

**Reporting Title:** Coenzyme Q10, Reduced and Total, P  
**Performing Location:** Rochester

**Ordering Guidance:**  
This test provides both reduced and total coenzyme Q10 (CoQ10). For assessment of total only, order TQ10 / Coenzyme Q10, Total, Plasma.

The level of oxidized CoQ10 is affected in specimens with even slight amounts of hemolysis; however, the total Q10 level remains constant. Hemolyzed specimens can be analyzed for total Q10 using TQ10 / Coenzyme Q10, Total, Plasma.

The most reliable test for the diagnosis of primary defects in ubiquinone (ie, CoQ10) biosynthesis is direct measurement of CoQ10 in muscle.

**Shipping Instructions:**  
If possible, **do not** send other tests ordered on same vial of plasma. In doing so, the other tests may have increased turnaround time due to the strict frozen criteria of this assay.

**Necessary Information:**  
Patient's age is required.

**Specimen Requirements:**  
**Patient Preparation:** Fasting (8 hours)  
**Collection Container/Tube:** Green top (lithium or sodium heparin)  
**Submission Container/Tube:** Plastic vial  
**Specimen Volume:** 0.5 mL  
**Collection Instructions:**  
1. Immediately after collection, place specimen on wet ice. Maintain on wet ice and process within 3 hours of collection.  
2. Centrifuge, aliquot plasma into plastic vial, and freeze immediately.

**Forms:**  
[If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request](#) (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen (preferred)	14 days	
	Refrigerated	8 hours	

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
87853	CoQ10 reduced	Numeric	mcg/L	81157-0
30091	CoQ10 Total	Alphanumeric	mcg/L	27923-2
30092	CoQ10 % reduced	Alphanumeric	%	81156-2
30159	Interpretation	Alphanumeric		59462-2

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82542

Reference Values:

COENZYME Q10 (CoQ10) REDUCED

<18 years: 320-1376 mcg/L

> or =18 years: 415-1480 mcg/L

CoQ10 TOTAL

<18 years: 320-1558 mcg/L

> or =18 years: 433-1532 mcg/L

CoQ10 % REDUCED

<18 years: 93-100%

> or =18 years: 92-98%

Miles MV, Horn PS, Tang PH, et al. Age-related changes in plasma coenzyme Q10 concentrations and redox state in apparently healthy children and adults. Clin Chim Acta. 2004;34:139-144