

## Routine 24-Hour Urine Collection

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For many urine chemistry tests, it is necessary to analyze a sample taken from an entire 24-hour excretion. Incorrect collection and preservation of a 24-hour urine collection are two of the most frequent errors in laboratory medicine.

The 24-hour urine specimen should be submitted in a wide-mouth, chemically clean, properly labeled urine container. (Patients should not be allowed to submit urine specimens in their own “clean” jars.) The laboratory will add required preservatives.

Written instructions explain the following points:

1. The collection of the 24-hour urine starts with the patient voiding (completely emptying bladder) and discarding the first urine passed in the morning.
2. Except for this first discarded urine, all of the urine passed during that day and night, up to and including the first voiding of the following day, should be collected.
3. If possible, the entire specimen should be refrigerated at 4°C to 8°C during collection, or kept in a cool place, since urine is an excellent culture medium for organisms, and its constituents decompose quickly.

Inform the patient of the following recommended collection requirements:

1. A normal intake of fluids during the collection period is desirable unless otherwise indicated by the physician or test specimen requirements.
2. In some cases, it may be advisable for patients to discontinue taking all medications for an interval of at least 24 hours (preferable 48-72 hours) preceding the urine collection period. This is done as a precaution against interference in the chemical assays of various hormones; there may be instances, however, in which this is not recommended. Check with the physician before any medication is discontinued.
3. In certain complex chemical analyses, the metabolic products of certain foods may also cause misleading results. In these instances, the laboratory will advise the physician of specimen dietary restrictions to be communicated to the patient.

**In preparing and submitting the specimen, always adhere to the following critical points:** If only a portion of the 24-hour collection is submitted to the laboratory:

1. Measure the entire 24-hour volume and record the following information on the patient label or test requisition (this is required for laboratory use):
  1. Total amount in milliliters (mL)
  2. Collection start date and time
  3. Collection stop date and time
2. Mix the specimen well and send 100 mL to laboratory for testing.

## Timed Urine Collection Preservatives (see individual test listings for more instructions)

Tests that require **no** preservative but **require refrigeration** during collection:

<ul style="list-style-type: none"><li>• Aldosterone</li><li>• Amino acids</li><li>• Amylase</li><li>• B-2 Microglobulin</li><li>• Calcium</li><li>• Calculus analysis</li><li>• Chloride</li><li>• Citrate</li><li>• Copper</li><li>• Cortisol</li><li>• Cotinine</li><li>• Creatinine</li><li>• Creatinine clearance</li><li>• Cystine</li><li>• Deoxypyridinoline crosslink</li><li>• d-Xylose</li><li>• Histamine</li><li>• Histoplasmosis</li><li>• Homocystine</li><li>• Hydroxyproline, free</li><li>• Hydroxyproline, total</li><li>• Hydroxyproline, total &amp; free</li></ul>	<ul style="list-style-type: none"><li>• Iron</li><li>• Long chain fatty acid</li><li>• Magnesium</li><li>• Methylmalonic acid</li><li>• Microalbumin</li><li>• Nitrogen</li><li>• N-telopeptide cross links</li><li>• Osmolality</li><li>• Organic acids</li><li>• Oxalate</li><li>• Phosphorus</li><li>• Potassium</li><li>• Protein</li><li>• Prostaglandin</li><li>• Sodium</li><li>• Sulfate</li><li>• Urea nitrogen</li><li>• Uric acid</li><li>• Urobilinogen</li></ul>
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For tests not listed, refer to the specific test in the Test List. For additional information, call Pathology Client Services @ 828-7284.