

TECHNICAL DATA SHEET

Product Name: Green Tea Powder 10:1

INCI Name: Camellia Sinensis Extract

CAS: 84650-60-2

Synonyms: Tea Thearubigin Extract, Asama/Ceylon Extract, Caffeinated Tea Extract, Tea Leaf Extract, Theaflavin Extract, Thearubigin Extract, Fermented Tea Extract, Assam Extract/Ceylon Extract, Tea Tannin Extract

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

Origin of Raw Material: China

Description: Green tea powder is obtained from the leaves of the woody plant *Camellia sinensis*. The tree usually grows to a height of 2-5 meters, but can be shorter in cases where it is cultivated for tea production. The plant has glossy green leaves with serrated edges, 4-15 cm in length. It produces small, white flowers with a sweet scent, which yield fruits containing seeds. The leaves and leaf buds are harvested for tea production, and variations in processing lead to different types of tea (such as green, black, oolong, and white teas). The plant prefers acidic soil and can grow in various climatic conditions, from tropical to subtropical regions. Green tea extract contains numerous phytochemicals: potent theaflavin antioxidants: Theaflavin (TF), Theaflavin-3-gallate (TF-3-G), and Theaflavin-3,3'-digallate (TFDG), catechins - phenolic antioxidants: Epicatechin (EC), Epigallocatechin (EGC), Epicatechin gallate (ECG), Epigallocatechin gallate (EGCG). The extract also contains important phytochemicals such as: Caffeine, Theobromine, and Theophylline, the amino acid - L-theanine, and tannins responsible for the characteristic bitter taste and astringent actions: proanthocyanidins and Gallic acid and its ester forms.

Benefits:

- **Antioxidant Properties:** The mechanism of antioxidant action of green tea is based on the neutralization of free radicals. Polyphenols, such as epigallocatechin

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gallate (EGCG), can effectively donate electrons to free radicals, thereby stabilizing them and preventing further cell damage. Some polyphenols can bind to metal ions, such as iron and copper, which can catalyze the production of free radicals, thereby reducing their availability to participate in reactions that generate free radicals. Components of green tea can increase the activity of enzymes in the body that participate in neutralizing free radicals, such as superoxide dismutase (SOD), catalase, and glutathione peroxidase. By helping protect the skin from external stressors such as various pollutants and UV radiation, they reduce signs of skin aging.

- **Anti-inflammatory Effects:** The anti-inflammatory effect of green tea is based on the presence of polyphenols, such as theaflavins and thearubigins, as well as other antioxidants. These substances can reduce inflammation by neutralizing free radicals and inhibiting molecules that trigger inflammatory reactions. Green tea extract can help soothe irritated skin, reducing redness and swelling. It is useful for conditions such as acne and rosacea.

- **Hydration:** Black tea extract promotes renewal and maintains the natural barrier function of the skin. When the skin barrier is healthy and functional, the skin more effectively retains moisture, resulting in better hydration, elasticity, and softness of the skin. By adding black tea extract to cosmetic formulas, overall skin health and hydration can be enhanced.

- **Skin Tightening:** Caffeine in black tea extract has a skin-tightening effect, which can help reduce the appearance of fine lines and wrinkles, giving the skin a firmer and younger look.

- **Skin Brightening:** Black tea extract can help improve the skin's complexion by brightening the skin and reducing the appearance of dark spots and hyperpigmentation. Protection from Photo-aging: Antioxidants in black tea extract can protect the skin from photo-aging that can occur with prolonged exposure to the sun's UV rays. By neutralizing free radicals produced by UV radiation, antioxidants reduce DNA damage and inflammation. They also promote the production of collagen and elastin, preserving the elasticity and youthfulness of the skin.

- **Reduction of Puffiness:** Caffeine in black tea extract improves blood circulation and reduces fluid retention, helping to reduce puffiness and dark circles under the eyes.

Usage: Used to make water-glycerin extracts, glycerites, tinctures, and other cosmetic semi-products. Recommended concentrations range from 5-10%.

Storage (Shelf Life): Stable when stored in a dry and cool place.

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Approximate shelf life of 2 years.

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

GMO: Not GMO.

Vegan: Does not contain components of animal origin.



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