medicinal properties, especially in traditional Asian medicine, and is used to improve memory, heal wounds, and as a general tonic. The active principles include pentacyclic triterpenoids, including asiaticoside, brahmoside, asiatic acid, and madecassic acid (thankunic acid). Other ingredients include centellose, centelloside, and madecassoside.

### Benefits:

- **Increased Collagen Production:** The active ingredients in the extract, especially asiaticoside and madecassoside, affect the genetic expression related to collagen synthesis, contributing to the "upregulation" of genes responsible for the production of collagen types I and III. This leads to increased production and secretion of collagen fibers in the skin, which is key for elasticity and firmness. The Gotu Kola extract helps

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reduce the appearance of fine lines and wrinkles, making it an excellent ingredient for anti-aging formulations.

- **Antioxidant Protection:** Free radicals are unstable molecules that can damage cells, including fibroblasts responsible for collagen production. Gotu Kola contains powerful antioxidants, such as triterpenoids (including asiatic acid, madecassoside, and asiaticoside), which can neutralize free radicals, thereby protecting skin cells and collagen fibers. Oxidative stress occurs when there is an imbalance between the production of free radicals and the body's ability to neutralize them. The antioxidants present in Gotu Kola help reestablish this balance.

- **UV Radiation Protection:** Exposure to ultraviolet (UV) radiation is one of the main sources of free radicals leading to oxidative stress in the skin. Gotu Kola provides additional protection to fibroblasts and collagen from damage caused by UV radiation, acting as a natural sun filter that contributes to reducing photoaging.

- **Modulation of Inflammatory Response:** Gotu Kola exhibits anti-inflammatory properties. By reducing the inflammatory process on the skin, it creates a more favorable environment for collagen production.

- **Improved Circulation:** By improving microcirculation in the skin, Gotu Kola can contribute to a better supply of nutrients and oxygen to skin cells. This can further encourage collagen production.

- **Reduction of Stretch Marks:** Recent research suggests that Gotu Kola may help reduce the appearance of stretch marks, making it a popular choice for post-pregnancy skin care products.

**Usage:** Used to make water-glycerin extracts, glycerites, tinctures, and other cosmetic semi-products. Recommended concentrations range from 1-10%.

**Storage (shelf life):** Stable when stored in a dry and cool place. Approximate shelf life of 2 years.

**Animal Testing:** The substance has not been tested on animals.

**GMO:** Non-GMO

**Vegan:** Does not contain animal-derived components.

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