

Overview

Useful For

Assessment and management of patients with kidney stones, particularly uric acid stones

Special Instructions

- [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#)

Method Name

Uricase

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

X-ray dyes and contrast media will affect test results.

-If a kidney X-ray with dye or computerized tomography (CT) scan with contrast has been performed, patient should wait a minimum of 1 day before starting collection.

-If a cholangiography (bile duct X-ray) has performed, patient should wait 7 days before starting collection.

-Urine must be collected before tablets have been taken for gallbladder X-ray, otherwise patient should wait 7 days before starting collection.

Necessary Information

24-Hour volume (in milliliters) is required.

Specimen Required

Supplies: Sarstedt 5 mL Aliquot Tube (T914)

Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert

Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert

Specimen Volume: 5 mL

Collection Instructions:

1. Collect urine for 24 hours.
2. Refrigerate specimen within 4 hours of completion of 24-hour collection.

Additional Information: See [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#) for multiple collections.

Forms

If not ordering electronically, complete, print, and send a [Renal Diagnostics Test Request](#) (T830) with the specimen.

Urine Preservative Collection Options

Note: The addition of preservative or application of temperature controls **must occur within 4 hours of completion** of the collection.

| | |
|----------------------|-----------|
| Ambient | No |
| Refrigerate | OK |
| Frozen | OK |
| 50% Acetic Acid | No |
| Boric Acid | Preferred |
| Diazolidinyl Urea | OK |
| 6M Hydrochloric Acid | No |
| 6M Nitric Acid | No |
| Sodium Carbonate | OK |
| Thymol | OK |
| Toluene | No |

Specimen Minimum Volume

1 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) | 14 days | |
| | Ambient | 7 days | |
| | Frozen | 30 days | |

Clinical & Interpretive

Clinical Information

Uric acid is the end-product of purine metabolism. It is freely filtered by the glomeruli and most is reabsorbed by the tubules. There is also active tubular secretion.

Increased levels of uric acid in the urine usually accompany increased plasma uric acid levels unless there is a decreased excretion of uric acid by the kidneys. Urine uric acid levels reflect the amount of dietary purines and endogenous nucleic acid breakdown.

Reference Values

Males > or =18 years old: 200-1,000 mg/24 hours

Females > or =18 years old: 250-750 mg/24 hours

Reference values have not been established for patients who are less than 18 years of age.

The reference value is for a 24-hour collection.

Interpretation

Urinary uric acid excretion is elevated in a significant proportion of patients with uric acid stones.

Uric acid excretion can be either decreased or increased in response to a variety of pharmacologic agents.

Urine uric acid levels are elevated in states of uric acid overproduction such as in leukemia and polycythemia and after intake of food rich in nucleoproteins.

Cautions

High levels of bilirubin and ascorbic acid may interfere with measurement.

Clinical Reference

1. Lamb EJ, Jones GRD: Kidney function tests. Rifai N, Horvath AR, Wittwer CT, eds: Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018:500-503
2. Newman DJ, Price CP: Renal function and nitrogen metabolites. In: Tietz NW, ed. Textbook of Clinical Chemistry. WB Saunders Company; 1999:1245-1250

Performance**Method Description**

Uric acid is oxidized by the specific enzyme uricase to form allantoin and peroxide. Peroxide reacts in the presence of peroxidase and a color reagent to form a red color, the intensity of which is proportional to the uric acid concentration.(Package insert: Roche Uric Acid Plus. Roche Diagnostics; V13.0 05/2019)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

Same day/1 to 3 days

Specimen Retention Time

7 days

Performing Laboratory Location

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

84560

LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---------|---------------------|--------------------|
| URCU | Uric Acid, 24 HR, U | 3087-4 |

| Result ID | Test Result Name | Result LOINC® Value |
|-----------|-------------------------|---------------------|
| UACID | Uric Acid, 24 HR, U | 3087-4 |
| TM29 | Collection Duration | 13362-9 |
| VL27 | Urine Volume | 3167-4 |
| UACN1 | Uric Acid Concentration | 21587-1 |