

**The University of Chicago Medical Center Laboratories**  
**Urine and Stool Specimen Collection Procedure**

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## **24-HOUR URINE COLLECTION**

The preferred time of collection is from 6 am to 6 am the following morning. However, any twenty-four period is acceptable, as long as the opening and closing times are indicated on the specimen container.

Only *one* first morning void must be included.

*Note:* While timed urine collections encompassing a 24-hour period are preferable, collections of shorter duration may be accepted in certain cases (e.g. pediatric patients)

24-hour urine specimens must be collected in a plastic, brown, graduated, urine container. These containers can be obtained from the inpatient/outpatient unit or outpatient pharmacy.

It is preferable that the collection be refrigerated and delivered promptly.

The start date/time and end date/time must be indicated.

The container must be labeled with the patient name and unique identification such as the medical history number.

### **Patient Instruction**

1. Void and discard urine for starting time.
2. Begin saving all urine from this time in container for 24 hours.
3. Refrigerate container during collection.
4. Void at the end of the twenty-four period and add to bottle.
5. Report any loss of urine. Aliquots of specimen must not be removed for other purposes such as other testing or research testing. The Laboratory Service Center must receive the entire twenty-four hour sample.

### **Preservative**

Specimen requirements for 24-hour collection with *ACID PRESERVATIVE*: 25 ml, 50 % acetic acid must be added at the start of collection. The acid preservative bottle can be obtained from out-patient pharmacy. The following are examples of tests that require acid preservative:

- Catecholamines
- Metanephrines
- VMA
- 5HIAA
- HVA
- DALA/ALA

### **No Preservative**

Specimen Requirements for 24-hour collection with *NO PRESERVATIVE*: 24-hour urine is collected in a brown bottle with no preservative. These containers can be obtained from the clinic or out-patient pharmacy. The following are examples of tests that can be performed on a 24-hour collection with no preservative:

- Citrate
- Oxalate
- Heavy Metal Screen
- Copper

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- Mercury
  - Porphyrin Screen/Fractionation (Protect from light, use brown bottle or wrap in foil)
  - Porphobilinogen Qualitative/Quantitative (Protect from light, use brown bottle or wrap in foil)
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### **RANDOM URINE COLLECTION**

Specimen Requirements: A random clean-catch urine specimen should be collected in a blue-capped, BD Vacutainer Urine Collection Cup. The container must be labeled with the patient name and unique identification such as the medical history number. The instructions for clean-catch, midstream urine collection are given to the patient.

For additional instructions regarding collection of urine for Microbiology culture, please refer to the “Microbiology Specimen Collection Tables” document in this catalog.

#### **Patient Instruction**

Please see “Patient Instruction Random Urine”

#### **Specimen Handling Instruction**

After collection, the sealed blue-capped container is returned to the healthcare worker. Urine will be transferred to both a gray top and yellow top tube.

If there are orders for a urine culture, the healthcare worker will:

1. Transfer the specimen from the urine cup into a gray-top tube containing boric acid by removing the seal from the blue cap, and inserting the gray-top tube through the blue cap and onto the needle.
2. Once the fill-line has been reached, the tube is removed and mixed immediately by gently inverting it 8 to 10 times (holding the tube upright, gently invert it 180° and back (=1 inversion).

If there are orders for urinalysis, the healthcare worker will:

1. Transfer the specimen from the urine cup into a yellow-top tube is then inserted onto the needle.

If there are additional orders for other urine tests, the blue cap is carefully removed from the cup and the urine is poured into a wide-mouth, tightly-sealable, screw-cap container.

All specimen tubes and containers must be labeled with the patient name and unique identification such as the medical history number. The healthcare worker must NOT send the blue-capped urine container through the pneumatic tube system or via courier

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### **TIMED STOOL COLLECTION**

Timed fecal specimens must be collected in Mayo stool containers (these are available in the Lab Service Center (2-1316) in TW005). Containers must be obtained before collection is started. The start date/time and end date/time must be indicated on a timed collection. The container must be labeled with the patient name and unique identification such as the medical history number.

The following is an example of a test requiring a timed collection:

- Quantitative Fecal Fat

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**RANDOM STOOL COLLECTION**

Random fecal specimens must be collected in Mayo stool containers (these are available in the Lab Service Center (2-1316) in TW005). Containers must be obtained before collection is started. The container must be labeled with the patient name and unique identification such as the medical history number.

The following are examples of tests that can be performed on collections:

- Alpha 1 Anti trypsin
- Qualitative Fecal Fat