
Lab Dept: Chemistry

Test Name: CAROTENE

General Information

Lab Order Codes: CARO

Synonyms: Beta Carotene

CPT Codes: 82380 - Carotene

Test Includes: Carotene level reported in mcg/dL.

Logistics

Test Indications: Useful for detection of nutritional deficiency of carotene or detection of excessive ingestion of carotene.

Beta-carotene is a member of the family of carotenoids, highly pigmented (red, orange, yellow) fat soluble vitamins that are the precursors or provitamins of vitamin A. The principle provitamin A compounds include beta-carotene, alpha-carotene, and beta-cryptoxanthin. Carotenoids occur in high levels in many fruits and vegetables such as carrots, sweet potatoes, cantaloupe, and others. The most significant effect of these provitamins is their conversion to vitamin A, which plays a major role in vision as well as reproduction, embryonic growth, and immune function.

The highest level of carotene can be found in the serum of individuals ingesting large amounts of vegetables, primarily carrots. These people may have a slight yellowish tinge of the skin but the sclera of the eye is not discolored. Decreased serum levels may be seen in individuals with nutritional deficiencies including anorexia nervosa, malabsorption, and steatorrhea.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories forward to LabCorp Burlington (Test: FCARO)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 4-11 days, performed Monday, Wednesday, Friday

Special Instructions: See [Patient Preparation](#)

Specimen

Specimen Type: Blood

Container: SST (Gold, marble or red) tube

Draw Volume: 3 mL (Minimum: 1.5 mL) blood

Processed Volume: 1 mL (Minimum: 0.5 mL) serum

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into an amber MML tube (Supply T192) to protect from light. Store and ship at refrigerated temperatures. Forward promptly.

Patient Preparation: Patient must not consume any alcohol or vitamin supplements for 24 hours before the specimen is drawn. An overnight (12-14 hour) fast is recommended for the patient (water, but no other liquids, may be taken as needed).

Sample Rejection: Specimens other than serum, mislabeled or unlabeled specimens; mild or gross hemolysis

Interpretive

Reference Range:	Age	Range
	All ages:	3 – 91 ug/dL

Critical Values: N/A

Limitations: Lower serum beta-carotene concentrations have been associated with smoking and ethanol consumption.

Methodology: High-Performance Liquid Chromatography (HPLC)

References: [Mayo Medical Laboratories](#) November 2017

Updates: 4/29/2013: Updated method and reference range.
11/14/2017: Updated collection container, ref ranges