
Lab Dept: Chemistry

Test Name: CH50

General Information

Lab Order Codes: CH5

Synonyms: Complement, Total; Complement, Total Hemolytic

CPT Codes: 86162 – Complement; total hemolytic (CH50)

Test Includes: Total complement level reported in U/mL.

Logistics

Test Indications: Useful for detection of individuals with on ongoing immune process or congenital complement deficiencies.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: 8167/COM)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 2 days, test set up Monday - Saturday

Special Instructions: See [Collection](#). See [Patient Preparation](#).

Specimen

Specimen Type: Whole blood

Container: Red top tube (plain, no gel)

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

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

Collection: Routine venipuncture, immediately place specimen on wet ice and transport to lab for processing.

Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at frozen temperatures. Forward promptly.

Patient Preparation: Fasting specimens preferred.

Sample Rejection: Warm specimens, mislabeled or unlabeled specimens

Interpretive

Reference Range:

30 – 75 U/mL

Interpretation: Low levels of complement (total hemolytic complement: CH50) may occur during infections, disease exacerbation in patients with systemic lupus erythematosus, and in patients with immune complex diseases such as glomerulonephritis.

Undetectable levels suggest the possibility of a complement component deficiency. Individual complement component assays are useful to identify the specific deficiency.

Critical Values: N/A

Limitations: Because this is a functional assay, the results are dependant on appropriate specimen transport and storage.

Methodology: Automated Liposome Lysis Assay

References: [Mayo Clinic Laboratories](#) November 2020

Updates: 11/24/2020: Updated reference range for all ages per Mayo