

## Overview

### Useful For

Detecting hemosiderinuria, secondary to excess hemolysis, as in incompatible blood transfusions, severe acute hemolytic anemia, or hemochromatosis for external patients.

### Method Name

Rous Method

### NY State Available

Yes

## Specimen

### Specimen Type

Urine

### Specimen Required

**Container/Tube:** Plastic urine container

**Specimen Volume:** 13 mL

#### Collection Instructions:

1. Collect a random urine specimen.
2. No preservative.

### Specimen Minimum Volume

12 mL

### Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

### Specimen Stability Information

| Specimen Type | Temperature              | Time    | Special Container |
|---------------|--------------------------|---------|-------------------|
| Urine         | Refrigerated (preferred) | 7 days  |                   |
|               | Ambient                  | 2 hours |                   |
|               | Frozen                   | 7 days  |                   |

## Clinical & Interpretive

**Clinical Information**

When the plasma hemoglobin level is 50 to 200 mg/dL after hemolysis, the capacity of haptoglobin to bind hemoglobin is exceeded, and hemoglobin readily passes through the glomeruli of the kidney. Part of the hemoglobin is absorbed by the proximal tubular cells where the hemoglobin iron is converted to hemosiderin. When these tubular cells are later shed into the urine, hemosiderinuria results. If the hemoglobin cannot be absorbed into the tubular cells, hemoglobinuria results.

Hemosiderin is found as yellow-brown granules that are free or in epithelial cells and occasionally in casts in an acidic or neutral urine.

**Reference Values**

Negative

**Interpretation**

A positive hemosiderin indicates excess red cell destruction.

**Cautions**

[No significant cautionary statements](#)

**Clinical Reference**

1. Brunzel N. Chemical examination of urine. *Fundamentals of Urine and Body Fluid Analysis*. 4th ed. Saunders; 2018:98-99
2. Henry JB. *Clinical Diagnosis and Management by Laboratory Methods*. 18th ed. WB Saunders Company; 1991:412-413
3. Cappellini MD, Lo SF, Swinkles DW. Hemoglobin, iron, bilirubin. In: Rifai N, Horvath AR, Wittwer CT, eds. *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics*. 6th ed. Elsevier; 2018:747

**Performance****Method Description**

The Prussian blue reaction is used to demonstrate hemosiderin as first described by Rous in 1918.(Brunzel N. *Microscopic examination of urine sediment. Fundamentals of Urine and Body Fluid Analysis*. 4th ed. Saunders; 2018:392)

**PDF Report**

No

**Day(s) Performed**

Monday, Wednesday, Friday

**Report Available**

1 to 3 days

**Specimen Retention Time**

2 days

**Performing Laboratory Location**

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Mayo Clinic Laboratories - Rochester Main Campus

## Fees & Codes

### Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

### Test Classification

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

### CPT Code Information

83070

### LOINC® Information

| Test ID   | Test Order Name        | Order LOINC® Value  |
|-----------|------------------------|---------------------|
| UHSD2     | Hemosiderin, Random, U | 4644-1              |
| Result ID | Test Result Name       | Result LOINC® Value |
| HSDU2     | Hemosiderin, Random, U | 4644-1              |