Standard Operating Procedure

Eastern Health Laboratory Medicine	**Section:** Management System\Eastern Health\Biochemistry\Collection Manual\		
	Title: Urine Collection Preservation		**Number:** 7013
			Version: 3.0
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Effective Date: 2021-09-07			**Status:** Current

Purpose or Principle

This procedure provides instructions for the Collection of Urine Samples with the BD Vacutainer Collection System. This system provides stability for urine specimens submitted for Routine, Culture and Sensitivity and other urine test as required. Tube formulation ensures specimen quality as validated for Eastern Health for up to 48 hours based on room temperature. The urine specimen will be transferred to preservative tubes to maintain specimen integrity following patient collection ideally immediately but not longer than 30 minutes.

Materials

Reagents

Not Applicable

Supplies

- Sterile Screw Cap Collection Cup(120ml) with Transfer Device
- Castile Soap Towelettes
- Biohazard Bags
- 8ml, 16X100mm Ethyl Paraben, Sodium Propionate and Chlorhexidine Preservative (Yellow/Cherry Red Speckled Top)
- 4ml, 13X 75mm Buffered Boric Acid Formula C&S Preservative Tube (Gray Top)
- 10ml, No Additive Tube (Yellow Top Conical Tube)
- Sterile Urine Collection Cup (Pink Lid)
- 5ml, Simport, round bottom tubes 12.5x92mm
- Screw cap (blue) for graduated tubes (Simport)
- 4.3ml Urine Cobas PCR Media

Equipment

Not Applicable

Sample

- The urine sample provided must be a Midstream, as per patient collection instructions.

Special safety precautions

- Standard Precautions

Quality Control

Not Applicable

Procedure:

Follow the activities below for collection of urine samples with the BD Vacutainer System.

Urine Collection

1. Ensure that the patient has been identified using two unique identifiers.

2. Label the collection cup with a satellite computer generated label (small non barcoded label).

3. Place remaining labels in a designated area as per site requirements.

4. Place collection cup into biohazard bag

5. Provide clear concise instruction for a midstream urine as per the patient collection instructions (see Appendix A).

6. Instruct the patient to follow wall poster placed in washrooms.

7. Caution the patient not to remove the protective sticker due to the potential hazard of a finger prick from the sharp located under the sticker.

8. Specify to the patient the collection volume. As a guideline 50mls is recommended but will vary depending on testing required (See Note below, Option is to indicate the volume required on the specimen container with a marker to ensure patient understands).
   - C&S Tube 3-5mls (Grey Stopper Tube)
   - Urinalysis Tube 7-8mls (Cherry Red and Yellow Stopper)
   - Non-Preservative Tube as much as possible (Clear Top Tube 6ml or Yellow Stopper Conical Tube 8ml whichever is available)
   - Urine drug screens must be poured off into 5ml round bottom tubes.
   - Urine for Chlamydia must be poured off to the fill line into the 4.3ml Cobas Tubes.

9. Instruct the patient to lay collection cup lid upside down to ensure the straw does not touch anything, preventing contamination.

10. Provide the patient with the biohazard bag prepared in step 4. Direct them to the washroom for urine collection and ask them to return the specimen to the designated drop off area.

Upon receipt of the specimen,

1. If the specimen is acceptable continue with instructions for **Transferring Urine to Vacutainer**. If the specimen is not acceptable, lab staff must request that the patient provide a fresh sample. All acceptable specimens must be kept cool and ideally transferred immediately, but no longer than 30 minutes to maintain specimen integrity.

2. If the patient is **unable** to obtain sufficient specimen ask the patient to return at a later date. Photocopy requisition. Circle/highlight the test not completed. Note on the requisition, patient returning for urine test only (upon return patient will not have to wait). Cancel specimen immediately with the comment, "Patient asked to return at a later date, unable to collect urine sample at this time. In extenuating circumstances if the patient is unable to provide a urine, refer to the instructions under **Special Considerations**.

Transferring Urine to Vacutainer Tubes

1. Peel back protective sticker.

2. If C&S is requested, push Grey Stopper tube into transfer port. Fill to minimum volume of 3ml, and shake vigorously.

3. If UA is requested, push red and yellow tiger top tube into the transfer port. Fill to minimum volume of 7ml and invert 8-10 times.

4. If any other tests are ordered with the exception of Urine Drug Screen or Urine for Chlamydia, push the clear top or yellow top tube whichever is provided into the transfer port and fill to capacity if possible.

5. If Urine Drug Screen is requested, remove the cap from the collection cup and pour off into the plastic (simport) round bottom tube sealing it with a blue screw cap.

6. If urine for Chlamydia is requested, remove the cap from the collection cup and pour urine off to the fill line in the Cobas tube.

7. Label tubes with patient information and/or barcoded label, date, time of collection

and Health Care Provider mnemonics.

8. Place protective sticker back over transfer port. Dispose of the collection cup lid in a designated sharps container.

9. Dispose of the remaining urine in a designated sink.

10. Dispose of the cup ensuring patient information has been removed (lab Staff should refer to the Lab Safety Manual).

11. Receive specimens in Meditech, ensuring correct time of collection is entered.

12. Prepare labelled tubes to be transported to the appropriate testing area.

13. If a urine is collected in a non-preservative tube (yellow or clear top) for urinalysis, microscopic, or culture; it must be submitted to lab without delay to ensure it is accepted for testing and not rejected. To ensure accurate results, the laboratory cannot accept non-preserved samples beyond the stability limit window.

Special Considerations

Note:

- This section applies to extenuating circumstances, particularly for the “At Risk Patient Population”.
- A properly collected and handled specimen is critical to quality testing. On-site collection is preferable but not always possible.
- Follow the instruction below when a patient falls into one of the at risk categories.

Collection for Infant, Dialysis, Elderly and or Disabled Patients

1. Provide a copy of the instructions for a Mid-Stream Urine Sample along with a pink top sterile container to the parent or guardian.

2. Ensure the parent or guardian understands the importance of recording the name, Healthcare number, date and time the specimen was collected on the container

3. Return urine specimen to a Health Care Facility immediately.

4. Follow the instructions provided for Low Specimen Volume if necessary

Paraplegic or Patients with a Foley Catheter

NOTE:

- In/Out catheter is the preferred method of collection as sample integrity may be

compromised with the use of catheter bag.

1. Provide a copy of Urine Collection Steps from a Foley catheter along with a pink cap sterile container to the patient or Health Care Provider.

2. Ensure the patient or Health Care Provider understands the importance of recording the name, Healthcare number, date and time the specimen was collected on the container.

3. Return urine specimen to a Health Care Facility immediately.

4. Follow the instructions for Low Specimen Volume if necessary.

Low Specimen Volume

Notes:

- Low Specimen Volumes will be rejected except in extreme circumstances.
- The preparation of low specimen volume samples is especially important for clinical diagnosis and chemical analysis.
- Avoid preservative if a specimen does not meet the minimum volume requirements.
- Submit low volume urine to the Microbiology Lab for Culture and Sensitivity before being submitted to Biochemistry Lab for Routine Urinalysis (This prevents contamination of the sample which would occur if the Routine Urinalysis was performed first).
- Refer to Appendix B for Lab Flow Chart

Calculations

Not Applicable

Interpretation/Results/Alert values

Not Applicable

Reference intervals

Not Applicable

Method performance specifications/limitations

Not Applicable

Result reporting

Not Applicable

References

- BD Vacutainer-Urine Products (Product Insert), Beckton Dickinson and Company, July 2004.
- BD Vacutainer Urine Collection Products, BD Diagnostics, Franklin Lakes, NJ 07417, September 2004.

Related procedures

- Positive Patient Identification Policy (PPI)
- Eastern Health Laboratory Medicine Lab Safety Manual Orig ID 8434
- Urine Drug Screen Orig ID 4051

Documents/Forms/Records

- Patient Instruction for Collecting a Mid-Stream Urine Orig ID 11120

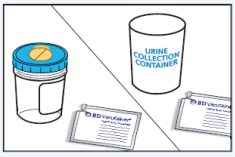
Document Change Log	
Date	**Changes**
21/March/2017	Original
29/April/2019	Document Reviewed for Accuracy
23/March/2021	Purpose updated to reflect 48 hour validation

Appendix A

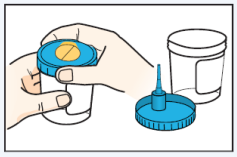
BD Helping all people live healthy lives

Midstream Clean Catch Urine Procedure

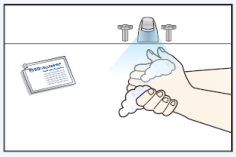
For use with the BD Vacutainer® Urine Collection Cup or other collection cup



1. Verify you have a packet of castile soap towelettes and either a BD Vacutainer Urine Collection Cup (blue cap) or a plastic/paper cup.

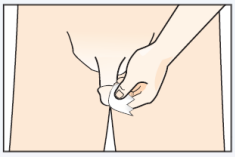


2. Be careful not to touch inside of cup. Remove the blue cap if using the BD Vacutainer Urine Collection Cup. Place cap on counter with "straw" facing upwards. Do not touch inside of cap or straw. Do not remove yellow label on top of cap.

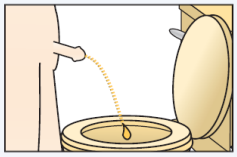


3. Open packet of castile soap towelettes and place aside. Wash hands thoroughly with soap and water.

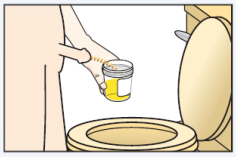
Male Instructions



4. Cleanse the end of the penis with the first castile soap towelette beginning at the urethral opening and working away from it (the foreskin of an uncircumcised male must first be retracted). Repeat using a second clean towelette.



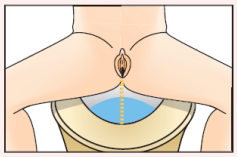
5. Void the first portion of urine into the toilet.



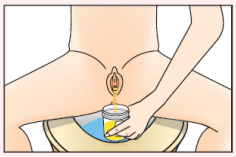
6. As you continue to void, bring the collection cup into the "midstream" to collect the urine specimen. DO NOT touch the inside or lip of the cup with the hands or any other part of the body. Void remainder of urine into the toilet.

Female Instructions

4. Stand in a squatting position over the toilet. Separate the folds of skin around the urinary opening. Cleanse the area around the opening with the first castile soap towelette. Repeat using a second clean towelette.



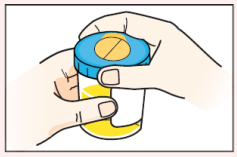
5. Void the first portion of urine into the toilet.



6. As you continue to void, bring the collection cup into the "midstream" to collect the urine specimen. DO NOT touch the inside or lip of the cup with the hands or any other part of the body. Void the remainder of urine into the toilet.

CAUTION: SHARP NEEDLE LOCATED UNDER YELLOW CAP LABEL. DO NOT REMOVE YELLOW LABEL ON TOP OF CAP.

CALL HEALTHCARE PROFESSIONAL IMMEDIATELY AND GIVE CUP TO HEALTHCARE PROFESSIONAL.



7. If using the BD Vacutainer Urine Collection Cup, close the cup with the sterile blue cap, touching ONLY the outside surfaces of the cap and cup.

BD

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Appendix B