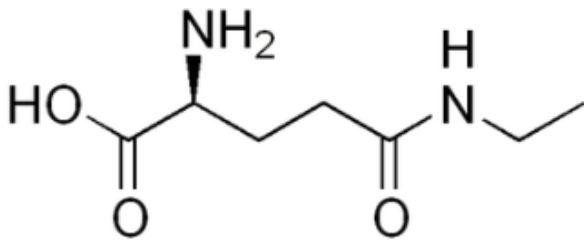


L-Theanine 200 mg

TECHNICAL SUMMARY

Theanine is an amino acid shown to be the constituent responsible for the calming properties of green tea.* Theanine can cross the blood-brain barrier and enhances healthy alpha brain-wave activity, which is associated with a relaxed but alert state.* At the same time, theanine helps to support the health of brain cells exposed to typical stimulation from excitatory neurotransmitters and promotes normal dopamine and GABA release.* Clinical studies have shown that theanine can support relaxation without drowsiness and promote healthy cognitive function.*

Structure Formula:



Chemical Name: N-Ethyl-L-glutamine

Allergen and Additive Disclosure: Not manufactured with wheat, gluten, soy, milk, egg, fish, shellfish, or tree nut ingredients. Produced in a GMP facility that processes other ingredients containing these allergens.

Delivery Form: Veg Capsules

ROLE AS NUTRIENT/FUNCTION

Ingestion of theanine has been reported to facilitate the generation of alpha brain waves, which are associated with a relaxed but alert mental state.* In addition, theanine is reported to promote the release of the inhibitory neurotransmitter γ -aminobutyric acid (GABA), which in turn regulates dopamine and serotonin levels in the brain.* Thus, theanine consumption has been closely associated with relaxation and improved learning ability.*

Inositol is an isomer of glucose. It is known as a second messenger precursor and known to regulate numerous cellular functions.* Its function in the brain is not well defined; it may be able to modify serotonergic 5HT_{2a} and muscarinic receptor signaling.*

NATUROKINETICS®

Liberation: Disintegration of the vegetable capsule is tested in water using a USP testing method with disintegration measure between zero and 60 minutes.

Absorption: Theanine is absorbed in the intestines. Studies have shown the absorption of theanine across the luminal wall is facilitated by a Na⁺-dependent active transporter. Theanine reaches its maximum plasma concentration between 30 to 60 minutes after administration. In a pharmacokinetic clinical trial with 12 healthy adult volunteers, a single administration of 100 mg L-Theanine resulted in a T_{max} of about 0.8 h (Figure 1).

Supplement Facts

Serving Size 1 Veg Capsule

Amount Per Serving

L-Theanine	200 mg**
Inositol	100 mg**

**Daily Value not established.

Other ingredients: Hypromellose (cellulose capsule), Stearic Acid (vegetable source) and Silicon Dioxide.

- **Relaxed but Alert Mental State***
- **Cognitive Support***

SUGGESTED USAGE: Take 1 capsule 1 to 2 times daily as needed, or as directed by your healthcare practitioner.

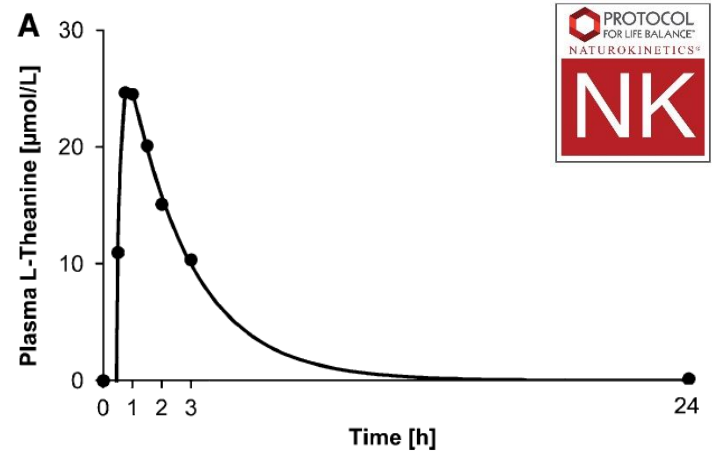


Fig. 1. Typical plasma L-Theanine concentration after intake of 100 mg L-Theanine capsule in healthy human adult volunteers.

Distribution: There is very little plasma theanine available. Unmetabolized theanine passes through the blood-brain barrier via a unique active transport system. Theanine is distributed to all the major organs of the body.

Metabolism: L-Theanine is catabolized by amide hydrolysis, yielding glutamic acid and ethylamine in the kidneys.

Elimination: L-Theanine and its metabolites are cleared by excretion into urine. Elimination half-time (t_{1/2}) following a single administration of 100 mg theanine capsule to healthy human volunteers is 1.2 h.

CLINICAL VALIDATION

- **Relaxed Mental State.*** In a double-blind, placebo-controlled clinical trial with 16 healthy volunteers (average 27 years old), a single oral administration of theanine (200 mg) resulted in a statistically significantly more relaxed score of VAMS (Visual Analogue Mood

Scale), as compared to both placebo and a treatment of reference ($p < 0.05$).*

- **Cognitive Function Support.*** In a randomized, double-blind, placebo control clinical trial with 91 subjects with mild cognitive impairment (average age 57 years), supplementation with theanine (a combination of green tea extract + 480 L-Theanine mg/day in two divided doses for 16 weeks) resulted in a statistically significant improvement in Rey-Kim memory test, as compared to placebo ($p < 0.05$).*

SAFETY INFORMATION

Tolerability: Well tolerated when taken as directed. Theanine is considered Generally Recognized as Safe (GRAS) when used in the amount of 250 mg per serving with the estimated daily intake up to 1,290 mg per day.

Contraindications. Avoid using during pregnancy and nursing; insufficient reliable information available.

INTERACTIONS

Drug Interactions: Theoretically, concomitant use of theanine might interact with the activity of antihypertensive medications. Caution is advised when co-administering with psychoactive drugs.

Supplement Interactions: None known.

Interaction with Lab Tests: None known.

STORAGE

Store in a cool, dry place in original sealed container.