

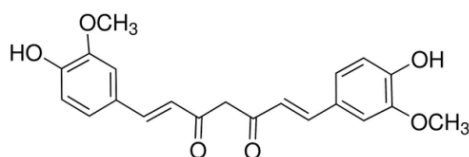
## Cogumin SLCP™

### Longvida® Optimized Curcumin 400 mg

#### TECHNICAL SUMMARY

Cogumin SLCP™ (Solid Lipid Curcumin Particle) contains patented Longvida® Optimized curcumin. It is called SLCP™ because the curcumin-containing lipid particles remain solid at body temperature. Administration of Longvida® results in circulating free, unmetabolized curcumin capable of crossing the blood-brain barrier.

#### Structure Formula:



**Chemical Name:** Curcumin: Diferuloylmethane [1,7-bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione]

**Allergen and Additive Disclosure:** Contains soy. Not manufactured with yeast, wheat, gluten, 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

Curcumin is found in rhizomes of turmeric (*Curcuma longa*). It is widely used as a spice, food coloring, yellow dye, and has been used by traditional herbalists for centuries. Curcumin is known for its numerous molecular targets; for example it directly modulates the activity of major enzymes involved in immune system responses to normal biological stress.\* Curcumin is a potent free radical scavenger and it enhances the synthesis of glutathione.\* Preliminary laboratory studies suggest that curcumin may help to promote normal cell cycle regulation and help to maintain healthy brain function.\*

#### NATUROKINETICS®

**Liberation:** Cogumin SLCP™ Veg Capsules pass standard disintegration test in water (< 60 minutes).

**Absorption:** In a pharmacokinetic clinical trial with 6 adult volunteers, a single oral administration of 650 mg Longvida® SLCP (minimum 130 mg curcumin) resulted in circulating free, unmetabolized curcumin plasma levels with  $T_{max}$  of 2.4 hours, while administration of 650 mg turmeric extract standardized by 95% curcuminoids (minimum 390 mg curcumin) resulted in undetectable levels of free curcumin (Figure 1).

**Distribution:** Once in the bloodstream, curcumin binds with serum albumin and is transported to target tissues (in descending order): intestine, spleen, liver, kidneys. Free, but not conjugated, curcumin has

## Supplement Facts

Serving Size 1 Veg Capsule

### Amount Per Serving

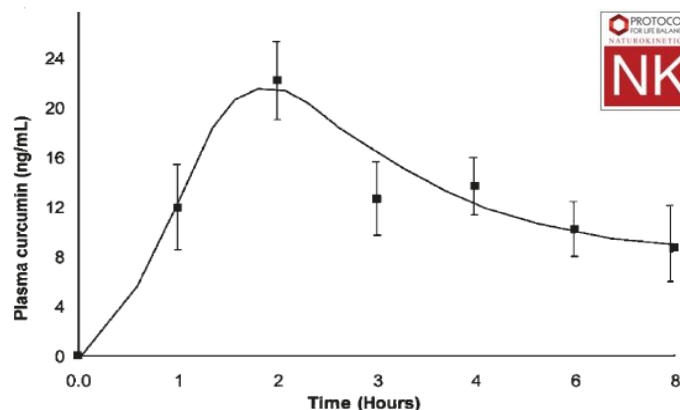
Longvida® Optimized Curcumin Extract [from <i>Curcuma longa</i> (Turmeric) Root] (Rhizome) (min. 20% Curcuminoids)	400 mg*
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\* Daily Value not established.

Other ingredients: Cellulose (capsule), Rice Flour, Stearic Acid (vegetable source), Magnesium Stearate (vegetable source) and Silica.

- Cognitive Support\*
- Circulating Free Curcumin

**SUGGESTED USAGE:** Take 1 capsule daily, or as directed by your healthcare practitioner.



**Figure 1:** Mean free plasma curcumin concentration-time profiles of healthy human subjects (n = 6) after administration of 650 mg of Longvida® SLCP.

been shown to cross the blood-brain barrier, specifically in the form of solid lipid particles.

**Metabolism:** Unlike regular turmeric extracts, SLCP™ Longvida® prevents absorbed curcumin from excessive metabolism, which is typically accomplished by glucuronidation, and to a lesser extent, sulfation.

**Elimination:** In healthy adult volunteers, the half-life ( $t_{1/2}$ ) for free curcumin following administration of 650 mg Longvida® (minimum 130 mg curcumin) was 7.5 hours. Glucuronidated and sulfated conjugates have a shorter half-life and are eliminated quickly via bile and urine.

#### CLINICAL VALIDATION

- In a randomized, double-blind, placebo-controlled clinical trial with 38 healthy middle-aged volunteers (40–60 years old), supplementation with Longvida® (80 mg curcumin/day for 4 weeks) resulted in statistically significant reduction of plasma  $\beta$ -amyloid

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protein level ( $p < 0.05$  from baseline), while no statistically significant changes were found in the placebo group (Figure 2). Additionally, Longvida® curcumin, but not placebo, produced a statistically significant decrease in plasma triglycerides and increases in salivary radical scavenging capacity, plasma nitric oxide and catalase activity.

- In a randomized, double-blind, placebo-controlled, parallel group clinical trial with 60 healthy adult volunteers (60-84 years old), supplementation with Longvida® (400 mg/day for 30 days) resulted in significant improvement in working memory and attention ( $p < 0.05$ ), mental energy ( $p < 0.01$ ), alertness ( $p < 0.05$ ), calmness ( $p < 0.05$ ) and contentedness ( $p < 0.05$ ) as compared to placebo, using Computerized Mental Performance Assessment System (COMPASS).

### SAFETY INFORMATION

**Tolerability:** Curcumin in food is typically well tolerated and it is estimated that a typical Indian diet provides 80-200 mg curcumin per day. Supplementation with 400 mg Longvida® turmeric extract containing 80 mg curcumin/day for 4 weeks was well tolerated.

**Contraindications:** None known.

### INTERACTIONS

**Drug Interactions:** Curcumin may interact with aspirin, clopidogrel (Plavix®), dalteparin (Fragmin®), enoxaparin (Lovenox®), heparin, ticlopidine (Ticlid®), and warfarin (Coumadin®).

**Supplement Interactions:** Concomitant use of turmeric with herbs that might affect platelet function could theoretically increase the risk of bleeding in some people. These herbs include angelica, clove, danshen, garlic, ginger, ginkgo, *Panax ginseng*, red clover, willow, and others.

**Interaction with Lab Tests:** None known.

### STORAGE

Store in a cool, dry and dark environment in original sealed container. Protect from extended exposure to moisture, heat and direct light.

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