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 an 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

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<tr>
<th>Reference Range</th>
<th>≥16 years: 30 – 75 U/mL</th>
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**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 Medical Laboratories](https://www.mayoclinic.org) July 2013