[ **Product Information** ]

**Name:** Coenzyme Q10  
**Catalog No.:** CFN99165  
**Cas No.:** 303-98-0  
**Purity:** >=98%  
**M.F:** C_{59}H_{90}O_{4}  
**M.W:** 863.36  

**Physical Description:** Yellow cryst.  
**Synonyms:** COQ10; Q-Gel; Ensorb; Coenz10; Kudesan; Carenone; Eiquinon; neuquinon.

[ **Intended Use** ]

1. Reference standards;  
2. Pharmacological research;  
3. Food and cosmetic research;  
4. Synthetic precursor compounds;  
5. Intermediates & Fine Chemicals;  
6. Ingredient in supplements, beverages;  
7. Others.

[ **Source** ]

From *Gibberella fujikuroi.*
Biological Activity or Inhibitors

The level of Coenzyme Q10 (CoQ10), as antioxidant capacity, is significantly lower in diabetic patients than in controls; plasma and platelet MDA, as a marker of oxidative stress, are significantly higher in diabetic patients than in controls, thus, type 2 diabetic patients are at increased risk of oxidative stress manifested by increased plasma MDA as well as platelet MDA and decreased CoQ10.\(^1\)

Coenzyme Q10 and alpha-lipoic acid are found naturally in mitochondria and act as potent antioxidants; treatment with coenzyme Q10 plus alpha-lipoic acid can significantly restore contractile responses to all forms of stimulation, treatment also has mitochondrial and neuronal effects and reduces protein nitration and carbonylation, demonstrates that coenzyme Q10 and alpha-lipoic acid supplementation can improve bladder function after outlet obstruction.\(^2\)

Coenzyme Q10 has neuroprotective effect in the cerebral ischemia via as a potent antioxidant and oxygen derived free radicals scavenger.\(^3\)

Treatment with coenzyme Q10 in patients with myocardial infarction (MI) may be beneficial in patients with high risk of atherothrombosis.\(^4\)

The combination of Coenzyme Q(10) and creatine produces additive neuroprotective effects on improving motor performance and extending survival in the transgenic R6/2 HD mice, suggests that combination therapy using CoQ(10) and creatine may be useful in the treatment of neurodegenerative diseases such as Parkinson's disease and Huntington's Diseases.\(^5\)

Coenzyme Q(10) supplementation improves endothelial function of conduit arteries of the peripheral circulation in dyslipidaemic patients with Type II diabetes, the mechanism could involve increased endothelial release and/or activity of nitric oxide due to improvement in vascular oxidative stress, an effect that might not be reflected by changes in plasma F(2)-isoprostane concentrations.\(^6\)

Solvent

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.
[HPLC Method][7]

Mobile phase: Methanol-hexane-Acetic acid- Isopropanol -0.42% Sodium acetate =55:9:1:1;
Flow rate: 1.0 ml/min;
Column temperature: Room Temperature;
The wave length of determination: 275 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]