

LIPOSOMAL CBD HEMP OIL

Better taste, better absorption, better value for money

LIPIDS AND BIOAVAILABILITY

When food is eaten a cascade of digestive events take place for the purpose of breaking that food down into its component parts so they can be classified, digested, absorbed and distributed throughout the body.

The bioavailability of something is a measure of how much makes it all the way through the digestive system into your blood. For example, if you ate a food that contained 100mg of Vitamin C and all 100mg made it into your blood, you would say it is 100% bioavailable.

The entire digestive system runs on water. It is the primary solvent used to digest food, expel waste and the medium that carries nutrients through the body. To a large extent, the bioavailability of a substance is dependent upon its ability to dissolve in water.

Consequently, nutrients that are already soluble in water (Vitamin C for example) are relatively easy for the body to digest, absorb and distribute. CBD Hemp oil contains hundreds of

nutrients, some of which are soluble in water. Cannabinoids such as CBD however are not, they are lipid-soluble which means they dissolve in fats and oils.

When lipids are detected during digestion the liver, gall bladder and pancreas are stimulated to produce surfactants and enzymes capable of breaking the lipids down into particles small enough to be soluble in water and pass through the wall of the intestines.

CBD HEMP OIL

CBD Hemp oil faces numerous digestive challenges. First is the bitter taste which can make it difficult to keep consuming day after day, especially for children or animals who lack the mental discipline to eat something they desperately need in spite of a taste they don't like.

The second key is the speed of digestion and absorption. Once you swallow food and commence the process of digestion, the rest is for the most part automatic. Your body will continuously push that food downwards through the stomach, small intestines, large intestines and out the other end. Practically all lipid absorption takes place in the small intestines. If the

lipids haven't been adequately digested and absorbed by the time they reach the end of the small intestine they will be expelled from the body.

Thirdly is that CBD Hemp oil is often consumed in very small amounts and often on an empty stomach. For example parents may give their child a blob of oil the size of a grain of rice. A small amount of the oil may absorb through the lining of the mouth into the blood [which may be enough to produce the desired effect] but most will slowly pass down into the stomach.

Because the amount consumed is so small, the body may not notice that something requiring digestion has been swallowed and therefore the cascade of digestive events will not be activated.

If it is not consumed with food, it will sit in the stomach doing nothing until enough fat-containing food is eaten to turn digestion on. If the tiny blob of oil passes into the intestines before that meal comes it will pass out of the body without being absorbed.

Elixinol introduces a more efficient way to

consume whole plant CBD Hemp oil.



**THE BIOAVAILABILITY OF A
SUBSTANCE IS DEPENDENT UPON
ITS ABILITY TO DISSOLVE IN WATER**

LIPOSOMES

Liposomes are very similar to structures that the body naturally produces called vesicles.

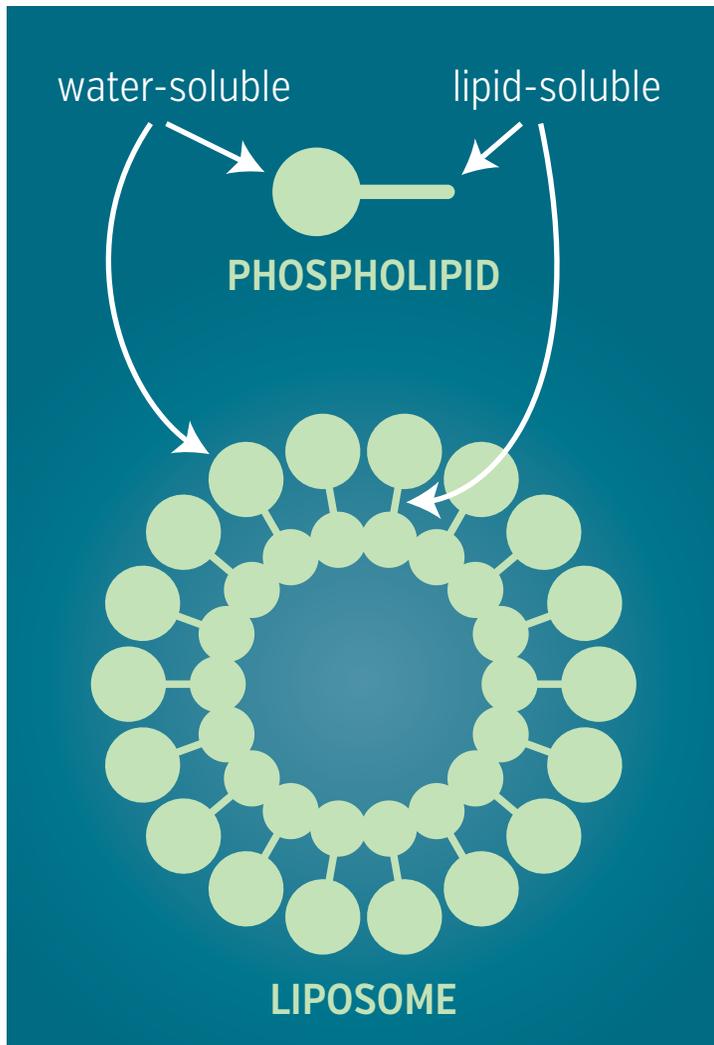
STRUCTURE/FUNCTION

Liposomes and vesicles are tiny hollow spheres that have the ability to carry both water soluble and lipid soluble compounds through the body and through cell membranes.

Liposomes are made from phospholipids which favor uptake into the intestinal lymphatic system bypassing the Liver and ensuring maximal blood uptake of CBD.

NATURAL

Natural phospholipids come from three main sources: Sunflower seeds, Soy beans and Egg yolk. Being that Sunflower seeds are the healthiest and most sustainable source, Elixinol uses Sunflower sourced phospholipids.



SOLUBILITY

The wall of the liposome is made from a double-layer of phospholipids. The internal part of this double-layer wall is lipid soluble which is where lipid soluble compounds such as CBD are carried.

The inner hollow part of the liposome is filled with water and is where water soluble compounds are carried. The outer surface of the liposome is also water soluble which allows the liposome to dissolve in water.

These features combined result in faster uptake and increased bioavailability.



BITTER BLOCKING

Another advantage of this double-layer phospholipid wall is that it acts as a barrier to your taste buds which reduces the sensation of bitterness making it more pleasant to consume.

SAFE NATURAL FORMULATION

Being that the medical Cannabis industry is very fast moving and very competitive with manufacturers facing high start-up costs, uncooperative

banks, opposition from governments and law enforcement, opposition from the pharmaceutical industry and consumers who are desperate to get access to this life-saving plant, it can be tempting for manufacturers to take potentially harmful shortcuts to lower their costs and shorten the amount of time taken to bring new products to market.

These shortcuts can also arise as a result of out-sourcing product formulation and manufacturing to 3rd parties who may convince you that the shortcuts they take “are the industry standard and nothing to be worried about.”

At Elixinol we fully understand these pressures but are opposed to taking such shortcuts when it comes to creating products.

Unlike some of our competitors our liposomal products do not contain:

- Isolated/synthetic Cannabinoids
- Soy or Egg derived phospholipids
- Genetically modified organisms
- Ethanol and other harmful solvents
- Propylene Glycol
- Artificial Flavors or Sweeteners
- Misleading labelling

PACKAGING

Elixinol has chosen to use **Miron Violet Glass** bottles for packaging it's Liposomal products. German scientists discovered that while certain wavelengths of visible light damage herbal extracts, a certain wavelength of violet light actually enhances them.

Originally crafted in Switzerland, Miron Violet glass is the gold standard for storing herbal extracts. It selectively allows the energising violet wavelength to penetrate while blocking all others. Extensive testing proved it's ability to act like a preservative and prevent phytonutrient oxidation better than any other storage media.

SPECIFICATIONS

- **PRODUCT SIZE:** 1oz/30ml pump dispenser bottle.
- **STRENGTH:** 100mg or 300mg CBD per bottle
- **SERVING SIZE:** Press pump 5 times [5mg CBD].
- **SERVINGS PER BOTTLE:** 60.
- **DIRECTIONS:** Stir into a glass of water twice daily.
- **SHELF LIFE:** 12 months from date of manufacture.
- **STORAGE:** Refrigerated storage is recommended.