

# Ubiquinol VESIsorb®

Introduced 2012



## What Is It?

Ubiquinol VESIsorb® offers a unique self-assembling nano-colloid system to enhance ubiquinol absorption. Ubiquinol is the active antioxidant form of CoQ<sub>10</sub>. It has an additional two hydrogen atoms and comprises the majority of the ubiquinone/ubiquinol pool in the plasma of healthy young subjects. In the body, the enzymatic conversion of ubiquinone to ubiquinol in the mitochondria is a key step in the electron transport chain and the manufacture of ATP.\*

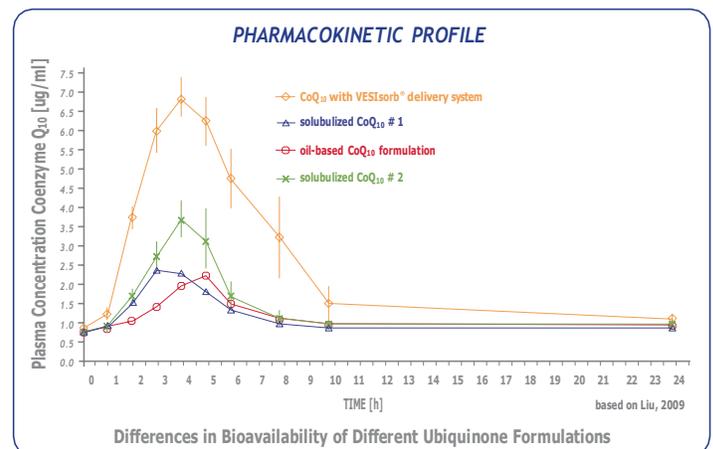
## Special Features

### Enhanced Absorption Patented VESIsorb® Delivery System

- Developed by Vesifact, a Switzerland-based company dedicated to innovative technology and research
- Patented, lipid-based delivery system increases bioavailability of a bioactive that is fat soluble or that has poor water solubility\*
- Self-assembling colloidal system forms evenly dispersed fluid droplets upon contact with water in the G.I. tract, each with a mean diameter of less than 100 nanometers and with the bioactive at its core
- Nanosized water-soluble droplets or micelles allow the bioactive to cross the water layer of the G.I. tract for absorption
- Provides extended release of the bioactive over time

## Ubiquinol VESIsorb®

- A human pilot study compared a typical ubiquinol preparation to ubiquinol in the VESIsorb® delivery system and demonstrated a 696% increase in peak blood levels and a 485% increase in relative bioavailability\*
- A cross-over, pharmacokinetic pilot study (single oral dose) in humans compared an oil-based CoQ<sub>10</sub> preparation to CoQ<sub>10</sub> in the VESIsorb® delivery system and demonstrated a 308% increase in peak blood levels (C<sub>max</sub>) and a 622% increase in area under the curve (AUC<sub>(0-10 hr)</sub>), a measure of 10-hour bioavailability\*
- In the same study, AUC<sub>(0-10 hr)</sub> values were 285% and 499% greater with VESIsorb® CoQ<sub>10</sub> compared to two other solubilized, bio-enhanced preparations\*



CoQ<sub>10</sub> with the VESIsorb® delivery system demonstrated a 308% increase in peak plasma levels (C<sub>max</sub> = 6.9) compared to an oil-based preparation (C<sub>max</sub> = 2.2). C<sub>max</sub> of VESIsorb® CoQ<sub>10</sub> also exceeded values for two solubilized formulations (C<sub>max</sub> = 2.4 and 3.7).

### The VESIsorb® technology is broken down into three steps:

#### Step 1

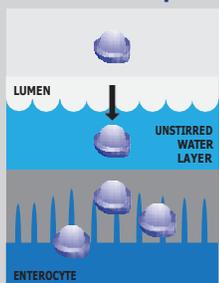
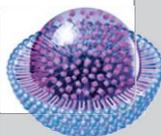
Formation of the colloidal delivery system

#### Step 2

Diffusion across the unstirred water layer

#### Step 3

Transfer to the absorptive surface of the GI epithelium



(continued)

‡These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

## Uses for Ubiquinol VESIsorb®

**General Support:** Ubiquinol makes up over 90% of the CoQ<sub>10</sub> found in the plasma of healthy young individuals, typically up to the age of about 40-45 years. This makes ubiquinol especially important for older individuals, individuals who may be experiencing greater levels of oxidative or physical stress, or individuals who appear not to respond to regular CoQ<sub>10</sub> supplementation (possibly due to poor conversion of CoQ<sub>10</sub> to ubiquinol in the body). Research suggests that it may be more readily absorbed than the ubiquinone form. The safety and bioavailability of ubiquinol were evaluated after single oral dose and 4-week multiple dose studies. Significant gastrointestinal absorption was observed and no clinically significant adverse effects were noted.\*

**Cardiovascular Support:** In a preliminary case report involving an open clinical evaluation using ubiquinol, a U.S. cardiologist reports that plasma CoQ<sub>10</sub> levels doubled for one 52 year-old woman after supplementation with 300 mg ubiquinol in divided doses for one month. It was also noted that ubiquinol supported a healthy ratio of CoQ<sub>10</sub> to lipids. In a separate case, a 65 year-old male not responding to CoQ<sub>10</sub> supplementation experienced a 4-fold increase in plasma CoQ<sub>10</sub> after supplementation with the same dose of ubiquinol. In addition, ubiquinol supported healthy ejection fraction and mitral valve function while supporting overall physical activity and quality of life.\*

## What Is The Source?

CoQ<sub>10</sub> is produced by microbial (yeast) fermentation. There is no residual yeast in the final product.

## Recommendations

Pure Encapsulations recommends 1-2 Caplique® Capsules daily, in divided doses, with meals.

## Are There Any Potential Side Effects Or Precautions?

If pregnant or lactating, consult your physician before taking this product. Rarely, CoQ<sub>10</sub> may cause mild gastrointestinal upset, nausea, vomiting, diarrhea or constipation. Consult your physician for more information.

## Are There Any Potential Drug Interactions?

CoQ<sub>10</sub> may be contra-indicated for individuals taking blood thinning medication. Consult your physician for more information.

## Ubiquinol VESIsorb®

each Caplique® Capsule contains 0	
ubiquinol® (Kaneka QH™ active antioxidant form of CoQ <sub>10</sub> )	100 mg
vitamin E (as d-alpha tocopheryl acetate)	10 iu
other ingredients: medium chain triglycerides, polysorbate 80, polyglycerol fatty acid esters, gelatin Caplique® Capsule (gelatin, glycerin, water, titanium dioxide)	
<b>1-2 Caplique® Capsules daily, in divided doses, with meals.</b>	

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