
Lab Dept: Urine/Stool

Test Name: MYOGLOBIN, URINE

General Information

Lab Order Codes: MYOU

Synonyms: Random urine myoglobin

CPT Codes: 83874 - Myoglobin

Test Includes: Myoglobin, urine level reported in mcg/L.

Logistics

Test Indications: Confirming the presence of a myopathy associated with hereditary myoglobinuria, phosphorylase deficiency, sporadic myoglobinuria, exertional myoglobinuria in untrained individuals, Crush syndrome, myocardial infarction, myoglobinuria of progressive muscle disease, and heat injury. May suggest a myopathic cause for acute renal failure.

Lab Testing Sections: Urine/Stool - Sendouts

Referred to: Mayo Clinic Laboratories (MML Test: MYGLU)

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 – Friday

Special Instructions: Do not use a preservative for this collection as myoglobin deteriorates by 25% a day in preserved samples.

Specimen

Specimen Type: Urine, random collection

Collection Container: Plastic leakproof container (No preservatives)

Draw Volume: Entire random urine collection

Processed Volume: 4 mL (Minimum: 1 mL) urine aliquot

Collection: A random urine sample may be obtained by voiding into a urine cup and is often performed at the laboratory. Bring the refrigerated container to the lab. Make sure all specimens submitted to the laboratory are properly labeled with the patient's name, medical record number and date of birth.

Special Processing: Lab Staff: Mix specimen well. Remove 5 mL (Minimum: 1 mL) aliquot from urine specimen. Put aliquot in Special Mayo Myoglobin Transport Tube (Supply T691)*.

If specimen is at ambient temperature, aliquot the urine within 1 hour of collection. Refrigerate specimen.

If specimen is refrigerated, aliquot the urine within 2 hours of collection. Refrigerate specimen.

Store and ship at refrigerated temperatures. Forward promptly

Specimen is stable for 7 days if refrigerated and in myoglobin transport tube.

***Specimen must be submitted in Supply T691 or will be rejected.**

Patient Preparation: None

Sample Rejection: Urine not submitted in special transport tube; mislabeled or unlabeled specimens

Interpretive

Reference Range: 0 to 24 mcg/L

Critical Values: N/A

Limitations: An elevated level of myoglobin in urine does not identify the clinical disorder.

Urine collected with acid as a preservative will not be valid because acid interferes with antibody binding. Urinary myoglobin does not withstand freezing even when pH is raised with sodium carbonate.

Urinary myoglobin is highly unstable unless alkalinized with sodium carbonate preservative. Even with alkalinization, myoglobin deterioration is variable and specimen dependent (approximate averages of 10% at 1 day, 20% at 3 days, and 30% at 7 days).

Methodology: Electrochemiluminescent Immunoassay (ECLIA)

References: [Mayo Clinic Laboratories](#) May 2024

Updates:

7/13/2010: Units update from ug/mL to mcg/mL. Reference range update.

7/24/2013: Method update, units previously listed as mcg/mL, reference range update.

5/2/2024: Updated aliquot volume, test indications, methodology, and reference range. Added specimen stability.