NANOEMULSIFIED

FULL SPECTRUM BLISS

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Full Spectrum Bliss is a nanoemulsified formula featuring full spectrum hemp extract, cannabidiol (CBD), cannabigerol (CBG) isolate, and anandamide. This feel-good blend retains the Farm Bill compliant level of Δ9 tetrahydrocannabinol (THC) naturally present in hemp to support the "entourage effect."

Supplement Facts

Serving Size: 2 mL (4 Pumps) Servings Per Container: 25	Amount Per Serving	% Daily Value
Full Spectrum Hemp Extracts (aerial parts)	25 mg	**
Cannabidiol (CBD)	16 mg	**
Cannabigerol (CBG)	4 mg	**

**Daily Value not established

Other Ingredients: Glycerin, water, tocofersolan, medium chain triglycerides, ethanol, highly purified phospholipids, natural citrus oils, natural mixed tocopherols, anandamide, natural flavoring

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EDUCATION

CANNABIS AND THE ENDOCANNABINOID SYSTEM

According to archaeological records, humans have turned to medicinal plants for over 60,000 years.[1] Furthermore, the World Health Organization has inventoried over 20,000 medicinal plants utilized by countless cultures worldwide.[2] However, few botanicals offer a spectrum of healing molecules comparable to that of the hemp plant, Cannabis.

Cannabis contains over a hundred unique, bioactive cannabinoids that can modulate the neuroendocrine and immune systems, including THC, CBD, and CBG.[3,4,5]

The isolation and discovery of psychoactive THC in 1964 at the Hebrew University of Jerusalem,[6] led to a decades-long race to discover the receptors it might act upon, and ultimately led to the discovery of the body's endocannabinoid system (ECS).[7] The ECS features two main receptors—CB1, found in 1990,[8] and CB2, found in 1993,[9] although other receptors likely also play a role.[10,11,12] CB1 is widely distributed in the brain and central nervous system[13] while CB2 is found abundantly in the immune system, in cells such as leukocytes and macrophages, as well as the spleen, tonsils, thymus, lung, and testes.[14] These receptors populate the GI tract, reproductive tract, immune system, arteries, heart, lungs, endocrine glands, and more.[15]

A growing body of research indicates that cannabinoids—both endogenous and plant-based— act on numerous receptors and pathways. Cannabinoids may impact opioid, GABA, adenosine, and serotonin receptors.[16,17,18,19,20] Other significant molecular targets include glycine receptors and peroxisome proliferator-activated receptors (PPARs), which play an essential role in cellular differentiation, development, and metabolism.[21,22]

Our built-in ECS is critical for bioregulation throughout the body, affecting appetite, pain, mood, memory, cognition, analgesia, immune function, sleep, motivation, emotions, and more.[23] In essence, cannabinoids allow us to relax, eat, sleep, and protect our bodies.[24] When cannabinoid signaling is balanced, we experience optimal endocannabinoid tone and whole-body health.

"Free radicals are the friction of life," says biologist Robert Melamede of the University of Colorado, " [and]Endocannabinoids are the oil of life."[25]

ANANDAMIDE: THE BODY'S "BLISS MOLECULE"

Our body produces two unique endocannabinoid lipids that "talk" to ECS receptors: anandamide and 2-arachidonoylglycerol. Anandamide is associated with a joyful mood and was named after the Sanskrit word for bliss.[26] Fatty acids and enzymes that help synthesize and break down endocannabinoids complete the system and its feedback loops.

Cannabidiol (CBD) powerfully supports anandamide, the "bliss molecule," by inhibiting the enzyme that breaks it down.[27] However, it does not actively increase the body's own production of anandamide. Anandamide deficiency within the nervous system is associated with reduced stress tolerance, increased nervousness and bodily discomforts. Conversely, supporting healthy anandamide levels may lead to a balanced, peaceful mood and restorative sleep.[28,29,30]

PHYTOCANNABINOIDS: A POTENT FAMILY OF MOLECULES ISSUING HOMEOSTASIS

A growing body of research indicates that phytocannabinoids have a broad range of therapeutic action. Phytocannabinoids significantly modulate inflammation, pain, appetite, sleep, mood, insulin sensitivity, fat and energy metabolism, and impact neurologic conditions.[31,32,33] Phytocannabinoids may act as neuroprotective antioxidants, superior to alpha-tocopherol and ascorbate in preventing glutamate toxicity.[34]

THC, cannabidiol, cannabigerol, and numerous other phytocannabinoids can shift the activity of more than 1000 human genes, increasing our cellular antioxidant defenses and downregulating many pro-inflammatory mediators.[35] For example, THC is an agonist—stimulating activity of both CB1 and CB2 receptors. CBD, on the other hand, is thought to be an antagonist that downregulates receptor activity.

CANNABIDIOL (CBD)

The scientific community has taken a keen interest in cannabidiol (CBD). CBD may positively impact health by inhibiting the reuptake of anandamide, activating CB2 receptors, and interacting with opioid, dopamine, serotonin, and glutamate systems in the body.[36]

Research shows CBD is an effective, non-intoxicating option for managing ongoing discomforts.[37] It also offers significant nervous system support, alleviating anxiousness[38] and improving mood disorders. The anti-inflammatory effects of CBD may also make it useful for individuals with autoimmune conditions of the gastrointestinal tract.[39,40]

CANNABIGEROL (CBG)

While THC and CBD get most of the attention, another phytocannabinoid, cannabigerol (CBG), is emerging as another powerful phytocannabinoid that works synergistically with its "sister" phytocannabinoids. CBG interacts with the ECS, cyclooxygenase (COX) enzymes, and serotonin receptors to exert various health benefits, including calming, neuroprotective, and anti-nausea properties.[41] A survey of patients using CBG-predominant Cannabis preparations found that over 50% of the patients used the CBG-predominant variant of this plant specifically for its calming benefits.[42]

Quicksilver Delivery Systems® improve upon liposomal and emulsification technology with smaller, more stable particles made from the highest-grade ingredients available. In addition to exceptional absorption rates, these tiny liposomal and nanoemulsified particles increase diffusion across mucous membranes, enhance lymphatic circulation of nutrients and support cellular delivery.