

Blanchard Valley Health System Laboratory Services

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General Urine Specimen Collection Procedure (LTR27570)

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Urine Specimen Collection Procedure

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PRINCIPLE:

Urine is one type of specimen that can be easily collected from a patient. Urinalysis testing can give the doctor valuable information about many body systems especially kidney function. The physician uses the information from urine testing to diagnose and treat many disease states.

Types of urine specimens:

1. **Random sample:** Sample which is collected anytime during the day. Usually used only for routine screening because the composition of urine changes throughout the day.
2. **First voided specimen:** Sample also referred to as a first morning specimen. This sample is collected the first time the patient urinates in the morning. A first voided specimen is the most concentrated and is the preferred specimen for pregnancy testing, bacterial cultures and microscopic examinations.
3. **Timed specimens:** These specimens are used when the physician requires urine samples to be taken at specific intervals during the day. Twenty-four (24) hour urine specimens are required for creatinine clearance tests and many other hormone studies.
4. **Clean-catch midstream specimen:** This sample type is collected if the urine is going to be cultured and examined for bacterial growth or used for cytology.
5. **“Dirty collection:”** This specimen will be used for DNA testing and the FIRST part of the voided stream is collected.
6. **Catheterized specimen:** These specimens are obtained by inserting a catheter or sterile flexible tube into the bladder via the urethra to withdraw urine. This procedure is done only by specially trained personnel

PROCEDURE

Specimen collection:

1. **Routine or random sample:** The patient is given a non-sterile collection container and instructed to collect a midstream specimen in the container. This type of specimen is routinely used for urinalysis and may not be used for a culture and sensitivity.
2. **First voided specimen:** The patient is given a urine container to take home and instructed to collect a sample of the urine the first time he or she urinates in the morning. Because urine is not stable, the specimen should be returned to the laboratory within one (1) hour of collection. If that is not possible, the specimen should be refrigerated until it can be tested.
3. **Timed specimen:** Timed specimens are usually a 24 hour urine collection.

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- A. The patient is given a large container (approximately 1 gallon) that is labeled with the patient's name and date. Space is provided to write the time the collection begins and ends.
 - B. Before issuing the 24 hour urine container the type of testing ordered is checked for **preservative requirements**. This information can be found in the BVH Laboratory specimen collection manual and any required preservatives addition is done by a tech. Cautionary labels are also often applied to caution patients that the added preservative may be caustic. 24 hour urine specimens are also usually required to be refrigerated during the collection period. This information should be recorded on the label applied to the 24 hour container.
 - C. The test usually begins in the morning. The patient is told to empty their bladder and **discard** the urine in the toilet and record the time on the label of the urine container. For the next 24 hours, all urine must be collected in the container. The next day at the same time the test began the patient empties their bladder, collects the urine in the container, and records the time the test ended. The patient should be instructed to avoid fecal contamination of the specimen.
 - D. The 24 hour urine specimen is brought to the laboratory as soon as possible as the 24-hour period is over.
4. **Clean-catch mid-stream specimen:** Patients with orders for a urine culture and sensitivity are given the proper mid-stream urine collection kit and the appropriate instruction sheet.
- A. Give the patient a sterile urine collection kit. The kits are located in the out-patient lab.
 - B. Explain to the patient that an instruction sheet is included in the kit. There are two sets of instructions. There are different instructions for males and females. Verify that the patient understands the instructions.
 - C. *Male urine culture collection instructions:* These are general instructions. BVH periodically changes the company which provides the mid-stream collection kits. Each manufacturer provides very specific instructions to correlate with their specific type of container. These instructions may vary slightly with different manufacturers. The current use kit instructions are the instructions provided to the patient.
 - 1. Wash hands thoroughly with soap and water, rinse and dry.
 - 2. Open the collection package but **DO NOT TOUCH INSIDE OF CUP OR RIM**. Open the package of 3 towelettes. Retract foreskin if present. With the first towelette, cleanse the urinary opening of the penis starting at the center and work outward. Repeat the cleansing in the same manner with the two remaining towelettes.
 - 3. Remove lid carefully from the collection container, **DO NOT TOUCH** the inside of the container or rim. Gently grasp the container.
 - 4. Begin to void urine, **letting the first 20-25 ml pass into the toilet**. Position the cup in the stream of urine until the container is about half to two-thirds full. Finish voiding into the toilet.

5. After obtaining the urine specimen, screw the lid on tightly again being careful to avoid touching inside the container or lid.
6. Bring the specimen to the lab within 1 hour of collection or store refrigerated for up to 24 hours.

D. Female urine culture collection instructions: These are general instructions. BVH periodically changes the company which provides the mid-stream collection kits. Each manufacturer provides very specific instructions to correlate with their specific type of container. These instructions may vary slightly with different manufacturers. The instructions included in the kit currently in use are the instructions provided to the patient.

1. Wash hands thoroughly with soap and water, rinse and dry.
2. Open the collection package but **DO NOT TOUCH INSIDE OF CUP OR RIM**. Open the package of 3 towelettes. While seated on the toilet spread labia major (outer folds). With the first towelette, wipe one side of the labia minora (inner fold) using a single downward stroke. Discard towelette. With the second towelette repeat the procedure on opposite side using a single downward stroke. Discard towelette. With the third towelette, cleanse meatus (center area) with a single downward stroke. Discard towelette.
3. Remove lid carefully from the collection container, **DO NOT TOUCH** the inside of the container or rim. Gently grasp the container.
4. Begin to void urine, letting the first 20-25 ml pass into the toilet. Position the cup in the stream of urine until the container is about one-half to two-thirds full. Finish voiding into the toilet.
5. After obtaining the urine specimen, screw the lid on tightly again being careful to avoid touching inside the container or lid.
6. Bring the specimen to the lab within 1 hour of collection or store refrigerated for up to 24 hours.

5. “Dirty” specimen: The patient is given a sterile urine cup and told to clean as stated above for a clean-catch specimen. They are then instructed to collect the **FIRST** part of the voided stream. Fill the container one half to two thirds full and finish voiding into the toilet. Apply the cap tightly and label the cup.
6. Catheterized specimen: These specimens are collected by specially trained personnel only.

All urine specimens should be promptly returned to the laboratory. Specimens must be labeled with the patient’s **name, DOB, date, time of collection and ordering physician**.

Instruction sheets have been developed to be given to patients for common urine collections testing. These forms can be found in SoftTech as well as in the collection manual.

References:

Fremgen, Bonnie F., Phlebotomy Basics with other Laboratory Techniques., 2001