

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 | Refrigerated | 8 hours | |
| | Frozen (preferred) | 14 days | |

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