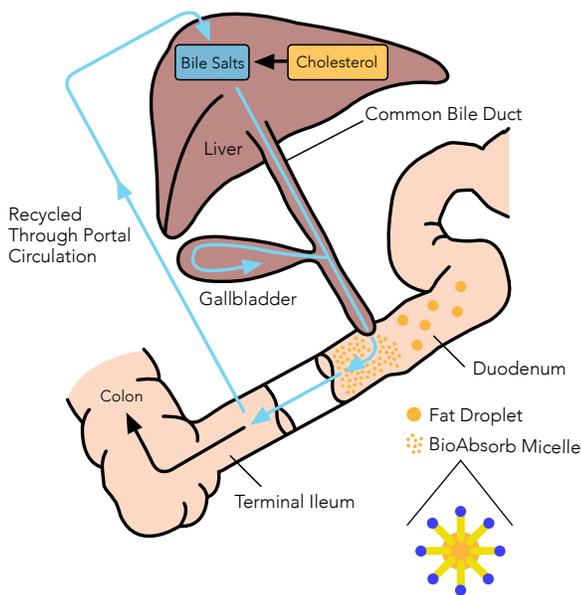




BioAbsorb™ vs Liposome

Imitation vs. Actual water soluble compounds: There are many ways to make oil based ingredients water dispersible in water but the human body makes oil based ingredients bioavailable through a process called micellization. **BioAbsorb** technology uses the same process that the human body uses make oil based ingredients bio-absorbable. **BioAbsorb** technology isn't an imitation of the body's way to utilize nutrients, **BioAbsorb** mimics the body's natural process of absorption.

Why BioAbsorb Micellization Technology is a game changer: It mimics the body's natural process of absorption.



- The Human Body is over **60%** water
- Absorption takes place primarily in the intestines
- Intestine cells are covered with a fine water film
- Only water soluble substances, which can permeate this water film, are directly absorbed and are "**bio-available**"
- Fat soluble substances cannot permeate the water film and have to be pre-treated
- This pre-treatment takes time and occurs indirectly in the intestine by the building of **micelles** by means of gall salts
- Most fat soluble substances (**80-90%**) are excreted and not utilized

BioAbsorb are micelles that mimic the body's way to make oil based ingredients bioavailable.

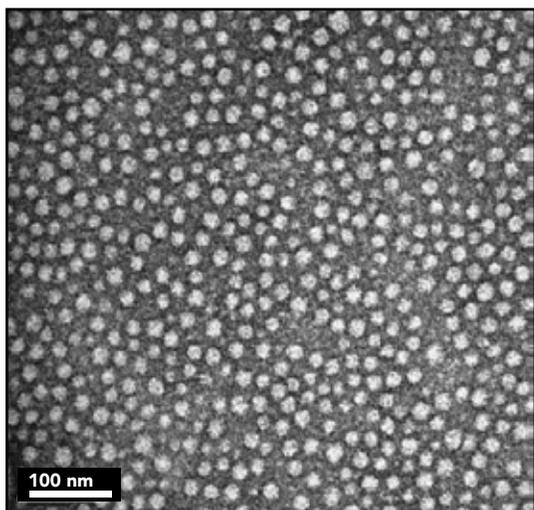
Bio-Absorption

It is well documented that the bioavailability of Native CBD oil is only 6%. Many companies utilizing various emulsions and water dispersible technologies including Liposomes, will claim increased bioavailability of CBD oil 3-4 times that of normal CBD. This would equate to 18-24% of their CBD making into the blood stream. BioAbsorb water soluble Hemp CBD oil has been proven to have over 85% absorption through the intestinal tract. This means that your body can utilize almost all of the CBD that you ingest.

Stability

One of the biggest issues that face current methods for dispersing oil based ingredients in water is stability. "Nutrient Fall-out" is a term used to describe whether an ingredient stays in its ideal bioavailable form or "falls out" and lies at the bottom or top of a solution. The polarity of water, the acidity of stomach acids, other bioactive ingredients in product formulations can all cause fall-out for both micelles and liposomes. Liposomes are particularly susceptible to temperature and stomach acid. Variations of temperature and the acidity and contents of the stomach can have drastic effects on the stability of a liposome. Liposomes have limited shelf life, temperature constraints and restrictions on when to take them. **BioAbsorb** water soluble Hemp CBD oil can be used or stored at room temperature, in the refrigerator, or left in the trunk of the car on summer vacation.

BioAbsorb water soluble Hemp oil micelles are 22 nanometers in size and are stable over Long periods of time.



BioAbsorb micelles under a Electron microscope.

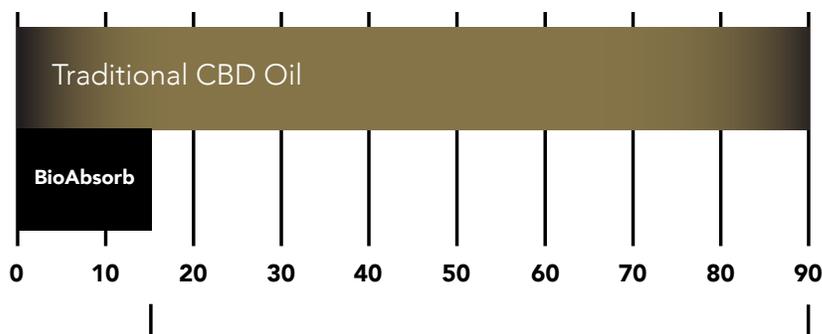
Onset and Duration of Action

Another way to differentiate between imitation or actual bio-absorption, is the onset of action and duration of effect of a product. Native and even Liposomal CBD products require 60-90 minutes to reach their peak effect in the body and begin to drop in effect after 2-3 hours.

BioAbsorb water soluble Hemp oil has an onset of action and peak effect within 15 minutes of ingestion and remain at high levels in the body.

The reported Onset of Action of orally ingested **BioAbsorb** CBD oil can occur within 15-30 minutes compared to traditional CBD oil which occurs between 60-90 minutes.

Onset of Action



Onset of Action for **BioAbsorb** can be over 7x faster than untreated, traditional CBD oil