Application of Coenzyme Q10 as a Functional Food

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ABSTRACT

Each cell contains mitochondria to transport electrons and produce the energy substance of ATP that maintains the life of cells. The coenzyme Q10 in the mitochondria includes in the electron transport chain.

Coenzyme Q10 is an odorless, fat-soluble, yellow-orange crystal/powder. The functions of coenzyme Q10 are to process the electron transport, scavenge the free radicals and act as a excellent antioxidant. The insufficient content of coenzyme Q10 in the body will cause some diseases, such as Parkinson ’ s disease, Alzheimer ’ s disease, Huntington ’ s disease and Down syndrome. Coenzyme Q10 will also influence the cardiovascular disease, such as chronic heart failure, ischemic cardiomyopathy, chronic cardiac disease and congestive heart failure. Coenzyme Q10 improves the carcinogenesis. It is indicated that coenzyme Q10 has potentially marketed.

According to the information provided by Natural products Industry Center, coenzyme Q10 has the marketing of 140-150 tons in 2004. The increase rate of coenzyme Q10 demand is 20-25% that the total amount of coenzyme Q10 needed will be 750 tons in 2010.

The production methods of coenzyme Q10 include extraction from animal organic tissues, microbial fermentation and chemical synthesis. The method used in three most famous Japanese factories is the microbial fermentation that the product has high purity. There are about ten million people in Japan that use coenzyme Q10 every day. The economics and valuable of coenzyme Q10 have encouraged many companies to research and develop production.

Keywords : coenzyme Q10

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