Overview

Useful For
Assessment of patients with metabolic acidosis
Assessment of crystalluria
Monitoring the effectiveness of alkalinization or acidification of urine for certain medical conditions (e.g., treatment of uric acid nephrolithiasis)

Special Instructions
- Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens

Method Name
pHMeter

NY State Available
Yes

Specimen

Specimen Type
Urine

Necessary Information
24-Hour volume is required.

Specimen Required

Supplies: Diazolidinyl Urea (Germall) 5.0 mL (T822)

Container/Tube: Plastic, 10-mL urine tube (T068) or a clean, plastic aliquot container

Specimen Volume: 10 mL

Collection Instructions:

1. Collect urine for 24 hours.
2. Add 5 mL of diazolidinyl urea as preservative at start of collection or refrigerate specimen during and after collection.
3. Refrigerate specimen within 4 hours of completion of 24-hour collection.

Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Urine Preservative Collection Options
Note: The addition of preservative or application of temperature controls must occur within 4 hours of completion of the collection.

<table>
<thead>
<tr>
<th></th>
<th>Ambient</th>
<th>Refrigerate</th>
<th>Frozen</th>
<th>50% Acetic Acid</th>
<th>Boric Acid</th>
<th>Diazolidinyl Urea</th>
<th>6M Hydrochloric Acid</th>
<th>6M Nitric Acid</th>
<th>Sodium Carbonate</th>
<th>Thymol</th>
<th>Toluene</th>
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<tbody>
<tr>
<td></td>
<td>No</td>
<td>OK</td>
<td>OK</td>
<td>No</td>
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</table>

Specimen Minimum Volume

1 mL

Reject Due To

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

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
<td>Urine</td>
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<td>7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>7 days</td>
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Clinical and Interpretive

Clinical Information

Urine pH is a measure of the acidity/alkalinity of urine and by itself usually provides little useful information. Under normal conditions its value is influenced by the type of diet. Some diets (eg, diets rich in meat) have more acid content than others (eg, vegetarian diets).

Changes in urine pH may reflect systemic acid-base disorders. For example, the normal response during metabolic acidosis is a lowering of the urine pH to <5. If the pH is >5, then a defect in urine acidification should be considered. A urine pH >7 is suggestive of infection by a urea-splitting organism such as *Proteus mirabilis*.

Therapeutic interventions to either alkalinize or acidify the urine are necessary for some diseases. For example, some crystals have a propensity to form in alkaline urine, while others form in relative acidic urine, and changing the pH may reduce stone formation.
Reference Values
4.5-8.0

Interpretation
Dependent on clinical condition

A pH >7 suggests the presence of urinary tract infection with a urea-splitting organism.

Cautions
No significant cautionary statements

Performance

Method Description
pH Meter

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Saturday; 6:30 a.m.-5 p.m.

Analytic Time
2 days

Maximum Laboratory Time
3 days

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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
83986

LOINC® Information
### Test Definition: UPH24
**pH, Urine 24 Hour**

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<th>Order LOINC Value</th>
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<td>pH, Urine 24 Hour</td>
<td>27378-9</td>
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<th>Result LOINC Value</th>
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