Specimen Collection and Preparation

Laboratory test results are dependent on the quality of the specimen submitted. It is important that all specimens and request slips be properly labeled with the name of the patient, collection date, and the origin (source) of the specimen, when applicable.

If there is any doubt or question regarding the type of specimen that should be collected, it is imperative that Bronson Laboratory Services (BLS) be called to clarify the order and specimen requirements.

Patient Preparation: Fasting Specimens
Please refer to specific tests in the Alphabetical Test Listing section for additional details.

The requirement for a fasting specimen requires an overnight fast. The last meal should be eaten 12 hours before specimen collection. During the 12-hour fast, only small amounts of water may be taken. Other beverages and caffeine-containing liquids, including coffee, must be omitted. Avoid chewing gum, mints, candies, and tobacco products. Avoid even mild exercise during the fast. Over the counter drugs should be avoided when possible. Prescription medicines critical to health maintenance should be taken.

Tests for lipid and lipoprotein disorders require further dietary restriction. In addition to the above fast, alcohol should not be ingested for 24 hours prior to specimen collection. The evening meal before the test should contain no fatty foods and should be completed before 6 p.m.

Patients for glucose tolerance testing (GTT) should be on a full, unlimited, normal diet for at least 3 days prior to the day of the GTT. GTT should not be performed on obviously ill or bedridden patients. GTT is not performed on inpatients unless the attending physician confers with the clinical pathologist.

Specimen Identification Requirements
The purpose of this Bronson policy (Policy Code G-12) is to provide the standardized requirements for patient specimen labeling throughout the Bronson system to ensure patient safety.

- Patient is positively identified at the time of collection using 2 unique identifiers—patient’s name and date of birth.
  - Patient’s medical record number can be used in addition to patient’s name and date of birth.
  - Patient’s hospital armband must be checked for name and medical record number.
  - Patient’s room number must not be used as an identifier.
  - Outpatients must be identified by asking the patient to state their name and date of birth.
- The request form and patient labels must match exactly with patient’s name (first and last), and date of birth and/or medical record number.
- Specimen collection containers are to be labeled:
  - Immediately upon collection.
  - Legibly with indelible ink.
  - In the presence of the patient.
  - By the person who collected the specimen or assisted in the collection.
  - Patients collecting their own specimen (such as urine) must be given a collection container which is labeled in their presence prior to collection.
- Specimen collection container must have a patient identification label. Three types of labels available are a Laboratory Information System (LIS) generated collection label, a preprinted Chart Label, or be hand labeled using indelible ink with the following:
  - Patient’s first and last name.
  - Patient’s date of birth.
  - Patient’s medical record number can be used in addition to name and date of birth.
  - Date and time of collection.
  - Identification of person collecting specimen: initials, employee #, or phlebotomy code are acceptable.
Specimen Collection: Standard Precautions

Standard precautions from the U.S. Centers for Disease Control (CDC) must be adhered to for all patient specimens. All specimens must be regarded as potentially infectious.

Gloves must be worn whenever there is potential for risk of exposure to blood, body fluids, or tissue specimens. Goggles, gowns, and masks are also indicated in areas where contact with aerosols or large amounts of body fluids may occur. Wash hands before each patient contact, prior to putting on gloves. Gloves must be worn when collecting specimens. Wash hands immediately after removing gloves. Gloves must be changed between each patient, washing hands immediately after removing gloves.

To prevent needlestick injuries, the use of safety needles is required. Needles must not be recapped, purposely bent, cut, broken, or otherwise manipulated by hand. Place used needles and other sharp items into puncture-resistant biohazard containers for disposal. Never send a specimen with the needle attached to prevent needlestick injuries.

After specimens are obtained from the patient, label the primary container (blood tube, urine screw-cap container, etc.) in the presence of the patient. Place specimens in a secondary container such as a plastic, Ziploc bag for transport to the laboratory.

Specimen Collection: Blood

The following table lists the most common types of collection tubes required for blood specimen analysis. Refer to the Alphabetical Test Listing for collection tubes required for tests ordered. Always allow the tube to fill completely for correct blood to anticoagulant mix.
<table>
<thead>
<tr>
<th>Tube</th>
<th>Contents/Additive</th>
<th>Handling (Once Filled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green top</td>
<td>Heparin anticoagulant</td>
<td>Invert tube 8 times to prevent coagulation. Note: It is important to distinguish when a sodium heparin vs. lithium heparin tube is required.</td>
</tr>
<tr>
<td>Grey top</td>
<td>Potassium oxalate as an anticoagulant and sodium fluoride as a preservative</td>
<td>Invert tube 8 times to prevent coagulation.</td>
</tr>
<tr>
<td>Lavender top</td>
<td>EDTA anticoagulant</td>
<td>Invert tube 8 times to prevent coagulation.</td>
</tr>
<tr>
<td>Light-blue top</td>
<td>Buffered sodium citrate anticoagulant</td>
<td>Invert tube 8 times to activate anticoagulant. Use discard tube if drawn through blood collection set (ie, butterfly).</td>
</tr>
<tr>
<td>Light-green top plasma separator with gel</td>
<td>Heparin anticoagulant and a gel for plasma separation (gel forms a barrier to preserve specimen after centrifugation)</td>
<td>Invert tube 8 times to mix blood. Centrifuge for 10 to 15 minutes if not sent immediately to the laboratory.</td>
</tr>
<tr>
<td>Red-top</td>
<td>Plain Vacutainer containing no anticoagulant</td>
<td>Allow blood to clot before centrifugation if not sent immediately to the laboratory.</td>
</tr>
<tr>
<td>Gold top or black/grey top serum separator with gel</td>
<td>Clot enhancer and a gel which forms a barrier to preserve specimen after centrifugation. No anticoagulant.</td>
<td>Invert tube 8 times to mix blood. Allow to clot for 30 minutes before centrifuging for 10 to 15 minutes if not sent immediately to the laboratory</td>
</tr>
<tr>
<td>Royal-blue top</td>
<td>2 types of royal blue-top Monoject tubes - 1 with the anticoagulant EDTA and the other plain. These are used for collection of whole blood or serum for trace element analysis.</td>
<td></td>
</tr>
<tr>
<td>Special collection tubes</td>
<td>Some tests require specific tubes for proper analysis. Please contact BLS prior to patient draw to obtain correct tubes for metal analysis or other tests as identified in the individual test listings.</td>
<td></td>
</tr>
<tr>
<td>Blood culture bottles</td>
<td>Fill the following bottles with specified amounts of blood.</td>
<td>Invert bottle 8 times to mix blood.</td>
</tr>
<tr>
<td></td>
<td>Yellow top, pediatric bottle: 1-4 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Green top, adult, aerobic bottle: 8-10 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orange top, adult, anaerobic bottle: 8-10 mL</td>
<td></td>
</tr>
</tbody>
</table>

**Blood Collection: Venipuncture**

The evacuated tube system (Vacutainer) is the most commonly used means of drawing blood specimens. This method is preferable to the needle and syringe method, as it allows the blood to pass directly from the vein into the evacuated tube. This method prevents clotting of the specimen and reduces the risk of hemolysis (rupturing of red cells). Improperly collected specimens (ie, wrong anticoagulant, clotted, hemolyzed, or insufficient amount) will result in rejection of the specimen for testing.

- **Patient Preparation:** The ordering physician should provide the patient with information on fasting, diet, and medication restrictions prior to requesting testing. See the Alphabetical Test Listing for specific requirements relating to test ordered.
- **Considerations for Venipuncture:**
  - Draw specimen from vein without an IV
  - Avoid drawing from a vein associated with a hematoma.
  - If a patient has had a mastectomy, do not draw blood from that side of the body.
  - Label specimen(s) immediately after collection, in the presence of the patient.
**Supplies Needed:**

- Tourniquet
- Alcohol
- Dry cotton or gauze
- Sterile blood collection safety needle
- Needle holder device (screw needle into needle holder device)
- Blood collection evacuated tubes (appropriate for tests ordered)
- Bandage
- Pen to label tubes

**Procedure:**

1. Greet patient, stating your name and informing them that you need to obtain a blood specimen.
2. Confirm identity of patient. Ask their name and date of birth. Inpatients are identified additionally by examining the patient armband to confirm name, date of birth, and medical record number. Name, date of birth, and medical record number must match the information on the laboratory request form.
3. For tests requiring dietary restrictions, ask the patient if they have followed the guidelines prior to blood collection. If they have not, suggest they return at a time when they have followed the guidelines as test results may be adversely affected.
4. Wash hands, Glove.
5. Position patient:
   - **Chair** - Seat patient comfortably in chair with arm extended on armrest to form a straight line from shoulder to wrist. Arm and elbow should be supported firmly by the armrest and should not bend at elbow.
   - **Bed** - Patient may lie on their back in a comfortable position. Placing a pillow under the patient’s arm to be used for collection may provide additional support. Patient’s arm should be extended to form a straight line from shoulder to wrist.
6. Assemble supplies needed.
7. Inspect patient’s arms and select an appropriate venipuncture site by palpating arm firmly with index finger of opposite hand you normally use. The larger and fuller median cubital veins are most frequently used.
8. Cleanse venipuncture site with alcohol-moistened cotton or gauze pad, rubbing in a circular motion outward from puncture site. Allow area to dry.
9. Apply tourniquet 3 to 5 inches above vein site. Do not leave tourniquet on for >2 minutes. Patient may form a fist to make the vein prominent, but should open hand once blood begins to flow into tube.
10. The vein may be “fixed” or held taut during puncture. The needle should be in line with the vein at a 15° angle with the skin, bevel up. Firmly grasping the holder, puncture vein with needle. Push tube onto needle in holder. Blood should immediately begin to fill tube due to the vacuum action. Fill all tubes completely.
11. When collecting more than 1 tube of blood during a venipuncture, the required order of draw is:
   - Sterile tube for blood culture
   - Light-blue top
   - Red top or gold top gel
   - Green top
   - Lavender/purple top
   - Grey top or other additives
12. Once filled, remove tube and replace it with a new tube as needed, keeping the needle steady in the vein. Gently invert collected tube of blood 5 to 10 times. **Do not shake.**
13. After all tubes have been drawn, remove tourniquet. Remove tube from holder before removing needle from vein.
14. Press a sterile gauze pad over the venipuncture site and remove needle. Hold pad in place for 1 to 3 minutes until bleeding has stopped.
15. Place used needle in a hazardous sharps container.
16. Place a bandage over the site to prevent blood leakage.
17. Immediately label all tubes with patient’s name (first and last), date of birth, and date and time drawn. See “Blood Bank Services” for specific labeling requirements of blood bank specimens.
18. Check the Alphabetic Test Listing for any special handling requirements (eg, ice, etc.).
19. Place all tubes in approved specimen transport bag with the request form. Transport to the laboratory as soon as possible.

**Specimen Collection: Blood Culture**

**Supplies Needed:**

- Blood Culture Bottles
  - Adults:
    - 1 aerobic bottle
    - 1 anaerobic bottle
  - Children and Low Volume Adults
    - 1 pediatric bottle
- Gloves
- Cleansing Supplies
  - Chloraprep or iodine, alcohol pads, and gauze
- Drawing Equipment
  - 20-mL syringe, needle, and transfer device (when available) or
  - Butterfly set, luer adapter, and transfer device (when available)
- Alcohol Prep Pads (for cleaning bottle tops)
- Tourniquet
- Patient Labels (1 per bottle)
- Laboratory Test Request Form

**Procedure:**

1. Wash hands.
2. Identify patient to be drawn using the patient identification procedure.
3. Observe appropriate infection control precautions for each patient.
4. Tie tourniquet around patient’s extremity and locate a vein. Then untie tourniquet.
5. Prepare draw site using 1 of the following methods:

- Chloraprep® - Open the package of Chloraprep. Pinch wings on applicator to break ampule and release antiseptic. Do not touch sponge. Wet sponge by repeatedly pressing and releasing sponge against treatment area until liquid is visible on skin. Use repeated back and forth strokes of the applicator for approximately 30 seconds. Completely wet treatment area with antiseptic. Allow area to dry for approximately 30 seconds. **Do not blot or wipe away.**
- Iodine® - Cleanse venipuncture site with an alcohol prep pad. Beginning in center of venipuncture area, swab skin in an outward spiral pattern using iodine swab. Using a new iodine swab, repeat procedure. Let iodine remain on skin for 1 minute. Cleanse iodine from patient’s skin using an alcohol prep pad, then dry venipuncture area using a sterile gauze pad.

*While skin is being prepared with iodine or drying from the Chloraprep, remove flip-caps on the blood culture bottles and apply an alcohol prep pad to the rubber septum of each bottle to clean it. **Do not apply iodine to bottle tops.**

6. Retie tourniquet and relocate vein without contaminating draw site. If you palpate over the venipuncture area, you must repeat the cleaning procedure.
7. Perform venipuncture using a needle and syringe or butterfly set.
8. Draw required amount of blood, withdraw needle from vein, and place pressure on venipuncture site using a sterile gauze pad.
9. Inject blood into culture bottles as described in the Blood Volume for Culture table. Do not change the needle on the syringe prior to inoculating bottles. Do not inject air into bottles. Discard drawing supplies into sharps container.

<table>
<thead>
<tr>
<th>Blood Volume Drawn</th>
<th>Blood Volume in Culture Bottle</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20 mL</td>
<td>8-10 mL in aerobic (green top) and 8-10 mL in anaerobic (orange top)</td>
</tr>
<tr>
<td>10-16 mL</td>
<td>8-10 mL in aerobic (green top) and remainder in anaerobic (orange top)</td>
</tr>
<tr>
<td>4-10 mL</td>
<td>Entire specimen in aerobic (green top)</td>
</tr>
<tr>
<td>&lt;4 mL</td>
<td>Entire specimen in pediatric (yellow top)</td>
</tr>
</tbody>
</table>

10. Label each bottle with an acceptable patient label being careful not to cover the bar code on bottle. Write on each label the set number, date and time of draw, site of venipuncture, and initials or tech code of the phlebotomist.
11. Wash off any remaining iodine from patient’s skin using an alcohol pad and a sterile gauze pad. Apply a bandage to the venipuncture site. Remove and discard gloves. Wash hands.
12. Blood culture bottles should be held at ambient temperature until received in the laboratory.
13. Send bottles directly to the Microbiology department during the first and second shifts. If the pneumatic tube system is used, place each bottle in a separate plastic bag. During the third shift, send bottles to the main laboratory accession area where personnel will place them in the blood culture instrument.

Note: 1. If multiple laboratory tests are ordered, prepare patient’s skin and draw the blood cultures first, followed by the other tubes.
2. For adult patients who are difficult to draw and from whom <5 mL of blood is available for culture, a pediatric bottle may be inoculated. A 16-mL to 20-mL draw is optimal for adults, and a pediatric bottle is suboptimal but acceptable.
3. If the patient is allergic to iodine, alcohol prep pads may be substituted for iodine, but a total of 2 minutes of contact with patient’s skin is required instead of 1 minute.
4. ChloralPrep should not be used on patients with known allergies to chlorhexidine gluconate or isopropyl alcohol, on open skin wounds, or as a general skin cleanser.
5. Blood for culture should not normally be drawn from an indwelling catheter unless the catheter is suspected as the source of a catheter-related bloodstream infection. If ordered, the catheter blood cultures should be clearly labeled as such to differentiate.
6. Blood cultures drawn from patients with intravenous (IV) lines should be drawn from below the IV or from another extremity to avoid diluting the specimen with IV fluid.
<table>
<thead>
<tr>
<th>Source</th>
<th>Test</th>
<th>Container</th>
<th>Storage</th>
<th>Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Fluid</td>
<td>AFB culture/smear</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Body Fluid (&lt;1 ml)</td>
<td>Culture, Anaerobic</td>
<td>Port A Cul Fluid Vial</td>
<td>Room Temp</td>
<td>24 hours</td>
</tr>
<tr>
<td>Body Fluid (1-2 ml)</td>
<td>Culture, Anaerobic</td>
<td>Sterile container</td>
<td>Room Temp</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port A Cul Fluid Vial</td>
<td>Room Temp</td>
<td>24 hours</td>
</tr>
<tr>
<td>Body Fluid (&gt;2 ml)</td>
<td>Culture, Anaerobic</td>
<td>Sterile container</td>
<td>Room Temp</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port A Cul Fluid Vial</td>
<td>Room Temp</td>
<td>24 hours</td>
</tr>
<tr>
<td>Body Fluid</td>
<td>Culture, Bacterial Routine</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Body fluid</td>
<td>Culture, Bacterial Routine</td>
<td>eSwab (not preferred container type)</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Body fluid</td>
<td>Culture, Fungal, Other</td>
<td>eSwab (not preferred container type)</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Body Fluid</td>
<td>Culture, Fungal, Other</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>4 days</td>
</tr>
<tr>
<td>Catheter Tip</td>
<td>Culture, Bacterial Routine</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Cervix</td>
<td>GC/Chlamydia DNA probe</td>
<td>Genprobe collection kit or Thin Preps</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td></td>
<td>GC/Chlamydia/Trichomonas DNA probe</td>
<td>Genprobe collection kit or Thin Preps</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td></td>
<td>Pap Smear</td>
<td>Thin Prep</td>
<td>Room Temp</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>HPV</td>
<td>Thin Prep</td>
<td>Refrigerate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Culture, Genital</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Culture, Herpes</td>
<td>Viral Transport Media</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>KOH prep</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Group B Strep Screen</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>AFB culture/smear</td>
<td>Tube 2</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td>Culture, Bacterial Routine</td>
<td>Tube 2</td>
<td>Room Temp</td>
<td>2 hours</td>
</tr>
<tr>
<td></td>
<td>Culture, Herpes</td>
<td>Send out for PCR</td>
<td>Refrigerate</td>
<td>1 week</td>
</tr>
<tr>
<td></td>
<td>Cytology, Cerebrospinal Fluid</td>
<td>Sterile Container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td>Enterovirus PCR</td>
<td>Tube 2</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Eye</td>
<td>GC/Chlamydia DNA probe</td>
<td>Genprobe collection kit</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td>Hair, Skin and Nails</td>
<td>Culture, Fungal</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td>S. aureus Screen</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Nasopharyngeal</td>
<td>Pertussis ONLY</td>
<td>Nasopharyngeal culturette Amies charcoal</td>
<td>Refrigerate</td>
<td>7 days</td>
</tr>
<tr>
<td></td>
<td>Respiratory Infectious Disease Panel</td>
<td>Nasopharyngeal swab in VTM</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Rectal</td>
<td>GC/Chlamydia DNA probe</td>
<td>Genprobe collection kit</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td>Sputum</td>
<td>AFB culture/smear</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Sputum</td>
<td>Culture, Bacterial Routine</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Sputum</td>
<td>Culture, Fungal, Other</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Sputum</td>
<td>Cytology</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>4 days</td>
</tr>
<tr>
<td>Stool</td>
<td>C-Diff</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Stool</td>
<td>Culture, Bacterial Routine</td>
<td>Preservative-Carey Blar</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Stool</td>
<td>Fecal Occult Blood</td>
<td>Clearview FOB sample vial</td>
<td>Refrigerate</td>
<td>10 days</td>
</tr>
<tr>
<td>Stool</td>
<td>Giardia/Cryptosporidium or OVP</td>
<td>Prototix Vial</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Stool</td>
<td>H.pylori Antigen</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Stool</td>
<td>Lactoferrin</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Stool</td>
<td>Ova &amp; Parasite exam</td>
<td>Prototix Vial</td>
<td>Room Temp</td>
<td>72 hours</td>
</tr>
<tr>
<td>Type</td>
<td>Specimen</td>
<td>Container/Collection Kit</td>
<td>Storage</td>
<td>Time</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------</td>
<td>------------------------------------------</td>
<td>---------------</td>
<td>----------</td>
</tr>
<tr>
<td>Stool</td>
<td>Rota virus</td>
<td>Sterile container / eSwab</td>
<td>Refrigerate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Throat</td>
<td>Group A Strep Culture</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Throat</td>
<td>GC/Chlamydia DNA probe</td>
<td>Genprobe Collection Kit</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td>Tissue</td>
<td>AFB culture/smear</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Tissue</td>
<td>Culture, Anaerobic</td>
<td>Sterile container</td>
<td>Room Temp</td>
<td>2 hours</td>
</tr>
<tr>
<td>Tissue</td>
<td>Culture, Bacterial Routine</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Tissue</td>
<td>Culture, Fungal, Other</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Tissue</td>
<td>Culture, Quantitative</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Tissue</td>
<td>Pathology</td>
<td>Formalin</td>
<td>Room Temp</td>
<td>n/a</td>
</tr>
<tr>
<td>Urethra</td>
<td>Culture, Herpes</td>
<td>Viral Transport Media</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Urethra</td>
<td>GC/Chlamydia DNA probe</td>
<td>Genprobe collection kit</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td>Urine</td>
<td>Culture, Bacterial Routine</td>
<td>Sterile container (inpatients)</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
<tr>
<td>Urine</td>
<td>Culture, Bacterial Routine</td>
<td>Grey Top Urine Preservative vial</td>
<td>Refrigerate</td>
<td>48 hours</td>
</tr>
<tr>
<td>Urine</td>
<td>GC/Chlamydia DNA probe</td>
<td>Aptima collection kit - Urine</td>
<td>Refrigerate</td>
<td>60 days</td>
</tr>
<tr>
<td>Urine</td>
<td>GC/Chlamydia DNA probe</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>30 days</td>
</tr>
<tr>
<td>Urine</td>
<td>Cytology</td>
<td>Sterile container</td>
<td>Refrigerate</td>
<td>4 days</td>
</tr>
<tr>
<td>Wound</td>
<td>Culture, Anaerobic</td>
<td>eSwab</td>
<td>Room Temp</td>
<td>24 hours</td>
</tr>
<tr>
<td>Wound</td>
<td>Culture, Bacterial Routine</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>72 hours</td>
</tr>
<tr>
<td>Wound</td>
<td>Culture, Fungal, Other</td>
<td>eSwab</td>
<td>Refrigerate</td>
<td>24 hours</td>
</tr>
</tbody>
</table>
Specimen Collection: Urine

**Processing Urine Samples with BD Vacutainer® Collection Products**

**UA Preservative or Plain UA Tube with Culture and Sensitivity (C&S) Tube**

1. Submerge tip of transfer straw in specimen in the sterile container.
2. Order of draw: Must draw grey top tube before the cherry red/yellow top tube.
3. Push Grey Top Tube into the holder end of the transfer straw, and needle pierces the rubber stopper.
4. Hold in position until flow stops.
5. Remove Grey Top from holder.
6. Invert tube several times to dissolve white pellet at the bottom of the tube.
7. Repeat steps 3 thru 5 using the cherry red/yellow tube.
8. Invert red/yellow tube several times mix urine with the preservative coated on the sides of the tube.
9. Label all specimens with SIDQV81J9V2QG last name, date of birth, date and time collected.
10. Dispose of transfer straw in sharps container.

<table>
<thead>
<tr>
<th>WHEN ORDERING:</th>
<th>CONTAINER/TO SEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinalysis only</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Urinalysis and Culture</td>
<td></td>
</tr>
<tr>
<td>Urine Culture only</td>
<td></td>
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<tr>
<td>Miscellaneous urine tests</td>
<td></td>
</tr>
<tr>
<td>micro albumin, electrolytes, urine genprobe, strep pneumo antigen, leJrQ003D0/8JLH0 10f&lt;0)</td>
<td></td>
</tr>
<tr>
<td>Urine Genprobe (GC/Chlamydia)</td>
<td></td>
</tr>
</tbody>
</table>

_Clean-Catch, Midstream, Random Urine:_ **First-morning** specimen is preferred as it is the most concentrated. It is important to avoid contaminating urine with bacteria and cells from the skin.

1. Wash hands with soap and water.
2. Unscrew the blue cap.

**Caution:** **DO NOT REMOVE** the yellow label from the top of the Urine Collection Cup. There is a needle under the label.

3. Place blue cap on counter with straw facing upwards. **Do not** touch inside of cap or straw.
4. Open the towelette package. The package contains 2 towelettes.

**a. Males:**

- Cleanse the end of the penis with the 1 towelette.
- Begin at the urethral opening and work away from it. Uncircumcised male: foreskin must be retracted.
- Repeat using the second towelette.
- Urinate the first portion of urine in the toilet.
b. Females:
   - Stand in a squatting position over the toilet.
   - Separate the folds of skin around the urinary opening.
   - Cleanse the area around the opening with 1 towelette.
   - Repeat using the second towelette.
   - Urinate the first portion of urine in the toilet.

6. As you continue to urinate, bring the collection cup into the midstream to collect the urine sample.
7. **Do not** touch the inside or lip of the cup.
8. Urinate remainder of urine into the toilet.
9. Replace the blue cap onto the Urine Collection Cup.
10. Return the sample to the healthcare worker.

* Catheterized Urine - Straight Catheter:
   1. Discard first urine flow from catheter. This portion may contain contaminating organisms and cells as a consequence of catheter insertion.
   2. Collect a specimen of mid or later flow of urine into the blue cap sterile cup from the urine collection kit.

* Catheterized Urine - Indwelling Catheter (Foley Catheters):
   1. Check to ensure there is no backflow of urine from collection bag into catheter tubing.
   2. Cleanse the port with alcohol and then attach the syringe to the catheter.
   3. Draw the specimen into a sterile syringe.
   4. Expel urine from syringe into the blue cap sterile cup form the Urine Collection Kit.
   5. Discard syringe in a biohazard sharps container.

* Cystoscopy Urine:
   1. Following insertion of cystoscope; allow first portion of specimen to drain in collection pan, and then collect specimen in the blue cap sterile cup from the Urine Collection Kit.
   2. See Urine Collection and Processing Reference Guide for additional clinical staff instructions.

* Suprapubic Aspirate Urine:
   1. Wait at least 4 to 6 hours after the last urination.
   2. Clean suprapubic skin with iodine followed by alcohol.
   3. Insert 22-gauge needle attached to a 20-mL syringe into the skin at about a 30° angle to abdominal wall, immediately superior to symphysis in midline.
   **Note:** Infants may require a smaller syringe and needle. Aspirating as one penetrates, stop as urine is obtained, and fill syringe with urine.
   4. Expel urine from syringe into the blue cap sterile cup from the Urine Collection Kit.
   5. See Urine Collection and Processing Reference Guide for additional clinical staff instructions.
24-Hour Urine:

Patient Instructions for 24 Hour Urine Collection

Supplies
- 24-Hour Urine Collection Jug
  "NOTE: May contain acid; do not urinate directly into the urine collection jug. Use the
  provided urine collection transfer device to safely transfer urine into the collection jug.
- Urine collection transfer device (device that fits on the rim of the toilet to enable safe transfer of
  urine to collection jug)

24-Hour Collection Instructions
1. Follow your provider's directions regarding food, drink, or drugs before and during collection.
2. Empty your bladder completely when you get up in the morning. DO NOT SAVE THIS URINE
   SPECIMEN. Discard your first morning urine in the toilet. This is your START time.
3. Record the START Date and Time on the collection jug label (Example: 9/20/09 at 7:00AM).

4. For the next 24 hours, of the urine that you pass must be transferred into the collection jug
   provided. Urinate into the urine collection transfer device and then carefully transfer the urine
   into the collection jug. Do this all day and night. Keep the collection jug refrigerated during
   collection period.
5. Urinate for the last time the next morning at the same time as the collection started. SAVE
   THIS URINE SPECIMEN and add it to the collection jug using the urine collection
   transfer device (the STOP time must be the same as the START time from step 3, above or
   collection is not considered a 24 hour urine).
6. Record the STOP Date and Time on the collection jug label (Example: 9/21/09 at 7:00AM (time
   must match the start time or collection is not considered a 24 hour urine)

7. Bring specimen to the laboratory drop off location as soon as possible after 24-hour collection is
   complete.
8. Certain testing requires a blood draw. Check with lab staff before leaving.

Please call Bronson Laboratory if you have questions about this collection.
(269) 341-6440

Note: Certain tests may also require a blood specimen. Please check specific 24-hour urine test requirements to see if a blood draw is required.
Specimen Collection: Stool

Common tests ordered on stool specimens are:

- Occult blood
- 24-Hour fecal fat
- Fecal WBCs
- Stool culture
- Ova and parasite examination
- pH/reducing substances
- Rotavirus antigen
- *Clostridium difficile* toxin

General instructions for stool collection are listed below. Refer to the Alphabetical Test Listing for specific test requirements.

- If patient is taking Milk of Magnesia, Kaopectate or similar medication, or had a barium X-ray recently, wait 7 to 10 days before collecting a specimen.
- Stool collection container is dependant on the test. Please refer to the specific test to find the appropriate specimen container.
- Specimen must not be mixed with water (eg, from toilet bowl) or with urine.
- Specimen container must be labeled with patient’s name (first and last), date of birth, and date and time of collection. Refer to the Alphabetical Test Listing for storage and delivery instructions.
- Only 1 stool specimen per day is accepted for routine bacterial culture and ova and parasite examination.

Specimen Collection: Throat Swab

**Supplies Needed:**

- Culturette tube
- Tongue blade
- Gloves (mask and eye protection, as needed)
- Patient identification label (to be placed on Culturette)
- Laboratory request form (properly labeled with patient identification label)

**Procedure:**

1. Apply gloves, eye protection, and mask (mask as needed, depending on anticipated exposure).
2. Keeping cotton applicator sterile, remove from Culturette tube.
3. Depress tongue with tongue blade, if indicated.
4. Insert cotton tip of applicator to the **back of patient's throat**, and swab area.
5. Place applicator in Culturette tube.
6. Label specimen with patient’s name (first and last), date of birth, date and time of collection, and source of specimen.
Specimen Collection: Nasopharyngeal Swab

*General Information:* Obtain nasopharyngeal specimen by nasopharyngeal swab.

*Note:* Viruses are intracellular, so nasopharyngeal swab must contain an adequate number of cells for optimal results.

*Supplies Needed:*

- VTM (viral transport media) tube - obtain from Microbiology
- Mask, eye protection, and gloves
- Container of ice (not necessary if specimen is sent to laboratory immediately)
- Flocked nasopharyngeal swab
- Laboratory request form (properly labeled with patient identification label)

*Procedure:*
1. Apply mask, eye protection, and gloves.
2. Open VTM tube if obtaining viral specimen except for rapid influenza test.
3. Open flocked nasopharyngeal swab package, leaving paper covering on handle end to maintain sterility.
4. Insert swab into the nostril straight to the back of the throat—not upwards. See diagram below for proper insertion of swab. Rub gently to obtain nasopharyngeal cells and secretions.

![Diagram of nasopharyngeal swab](image)

5. Remove swab and immediately place in VTM tube. Break off excess swab handle to fit into VTM tube.
6. Label VTM tube (according to Bronson’s specimen labeling standard), and **immediately send to the laboratory** via pneumatic tube system.

*Note:* If specimen transportation is delayed, place specimen on ice.


*Note:* Once you click on the link, you will be directed away from the Bronson Test Catalog website. Please use the “Back” button to return to our website.