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**Lab Dept:** Chemistry

**Test Name:** CH50

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***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.

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***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](#).

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***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

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***Interpretive***

<b>Reference Range:</b>	≥16 years: 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 Medical Laboratories](#) July 2013