

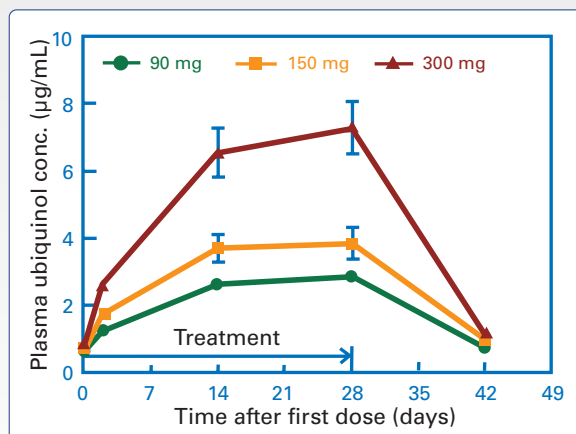
## Ubiquinol

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 subjects. Ubiquinol may be especially important for older individuals, individuals who may be experiencing greater levels of oxidative or physical stress, or for 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 ubiquinone. In a comparison study involving healthy subjects, supplementation with 200 mg ubiquinol for 4 weeks increased plasma total CoQ<sub>10</sub> from 0.9 to 4.3 μg/mL (P < 0.001) compared to 0.9 to 2.5 μg/mL with ubiquinone. It was also noted that ubiquinol supported a healthy ratio of CoQ<sub>10</sub> to lipids. Research indicates ubiquinol supports antioxidant status, healthy ejection fraction and mitral valve function while supporting overall physical activity and quality of life. 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.<sup>‡</sup>

## The Facts About Kaneka QH™ (Ubiquinol)

- Developed after 10 years of research by Kaneka Corporation, leading manufacturer of CoQ<sub>10</sub>
- CoQ<sub>10</sub> must first be converted to ubiquinol in order to be used by the body; Ubiquinol is the active form that is usable in the body
- Ubiquinol makes up over 90% of the CoQ<sub>10</sub> found in the plasma of healthy young individuals
- Contains two additional hydrogen atoms compared to ubiquinone (the oxidized form of CoQ<sub>10</sub>), making it the reduced and active antioxidant form of CoQ<sub>10</sub>
- In healthy volunteers, one 4-week trial indicated an 11-fold increase in serum levels over baseline

4-Week Multiple Dose Kaneka QH™ Study



Morning trough concentrations of ubiquinol in plasma during 4-week multiple oral administration of ubiquinol and 2 weeks after completion in healthy volunteers. Each point represents the mean  $\pm$  SEM of 20 subjects (90 mg and 150 mg) or 19 subjects (300 mg).

Hosoe K, Kitano M, Kishida H, Kubo H, Fujii K, Kitahara M. *Regul Toxicol Pharmacol*. 2007;47(1):19-28.