

## *Overview*

The Elliot Hospital Laboratory offers clinical and anatomic laboratory services to medical facilities, physicians and other health care providers in New England.

Our commitment to you revolves around a team of highly qualified scientific and technical-area professionals, state-of-the art equipment, and sensitivity to client and patient needs. Elliot Hospital takes pride in our long-standing reputation for consistently producing timely and reliable diagnostic laboratory services.

A full spectrum of laboratory testing is provided 24 hours per day, and our technical staff and pathologists are available around the clock for client consultation.

## *Mission*

It is the mission of the Elliot Hospital Laboratory to provide outstanding health care while meeting the unique laboratory needs of our community. We are committed to maintaining a reputation of **trust**, **respect**, and **responsibility** through the delivery of quality patient care, excellence in performance, exceptional customer service and support for our health care providers.

## *Vision*

The laboratory will continue to maintain high quality standards of performance and accuracy of results that physicians and patients can **trust**.

The laboratory will consistently deliver services as promised and exceed expectations to earn our physician's and patient's **respect**.

The laboratory will be fiscally **responsible** by spending to save and planning to grow.

# *Staff*

## **Pathology Staff**

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Laboratory Medical Director Chief of Pathology 603-663-2583

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## **Professional Staff**

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Lead Cyto Technologist

Sue Beliveau  
Point of Care Coordinator

Sandy Bourque  
NHOH Lab Supervisor

William Burns  
Outreach Long Term Care

Alice Cashin  
Blood Bank QI/QA Supervisor

Lucia Cote  
Sales and Marketing Specialist

Sharon Davis-McKay  
Microbiology Supervisor

Peg Donovan  
Londonderry Stat Lab Supervisor

Melinda Donahue  
Outreach Long Term Care

Michelle Drolette  
Interface Support Analyst,  
Administrative Coordinator, Client Services

Barry Fish  
Administrative Director

Nicole Fitzgerald  
Phlebotomy Team Leader

Linda Guillette  
3rd Shift Lead Technologist

Kelley Hartwell  
Point of Care Coordinator

Kim Keefe  
Specimen Receiving & Phlebotomy Supervisor

Carol Lovely  
Registration & Billing Team Leader

Mary Martin  
Hematology Supervisor

Sandy Moreau  
Laboratory Control Manager

Sarteep Rashid  
2nd Shift Lead Technologist

Richard Viprino  
Histology Manager

Rebecca Young  
Specimen Processing Team Lead

Christine Wright  
Chemistry & SPA Supervisor

# ***Laboratory Services Licensing & Certification***

## **Licensing and Certifications**

AABB (Formerly American Association of Blood Banks) 1117 North 19th Street, Suite 600, Arlington, VA 22209 Arthur Silvergleid, M.D.

## **Health Care Financing Administration**

Provider Number NH8027 C & S Administrative Services, Inc. Medicare B 100 Summer Street 4th Floor Boston, MA 02110

## **College of American Pathologists**

325 Waukegan Road Northfield, IL 60093-2750 William B. Hamlin, M.D., Chairman Commission of Laboratory Accreditation

## **State of New Hampshire**

Division of Public Health Services Bureau of Health Facilities Administration 6 Hazen Drive Concord, NH 03301

## **Clinical Laboratory Improvement Act (CLIA) - 1988**

NCFA CLIA Program Department of Health and Human Services PO Box 26687 Baltimore, MD 21207-9487 Anthony J. Tirone, Director

## ***Policies—Elliot Hospital Laboratory***

- **Billing** The Elliot Hospital Laboratory is a participating provider for private insurance/health plans, Medicare and Medicaid.
- **Client Billing** -The Elliot Hospital Laboratory will bill the physician, medical group, hospital or clinic directly unless otherwise indicated by providing us patient demographics on the requisition. For client billing questions, please call 603-663-2556. Note that the Elliot Hospital Laboratory **must** bill the payor if the patient is covered by Medicare or Medicaid.
- **Patient Billing (Self-Pay)** -The Elliot Hospital Laboratory will bill patients directly upon request. The following information must be completed on the laboratory requisition: patient and responsible party's full name, complete address, phone number, patient date of birth, Social Security number, and ordering physician.
- **Third Party Billing** -The Elliot Hospital Laboratory will bill third party payors, including Medicare and Medicaid directly upon request. The following information must be completed on the laboratory requisition: patient and responsible party's full name, complete address, phone number, patient date of birth, sex, diagnosis (ICD-9-CM) in support of each test ordered. Also include insurance company name, claim address, insured's I.D., and certificate number.

If patient demographics are not provided on the requisition form the patient will be billed for the services. However, the laboratory billing department will make every attempt to contact the ordering provider to obtain any missing information that is needed to properly expedite patient's insurance claims.

### **Billing Questions:**

- Questions regarding self-pay or third party billing, please call 1-866-890-8689.
- For client billing questions, please call 603-663-2556.

### **Cancellation of Tests**

Cancellations received prior to test set-up will be honored at no charge. Requests received after testing has started cannot be honored. A report will be issued and charged accordingly.

### **Client Service**

The Elliot Hospital Laboratory Client Service Department is the day-to-day liaison for laboratory users. Call Client Service for medical test results, to inquire about adding a test on a previously submitted specimen, for assistance with routine specimen requirements, and to order laboratory supplies and requisitions. Our knowledgeable staff works closely with the clinical laboratory departments and will connect you with a medical technologist if interpretive data is needed. At your request, Client Service will call or fax results.

### **Continuing Education**

The Elliot Hospital Laboratory offers continuing education in laboratory medicine for employees and clients. Education includes in-service programs, teleconferences and written laboratory updates on new testing methodologies and the Elliot Hospital services and products.

### **Courier Service**

The Elliot Hospital Laboratory provides courteous, prompt specimen courier service. Courier service is available as an on-call or scheduled basis for retrieval of specimens and delivery of laboratory reports and supplies. STAT service is also available, though limited by range, from the laboratory so as not to compromise turn-around time.

### **Client Office Transportation**

- Verify specimen container is sealed properly (primary package).
- Place specimen(s) into an individual plastic biohazard bag and seal properly (secondary package).
- Take all individual specimens and place into a large plastic biohazard bag and seal properly.
- Place specimens in designated location for courier pick-up.
- Courier will pick-up all specimens and place in a rigid container marked with biohazard for delivery to laboratory (tertiary package).

### **Normal Ranges**

All reference ranges listed in this manual are adult normal ranges unless otherwise indicated. Age and sex specific reference ranges are printed on the patient report.

## **Professional Courtesy**

The Elliot Hospital Laboratory is honored when physicians select us to perform testing and pathological examination on specimens from themselves and members of their families. This holds true regardless of your affiliation, allegiance or business relationship with our laboratory. However, this medical community's long-standing tradition of extending professional courtesy is now unfortunately viewed by the government as potential enticement to influence provider selection for patient testing when the government pays for services. Additionally, the IRS views professional courtesy as income to the recipient and requires that the organization extending the courtesy report the value as income to the recipients of those receiving the courtesy. Due to the above restrictions the Elliot Hospital Laboratory is unable to honor provider requests for professional courtesy.

## Quality Assurance

The Elliot Hospital Laboratory is committed to the highest standards in laboratory medicine to assure the accuracy and reliability of clinical testing used in the diagnosis and treatment of disease. Our Quality Assurance (QA) Department is responsible for ensuring continuing compliance with the state and federal government regulations and with requirements for accrediting agencies.

The QA Department subscribes to external proficiency testing programs and maintains an extensive internal proficiency testing program.

Quality assurance ensures that all personnel are evaluating the effectiveness of policies and procedures; identifying and correcting problems; assuring accurate, reliable, and prompt reporting of test results; and assuring the adequacy and competency of testing personnel.

## Send-Out Laboratory Testing

The Elliot Hospital Laboratory may send highly specialized testing to another laboratory for analysis. Many of the send-out tests are identified in the A-Z test listing in this directory. If a test is NOT listed, consult with the Client Service Department for detailed information.

## Specimen Handling

- **Exposure to Light** -It is important to avoid exposing certain specimens for photosensitive analytes to artificial light or sunlight for any length of time. Examples: Bilirubin, vitamin A and B12, beta-carotene, phosphatidylglycerol, and porphyrins. These specimens should be protected with an aluminum foil wrap or equivalent.
- **Frozen Specimens** -Our couriers do not routinely carry dry ice. If you have a specimen, which needs to be kept frozen, please contact Client Service at 603-663-3555 so that we may send dry ice to your facility.
- **Refrigerated Specimens** -Place the specimen in the refrigerator for storage before pick-up by the courier. When packaging for pick-ups, place the specimen (tube, cup, or culture) into the Ziploc® portion of the transport bag with the request slip placed into the outer pouch.

OSHA REQUIRES THAT ALL SPECIMENS BE MARKED WITH A sealed **BIOHAZARD LABEL**. All specimens **MUST** be placed in the biohazard specimen transport bags provided by Elliot Hospital Laboratory.

## STAT, ASAP, or PRIORITY Testing

Requests for expedited STAT or PRIORITY testing should be made only when the patient's condition requires immediate action, and results of the laboratory test(s) are required before a decision regarding action or treatment can be made. Check off the STAT or PRIORITY box on the requisition to request expedited testing. Offices with electronic medical record systems such as Epicare should enter orders with STAT or PRIORITY when needed.

## Test Results and Turnaround Time

Test results by telephone are available through Client Service at 603-663-3555. Completed results are electronically transmitted, delivered by our courier service, or mailed, based upon the specific needs of each client. Partial or final reports are available upon request. Most routine tests are completed the same day they are received in the laboratory. Special or esoteric tests are performed as rapidly as complexity permits.

## Unsatisfactory Analytic Results

There is no charge if Elliot Hospital Laboratory is unable to obtain a satisfactory analytic result. Repeat testing is also provided at no charge on the same specimen or a new one, if preferred. Please notify our customer service representatives at 603-663-3555 when requesting a repeat test.

## Unacceptable Specimens / Specimen Rejections

Some specimens cannot be analyzed because of improper collection or degradation during transport due to improper handling. Other specimens may have prolonged turnaround times because of lack of necessary ancillary specimens or patient information. Offices will be notified of rejected or problematic specimens upon receipt. Please consider the following elements for proper specimen collection:

- Full 24 hours for timed urine collection
- pH of urine
- Lack of hemolysis/lipemia
- Specimen type (plasma, serum, whole blood, source or site)
- Specimen volume
- Patient information requested
- Patient/specimen properly identified & labeled
- Specimen container (metal-free, separation gel, appropriate preservative, etc.)
- Specimen stability
- Transport medium
- Temperature (ambient, frozen, refrigerate)

## **Specimen Identification Policy**

In compliance with and adherence to the College of American Pathologists and The Joint Commission's 2008 Patient Safety Goals (1A), Elliot Hospital Laboratory policy states that all specimens received for testing must be correctly and adequately labeled to assure positive identification. Specimens must have **2** person-specific identifiers on the patient label. Person-specific identifiers may include: accession number, patient's first and last name, unique identifying number (eg, medical record number), or date of birth. Specimens are considered mislabeled when there is a mismatch between the person-specific identifiers on the specimen and information accompanying the specimen (e.g., computer system, requisition form, additional paperwork). When insufficient or inconsistent identification is submitted, Mayo Medical Laboratories will recommend that a new specimen be obtained, if feasible.

# Specimen Collection & Preparation

Quality of laboratory results is directly dependent on the proper collection and handling of patient specimen. Specific requirements for each test including specimen container, specimen size, special preparation, and storage information are provided in the test requirements section of the manual. For information regarding specimen collection and preparation requirements contact our Client Service representatives.

## Patient Preparation

Consult the test listings for specific preparation requirements for each test procedure. For general patient preparation:

- Establish complete identity of patient: Full legal name, date of birth.
- Explain steps of collection procedure.
- Verify specific test requirements, such as fasting state, height and weight, or last medication dose.
- Use approved collection procedures and practices.
- Legibly complete test requisition and specimen labels according to the procedure.
- Ensure appropriate aftercare for patient.

## Types of Blood Specimens

There are 3 general types of blood specimens that can be obtained for laboratory testing.

- *Serum*: The liquid portion that remains on top of clotted cells after centrifuging whole blood that has been allowed to clot. It is different from plasma. To obtain serum, allow specimen to clot for 20 minutes, and not more than 2 hours, in an upright position. Centrifuge for 10 minutes at 3,000 rpm to 3,500 rpm. Store according to specific test directions.
- *Plasma*: The liquid portion that remains on top of cells after centrifuging anticoagulated whole blood. To obtain plasma, centrifuge tube for 10 minutes at 3,000 rpm to 3,500 rpm. Carefully transfer that plasma layer to a separate labeled plastic vial. Store according to test directions.
- *Whole Blood Anticoagulated*: Blood collected into anticoagulated vacuum tubes which are tested without centrifugation.

## Blood Specimen Collection

- Identify patient. Ask patient to state and spell his/her full, legal name and date of birth.
- Position patient. Patient should be comfortable.
- Situate and assemble equipment. Check expiration date on collection tubes.

- Apply tourniquet 3 to 5 inches above area selected for puncture site. Tourniquet must not remain in place any longer than 1 minute.
- Select puncture site.
- Put on clean gloves.
- Prep (cleanse) site with 70% isopropyl alcohol (for blood alcohol levels, use betadine or green soap). Prep with a circular motion outward from selected point of entry. The prepping agent must dry before needle is inserted.
- Remove needle cap; inspect bevel.
- Secure vein with index finger located below selected site. Stretch skin tightly to prevent vein from rolling and to allow needle to penetrate with ease.
- Hold vacuum tube with thumb on top and fingers on bottom. Fingers may be used as a brace against patient's arm. Needle should be aligned with direction of vein with bevel facing upward. Enter vein at a 15° angle with a deliberate, yet controlled thrust.
- Using 1 hand to steady holder and other hand to insert tube, push on end of tube with thumb and allow index and middle fingers to serve as leverage points on flange "ears" of holder. After vacuum is filled, blood flow will cease. The tube will fill completely to stopper. Wrap fingers around end of tube and pull tube off. Repeat this procedure with other tubes if more than 1 tube is needed. Gently invert gel barrier (serum separator) tubes at least 5 times and anticoagulated tubes at least 8 times.
- If it is certain that the vein has been entered and blood has not drawn into the tube, the vacuum tube may be faulted and a new tube should be selected.
- Loosen tourniquet before needle is removed. Tourniquet may be removed while blood is filling tubes.
- Remove needle and apply pressure with a gauze pad, being careful not to scratch patient's arm as needle is pulled out.
- Do not recap needles. **ACTIVATE NEEDLE SAFETY DEVICE**. Place needle/adaptor in appropriate waste containers using an approved disposal technique.
- Label tubes by clearly printing **patient's full name, date of birth, date** and **time** of collection, and **initials** of person who performed collection.
- Inspect site of venipuncture. Apply pressure until bleeding has stopped. If necessary, apply a dressing to puncture site. If there is excessive bleeding notify physician.
- Remove gloves and discard in appropriate container. Wash hands.



## Evacuated Tube Method

When using evacuated tube system, and when multiple tubes are to be drawn, the following “order of draw” is recommended to avoid contamination of non-additive tubes by additive tubes, as well as cross-contamination between different types of additive tubes:

- Blood culture tube(s) (and other tests requiring sterile specimens)
- Light blue-top stopper tube(s): sodium citrate, or other citrate-containing tubes or tubes for coagulation studies
- Plain, red-top and serum separator tube(s): non-additive and gel separator, respectively
- Green-top or green/gray-top stopper tube(s): heparin
- Lavender-top stopper tube(s): EDTA
- Grey-top stopper tube(s): potassium oxalate/sodium fluoride

## Syringe Method

Syringes come in various sizes, with 2 mL to 10 mL most commonly used for phlebotomy procedures. Syringes have 2 parts, a barrel with graduated markings in either milliliters (mL) or cubic centimeters (cc) and a plunger which fits in the barrel of the syringe. Push the plunger forward to break the seal before attaching it to the luer end of a 21 to 23 gauge “butterfly” collection device.

When drawing blood with a syringe, the plunger is slowly retracted by the phlebotomist, allowing the barrel to fill with blood. Blood specimens collected by syringe must be transferred to evacuated tubes using a female transfer device.

**Do not use a hypodermic needle to pierce the top of the tubes.**

## Blood Collection

Most laboratory tests are performed on anticoagulated plasma, serum, or whole blood. Serum specimens (those collected in serum gel or plain, red-top tubes) will need to be centrifuged after clotting. In general, specimens should be refrigerated until placed in courier box for transport to the laboratory. Please see individual test directory section for specific requirements.

## Centrifugation

Centrifugation should be performed at 3,000 rpm to 3,500 rpm for 10 minutes. Tubes of blood, serum, and plasma are to be kept closed at all times. This prevents possible exogenous contamination, evaporation, concentration changes, or possible spillage or aerosols.

**Note:** Invert serum (red-top tube with yellow or black ring) to activate clotting. Let stand for 20 to 30 minutes before centrifuging for 15 minutes. If frozen serum is required, pour off serum into plastic vial and freeze. Do not freeze tube.

## Fasting Specimens

An overnight fast is required for most fasting specimens. Some tests, however, particularly for cholesterol, lipids, triglycerides, and lipoproteins may require further dietary restriction, as per physician instruction.

## Requisitions & Supply Forms

Contact the Laboratory to order requisitions and/or supply forms for your facility. Reorders should allow for a 5 day print and delivery. Contact: 663-3555 to speak with a representative who can assist.

# Specimen Collection Tubes Available

The following is a list of tubes referred to in the test directory:

- **Green-Top (Heparin) Tube**: This tube contains sodium or lithium heparin—used for collection of heparinized plasma or whole blood for special tests. **Note**: After tube has been filled with blood, immediately invert tube gently several times in order to prevent coagulation.
- **Grey-Top (Potassium Oxalate/Sodium Fluoride) Tube**: This tube contains potassium oxalate as an anticoagulant and sodium fluoride as a preservative—used to preserve glucose in whole blood and for some special chemistry tests. **Note**: After tube has been filled with blood, immediately invert tube gently several times in order to prevent coagulation. Do not centrifuge. Do not remove stopper or separate plasma. Refrigerate uncentrifuged blood tube (do not freeze).
- **Lavender-Top (EDTA) Tube**: This tube contains EDTA as an anticoagulant—used for most hematological procedures. **Note**: After tube has been filled with blood, immediately invert tube gently several times in order to prevent coagulation.
- **Light Blue-Top (Sodium Citrate) Tube**: This tube contains sodium citrate as an anticoagulant—used for collection of blood for coagulation studies such as prothrombin time. **Note**: It is imperative that tube be completely filled to the arrow mark on label. The ratio of blood to anticoagulant is critical for valid prothrombin time results. Immediately after draw, gently invert tube 6 to 10 times in order to activate anticoagulant. Do not centrifuge.
- **Light Green-Top (Lithium Heparin) Tube**: This tube is a plasma separator tube. This tube contains an anticoagulant so when it's spun it will yield plasma.
- **Royal Blue-Top Tube**: There are 2 types of royal blue-top Monoject® tubes—one with the anticoagulant EDTA and the other plain. These are used in collection of whole blood or serum for trace element analysis. Refer to individual metals in individual test listings to determine tube type necessary. **Note**: After tube has been filled with blood, immediately invert tube gently several times in order to prevent coagulation. Refrigerate uncentrifuged blood tube (do not freeze).
- **Red-Top Tube**: This is a plain tube containing no anticoagulant or gel barrier. This tube contains a clot activator—Used for collection of serum for selected chemistry tests as well as clotted blood for immunohematology. When a test is designated to be collected in a red-top tube, a serum gel tube should not be substituted. The gel barrier may interfere with analysis. See individual test listings to determine whether serum or whole blood should be submitted.

**Note**: Invert tube to activate clotting. Let stand for 20 to 30 minutes before centrifuging for 15 minutes. If frozen serum is required, pour off serum into plastic vial and freeze. Do not freeze tube.

- **Serum Gel Tube**: This tube contains a clot activator and serum gel separator—used for routine chemistry tests. **Note**: Invert tube to activate clotting; let stand for 20 to 30 minutes before centrifuging for 15 minutes. If frozen serum is required, pour off serum into plastic vial and freeze. Do not freeze tube.
- **Special Collection Tubes**: Some tests require specific tubes for proper analysis. Please contact Elliot Hospital Laboratory prior to patient draw to obtain correct tubes for metal analysis or other tests as identified in the individual test listings.
- **Yellow-Top (ACD) Tube**: This tube contains ACD—used for collection of whole blood for special tests.

# *Urine Collections*

## **Collecting a Clean Catch Urine Specimen for the Female Patient**

1. Wash hands thoroughly with soap and water, rinse and dry them on a disposable paper towel.
2. Open Towelette® and container, careful not to touch rim or inside of container.
3. To cleanse periurethral area (labial folds, vulva, urethral meatus) spread labia with 1 hand, wipe area 3 times front to back, each time with a fresh Towelette®: 1-right side/2-left side/3-down the middle.
4. Discard Towelette® after each cleansing.
5. Begin to urinate into toilet. Void approximately 20 mL to 25 mL and catch a portion of the rest of the urine in container without stopping stream. Do not touch legs, vulva, or clothing with cup.
6. Screw cap tightly onto container.
7. Place **labeled** specimen container in biohazard bag.
8. Refrigerate specimen within 1 hour of collection if it cannot be tested immediately. Specimen is stable in refrigerator for 24 hours after collection.
9. If a culture and sensitivity is to be performed on clean catch specimen, immediately transfer appropriate volume to a urine C&S grey-top VACUTAINER®, which contains a preservative that stabilizes any bacteria present in the specimen, following collection. Urine in this tube is stable for 48 hours. If other testing, such as routine urinalysis, is requested on the same urine specimen, in addition to the culture, submit original collection container for all other tests.

## **Collecting a Clean Catch Urine Specimen for the Male Patient**

1. Wash hands thoroughly with soap and water, rinse and dry them on a disposable paper towel.
2. Retract foreskin completely. Cleanse tip of penis with Towelette®.
3. Open container, careful not to touch rim or inside of container.
4. Begin to urinate into toilet. Void approximately 20 mL to 25 mL and catch a portion of the rest of the urine in container without stopping stream.
5. Screw cap tightly onto container.
6. Place **labeled** specimen container in biohazard bag.
7. Refrigerate specimen within 1 hour of collection if it cannot be tested immediately. Specimen is stable in refrigerator for 24 hours after collection.
8. If a culture and sensitivity is to be performed on clean catch specimen, immediately transfer appropriate volume to a urine C&S grey-top VACUTAINER®, which contains a preservative that stabilizes any bacteria present in the specimen, following collection. Urine in this tube is stable for 48 hours. If other testing, such as routine urinalysis, is requested on the same urine specimen, in addition to the culture, submit original collection container for all other tests.

**Random Collections:** For routine urinalysis and microscopic evaluation, have patient void into a clean container. The **first-morning** specimen is preferred for most tests since it usually is the most concentrated and has a more uniform volume and a lower pH

**Catheterized Specimens: Indwelling Catheter**

1. Check to be sure there is no backflow of urine from collection bag into catheter tubing.
2. Cleanse an area of tubing with alcohol. If system has a collection port, cleanse this area.
3. Puncture tubing at cleansed area with a sterile 18-gauge needle attached to a 10 mL syringe. If the system has a collection port, use the port.
4. Collect 1 mL to 8 mL of flow into syringe. Remove needle and expel urine into a sterile specimen container.
5. Place **labeled** specimen container in biohazard bag.
6. Refrigerate specimen within 1 hour of collection if it cannot be tested immediately. Specimen is stable in refrigerator for 24 hours after collection.
7. If a culture and sensitivity is to be performed on the catheterized specimen, immediately transfer appropriate volume to a urine C&S grey-top VACUTAINER®, which contains a preservative that stabilizes any bacteria present in the specimen, following collection. Urine in this tube is stable for 48 hours. If other testing, such as routine urinalysis, is requested on the same urine specimen, in addition to the culture, submit original collection container for all other tests.

**Catheterized Specimens: Straight Catheter**

1. Discard initial flow of urine from catheter. This portion may contain contaminating organisms acquired as a consequence of catheter insertion.
2. Collect a sample of the mid- or later-flow of urine into a sterile container.
3. Place **labeled** specimen container in biohazard bag.
4. Refrigerate specimen within 1 hour of collection if it cannot be tested immediately. Specimen is stable in refrigerator for 24 hours after collection.
5. If a culture and sensitivity is to be performed on the catheterized specimen, immediately transfer appropriate volume to a urine C&S grey-top VACUTAINER®, which contains a preservative that stabilizes any bacteria present in the specimen, following collection. Urine in this tube is stable for 48 hours. If other testing, such as routine urinalysis, is requested on the same urine specimen, in addition to the culture, submit original collection container for all other tests.

**Timed Urine Collections:**

1. Obtain proper container for collection of specimen from laboratory.
2. Many urine tests require refrigeration of specimens during collection. Verify need to refrigerate before starting collection.
3. Start timing at the time of first urination. Discard first sample as it is not to be included as part of the specimen. Write down the time of this initial voiding. This is the specimen start time.
4. Collect urine voided within the time specified. The final voiding at the exact end of the timing period is to be included.
5. As soon as possible, at the end of the collection period, bring entire urine specimen, with timing noted, to the laboratory.
6. Label container with patient's name.

**24-Hour Urine Collections:**

Elliot Hospital Laboratory provides 24-hour urine collection containers and patient instruction sheets with various types of preservatives, depending on test requested. Use following procedure for correct specimen collection and preparation:

1. Instruct patient to discard **first-morning** specimen and to record time of voiding.
2. Patient should collect ALL subsequent voided urine for remainder of day and night.
3. Collect **first-morning** specimen on day 2 at same time as noted on that of day 1. The collection is now complete.
4. Send entire 24-hour specimen to laboratory. If only an aliquot is submitted, please mix well before aliquoting and ALWAYS provide total volume of the 24-hour collection.