

CoQsol-CF™ with Tocotrienols Rice Bran Oil Base (Hypoallergenic)

The Possible Benefits of CoQsol-CF™ with Tocotrienols, a Dietary Supplement

- Enhances the production of cellular energy (ATP)*
- Protects the mitochondrial membrane against lipid peroxidation*
- May support the function of the cardiovascular system, the immune system, and the health of the gums*
- CoQsol-CF™ has increased bioavailability, and is synergistic with tocotrienols*

Description

CoQsol-CF™ with Tocotrienols combines two lipid antioxidants in a superior synergistic formula. CoQsol-CF™ is a crystal-free, patent pending formulation of coenzyme Q10 (CoQ10), which is completely solubilized in a proprietary matrix to prevent the CoQ10 from recrystallizing, for enhanced absorption.* A pilot clinical trial demonstrated enhanced CoQ10 bioavailability in this form, and further studies are in progress.* CoQsol-CF™ with Tocotrienols also includes a substantial amount of mixed tocopherols and mixed tocotrienols, important members of the vitamin E family.

Tocotrienols have been shown to strengthen arterial walls, support blood flow through arteries, and support the regulation of cholesterol within normal levels.* CoQ10 is a nutrient critical for energy production and antioxidant protection of mitochondrial membranes, and tocotrienols and tocopherols work synergistically with CoQ10.*

Besides the four well-known tocopherols, the vitamin E family also contains alpha, beta, gamma, and delta tocotrienols. Barley, rice bran, and palm oil products contain tocotrienols, but only in small quantities. Rice bran oil yields higher amounts of gamma-tocotrienol and lower amounts of alpha-tocotrienol compared to tocotrienols from palm oil, potentially increasing absorption and utilization.*

Tocotrienols have been shown to strengthen arterial walls, and support blood flow through arteries (coronary, carotid, and peripheral).* They have also shown potential to support cholesterol within normal levels and protect against oxidation of cholesterol, possibly more effectively than vitamin E.* Differences in the antioxidant activities of tocopherols and tocotrienols are likely to be related to properties that affect their incorporation in cell membranes. Tocopherols, with a saturated side chain that interacts hydrophobically with acyl side chains of membrane phospholipids, may be relatively less able to access lipid radicals due to steric hindrance. Tocotrienols, with an unsaturated farnesyl side chain, have increased accessibility to lipid radicals and resulting greater antioxidant capacity, as compared with tocopherols.

CoQ10 is essential for the health of our cells, tissues and organs.* It belongs to a family of lipid soluble ubiquinones, present throughout the body, and it is the predominant CoQ form found in humans. It is most concentrated in cells of the heart, liver, kidney and pancreas. The body's production of CoQ10 peaks around age 20 and then declines. For many decades, supplemental CoQ10 has been used throughout Europe, Asia, and the United States for its support of cellular energy, antioxidant function and cardiovascular health.*

Item no. 75460 (30 softgels) Item no. 75470 (60 softgels) Item no. 75480 (200 softgels)

CoQ10 plays an essential role in the mitochondrial electron transport chain (ETC), the major metabolic pathway for making energy in every cell of the body. CoQ10 functions as an electron carrier in the ETC, linking the various enzymes of the chain, and the production of ATP is dependent on sufficient levels of CoQ10 in the mitochondrial membrane. CoQ10 is also an important antioxidant, protecting the mitochondria from free radical damage. The process of electron transport produces oxygen free radicals, which are then trapped by CoQ10 and vitamin E. CoQ10 reduces the initiation and propagation of lipid peroxidation in cell membranes and in lipoprotein fractions, and it works synergistically with vitamin E, helping to spare it.

CoQ10 has been extensively studied for its ability to support cardiovascular function.* Studies suggest that CoQ10 may strengthen the heart muscle, and enhance such things as quality of life, breathing and heart rate.* It supports blood pressure within normal levels, and it may be of benefit to those taking cholesterol-lowering medications, which can reduce blood levels of CoQ10.* It has been shown to potentially support energy, sexual health, gum health, certain immune parameters, aerobic capacity and physical performance.*

CoQ10, vitamin E and tocotrienols are well tolerated, with an extensive history of study and safe use.

Serving Size: 1 Softgel

Servings Per Container: 30, 60, 200

Amount Per Serving:

Vitamin E (D-alpha-Tocopherol) 125 IU
Coenzyme Q10 (CoQsol-CF™) 100 mg
Tocotrienols (from rice) 25 mg
D-alpha-Tocotrienol 11 mg
D-gamma-Tocotrienol 14 mg
Mixed Tocopherols 103 mg
D-delta-Tocopherol 21mg
D-gamma-Tocopherol 50 Mg

Suggested Use: As a dietary supplement, 1 to 3 softgels one or two times daily with meals, or as directed by a healthcare practitioner.

Other ingredients: D-limonene oil, gelatin, glycerin, rice bran oil, purified water, turmeric, zinc oxide.

References (CoQ10 references available upon request)

Asmah R, et al (1993). *Asia Pacific J Clin Nutr*, 2.

Berger K G, et al (1980). Studies on Tocopherols and Tocotrienols in Malaysian Palm Oil (11), Proceedings of International Symposium on the Tropical Plants, 1-4 September 1980, Tsukuba, Japan.

Dewitt G F, Chong Y H (1990). *Symp Proc New Dev in Palm Oil* (London 1989).

Guthrie N, Gapor A, et al (1994). *Proc Ant Assoc Cancer Res* 35:629 Abstract 3749.

He L, et al. *J Nutr*. May1997;127(5):668-74. Jacobsberg B, Deldime P, et al (1978). *Oleagineux* 33: 239-247.

Kato, A, et al (1985). *J Japan Oil Chem Soc (YUKAGAKU)*, 34: 375-376.

Komiyam, K, Iizuka K, et al (1989). *Chem. Pharm Bull*, 37(5): 1369- 1371.

Mahadevappa V G, Sicilia F, Holub, B J (1991). *Proc of 1989 Int*

Palm Oil Conference: Nutrition and Health Aspects of Palm Oil, published by PORIM.

Nesarethnam K, et al (1992). *Nutrition Research*, 12, 63-75.

Nesaretnam K, Dorasamy S, Darbre PD. *Int J Food Sci Nutr* 2000;51(Suppl):S95-103.

Nesaretnam K, et al. *Lipids* Dec 1995;30 (12):1139-43.

Quresh, I A A, et al (1988). *The National Palm Oil Conference: Current Dev*, 11-15 October, 1988, Shangri-La Hotel, Kuala Lumpur .

Qureshi A A, Qureshi N, et al (1991). *Am J Clin Nutr*, 53: 1021S-1026S.

Qureshi A, et al. *Lipids* 1995;30(12):1171-1177.

Qureshi, A A, Bradlow B A, et al (1993). Paper presented at 1993

PIPOC, 20-25 September 1993, Hotel Istana, Kuala Lumpur .

Rahmat A, et al. Nutrition May1993;9(3):229-32.

Serbinova E, et al (1991). Free Radical Biology & Medicine, 70: 263-275.

Tomeo A, et al. Lipids1995;30(12):1179-1183.

Wan Zurinah W N, Zanriah J, et al (1991). Am J Clin Nutr 53:1076S- 1081S.

Watkins T, Lenz P, et al (1993). Lipids, 28 (12): 1113-1118.