

Ordering Physician:

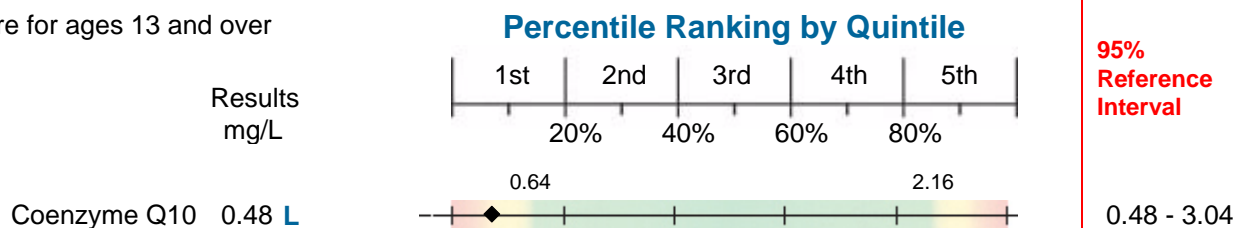
Metametrix

3425 Corporate Way  
 Duluth, GA 30096

**0034 Coenzyme Q10 - Serum**

Methodology: High Pressure Liquid Chromatography

Ranges are for ages 13 and over



**Background**

Coenzyme Q10 (CoQ10) is a fat soluble cofactor essential for energy producing metabolic pathways and for the proper functioning of the mitochondrial oxidative system. With insufficient CoQ10, the electron transfer activity of the mitochondria decreases, resulting in a net failure to produce the energy necessary to run the cell. Tissues with high energy demand have even greater demands for CoQ10. For example, heart muscle, which continually exerts a pumping action for an entire lifetime, has an immense need for this cofactor. Studies demonstrate the effectiveness of supplemental coenzyme Q10 in cardiomyopathy (2,3), myocardial dysfunction (4) and congestive heart failure (5). CoQ10 is also a powerful antioxidant (6) like vitamins E and C, and thus serves the role of neutralizing excess free radicals. It is now well established that the control of excessive free radical activity is key in preventing/delaying the progression of degenerative diseases.

**Therapeutic Information**

Serum CoQ10 measurements such as this test mirror bioavailable levels. If serum CoQ10 is low, it can be increased by supplementing according to the following (1):

- 30 to 100 mg daily for prevention of cardiovascular or periodontal disease and for patients taking HMG-CoA reductase inhibitors
- 90 to 180 mg daily for angina pectoris, cardiac arrhythmia, hypertension and moderate gingival disease
- 180 to 360 mg daily for congestive heart failure and dilated cardiomyopathy
- CoQ10 is best absorbed when taken with a balanced meal

**References**

1. Sinatra S. Coenzyme Q10 and the Heart. Keats Good Health Guide. Keats Publishing, Inc. 1998 New Cannan, CT.
2. Langsjoen PH, Folkers K. A six-year clinical study of therapy of cardiomyopathy with coenzyme Q10. Int J Tissue React 1990;12(3):169-71.
3. Langsjoen PH, Folkers K, Lyson K, et al. Pronounced increase of survival of patients with cardiomyopathy when treated with coenzyme Q10 and conventional therapy. Int J Tissue React 1990;12(3):163-8.
4. Mortensen SA, Vadhanavikit S, Muratsu K, et al. Coenzyme Q10: clinical benefits with biochemical correlated suggesting a scientific breakthrough in the management of chronic heart failure. Int J Tissue React 1990;12:155-162.
5. Morisco C, Nappi A, Argenziano L, et al. Noninvasive evaluation of cardiac hemodynamics during exercise in patients with chronic heart failure: effects of short term coenzyme Q10 treatment. Mol Aspects Med 1994;15 Suppl:s155-63.
6. Greenberg S and Frishman WH. Coenzyme Q10: A new drug for cardiovascular disease. J Clin Pharmacol 1990;30:596-608.

No parts of this laboratory report are intended to take the place of a qualified health care professional's advice. Educational information, intended to aid interpretation or to review potential interventions, may be included.

These test results are not for the diagnosis of disease. They are intended to provide nutritional guidelines to qualified healthcare professionals with full knowledge of patient history and concerns to assist in their design of an appropriate healthcare program.