Hemp MonoPure®

Highly Bioavailable Phytocannabinoids and Omega-3s*

Available in 30 softgels and 60 softgels

Clinical Applications

» Supports/Balances/Modulates the Endocannabinoid System*

Hemp MonoPure® *features a synergistic blend of phytocannabinoid-rich, THC-free hemp extract with aromatic terpenes to support the endocannabinoid system. The premium natural emulsifier delivery matrix is MaxSimil®, an IFOS five-star certified esterified fish oil that contains the omega-3s eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).**

Discussion

The endocannabinoid system (ECS) is an extensive biological signaling system composed of three core components: endocannabinoids, cannabinoid (CB) receptors, and enzymes. In the last 30 years, research on the ECS has expanded our understanding of this complex system. Located throughout the body, the primary role of the ECS is to maintain homoeostasis in a wide variety of physiological and cognitive processes, including appetite control, energy balance, and sensations of pain, sleep, mood, and memory. Endocannabinoid system signaling also plays an important role in the stress response, healthy inflammatory activity, immune activation, fertility, and pre- and post-natal development. The body of science elucidating the benefits of manipulating ECS activity continues to evolve, and the promise of a wide variety of physiological benefits persists.[1-4]

Cannabinoids are chemical messengers involved in the complicated monitoring, signaling, and modulation mechanisms that occur in the ECS when it is triggered by changes in the body. The biological purpose of the ECS is to respond to endocannabinoids; however, the system also recognizes and responds to exogenous cannabinoids.

The first CB receptor and endogenous receptor ligand (endocannabinoid) were identified in the early 1990s. Since then, additional receptors, their lipid mediators, and signaling pathways have subsequently been characterized. The two major endocannabinoids are anandamide, named for the Sanskrit word *ananda* which means bliss, and 2-arachidonoyl glycerol (2-AG). These endocannabinoids are fatty acid neurotransmitters (arachidonic acid derivatives) that safeguard, coordinate, and fine-tune ECS messaging. There are two main enzymes responsible for breaking down anandamide and 2-AG once they've carried out their functions; they are fatty acid amide hydrolase and monoacylglycerol acid lipase, respectively. Exogenous cannabinoids can be synthetic, or they can be plant-based terpenes, botanical extracts, or phytocannabinoids that naturally occur in many plant species ranging from hemp and echinacea to cloves and black pepper. Endogenous and exogenous cannabinoids are structurally different but share many chemical similarities, and both directly interact with CB receptors in the body.[1-3]

The two most prominent CB receptors, known as CB1 and CB2, are differentiated by their physiological action and location within the body. CB1 receptors are concentrated in the brain and central nervous system, whereas CB2 receptors occur mostly in peripheral tissues, including the gastrointestinal tract and the immune, reproductive, arterial, and endocrine systems. The wide distribution of the receptors is what allows the ECS to participate in such a range of physiological processes.[1,3,4]

Phytocannabinoids and Terpenes

The potential physiological and pathological impact of modulating the endocannabinoid system has been the focus of many studies that have helped elicit the health benefits of phytocannabinoids.[2,5,6] For example, in a randomized, placebo-controlled, double-blind study, overweight but otherwise healthy subjects (N = 65) ingested hemp oil extract containing 15 mg of phytocannabinoids for six weeks while following normal dietary and exercise measures. Outcome variables were broad and included changes in a 14-item panel of psychometric parameters, stress resilience, body composition, heart rate variability, plasma chromogranin A, and other general markers of health. In addition to tolerating the extract well, the test group showed a statistically significant improvement in blood lipid profile and reported better psychometric measures of perceived sleep, stress response, and perceived life pleasure compared to placebo.*[7]

Terpenes are a class of compounds that give numerous plants and natural substances their distinct aroma and flavor. They are linked to cannabinoids through a shared precursor molecule. The hemp plant naturally contains over 200 terpene-like compounds, including beta-caryophyllene, myrcene, d-limonene, alpha-pinene, linalool, and terpineol, of which some have been studied for specific physiological functions. The synergistic interactions between phytocannabinoids and terpenes appear to enhance biological activity, a phenomenon that has been described in the literature as the "entourage effect." Researchers who have studied the entourage effect between phytocannabinoids and terpenoids suggest a potential for targeting specific therapeutic products based on this synergy, but additional research is needed to fully understand and confirm these effects.*[4,8-10]

Fish Oil Matrix

The premium natural emulsifier delivery matrix in Hemp MonoPure is MaxSimil®, an IFOS five-star certified esterified fish oil that contains the omega-3 polyunsaturated fatty acids (PUFAs) docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Studies sponsored by the manufacturer of MaxSimil have demonstrated its enhanced bioavailability compared to other forms of omega-3 fatty acids. In a randomized, double-blind, crossover, controlled clinical trial, subjects (N = 20) received single doses of MaxSimil or an ethyl ester form. Plasma concentration of DHA was 2.5 times higher and EPA was 3 times higher in subjects receiving MaxSimil.*[11]

Continued on next page

Docosahexaenoic acid is an essential structural component of the central nervous system, and EPA plays a role in supporting healthy cardiac and circulatory systems. PUFAs also act as precursors to endocannabinoids. Studies have suggested a PUFA-rich diet is important for proper functioning of the ECS and could improve endocannabinoid signaling by reversing phospholipid fatty acid composition.*[12,13]

Hemp MonoPure® features phytocannabinoids and terpenes in a base of hemp extract and MaxSimil. It is formulated to provide premium support for modulation of the endocannabinoid system.*

Hemp MonoPure® Supplement Facts

Serving Size: 2 Softgels

	Amount Per Serving	%Daily Value
Calories	15	
Total Fat	1.5 g	2%†
Cholesterol	5 mg	2%†
Fish Oil Concentrate Blend[S1]	1.320 g	**
Total Omega-3 Fatty Acids	884 mg	**
EPA (eicosapentaenoic acid)	594 mg	**
DHA (docosahexaenoic acid)	264 mg	**
Broad Spectrum Hemp Extract (flowers and/or leaves)	78.58 mg	**
Total Phytocannabinoids	52.5 mg	**

† Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value not established.

Other Ingredients: Softgel (bovine gelatin, glycerin, purified water, and roasted carob powder), GRAS enteric coating (ethylcellulose, sodium alginate, purified water, ammonium hydroxide, medium chain triglycerides, oleic acid, and vegetable stearic acid), terpene blend (beta-caryophyllene, D-limonene, alpha-pinene, linalool, alpha-terpineol), and natural mixed tocopherols.
Contains: Fish (anchovy, sardine, and/or mackerel).

DIRECTIONS: Take one to two softgels daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

STORAGE: Keep closed in a cool, dry place out of reach of children.

FORMULATED TO EXCLUDE: Wheat, gluten, corn, yeast, soy protein, dairy products, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

S1. Manufactured using MaxSimil® fish oil. MaxSimil® is a registered trademark of Ingenutra Inc. Protected under U.S. patents 8,119,690 and 8,198,324; Canadian patents 2672513 and 2677670.

IFOS™ certification mark is a trademark of Nutrasource Diagnostics Inc.

This product contains a total delta-9-tetrahydrocannabinol concentration that does not exceed 0.3% on a dry weight basis.

References

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Additional references available upon request

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

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