



## Choosing Between Full Spectrum Hemp Extract with THC, and Broad Spectrum Hemp Extract Without THC

All the cannabinoids in hemp extract add to the elegant entourage effect, potentiating benefits while modulating potential adverse effects. A full spectrum extract, by retaining the legally allowed trace amount of THC, may fully activate cannabinoid receptors and increase effectiveness. This very small but biologically meaningful amount is fully compliant with the most recent 2018 farm bill.

For those who prefer a completely THC-free, broad spectrum extract, one can still receive the full benefits of a myriad of highly bioavailable, non-psychoactive, active phytocannabinoids, which includes CBD, as well as the suite of phytocannabinoids naturally present in hemp. In fact, potency can be enhanced by adding dietary terpenes.

Terpenes are aromatic molecules that are responsible for marijuana's distinctive odor, as well as that of many other essential oils. The terpenoids already present in cannabis include limonene, myrcene,  $\alpha$ -pinene, linalool, caryophyllene oxide, nerolidol and phytol—and most predominantly, beta-caryophyllene. **One can enhance the potency of a THC-free hemp extract by adding the proven dietary cannabinoid, beta-carophyllene.** It is a 'terpene' molecule found in essential oils of black pepper, oregano, cannabis, and even in green, leafy vegetables. It is the only terpene known to directly activate a cannabinoid receptor, and in fact, has been shown to be anti-inflammatory and a full agonist of the CB2 receptor, enhancing its activity.

## **NanoEmulsified Hemp Extract Offers Rapid Intake and Instant Relief**

Whether you choose a full spectrum or a broad spectrum hemp extract, a nanoemulsion will offer rapid uptake and impressive absorption. Our cells have a natural affinity for such vesicles, as we manufacture our own nanoemulsions, or micelles, in order to store, transport, and digest products from the cell. These vesicles can easily fuse with the cell membrane.

Where hemp extracts are concerned, nanoemulsions are far superior. One study compared a 5mg dose of nanoemulsified hemp extract to a 10mg dose of pharmaceutical synthetic cannabidiol (CBD), and the nanoemulsified Hemp Oil showed a 5.5-fold increased bioavailability. Another ten-person pilot study compared the uptake of 12 mg of nanoemulsified hemp extract NanoEmulsified Colorado hemp oil to 12 mg of non-liposomal hemp extract. The uptake of cannabidiol into the blood after taking a nanoemulsion was nearly six-fold higher, was measurable in the blood within several minutes, and peaked at 50 minutes. In contrast, it took 50 minutes for a non-liposomal hemp oil to begin to achieve measurable, but far less significant, levels.

For both full spectrum and broad spectrum hemp extracts, the key is the entourage effect, where minor cannabinoids contributing to a dramatically enhanced response. If you're looking for balance, look no further than the many bioactive molecules in cannabis.

References can be found at <https://www.quicksilverscientific.com/blog/full-spectrum-or-broad-spectrum-how-do-you-prefer-your-hemp-extract/>