

Overview

Useful For

Assessment of protein intake and/or nitrogen balance

Special Instructions

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

Method Name

KineticUVAssay

NY State Available

Yes

Specimen

Specimen Type

Urine

Necessary Information

24-Hour volume is required.

Specimen Required

Container/Tube: Plastic, 5-mL tube (T465)

Specimen Volume: 4 mL

Collection Instructions:

1. Add 10 g of boric acid as preservative at start of collection. (If boric acid is not available, refrigerate specimen during collection.)
2. Collect urine for 24 hours.
3. Mix well before taking aliquot.

Additional Information: See [Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens](#) in Special Instructions 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 | OK |
| Boric Acid | Preferred |
| Diazolidinyl Urea | OK |
| 6M Hydrochloric Acid | OK |
| 6M Nitric Acid | OK |
| 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 | |
| | Frozen | 14 days | |

Clinical and Interpretive

Clinical Information

Urea is a low molecular weight substance (Mol. Wt.=60) that is freely filtered by glomeruli and the majority is excreted into the urine, although variable amounts are reabsorbed along the nephron. It is the major end product of protein metabolism in humans and other mammals. Approximately 50% of urinary solute excretion and 90% to 95% of total nitrogen excretion is composed of urea under normal conditions. Factors which tend to increase urea excretion include increases in glomerular filtration rate, increased dietary protein intake, protein catabolic conditions, and water diuretic states. Factors which reduce urea excretion include low protein intake and conditions which result in low urine output (eg, dehydration).

Reference Values

10-35 g/24 hours

Interpretation

Because multiple factors (glomerular filtration rate, dietary protein intake, protein catabolic rate, hydration state, etc.) can independently affect the urinary excretion of urea, all of these factors must be taken into account when interpreting the results.

Cautions

No significant cautionary statements

Clinical Reference

Bankir L, Trinh-Trang-Tan MM: Urea and the kidney. In The Kidney. Sixth edition. Edited by BM Brenner. Philadelphia, WB Saunders Company, 2000

Performance

Method Description

Urea is hydrolyzed by urease to form ammonia and CO₂. The ammonia formed then reacts with ketoglutarate and NADH in the presence of GLDH to yield glutamate and NAD⁺. The decrease in absorbance is due to consumption of NADH and is measured kinetically at 340 nm. (Package insert: Roche Urea; BUN Package insert: Roche Diagnostic Corp, Indianapolis IN)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Sunday; Continuously

Analytic Time

Same day/1 day

Maximum Laboratory Time

1 day

Specimen Retention Time

7 days

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared or approved by the U.S. 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

84540

LOINC® Information



| Test ID | Test Order Name | Order LOINC Value |
|---------|-----------------|-------------------|
| URAU | Urea, U | 48999-7 |

| Result ID | Test Result Name | Result LOINC Value |
|-----------|---------------------|--------------------|
| UREA | Urea, U | 48999-7 |
| TM33 | Collection Duration | 13362-9 |
| VL31 | Urine Volume | 3167-4 |
| URECN | Urea Concentration | 63481-6 |