
Lab Dept: Chemistry

Test Name: CARBOXY HEMOGLOBIN

General Information

Lab Order Codes: COHB

Synonyms: Carboxy Hgb; Carbon Monoxide

CPT Codes: 82375 – Carbon monoxide (carboxyhemoglobin); quantitative

Test Includes: Carboxyhemoglobin concentration reported as a % of total hemoglobin.

Logistics

Test Indications: Carbon monoxide has a much greater binding affinity for hemoglobin than does oxygen. Carboxyhemoglobin is a hemoglobin-carbon monoxide complex. Carbon monoxide is normally generated in small quantities from the catabolism of heme. Common exogenous sources include cigarette smoke, automobile exhaust, and poorly ventilated home heating units.

Lab Testing Sections: Chemistry

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 30 minutes

Special Instructions: Capillary tube samples will not be accepted. See [Collection](#).

Specimen

Specimen Type: Whole blood

Container: Sims Portex® syringe (PB151) or Smooth-E syringe (956-463) or Green- (Li Heparin) top tube

Draw Volume: **Preferred:** 0.4 mL in Sims or Smooth-E syringe
Alternate: Completely filled green (lithium heparin) top tube, 2.7 mL of blood in a 3.0 mL tube.

Processed Volume: 0.2 mL whole blood

Collection:	Routine venipuncture. Do not expose specimen to air. Immediately remove all air from blood gas syringe, remove needle, cap tightly, and mix. Keep syringe/tube stoppered to avoid exposure of specimen to atmosphere. Forward promptly at ambient temperature only.
Special Processing:	Lab Staff: Deliver carboxyhemoglobin specimen to the blood gas workstation for testing. Specimens should be analyzed within one hour of collection.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimen; samples containing air; capillary tubes, clotted specimens

Interpretive

Reference Range:	0.0 – 1.5%
Critical Values:	N/A
Limitations:	N/A
Methodology:	Oximetry
References:	<p>Tietz (1999) Textbook of Clinical Chemistry, 3rd edition, Philadelphia, WB Saunders Co, pp 918, 1662</p> <p>ABL800 FLEX Operator's Manual from software version 6.14, Publication: 201410, Edition: E, Code number: 994-909, www.radiometer.com</p> <p>ABL90 FLEX Operator's Manual from software version 3.1xx Publication 201403, Edition H, Code number 996-656</p> <p>Jacobs & DeMott Laboratory Test Handbook, Lexi-Comp, Inc, Hudson, OH, 5th Edition, 2001</p>
Updates:	9/4/14: Turnaround time update, previously listed as 1 hour. References update.