



HOMOCYSTEINE, TOTAL, SERUM
Test ID: HCYSS

USEFUL FOR: An aid for screening patient suspected of having an inherited disorder of methionine metabolism.

METHODOLOGY: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) Stable Isotope Dilution Analysis.

REFERENCE VALUES:

Adults: < or =13 mcmmol/L
 Reference values apply to fasting specimens only.

SPECIMEN REQUIREMENTS:

Container/Tube: Red top or serum gel tube

Specimen Volume: 0.4mL

Collection Instructions:

1. Fasting (12 hours, preferred but not required)
2. Immediately place specimen on wet ice.
3. Spin down and separate serum from cells within 4 hours of draw. A refrigerated centrifuge is not required if 1-hour time restraint is met.
4. Alternatively, if blood is not immediately placed on ice, serum must be removed from cells within 1 hour of draw. A refrigerated centrifuge is not required if 1-hour time restraint is met.

Minimum Volume: 0.15mL

SPECIMEN STABILITY INFORMATION:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	

CPT CODE: 83090

DAY(S) SET UP: Monday-Friday; 2pm

ANALYTIC TIME: 2 days

Cautions: A fasting specimen is recommended; however, nonfasting homocysteine concentrations produce slightly higher, but likely clinically insignificant changes.

Other factors that may influence and increase serum homocysteine include:

- Age
- Smoking
- Poor diet/cofactor deficiencies
- Chronic kidney disease/renal disease
- Hypothyroidism

Medications that may increase homocysteine concentrations include:

Medication	Effect
Methotrexate	5-Methyltetrahydrofolate depletion
Azuridine	Vitamin B6 antagonist
Nitrous Oxide	Inactivation of methionine synthase
Carbamazepine	Interference with folate metabolism
Oral Contraceptives	Estrogen-induced vitamin B6 deficiency

QUESTIONS: Contact your Mayo Medical Laboratories' Regional Manager or
Dawn Keller, MML Laboratory Technologist Resource Coordinator
Telephone: 800-533-1710