

**Hemp Max Liquid with VESIsorb®**  
**Broad-Spectrum Hemp Oil with CBD**

**DESCRIPTION**

Hemp Max Liquid with VESIsorb® from Douglas Laboratories® offers pure hemp oil specially formulated with the VESIsorb® colloidal delivery system to provide enhanced absorption of its fat-soluble constituents. Broad-spectrum hemp oil is extracted with CO<sub>2</sub> from the *Cannabis sativa* plant and tested to ensure the THC levels are not detectable. It includes 10 mg of cannabidiol (CBD), beta-caryophyllene (BCP) and other terpenes in a natural cinnamint flavored liquid.

**FUNCTIONS AND MECHANISMS OF ACTION**

Hemp is defined as a tall, widely cultivated herb (*Cannabis sativa*) of the Cannabaceae family with tough phloem fiber. Evidence of cannabis use from a scientific perspective was discovered in the 19th century. It was not until the late 1980s that scientists identified the first endocannabinoid, a conjugate of arachidonic acid and ethanolamine that was named “anandamide,” from the Sanskrit word “ananda,” meaning bliss. Today there are hundreds of different chemical compounds identified to exist in the *Cannabis sativa* plant. Phytocannabinoids, a class of compounds that interact with the body’s endocannabinoid system, include cannabidiol and structurally diverse terpenes, including beta-caryophyllene and limonene. While cannabidiol is specific to hemp, terpenes and other phytocannabinoids also occur in other herbs, spices, and other plants.

The endocannabinoid system (ECS) is an internal homeostatic regulatory system that serves to limit excitatory neurotransmission. It consists of four components: 1) G protein-coupled cannabinoid CB1 and CB2 receptors; 2) endogenous endocannabinoids that target these receptors, and possibly others; 3) enzymes that catalyze endocannabinoid biosynthesis and metabolism; and 4) mechanisms involved in cell accumulation of specific endocannabinoids. Endogenous endocannabinoids play a fundamental role in regulating pleasure, relaxation, memory, thinking, concentration, body movement, awareness of time, appetite, pain, and sensory processing and brain development. They are produced on-demand in response to excitatory neurotransmission and travel in retrograde fashion to inhibit further neurotransmitter release. Research done on the system has shown that the ECS has receptors throughout the body, including in the brain, organs, connective tissues, glands, and immune cells. Because phytocannabinoids are insoluble in water, their absorption is limited in the body.

VESIsorb® is a patented colloidal system that allows phytocannabinoids to cross the intestinal barrier in a water-soluble droplet. The droplets easily disperse and diffuse across the water layer of the intestinal barrier, improving absorption. Studies show that the VESIsorb® delivery system provides significant improvements in absorption and bioavailability of poorly soluble phytochemicals, including cannabidiol, as demonstrated in a recent pharmacokinetic study.

**FORMULA (#57767-30X)**

Serving size: 1 ml (1 dropper) contains:

Calories.....	5
VESIsorb® hemp ( <i>Cannabis sativa</i> ) oil extract (aerial parts).....	56 mg
(standardized to contain phytocannabinoids and terpenes, including beta-caryophyllene and 10 mg of cannabidiol (CBD))	

Other ingredients: vegetable glycerin, purified water, VESIsorb® colloidal delivery system (medium chain triglycerides, polysorbate 80, polyglycerol esters), natural cinnamon and peppermint flavors

Hemp Max contains CO<sub>2</sub>-extracted, U.S.-sourced agricultural hemp.  
 This product contains a total delta-9 tetrahydrocannabinol (THC) concentration that does not exceed 0.3%

**Non-GMO, Gluten-Free**

## Hemp Max Liquid with VESIsorb® Broad-Spectrum Hemp Oil with CBD

VESIsorb® is a registered trademark of Source One Global Partners.

### SUGGESTED USE

Adults take 1 dropper (1 ml) 1-2 times daily by mouth with or without meals, or as directed by a health care practitioner.

### WARNING

Not to be taken by those who are pregnant or lactating or planning to become pregnant. Do not consume if you have liver disease. If you have any health condition, are under 18, or taking any medication, consult your health professional before use.

KEEP OUT OF THE REACH OF CHILDREN.

### SIDE EFFECTS

No adverse side effects reported.

### STORAGE

Store in a cool, dry place. Use only if safety seal is intact.

### REFERENCES

- Aizpurua-Olaizola, et al. *Drug Discovery Today*, 22(1); 2017
- Russo, E.B. *Therapeutics & Clinical Risk Management*. 2008. 4(1):245-259.
- Pacher P, et al. *Pharmacological Reviews*. 2006
- McPartland JM, Agraval J, Gleeson D, Heasman K, Glass M. *J Evol Biol*. 2006 Mar; 19(2): 366-73. 42
- Elphick MR. *Philos Trans R Soc Lond B Biol Sci*. 2012 Dec 5; 367(1607): 3201-15. 43
- Mackie K. *Handb Exp Pharmacol*. 2005; (168): 299-325. 44
- Matsuda LA, Lolait SJ, Brownstein MJ, Young AC, Bonner TI. *Nature*. 1990 Aug 9; 346(6284): 561-4.
- Iger BE, Kim J. *Trends Neurosci*. 2011 Jun; 34(6): 304-15.
- Maccarrone M, Guzmán M, Mackie K, Doherty P, Harkany T. *Nat Rev Neurosci*. 2014 Dec; 15(12): 786-801.

For more information on **Hemp Max with VESIsorb®** visit [douglaslabs.com](http://douglaslabs.com)

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

Manufactured for:  
Douglas Laboratories  
600 Boyce Road  
Pittsburgh, PA 15205  
1-800-245-4440  
[www.douglaslabs.com](http://www.douglaslabs.com)



© 2021 Douglas Laboratories. All Rights Reserved.

DL57767-0521