Acid Fast Bacilli (Mycobacteria/TB) Smear and Culture - AFB Culture

**Use**  
Isolation and identification of Mycobacteria species.

**Precautions & Labeling**  
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number).

**Special Instructions**  
It is recommended to collect 3 sputum specimens for AFB smear and culture in patients with clinical and chest x-ray findings consistent with tuberculosis. These specimens should be collected over an 8-24 hour period and should include at least one first morning specimen.

**Specimen Source**  
Blood, Body Fluids, Bone, Bone Marrow, Bronchial aspirates, Bronchoalveolar Lavage, Biopsies/Tissues, Gastric Lavage, Lymph Node, Sputum (Induced and Expectorated), Stool, Urine

**Specimen Collection**  

**Blood:** 1 to 5 mL of blood aseptically collected into a Myco-F-lytic bottle. Both fungal culture and AFB culture can be performed from one bottle. Collection is in the same manner as blood cultures.

**Body fluid**  
Collect as much fluid as possible aseptically. Recommended volume: >3ml, 10-15mL preferred

**Bone**  
Aseptically collected sample. Sample should be sent moist (not immersed in) few drops of sterile saline.

**CSF, Cerebral Spinal fluid**  
Collect as much fluid as possible aseptically. Recommended volume, 5 ml preferred (>0.5mL minimum)

**Bone Marrow**  
Collect as much as possible in an Isolator tube that is obtained from the Microbiology laboratory. Isolator tubes should be inverted 4 to 5 times to prevent clotting.

**Bronchial Aspirates, Bronchoalveolar Lavage, Fine-Needle Aspirates, and Lung Biopsy**  
Adherence to policies to cleanse the bronchoscope to avoid cross-contamination with AFB from proceeding patients is imperative. Do not allow the bronchoscope or patient sample to come in contact with tap water. Tap water may contain environmental AFB. Biopsy samples should be sent moistened with a few drops of sterile physiological saline.

**Gastric Lavage**  
5 to 10 ml of a fasting, early-morning specimens are recommended to obtain sputa swallowed during sleep. Sample must be sent to the laboratory within 2 hours where it will be adjusted to neutral pH by the addition of equal volume sodium citrate. For samples that will have delayed transport times of longer than 4 hours, sodium citrate may be obtained by calling the laboratory (410-601-5086). Mycobacterium will degrade over time exposed to low pH. Three samples collected on three consecutive days are recommended.

**Lymph Node**  
Collect the node or portion aseptically avoiding indigenous flora. Select caseous portion if available. Do not immerse in saline or other fluid. Do not wrap in gauze. Freezing decreases yield.

**Skin lesion**  
Biopsy – Biopsy or aspirate sent in a sterile container (syringe with Leur cap is acceptable for aspirates). For cutaneous ulcer, collect biopsy sample from the periphery of lesion
or aspirate material from under the margin of lesion. *Mycobacterium ulcerans*, which requires a prolonged incubation time, may need to be ruled out from infections obtained outside the country. Please inform the laboratory to rule out *M. ulcerans*.

**Sputum (induced preferred):** Three early morning samples should be collected on three consecutive days. Using a wet toothbrush and sterile water or saline, brush the buccal mucosa, tongue, and gums for 5 to 10 minutes prior to the procedure. Do not use tap water or toothpaste. Rinse the patient’s mouth thoroughly with sterile water or saline Using an ultrasonic nebulizer; have the patient inhale 20 to 30 mL of 3% NaCl solution.

**Stool:** at least 1 gram of sample should be submitted in a sterile container.

**Tissues:** minimum of 1 gram of tissue aseptically collected into a sterile container.

**Urine:** First morning, midstream sample, 40 mL minimum. Three samples collected on three consecutive days are recommended.

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<th>Collection Device</th>
<th>Respiratory specimens, stool, urine, body fluids, &amp; tissues: Sterile, leak-proof container</th>
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</thead>
</table>

| Transport Device  | Respiratory specimens, stool, urine, body fluids, & tissues: Sterile, leak-proof container |

**Blood:** Myco-F-lytic bottle. Do not refrigerate.

**Bone Marrow:** Isolator Tube that is obtained from the Microbiology laboratory.
Rejection Criteria
Swab specimens, Non-sterile containers, Leaky specimens, Excessive transport time,
Unlabeled/Mislabeled specimens, Frozen specimens, 24 hour collection of sputum or urine
samples, Urines collected in preservative, Samples submitted in formalin or fixative, Specimens
submitted without two patient identifiers

Storage and Stability
Specimens should be double bagged and delivered promptly (within 1 hour) to the laboratory. If
specimens cannot be delivered to the laboratory within 1 hour, specimens must be refrigerated
(unless otherwise indicated) during transport and storage.

<table>
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</tbody>
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Blue top rayon swab w/gel
Or
Sterile Leak Proof Container
Aerobic Wound Cultures - AERC

Use
Isolation and identification of bacterial isolates.

Precautions & Labeling
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number).

Specimen Source
Superficial wounds such as skin abrasions, lesions, abscesses, animal bites, skin biopsy and when specific aerobic organisms are suspected.

Specimen Collection
Collection prior to initiation of antimicrobial therapy is preferred.

Collection Device
White top rayon swab

Disinfect wound surface with 70% alcohol prior to collection to avoid contamination

Aspirate or sample the deepest portion of the lesion, avoiding contamination from the wound surface and pus

Transport Device
White top rayon swab

Rejection Criteria
Dry swabs
Expired swabs
Frozen specimens
Request for anaerobic culture on white top swab

Storage and Stability
Specimens should be double bagged and delivered promptly (within 1 hour) to the laboratory at room temperature.
**Affirm™ Bacterial Vaginitis/Vaginosis Panel**

*Candida species, Gardnerella vaginalis and Trichomonas vaginalis*

**Use**
DNA probe test intended for use in the detection and identification of *Candida species*, *Gardnerella vaginalis* and *Trichomonas vaginalis* nuclei acid in vaginal fluid specimens from patients with symptoms of vaginitis/vaginosis.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Vaginal Swab

**Collection Device**
**Affirm™ VPIII Ambient Temperature Transport System (ATTS)**

**Transport Device**
**Affirm™ VPIII Ambient Temperature Transport System (ATTS)**

**Rejection Criteria**
Specimens >72 hours old

Frozen Specimens

Specimens transported in systems other than **Affirm™ VPIII Ambient Temperature Transport System (ATTS)**

**Storage and Stability**
Specimens should be double bagged and delivered promptly to the laboratory at room temperature. Specimen is viable up to 72 hours at ambient temperatures (15-30°C).

**Anaerobic Wound Cultures - ANAC**

**Use**
Isolation and identification of bacterial isolates.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Deep wounds, abscess aspirates, surgical specimens, exudates (aspirated pus from deep wounds or...
Source: abscesses), drainages (JP drain, etc) & sterile body fluids

Specimen Collection: Collection prior to initiation of antimicrobial therapy is preferred

Disinfect wound surface with 70% alcohol prior to collection to avoid contamination

Aspirate or sample the deepest portion of the lesion, avoiding contamination from the wound surface and pus

It is recommended that if actual fluid can be obtained from the wound, the specimen should be submitted in a sterile leak-proof container and ordered as Drainage or Fluid Culture

Collection Device: Blue top rayon swab w/gel

Transport Device: Blue top rayon swab w/gel

Rejection Criteria: Dry swabs, Expired swabs, Frozen specimens, Request for anaerobic culture on white top swab, Sputum specimens

Swabs from the following sources: feces or rectal, throat, nasopharyngeal, vaginal, urines, ear, eye or superficial wounds

Storage and Stability: Specimens should be double bagged and delivered promptly to the laboratory at room temperature.

**Autopsy Culture - Pathologist request only**

Use: For detection of bacterial infection in autopsy specimens obtained by a pathologist

Precautions: All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source: Bronchial wash, fistual or intestinal contents, nose, decubitus ulcer (non-biopsy), prosthetic secretion, catheterized urine, gastric washings from non-neonates, stool, clean caught urine, ileostomy, throat, colostomy, mouth, or vagina

Specimen Collection: Specimen obtained during pathology autopsy

Collection Device: Sterile Leak Proof Container

Transport Device: Sterile Leak Proof Container

Rejection Criteria: Autopsy material without pathologist request

Storage: Specimens should be double bagged and delivered promptly to the laboratory at room temperature.

Written by: Christin Reuter

Date: 05/17/2017

Effective Date: 05/19/2017
### Bacterial Vaginosis/Vaginitis - See AffirmTM Bacterial Vaginosis/Vaginitis Panel

**Beta Strep Amplified (PCR) - Cepheid Xpert**

| Use | The Cepheid Xpert GBS performed on the GeneXpertR Dx System is a qualitative *in vitro* diagnostic test designed to detect Group B Streptococcus (GBS) DNA from vaginal/rectal swab specimens, using fully automated real-time polymerase chain reaction (PCR) with fluorogenic detection of the amplified DNA. |
| Precautions & Labeling | All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number). |
| Specimen Source | Vaginal/Rectal Swab |
| Specimen Collection | Use a sterile aerobic (white top) culture swab to sample the back of the throat (posterior pharynx), tonsillar crypts, and between the tonsillar pillars and uvula. Avoid touching the lips, cheeks, tongue and uvula. |
| Collection Device | Double Plastic Swabs - Red Cap |
| Transport Device | Double Plastic Swabs - Red Cap |
| Rejection Criteria | Dry swabs, Expired swabs, Swabs not submitted in correct swab |

### Beta Strep Screen - Beta Strep Culture

| Use | Isolation and identification of agents known to cause pharyngitis-group A streptococci, *Arcanobacterium haemolyticum* and groups C and G streptococci. |
| Precautions & Labeling | All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number) |
| Specimen Source | Throat |
| Specimen Collection | 1) Position the patient so the oral cavity is well lighted. Instruct the patient to breath deeply and depress the tongue with a tongue blade.  
2) Remove the swab and guide the swab to the posterior pharynx. Do not touch the tongue, cheeks, or uvula.  
3) Vigorously swab the posterior pharynx, tonsils, and inflamed areas to remove organisms adhering to the mucosal membrane. Having the patient say “Ah” lifts the uvula and decreases the gag reflex.  
4) Return the swab to the tube |
| Collection Device | White top rayon swab |
White top rayon swab

Dry swabs, Expired swabs, Frozen specimens, Request for anaerobic culture is inappropriate for this specimen source, Sputum specimens, Specimens >48 hours old

Specimens should be double bagged and delivered promptly to the laboratory at room temperature.

**Biopsy Culture for Bacteria, Fungi, and Mycobacteria**

**Orderables:** Biopsy Culture, Fungal Culture, AFB Culture

**Use**
For the detection of sepsis caused by bacteria, fungi or mycobacteria

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Tissue biopsy samples should be collected from areas within and adjacent to the area of infection. Large enough tissue samples should be collected to perform all tests required.

**Specimen Collection**
1) *Preferably collect specimen prior to initiation of therapy and only from wounds that are clinically infected or deteriorating or that fail to heal over a long period.*
2) Cleanse skin of mucosal surfaces
   a) For closed wounds and aspirates, disinfect as for a blood culture collection with 2% chlorhexidine or 70% alcohol followed by an iodine solution. Remove iodine with alcohol prior to specimen collection.
   b) For open wounds, debride, if appropriate, and thoroughly rinse with sterile saline prior to collection
3) Sample viable infected tissue, rather than superficial debris.
4) Avoid swab collection if aspirates or biopsies can be obtained

**Collection Device**
Sterile Leak Proof Container

**Transport Device**
Sterile Leak Proof Container

**Rejection Criteria**
Specimens submitted in formalin

For multiple requests but little specimen the physician will be contacted to determine which assays are most important and reject the others as QNS.

**Storage and Stability**
Specimen must be submitted to the laboratory immediately following collection. Within 30 minutes of collection.
### Use

**Isolation and identification of bloodstream infection**

Examine the blood culture bottles: Discard the bottles if any of the following is observed: Contamination, damage, or deterioration, Cloudy or turbid Media, More or significantly less than 2 inches of liquid media is inside the bottle, Media is expired, Sensor is the wrong color. The sensor is located on the bottom of the bottles and is used by the blood culture instrument to detect growth.

Mark bottles for appropriate specimen collection amount: The bottles are marked in 5 mL increments along the label. The only way to ensure that the appropriate amount of sample is collected is to mark off the broth level and indicate the fill level. 8-10 mL of blood per bottle is recommended for adults.

Collection of blood cultures should be performed prior to antimicrobial therapy. If unable to collect before antimicrobial therapy is administered, PLUS resin bottles should be used.

**Number and timing of blood cultures:** Most cases of bacteremia are detected by using three sets of separately collected blood cultures. More than three sets of blood cultures yield little additional information. Conversely, a single blood culture may miss intermittently occurring bacteremia and make it difficult to interpret the clinical significance of certain isolated organisms.

Fever of unknown origin: Obtain two separate blood cultures at least 1 hour apart. If these are negative, then 24-36 hours later, obtain two more blood cultures 1 hour apart. The yield of information beyond four cultures is usually minimal.

### Precautions & Labeling

**Order of draw:** Blood Culture tubes drawn before vacutainer tubes

**Specimen Source**

- Blood - Peripheral Venipuncture Site or Central Line

**Specimen Collection**

1. **Disinfect the bottle tops:** Remove the protective caps from the Bactec blood culture bottles and disinfect the top of each bottle septum with 70% alcohol and allow to air dry. Use 1 alcohol wipe for each bottle septum. Do Not Use Providine-Iodine on the Bactec blood culture bottles. After disinfecting the bottle septums, do not retouch the bottle tops.

2. **Identify the Patient:** Appropriate positive identification of patient and explanation procedure to patient is required before proceeding.

3. **Apply the Tourniquet:** Just prior to blood collection, apply the tourniquet 4-6 inches from insertion site. The tourniquet should restrict venous flow only, can be easily released, and never tight enough to restrict the arterial blood flow. Never allow the tourniquet to be left on longer than two minutes. NEVER probe blindly in a patient’s arm. Make only two attempts per person taking the blood.

4. **Skin Preparation:** Select the site of venipuncture. The practice of drawing blood for culture from catheters of the groin should never be performed when a peripheral (i.e., non-catheterized) site is available. Blood should be obtained from peripheral venous or arterial sites. Obtaining blood cultures from central venous catheters, arterial lines, and inguinal vessels increases the likelihood of obtaining a
false positive blood culture. Palpate for the site from which to draw the sample. Obtain 1 Chloroprep-Frepp. Place the sponge down onto the arm in the area of the intended puncture site and prime the sponge by pressing the sponge up and down on the arm until the alcohol can be seen on the skin. Scrub the arm vigorously with the Chloroprep sponge for 30 seconds. Allow to air dry completely for 30 seconds. DO NOT BLOW, FAN, OR WIPE THE AREA WITH GAUZE. DO NOT TOUCH THE AREA!

5. BD Butterfly Method: To be performed after inspecting bottles, disinfecting the tops, applying tourniquet, and skin preparation: Peel apart the package and remove blood collection set. Thread the Luer end of tubing set into Vacutainer holder. Remove sheath-covering needle at the wings.

b) Perform venipuncture.

c) Push and hold the Vacutainer holder over the top of the vial to puncture the septum. Collect blood in the aerobic bottle to the desired fill level on the vial. Inoculate the amount recommended on the bottle (8-10 cc for adults). The volume of the inoculum must never be less than 3.0 for the standard aerobic/F, standard anaerobic/F, aerobic plus, and anaerobic plus bottles. Pediatrics Plus bottles will except 1-3 ml.

d) Monitor to ensure proper blood flow and fill level. Always keep the culture bottles in the upright position while obtaining specimens.

e) Remove the holder from the vial. Immediately push and hold the holder onto the anaerobic bottle.

f) Collect blood to the desired fill level on the second vial. Remove the holder from the vial. Note: If more samples are required, additional tubes may be drawn at this time using the Vacutainer holder.

g) Thoroughly mix bottles to avoid clotting

h) Removal-- When the final vial or tube is filled, activate the safety on the butterfly. Apply pressure to the insertion site. Only after bleeding has completely ceased apply a 2x2 gauze and tape or Band-Aid.

i) Attach the patient label vertically (being careful not to completely cover the bottle barcode) to both blood culture bottles.
Standard Bottles BD BACTEC Blood Culture Bottles: The most commonly used bottles: media contained in blood culture bottles designed for optimal recovery of blood pathogens. One aerobic (blue label) and one anaerobic bottle (yellow label) are processed as a set for each blood culture test.

**Optimal volume: 8-10 ml blood**

Plus (Resin) Bottles: Resin beads in the media neutralize a wide variety of antibiotics, allowing growth of microorganisms that would not occur with conventional media. One aerobic (silver label) and one anaerobic (gold label) bottle are processed as a set for each blood culture test.

**Optimal volume: 8-10 ml blood**

Peds Plus (pink label): these bottles were designed to optimize detection of the most common pediatric pathogens in smaller volumes (<3mL) of blood. The medium also contains resins for antibiotic neutralization. Unless anaerobes are suspected, only the aerobic bottle should be submitted.

**Optimal volume: 1-3 ml blood**

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
**Myco-F-Lytic** – the bottles are an adjunct to aerobic blood culture media for optimal recovery of mycobacteria (AFB), yeast, and fungi from blood samples. 

*Available through the microbiology lab x24843 Optimal volume: 1-5 ml blood*

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**Transport Device**

- Appropriate blood culture collection device media seen above

**Rejection Criteria**

- Specimens should be double bagged and delivered promptly to the laboratory at room temperature. Blood Culture bottles should never be refrigerated.

**Bone Marrow Culture**

**Orderable: Red Cross Culture**

**Use**

- For detection and diagnosis of systemic bacterial infection

**Precautions & Labeling**

- All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

- Bone Marrow

**Specimen Collection**

- Collect 3-5ml of Bone Marrow in an Isolator Tube obtained from the Microbiology laboratory

**Collection Device**

- Isolator tube

**Transport Device**

- Isolator tube

**Rejection**

- Specimens submitted in non-approved collection containers

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*Written by: Christin Reuter  
Date: 05/17/2017  
Effective Date: 05/19/2017*
Bone marrow specimens should be delivered to the laboratory as soon as possible to not delay testing.

**Bordetella Pertussis Panel - Testing performed by Department of Health and Mental Hygiene**

**Use**
- Detection and isolation of Bordetella pertussis by PCR and Culture methods.

**Precautions & Labeling**
- All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number).

**Specimen Source**
- Nasal wash, nasal aspirate, or nasopharyngeal swab

**Specimen Collection**

PERTUSSIS KITS CAN BE OBTAINED BY CALLING THE MICROBIOLOGY LABORATORY AT 410-601-4843

1. Remove swabs from sterile package
2. Infants and young children should be supine. The infants/child's head should be held immobile by an assistant.
3. Pass two (2) swabs simultaneously through one nostril and gently along the floor of the nasopharyngeal cavity until it reaches the posterior nares. Note: DO NOT FORCE SWABS. Obstructions may be due to septal deviation.
4. Gently rotate both swabs together and leave in nasopharynx for 15 to 30 seconds to absorb mucus.
5. Repeat procedure through other nostril using the same two (2) swabs.
6. Place each swab into a separate tube of transport media, run the swab (streak) up the agar and then put the swab into the media.
7. Label both transport tubes with the patients name and barcode labels and place each tube back into a zip lock bag.
8. Please make sure that all forms are filled out thoroughly. For detailed instructions, see the reverse (back) of the requisition form.
9. Best results are obtained by transporting specimen at room temperature the same day taken.

Collection Device

Transport Device

Rejection Criteria Storage and Stability
Unlabeled specimens Improperly collected specimens Bordetella pertussis specimens should be sent to DHMH as soon as possible through the microbiology laboratory. If transportation is delayed, specimens should be kept in the 37°C incubator until the next courier day. Pick ups from DHMH are twice daily M-F.

Expired kits

Bronchial Culture w/gram smear

Written by: Christin Reuter Date: 05/17/2017
Effective Date: 05/19/2017
Use
Precautions & Labeling
Specimen Source
Specimen Collection

For isolation and identification of respiratory pathogens.
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)
Bronchial washing, Bronchial Lavage, Bronchial Brush

**Bronchial washing and Bronchial lavage (BAL) - Bronchial Culture**

1) Pass the bronchoscope transnasally or transorally in nonintubated patients or via the endotracheal tube in intubated patients.
2) Inject sterile nonbactetrostatic 0.85% NaCl (generally 5 to 20 mL aliquots) from a syringe through a biopsy channel of the bronchoscope.
3) Collect sample:
   a) Collect BAL sample by carefully wedging the tip of the bronchoscope into an airway lumen and instilling a large volume of sterile, nonbacterostatic (greater than 140 mL). The sample returned contains secretions distal to the bronchioles and alveoli.
   b) For bronchial washing, sample the major airways, the same area sampled by endotracheal aspirate.
4) Gently suction the recovered specimen into a sterile container before administering the next aliquot. In general 50% to 75% of the saline instilled in recovered in the lavage effluent. Keep aliquots separate.
5) Discard the initial fluid as contaminated and submit the rest for culture and staining. Aliquots from the same site may be combined for microbiology cultures and smear. Consult with the physician before combining aliquots for different sites.
6) Do not send these samples through the tube station.

**Bronchial brush - Bronchial Culture**

1) Instill a brush to collect cellular material from the airway wall. This is the best specimen for viral culture and cytology studies.
2) Only protected specimen brushes are acceptable for bacterial culture. Obtain by inserting a telescoping double catheter plugged with polyethylene glycol at The distal end (to prevent contamination of the bronchial brush) through a biopsy channel of the bronchoscope.
3) Collect in a sterile leak-proof cup.

**Bronchoscopy – collected by pulmonologist or other trained physician. - Bronchial Culture**

1) To reduce excess recovered blood, obtain bronchial wash and BAL samples before brushings or biopsies.
2) Avoid suctioning through the working channel before retrieving specimens to avoid contamination of the specimens with upper respiratory flora.
3) Avoid the injection of topical anesthetic agents as much as possible, as injection may lead to the contamination of the specimen. Aerosol application of anesthetics is preferred.
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<th>Rejection Criteria</th>
<th>Specimens submitted on swabs</th>
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</table>
| Storage and Stability | Specimens should be obtained before antibiotics/antimicrobials are administered.

**Bronchial (Quantitative) Culture w/ Gram Smear: See Quantitative Bronchial Culture**

**Catheter tip Culture**

**Use**
Isolation and identification of blood borne pathogens.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

<table>
<thead>
<tr>
<th>Specimen Source</th>
<th>Catheter tips</th>
</tr>
</thead>
</table>
| Specimen Collection | 1) Collect two blood cultures, one through the catheter and one from a peripheral site at the time the catheter is submitted for culture  
2) Clean the skin with 70% alcohol prior to catheter removal  
3) Observing aseptic technique, hold the exposed end of the catheter and carefully remove the catheter from the patient with a sterile instrument, taking care to avoid contact with the exposed skin. Holding the distal end over a sterile container, cut the tip with sterile scissors, dropping the last 2 to 3 inches into the sterile leak proof container.  
4) Avoid drying by sealing the container immediately  
| Collection Device | Sterile Leak Proof Container |

**Transport Device**
Sterile Leak Proof Container

| Rejection Criteria | Foley catheter tips submitted for culture  
Specimens submitted in formalin  
Transport the specimen to the laboratory as soon as possible at room temperature or refrigerated. Sample is stable up to 24 hours. |
|-------------------|--------------------------------------------------------|
| Storage and Stability | **Cerebrospinal Fluid Culture w/gram smear**  
Detection and isolation of a Central Nervous System infection  
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)  
If the patient is suspected of having Creutzfeld Jacob Disease (CJD) the laboratory must be notified beforehand |
| Written by: Christin Reuter | Date: 05/17/2017 |
| Effective Date: 05/19/2017 | |
Tube 2 is preferred, tube 3 or 4 is acceptable

At least 1 mL of cerebrospinal fluid

Collection of cerebrospinal fluid is a medical procedure that is performed by a physician guided by appropriate precautions

Lumbar puncture
1) Disinfect the puncture site with antiseptic solution and alcohol in a manner identical to phlebotomy skin preparation for blood culture to prevent specimen contamination and introduction of infection
2) Insert a needle with stylet at the L3-L4, L4-L5, or L5-S1 interspace. When the subarachnoid space is reached, remove the stylet; spinal fluid will appear in the needle hub
3) Measure the hydrostatic pressure with a manometer
4) Sequentially collect the CSF into five calibrated sterile tubes labeled 1 to 5
5) Physicians should be instructed to sequentially collect 2.0 mL of CSF into three calibrated tubes if only routine chemistry, bacteriology, and hematology are required.

Ommaya reservoir fluid or ventricular shunt fluid
1) Clean reservoir site with antiseptic solution and alcohol proper to removal of fluid to prevent introduction of infection
2) Remove fluid by aspiration of CSF from the Ommaya reservoir or by collection from the ventricular drain or shunt.
3) Sequentially collect 2.0 mL of CSF into three calibrated tubes if only routine chemistry, bacteriology, and hematology are required.

Collection Device
Lumbar puncture kit

Transport Device

Min volume for bacteriology testing: 1 mL.

An additional 3 mL of CSF needed for Mycobacteriology/AFB testing

Fungal cultures are not performed on CSF specimens. Fungi that cause CSF disease grow well on the media inoculated for routine culture.

Direct bacterial antigen testing is not performed on CSF specimens received in the laboratory.

If a Cryptococcal antigen test is ordered on CSF specimens submitted for diagnosis, back up cultures are performed on positive tests.

Deliver to the laboratory by foot as soon as possible. Do not tube the specimen. Do not refrigerate.

Chlamydia_Amplified (PCR)
Use
For detection of Chlamydia trachomatis by PCR methodology

Precautions & Labeling
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record)
number, or Social Security Number)

Specimen Source
Female Endocervix/Vagina Male Urethra

Urine Specimens

Specimen Collection Endocervical or Lesion Specimens:

Endocervical Swab Specimen Collection using BD ProbeTec Qx Collection Kit for

1. Remove the WHITE cleaning swab from packaging.
2. Using the polyester fiber-tipped cleaning swab with the white shaft, remove excess blood and mucus from the cervical os.
3. Discard the used cleaning swab.
4. Remove the PINK collection swab from packaging.
5. Insert the collection swab into the cervical canal and rotate for 15 – 30 s.
6. Withdraw the swab carefully. Avoid contact with the vaginal mucosa.
7. Uncap the Qx Swab Diluent tube.
8. Fully insert the collection swab into the Qx Swab Diluent tube.
9. Break the shaft of the swab at the score mark. Use care to avoid splashing of contents.
10. Tightly recap the tube.
11. Label the tube with two patient identifiers and date of collection.
12. Transport to laboratory.

Male Urethral Swab Specimen Collection using Male Urethral Specimen Collection Kit for the BD ProbeTec CT/GC Qx Amplified DNA Assays.

1. Remove the swab from packaging.
2. Insert the swab 2 – 4 cm into the urethra and rotate for 3 – 5 s.
3. Withdraw the swab.
4. Uncap the Qx Swab Diluent tube.
5. Fully insert the collection swab into the Qx Swab Diluent tube.
6. Break the shaft of the swab at the score mark. Use care to avoid splashing of contents.
7. Tightly recap the tube.
8. Label the tube with patient information and date/time collected.
9. Transport to laboratory.

Urine specimen collection For urine specimens, performance has been established with the Qx UPT and with urine collected in a sterile, plastic, preservative-free, specimen collection cup (i.e., neat urine without preservatives). Performance with other collection methods and collection devices has not been established.

1. The patient should not have urinated for at least 1 h prior to specimen collection.
2. Collect the specimen in a sterile, preservative-free specimen collection cup.
3. The patient should collect the first 20 – 60 mL of voided urine (the first part of the stream – NOT midstream) into a urine collection cup.
4. Cap and label with patient identification and date/time collected.

Collection Device
Male or Female ProbeTec Qx Collection Kit

Device
Sterile Leak Proof Container for urine specimens

Transport Device
Male or Female ProbeTec Qx Collection Kit
Rejection Criteria
Specimens submitted in collection containers other than the Male or Female ProbeTec Qx Collection Kits
Urine specimens submitted in grey top vacutainer tubes or non-sterile containers
Specimens received leaking

Storage and Stability
The endocervical and the male urethral swab specimens must be stored and transported to the laboratory and/or test site within 30 days after collection if kept at 2 – 30°C
Store and transport Qx UPT urine specimens at 2 – 30°C

**Clostridium difficile, EIA w/reflex to PCR**

**Use**
Determination of infection with toxin-producing *C. difficile*

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Only fresh liquid-semi solid stool specimens will be accepted for testing. Fresh specimens are those that have not sat at room temperature greater than 1 hour.

Fecal management system specimen collection:

**Stool Sampling**

If required, stool samples may be collected by using either of the following 2 methods:

- **Option A:** Irrigate silicone catheter and milk stool towards collection bag. Once patient has a bowel movement with an adequate amount of stool, disconnect the collection bag and collect required stool sample into an appropriate container from the bottom of the catheter. Snap collection bag back onto the catheter.

- **Option B:** Apply a new collection bag to the catheter. Once adequate amounts of fecal matter have been collected in the collection bag, remove the bag from the catheter and replace it with a new one. The filled collection bag may then be cut at the bottom to allow for collection of stool into an appropriate sample container. Dispose of the used collection bag.

**Specimen Collection Device**
Obtain specimen prior to *C. difficile* directed antibiotic therapy

**Sterile Leak Proof Container**

**Transport Device**

Stool in a Sterile Leak Proof Container

Stool in Cary-Blair transport medium
Rejection Criteria
Specimens submitted in formalin or alcohol-based fixatives will not be accepted.
All hard or formed stools must be canceled and not tested
Specimens contaminated with urine
Rectal swabs

Note: Positive test results for Clostridium difficile do not correlate well with disease in young children. Follow manufacturer guidelines for guidance on the testing of pediatric patients.

Storage and Stability
Specimens should be stored at 2-8°C for up to 72 hours. The stool should be sent to the laboratory as soon as possible for testing.

Cryptococcal Antigen

Use
Determination of infection caused by Cryptococcus neoformans

Precautions
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Cerebrospinal fluid or Serum (non-hemolyzed)

Collection Device
Lumbar puncture kit or venipuncture technique

Transport Device
Serum – Red top tube (no additive)

Rejection Criteria
Specimens other than CSF or Serum

Additional Information
Back up CSF Cultures should be ordered and performed on positive cryptococcal antigen tests.

Storage and Stability
Deliver to the laboratory as soon as possible. Prompt deliver ensures rapid testing procedures.
If a delay is encountered in specimen processing, storage at 2-8 °C for up to 72 hours is permissible. Specimens may be stored for longer periods at < -20°C, provided they are not repeatedly thawed and refrozen. Specimens in transit should be maintained at 2-8°C or < -20°C.

CSF Culture - See Cerebrospinal Fluid Culture

Drainage Culture w/Gram Smear

Use
Determination of infection from sterile drainage specimens

Precautions
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Drainages from abscesses, JP drains, abdominal drainages

Collection Device
Sterile Leak Proof Container

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
**Transport Device**

Stool in a Sterile Leak Proof Container

Or

Red Top tubes with no additives or serum separator

**Rejection Criteria**

Swab samples of drainage material are not recommended

**Storage and Stability**

Transport to the laboratory as soon as possible. Do not delay transport.

**Ear Culture w/Gram Smear**

- **Use**: Determine infection causing otitis media
- **Precautions & Labeling**: All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)
- **Specimen Source**: Ear swab
- **Specimen Collection**: Ear cultures including orbital aspirate or biopsy, external ear, and tympanocentesis fluid
- **Collection Device**: White top rayon swab
- **Transport Device**: Sterile leak proof container for fluid samples

**Or**

Fluids in Sterile Leak Proof Container

Written by: Christin Reuter  
Date: 05/17/2017  
Effective Date: 05/19/2017
Rejection Criteria
N/A

Storage and Stability
Transport to the laboratory as soon as possible. Do not refrigerate.

### Epidemiology Culture - Testing performed at Department of Health and Mental Hygiene – ordered by the Microbiology laboratory

**Use**
For the detection of Influenza A & B by PCR methods

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Nasopharyngeal aspirate or swab

**Specimen Collection**

1. **Nasopharyngeal swab**
   - With the patient’s head tilted back, remove the swab and guide the swab up through the nasal passages to the posterior nasopharynx.
   - Return the swab to the tube.

2. **Nasopharyngeal aspirate NPak Method**
   1. Position the patient - The patient should lie on their back with neck extended to allow pooling of the aspirate in the nasopharynx.
   2. Attach the leur catheter and (for regular culture) generously lubricate. RSV and influenza testing is affected by lubricant in the sample (increases indeterminate results); do not use generous amounts of lubricant for these samples.
   3. Expel the appropriate volume of saline from the syringe according to age or patient comfort.
      - a) 0-3 years old: 1 cc
      - b) 3-10 years old: 2 cc
      - c) 10 – adult: 3 cc
   4. Instruct the patient to hold their breath. Advance the catheter along the floor of the nose to the age appropriate marking that is on the catheter or until resistance is met abutting the nasopharynx.
   5. The syringe plunger is then pushed and pulled. The aspirate sample is adequate if at least 1cc is collected.
   6. For RSV, influenza, or viral culture, place 2-3 cc of the sample in the appropriate transport media (BD UVT

3. **Non-NPak Method**
   1. Attach mucus trap to suction outlet and sterile catheter, leaving wrapper on catheter
   2. Without applying suction and with the patient’s head tilted approximately 70°, remove the wrapper and insert the catheter into the nose, directed posteriorly and toward the opening of the external ear.
   3. Apply suction as follows:

   **Patient Age Catheter Size* (French) Suction Pressure:**
   
<table>
<thead>
<tr>
<th>Patient Age</th>
<th>Catheter Size</th>
<th>Suction Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premature infant</td>
<td>6</td>
<td>80-100 mmHg</td>
</tr>
<tr>
<td>Infant</td>
<td>6</td>
<td>80-100 mmHg</td>
</tr>
<tr>
<td>Toddler/Preschooler</td>
<td>8</td>
<td>100-120 mmHg</td>
</tr>
<tr>
<td>School age</td>
<td>8</td>
<td>100-120 mmHg</td>
</tr>
<tr>
<td>Adolescent/Adult</td>
<td>8</td>
<td>100-120 mmHg</td>
</tr>
</tbody>
</table>

   *The depth of insertion necessary to reach the posterior pharynx is equal to the distance between the anterior nares and the external opening of the ear. The catheter should remain in the nasopharynx for a minimal period of time, not to exceed 10 seconds.

   4. Using a rotating motion, slowly withdraw the catheter. Hold the trap upright to prevent secretions from
going into the pump.
5) Rinse the catheter with approximately 2.0 mL physiologic saline.
6) Place 2-3 cc of the sample in the appropriate transport media

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>BD UVT – Universal Viral Transport</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Transport Device</th>
<th>BD UVT</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rejection Criteria</th>
<th>Specimens not submitted in BD UVT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage and Stability</td>
<td>Deliver to the laboratory as soon as possible. Prompt deliver ensures rapid testing procedures</td>
</tr>
<tr>
<td></td>
<td>If a delay is encountered in specimen processing, storage at 2-8 °C for up to 72 hours is permissible.</td>
</tr>
</tbody>
</table>

**Eye Culture w/ gram smear**

<table>
<thead>
<tr>
<th>Use</th>
<th>Determination of bacterial infection of the eye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Conjunctival or corneal scrapings</td>
</tr>
</tbody>
</table>

**Eye Culture w/ gram smear**

**Bacterial and Fungal Ocular Cultures**

**Conjunctiva and lid margin**

1) Roll a sterile, pre-moistened cotton or calcium alginate swab, using a new swab for each of the following body sites:
   a) right lid

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
b) right conjunctiva
c) left lid
d) left conjunctiva

2) Inoculate the following media. On agar plates, use an “R” to designate the right lid, “L” to designate the left lid, horizontal squiggled line beneath the R to designate the right conjunctiva, and vertical squiggled line beneath the L to designate the left conjunctiva:
a) Trypticase soy agar (TSA) with 5% sheep’s blood agar plate - 2nd plate may be submitted for anaerobic incubation
b) Chocolate agar plate
c) Thioglycolate broth
d) Sabouraud Dextrose plate – for fungal culture only

Conjunctiva scraping for smear preparation:
a) Label 4 clean glass slides with the patient full name and date of birth. Label two with “left conj” and the other two with “right conj”.
b) Collect then smear the sample making a 1cm circle in the middle of the slide:
(a) Instill 1 or 2 drops proparacaine hydrochloride
(b) Using a sterile Kimura spatula, gently scrape across the lower right tarsal conjunctiva
(c) Place the material on the glass slide labeled “right conj”, repeat for the second slide.
(d) Using a sterile Kimura spatula, gently scrape across the lower left tarsal conjunctiva
(e) Place the material on the glass slide labeled “left conj”, repeat for the second slide.
(f) Place the slides in a slide holder and submit to the microbiology lab as soon as possible.

Corneal scrapings
1) Instill 1 or 2 drops proparacaine hydrochloride, if not already administered
2) Using a sterile Kimura spatula or 15 blade, use short firm strokes in one direction to obtain corneal scrapings from the advancing edge of the ulcer. Obtain multiple areas.
3) Obtain 3-4 scrapings per cornea
4) Inoculate a trypticase soy agar with 5% sheep’s blood agar plate and a chocolate agar plate making one row of “C” formations for each scraping.

c. Corneal scraping for smear preparation may be obtained.
1) Label 4 clean glass slides with the patient name and date of birth. Label two with “left cornea” and the other two with “right cornea”.
2) Collect then smear the sample making a 1cm circle in the middle of the slide:
a) Instill 1 or 2 drops proparacaine hydrochloride, if not already administered.
b) Using a sterile Kimura spatula or 15 blade, gently scrape across advancing edge of the corneal ulcer.

Preseptal, orbital cellulitis, dacryoadenitis, and canaliculitis
1. Cleanse skin with alcohol or tincture of iodine or iodophor and collect sample
1. Preseptal cellulites
   a) Cleanse skin with alcohol and tincture of iodine or iodophor
   b) Collect purulent material by syringe or stab incision in the upper or lower lid.

2. Orbital cellulitis
   a) Cleanse skin with alcohol and tincture of iodine or iodophor
   b) Collect aspirate or biopsy of the wound.

3. Dacryoadenitis
   a) Cleanse skin with alcohol and tincture of iodine or iodophor
   b) Collect a specimen of purulent discharge by using a swab (see conjunctivitis collection)
   c) Do not perform a needle aspiration of the lacrimal gland.

4. Canaliculitis
   1) Compress the inner aspect of the eyelid to express pus (see conjunctivitis collection)
   b. Inoculate the following media. On agar plates, use an “R” to designate the right lid, “L” to designate the left lid, horizontal squiggled line beneath the R to designate the right conjunctiva, and vertical squiggled line beneath the L to designate the left conjunctiva:
      1) Trypticase soy agar (TSA) with 5% sheep’s blood agar plate
         - 2nd plate may be submitted for anaerobic incubation
      2) Chocolate agar plate
      3) Thioglycolate broth
      4) Sabouraud Dextrose plate – for fungal culture only

Dacryocystitis
Exudate in a sterile container. Do not perform a needle aspiration of the lacrimal gland. Press the lacrimal sac to remove exudates material for culture and smear or collect exudates in a needle and syringe.

Bacterial Endophthalmitis
Vitreous fluid or paracentesis of the anterior chamber by needle aspiration. Submit fluid in a sterile container.

Donor Cornea
Using aseptic technique submit donor cornea in a white top rayon swab.
Inoculated agar plates, thioglycolate broth and/or prepared slides

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Transport Device</th>
<th>Chocolate agar</th>
<th>Blood Agar</th>
</tr>
</thead>
</table>

Written by: Christin Reuter  
Date: 05/17/2017  
Effective Date: 05/19/2017
Saborose dextrose agar

MacConkey Agar

For non-ophthalmology culture collection:

White top rayon swab

Rejection Criteria
Unlabeled plates/tubes/slides
Specimens submitted on/in expired media

Storage and Stability
Specimens should be delivered to the laboratory to ensure prompt incubation of inoculated media.

<table>
<thead>
<tr>
<th>Fecal Leukocytes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td><strong>Precautions &amp; Labeling</strong></td>
</tr>
<tr>
<td><strong>Specimen Source</strong></td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
Collection Device: Collect stool in a sterile leak proof container

Sterile Leak Proof Container

Rejection Criteria: Rectal swabs
- Stool submitted in preservative
- Frozen fecal specimens
- Specimens contaminated with urine
- Diapers are not acceptable.
- Stool should not be taken from the toilet bowl.

Storage and Stability: Samples should be submitted to the laboratory in a timely manner to ensure prompt staining of stool material for examination under the microscope.

Fluid Culture w/ Gram Smear

<table>
<thead>
<tr>
<th>Use</th>
<th>Determination of infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Sterile body fluids including Amniotic, Synovial, Pleural, Pericardial, and Peritoneal Fluid</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>Note: Use care to avoid contamination with commensals microbiota</td>
</tr>
</tbody>
</table>

1) Clean the needle puncture site with alcohol, and disinfect it with an iodine solution to prevent introduction of specimen contamination of infection of patient.
2) Aseptically perform percutaneous aspiration with a syringe and needle to obtain pleural, pericardial, peritoneal, or synovial fluid. Use safety devices to protect from needle exposure.
3) Immediately place a portion of the fluid in sterile collection tubes (see pictures to the right).

Collection Device: Sterile Leak Proof Container

Sterile Leak Proof Container(s)

Or
Or

Fungal Culture

Use
Detection of fungal infections

Precautions
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Respiratory, biopsy, fluid, drainage bone marrow, urine and other miscellaneous sources

Specimen Collection
Biliary Abscesses: Using a sterile sharp-pointed scalpel, express pus, and place it into a sterile container.

Blood: Fill one Myco-F-Lytic bottle with 1-5 ml blood. Myco-F-Lytic bottles can be used for both AFB and Fungal culture. Deliver to the lab ASAP for processing.

Body Fluid (e.g. Pleural, Synovial, and Peritoneal): Collect a minimum of 2 ml in a sterile container. Swabs are not the specimen of choice for this test.

Bone Marrow: Aspirate approximately 3-5ml of bone marrow in an Isolator tube that is obtained from the Microbiology laboratory. Isolator tubes should be inverted 4 to 5 times to prevent clotting.

Respiratory Specimens (Tracheal Aspirates, Lung Biopsy Material, and Bronchoscopy Specimens): Collect specimens aseptically, and deliver to the lab ASAP for examination and processing.

Pus, Exudate, And Drainage: Using a sterile needleless system and syringe, aspirate material from undrained abscesses. Place the material in a sterile container. Aerobic Swabs transport media are least preferred collection device.

Sputum: (tracheal aspirate, bronchial lavage) -- Sputum should be fresh. Collect in the early morning. Have patient remove dentures and rinse mouth. Sputum should be a deep cough, induced by aqueous aerosol. Collect 5 to 10 ml in sterile container.
**Stool:** Collect in a sterile container. Swabs are not the specimen of choice for this test.

**Tissue:** Collect tissue aseptically from the center and edge of lesion and place in a sterile container. The tissue may be placed between moist gauze squares with a small amount of sterile water or 0.85% NaCl to keep tissue from drying out, and send immediately to the laboratory. Keep refrigerated for no more than 8 hrs at 4°C until processed.

**Urine:** Early-morning aseptically collected catheterized urine is the most appropriate specimen for the diagnosis of mycoses of the urinary tract. Clean-catch (midstream) specimens will be accepted when aspiration or cystoscopy cannot be done.

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Sterile Leak Proof Container</th>
<th>Transport Device</th>
<th>Sterile Leak Proof Container</th>
</tr>
</thead>
</table>

**Rejection Criteria**
- Unlabeled specimens
- Fungal cultures are not performed on CSF specimens: Fungal cultures on CSF are cancelled with the following comment: Cancelled by Lab-media used in routine culture can support the growth of yeast.

**Storage and Stability**
- Specimens should be delivered in sterile containers to the laboratory within 2 hours to the laboratory.
- Specimens should be sent in sterile, humidified, leak proof containers. Anaerobic transport media and media which does not allow the complete recovery of the specimen should be avoided. Only dermatological specimens should be transported in a dry container.

- Swabs are not encouraged. For specimens, which cannot be collected easily by other means (e.g. ear canal, nasopharynx, throat, vagina, and cervix), swabs are accepted.

- Prolonged specimen storage may decrease recovery. Studies have shown decreased viability for *Histoplasma capsulatum*, *Coccidioides immitis*, *Blastomyces dermatitidis*, *Rhizopus species*, and *Aspergillus fumigatus* stored at room temperature or dry ice. The effect that refrigeration has on fungal specimens has not been well studied. If processing is to be delayed for more than several hours, store the specimens under refrigeration at 4°C with the following exceptions: store blood and CSF at 30-37°C and store dermatological specimens at 15 to 30°C. Urine may be stored at 4°C for 12-14 hours.

**Fungal Blood Culture**

<table>
<thead>
<tr>
<th>Use</th>
<th>Detection of blood borne fungal infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Blood</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>Fill one Myco-F-Lytic bottle with 1-5 ml blood. Myco-F-Lytic bottles can be used for both AFB and Fungal culture.</td>
</tr>
</tbody>
</table>

Written by: Christin Reuter

Date: 05/17/2017

Effective Date: 05/19/2017
**Transport Device**

**Myco-F-Lytic bottle**

- Available through the microbiology lab x24843 Optimal volume: 1-5 ml blood

<table>
<thead>
<tr>
<th>Rejection Criteria</th>
<th>Specimens submitted for fungal blood culture not in correct collection device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage and Stability</td>
<td>Specimens should be delivered the Myco-F-Lytic bottle to the laboratory within 2 hours to the laboratory.</td>
</tr>
</tbody>
</table>

**Fungal Dermatophyte Culture**

<table>
<thead>
<tr>
<th>Use</th>
<th>Detection of fungal infections caused by dermatophytes localized to Hair, Skin and Nails</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Nail, skin scrapings and nail clippings/scrapings</td>
</tr>
<tr>
<td>Specimen</td>
<td><strong>Hair</strong>: Cleaning of scalp not required. Select infected areas, with forceps epilate at least 10 infected broken hairs. For hairs broken at scalp level, use a scalpel or a knife and scrape. Place hair in a clean, sealed petri-dish or sterile cup.</td>
</tr>
<tr>
<td><strong>Nail</strong>: Clean nail with 70% alcohol. For a specimen of the dorsal plate, scrape the outer surface and discard the scrapings. Then scrape the deeper portion for a specimen. Remove a portion of debris from under the nail with a scalpel. Collect the whole nail or nail clippings. Place material in a clean sealed Petri dish or sterile cup.</td>
<td></td>
</tr>
<tr>
<td><strong>Skin and interspaces</strong>: Wipe lesions and interspaces between the toes with alcohol sponge or sterile water. Scrape at the edge of lesion with a sterile scalpel. Place scrapings in a clean, sealed Petri dish or sterile cup.</td>
<td></td>
</tr>
<tr>
<td>Collection Device</td>
<td>Sterile Leak Proof Container</td>
</tr>
<tr>
<td>Transport Device</td>
<td>Dry-Sterile Leak Proof Container</td>
</tr>
</tbody>
</table>
## Rejection Criteria
Specimens submitted for dermatophyte testing other than hair, skin and nails

## Storage and Stability
Transport to the laboratory as soon as possible. Do not refrigerate.

### Gastric Occult Blood/pH - Gastroccult®

<table>
<thead>
<tr>
<th>Use</th>
<th>Gastroccult® is a rapid screening test designed for detecting the presence of occult blood and determining the pH of gastric aspirate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Gastric secretion</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>Gastric aspirate obtained by nasogastric intubation</td>
</tr>
<tr>
<td>Collection Device</td>
<td>Sterile Leak Proof Container</td>
</tr>
<tr>
<td>Transport Device</td>
<td>Sterile Leak Proof Container</td>
</tr>
</tbody>
</table>

## Rejection Criteria
Non gastric secretion specimens

## Storage and Stability
Testing should be performed immediately after specimen collection. Delivery to the laboratory as soon as possible.

### GC Culture

<table>
<thead>
<tr>
<th>Use</th>
<th>For detection and isolation of <em>Neisseria gonorrhoeae</em> by bacterial culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Genital sources, eye, throat, sterile fluids, CSF and other miscellaneous sources</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>Collect according to body site/source</td>
</tr>
<tr>
<td>Collection Device</td>
<td>White top rayon swab</td>
</tr>
<tr>
<td>Transport Device</td>
<td>White top rayon swab</td>
</tr>
</tbody>
</table>

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
Rejection Criteria
Specimens submitted in viral media that is intended for PCR testing

Storage and Stability
Transport to the laboratory as soon as possible. Do not refrigerate.

### Genital Culture inc. Beta Strep

| **Use** | Determination of infectious agents in genital specimens |
|**Precautions & Labeling** | All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number) |
|**Specimen Source** | Amniotic, Bartholin cyst, cervical specimen, culdocentesis, endometrium, fallopian tube, pelvic cavity, skene’s gland, vaginal specimen, vulva, epididymis, testicular fluid, penis, or prostate |
|**Female Specimens** |

#### Amniotic Fluid - Fluid Culture
1) Aspirate fluid by catheter at cesarean section or at amniocentesis

#### Bartholin cyst - Anaerobic Wound Culture
1) Decontaminate the skin with povidone-iodine, 3% chloroxylenol, and 3% cocamidopropyl PG-dimonomium chloride phosphate or other surgical disinfectant, and aspirate material from the duct(s).
Note: Bartholin glands are small mucus secreting glands located beneath the posterior portion of the labia majora

#### Cervical - Genital Culture
1) Clear away vaginal mucus and exudates with large swab. Moisten speculum with warm water, not lubricant, which can be antibacterial. Using a small swab inserted through a speculum, sample endocervical canal. Avoid the vaginal walls during collection

#### Endometrium - Anaerobic Wound Culture
1) Insert endometrial suction curette or catheter protected Dacron swab through the cervical os and transfer beyond the cervical opening into the uterine cavity.
2) Collect sample within the cavity.

#### Fallopian tubes and pelvic cavity - Biopsy Culture
1) Obtain aspirates and biopsy samples during laparoscopy. Biopsies yield better diagnostic specimens

#### Vagina - Genital Culture
1) Collect fluid from the vagina with a white top rayon swab

#### Vaginal/Rectal Swab for GBS - Beta Strep Culture (enter genital source when ordering)
1) One or two swabs of the vaginal introitus and anorectum.
Note: Cervical cultures are not recommended; a speculum should not be used for culture collection.

#### Vulva - Yeast Culture, HSV Culture, or Genital Culture (r/o Haemophilus ducreyi)
1) Collect only if pain, erythema or edema is present
2) Clean the surface of the lesion with 0.85% NaCl and collect by one of the following methods:
   a) Sample exudate or area of erythema for yeast culture
b) If there is a vesicle present, collect for HSV culture
   i) Unroof vesicle
   ii) Collect fluid with a sterile swab or aspirate vesicular fluid
   iii) Then scrape the case of the vesicle with a sterile scalpel blade and collect specimen with a Dacron swab by vigorously rubbing the base of the vesicle

   Note: If there is crust on the lesion, gently remove it.

**Male Specimens**

**Epididymitis or testicular abscess - Genital Culture**
1) The specimen of choice for diagnosis of an infected epididymis is a urethral swab
2) Fluid/pus will only be collected if there is a testicular abscess. Fluid/pus is aspirated from the abscess after disinfecting the scrotal skin.

**Penile lesion or vesicle - HSV Culture or Genital Culture (r/o Haemophilus ducreyi)**
1) Clean the surface of the lesion with 0.85% NaCl and collect by one of the following methods:
   a) If there is a vesicle present, collect for HSV Culture
      i) Unroof vesicle
      ii) Collect fluid with a sterile swab or aspirate vesicular fluid
      iii) Then scrape the case of the vesicle with a sterile scalpel blade and collect specimen with a Dacron swab by vigorously rubbing the base of the vesicle

   Note: If there is crust on the lesion, gently remove it.

   **Collection Device**
   Sterile Leak Proof Container

   **Transport Device**
   White top rayon swab

   Or

   **Sterile Leak Proof Container**

   Or

   **White top rayon swab**

   Or for HSV Culture:
   M4 Viral Transport Media
For Amniotic Fluid

For anaerobic specimens
Blue top rayon swab w/gel

Rejection Criteria
- Leaking specimens
- Unlabeled specimens
- Specimens submitted in formalin
- Specimens submitted for genital culture that are not an approved site

Storage and Stability
- Amniotic fluid should be submitted in light protected tubes.
- All specimens should be delivered to the laboratory as soon as possible at room temperature

Gonorrhea Amplified PCR

<table>
<thead>
<tr>
<th>Use</th>
<th>For detection of <em>Neisseria gonorrhoeae</em> by PCR methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Female Endocervix/Vagina Male UrethraUrine Specimens</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td><strong>Endocervical Swab Specimen Collection</strong> using BD ProbeTec Qx Collection Kit for Endocervical or Lesion Specimens:</td>
</tr>
<tr>
<td></td>
<td>1. Remove the WHITE cleaning swab from packaging.</td>
</tr>
<tr>
<td></td>
<td>2. Using the polyester fiber-tipped cleaning swab with the white shaft, remove excess blood and mucus from the cervical os.</td>
</tr>
<tr>
<td></td>
<td>3. Discard the used cleaning swab.</td>
</tr>
<tr>
<td></td>
<td>4. Remove the PINK collection swab from packaging.</td>
</tr>
<tr>
<td></td>
<td>5. Insert the collection swab into the cervical canal and rotate for 15 – 30 s.</td>
</tr>
<tr>
<td></td>
<td>6. Withdraw the swab carefully. Avoid contact with the vaginal mucosa.</td>
</tr>
<tr>
<td></td>
<td>7. Uncap the Qx Swab Diluent tube.</td>
</tr>
<tr>
<td></td>
<td>8. Fully insert the collection swab into the Qx Swab Diluent tube.</td>
</tr>
<tr>
<td></td>
<td>9. Break the shaft of the swab at the score mark. Use care to avoid splashing of...</td>
</tr>
</tbody>
</table>
contents.
10. Tightly recap the tube.
11. Label the tube with two patient identifiers and date of collection.
12. Transport to laboratory.

**Male Urethral Swab Specimen Collection using** Male Urethral Specimen Collection Kit for the BD ProbeTec CT/GC Qx Amplified DNA Assays.
1. Remove the swab from packaging.
2. Insert the swab 2 – 4 cm into the urethra and rotate for 3 – 5 s.
3. Withdraw the swab.
4. Uncap the Qx Swab Diluent tube.
5. Fully insert the collection swab into the Qx Swab Diluent tube.
6. Break the shaft of the swab at the score mark. Use care to avoid splashing of contents.
7. Tightly recap the tube.
8. Label the tube with patient information and date/time collected.
9. Transport to laboratory.

**Urine specimen collection** For urine specimens, performance has been established with the Qx UPT and with urine collected in a sterile, plastic, preservative-free, specimen collection cup (i.e., neat urine without preservatives). Performance with other collection methods and collection devices has not been established.
1. The patient should not have urinated for at least 1 h prior to specimen collection.
2. Collect the specimen in a sterile, preservative-free specimen collection cup.
3. The patient should collect the first 20 – 60 mL of voided urine (the first part of the stream – NOT midstream) into a urine collection cup.
4. Cap and label with patient identification and date/time collected.

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Male or Female ProbeTec Qx Collection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Device</td>
<td>Sterile Leak Proof Container for urine specimens</td>
</tr>
<tr>
<td>Male or Female ProbeTec Qx Collection Kit</td>
<td></td>
</tr>
</tbody>
</table>

**Rejection Criteria**
- Specimens submitted in collection containers other than the Male or Female ProbeTec Qx Collection Kits
- Urine specimens submitted in grey top vacutainer tubes or non-sterile containers
- Specimens received leaking

**Storage and Stability**
- The endocervical and the male urethral swab specimens must be stored and transported to the laboratory and/or test site within 30 days after collection if kept at 2 – 30°C
- Store and transport Qx UPT urine specimens at 2 – 30°C

**Gram Stain**
- Use: Presumptive diagnosis of infectious agents as serves as an indicator of specimen quality
- Precautions: All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)
- Specimen Source: Gram stains are generally included in appropriate cultures however there are rare instances that a separate gram stain be ordered.
Specimen Collection
Collected according to appropriate body site

Collection Device
Collection device appropriate for specimen source

Transport Device
Transport device appropriate for specimen source

Rejection Criteria
Gram stains ordered separately on cultures that include a gram stain

Storage and Stability
Gram stains should be performed upon culture receipt in the laboratory

<table>
<thead>
<tr>
<th>Influenza Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
</tr>
<tr>
<td>Precautions &amp; Labeling</td>
</tr>
<tr>
<td>Specimen Source</td>
</tr>
</tbody>
</table>
| Specimen Collection | **Nasopharyngeal swab**  
1) With the patient’s head tilted back, remove the swab and guide the swab up through the nasal passages to the posterior nasopharynx.  
2) Return the swab to the tube. |

**Nasopharyngeal aspirate NPak Method**
1) Position the patient - The patient should lie on their back with neck extended to allow pooling of the aspirate in the nasopharynx.  
2) Attach the leur catheter and (for regular culture) generously lubricate. RSV and influenza testing is affected by lubricant in the sample (increases indeterminate results); do not use generous amounts of lubricant for these samples.  
3) Expel the appropriate volume of saline from the syringe according to age or patient comfort.  
   a) 0-3 years old: 1 cc  
   b) 3-10 years old: 2 cc  
   c) 10 – adult: 3 cc  
4) Instruct the patient to hold their breath. Advance the catheter along the floor of the nose to the age appropriate marking that is on the catheter or until resistance is met abutting the nasopharynx.  
5) The syringe plunger is then pushed and pulled. The aspirate sample is adequate if at least 1cc is collected.  
6) For RSV, influenza, or viral culture, place 2-3 cc of the sample in the appropriate transport media (BD UVT) |

**Non-NPak Method**
1) Attach mucus trap to suction outlet and sterile catheter, leaving wrapper on catheter  
2) Without applying suction and with the patient’s head tilted approximately 70°, remove the wrapper and insert the catheter into the nose, directed posteriorly and toward the opening of the external ear.  
3) Apply suction as follows:  

| Patient Age Catheter Size* (French) Suction Pressure: |
|-----------------|-----------------|
| Patient Age | Catheter Size | Suction Pressure |
| Premature infant: | 6 | 80-100 mmHg |
| Infant | 6 | 80-100 mmHg |
| Toddler/Preschooler | 8 | 100-120 mmHg |
| School age | 8 | 100-120 mmHg |
| Adolescent/Adult | 8 | 100-120 mmHg |

Written by: Christin Reuter  
Date: 05/17/2017  
Effective Date: 05/19/2017
*The depth of insertion necessary to reach the posterior pharynx is equal to the distance between the anterior nares and the external opening of the ear. The catheter should remain in the nasopharynx for a minimal period of time, not to exceed 10 seconds.

4) Using a rotating motion, slowly withdraw the catheter. Hold the trap upright to prevent secretions from going into the pump.
5) Rinse the catheter with approximately 2.0 mL physiologic saline.
6) Place 2-3 cc of the sample in the appropriate transport media

Collection Device | BD UVT – Universal Viral Transport

Transport Device | BD UVT

Rejection Criteria | Specimens not submitted in BD UVT
Storage and Stability | Deliver to the laboratory as soon as possible. Prompt deliver ensures rapid testing procedures
If a delay is encountered in specimen processing, storage at 2-8 °C for up to 72 hours is permissible.

<table>
<thead>
<tr>
<th>Isolation Culture</th>
<th>Synonym: Surveillance Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
<td>To detect the presence of Methicillin Resistant Staphylococcus aureus (MRSA) quickly and accurately from appropriate surveillance culture sites</td>
</tr>
<tr>
<td>Precautions &amp; Labeling</td>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td>Specimen Source</td>
<td><strong>Routine surveillance for MRSA</strong>: nasal swab (anterior nares). In addition to a nasal swab, axillary (armpit) and groin cultures may be collected on occasion.</td>
</tr>
</tbody>
</table>

Written by: Christin Reuter
Effective Date: 05/19/2017
Date: 05/17/2017
**Outbreak investigation for MRSA**: nasal swab, groin, surgical wounds, and decubitus ulcers. Nasal swabs from hospital staff may also be submitted.

Specimen Collection: Using a sterile swab from aerobic culturette, insert swab 2 cm. into one nare, rotate swab against the anterior mucosa for 3 seconds. Repeat using the same swab and procedure in the other nare.

Collection Device: White top rayon swab

**KOH Smear**

Use: 10% KOH is used as a rapid detection method for fungal elements.

Precautions & Labeling: All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source: Hair, nail, skin and sputum

Specimen Collection:

**Hair**: Cleaning of scalp not required. Select infected areas, with forceps epilate at least 10 infected broken hairs. For hairs broken at scalp level, use a scalpel or a knife and scrape. Place hair in a clean, sealed petri-dish or sterile cup.

**Nail**: Clean nail with 70% alcohol. For a specimen of the dorsal plate, scrape the outer surface and discard the scrapings. Then scrape the deeper portion for a specimen. Remove a portion of debris from under the nail with a scalpel. Collect the whole nail or nail clippings. Place material in a clean sealed Petri dish or sterile cup.

**Skin and interspaces**: Wipe lesions and interspaces between the toes with alcohol sponge or sterile water. Scrape at the edge of lesion with a sterile scalpel. Place scrapings in a clean, sealed Petri dish or sterile cup.

**Sputum**: (tracheal aspirate, bronchial lavage) -- Sputum should be fresh. Collect in the early morning. Have patient remove dentures and rinse mouth. Sputum should be a deep cough, induced by aqueous aerosol. Collect 5 to 10 ml in sterile container.

Collection Device: Sterile Leak Proof Container

Written by: Christin Reuter                  Date: 05/17/2017
Effective Date: 05/19/2017
Legionella Antigen

**Use**
Qualitative detection of *Legionella pneumophila* serogroup 1 antigen in human urine specimens.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Preserved and unpreserved urine

**Specimen Collection**
Specimens should be sent in non-preservation yellow top vacutainer tubes

**Collection Device**
Yellow Top Vacutainer

**Transport Device**
Yellow Top Vacutainer

**Rejection Criteria**
Specimens that have not been refrigerated
Specimens greater than 7 days old (that have been refrigerated)
Leaking specimens

**Storage and Stability**
Specimens should be immediately sent to the laboratory to ensure prompt and accurate results. If transport is delayed specimens should be refrigerated.

MRSA Amplified - Cepheid Xpert

**Use**
The Cepheid Xpert MRSA Assay performed in the GeneXpert® Dx System (Xpert MRSA) is a qualitative *in vitro* diagnostic test designed for rapid detection of methicillin-resistant *Staphylococcus aureus* (MRSA) from nasal swabs in patients at risk for nasal colonization.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Nares

**Specimen Collection**
1) Open the Cepheid Collection Device by peeling back the outer packaging.
2) Ask the patient to tilt his/her head back. Insert dry swabs approximately 1–2 cm into each nostril.
3) Rotate the swabs against the inside of the nostril for 3 seconds. Apply slight pressure with a finger on the outside of the nose to help assure good contact between the swab and the inside of the nose.
4) Using the same swabs, repeat for the second nostril, trying not to touch anything but the inside of the nose.
5) Remove the plastic transport tube. Twist off the tube cap and discard it. Place the swabs into the plastic transport tube. The swabs should go all the way into the tube until they rest on top of the sponge at the bottom of the tube. Make sure the red cap is on tightly. 
Note: The swabs should stay attached to the red cap at all times.
6) Label the plastic transport tube with patient ID and send to the laboratory.

Because the detection of MRSA is dependent on the number of organisms present in the sample; reliable results are dependent on proper specimen collection, handling, and storage.

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Transport Device</th>
<th>Double Plastic Swabs - Red Cap</th>
</tr>
</thead>
</table>

**Rejection Criteria**
- Swabs not submitted in correct swab
- Orders placed more than once during an admission stay
- Dry swabs
- Expired swabs

**Storage and Stability**
Specimens should be immediately sent to the laboratory to ensure prompt and accurate results.

### Nasopharyngeal Culture

**Use**
- For detection and isolation of nasopharynx pathogens

**Precautions & Labeling**
- All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
- Nasopharynx

**Specimen Collection**
- 1) With the patient’s head tilted back, remove the swab and guide the swab up through the nasal passages to the posterior nasopharynx.
- 2) Return the swab to the tube.

**Collection Device**
- White top rayon swab

**Transport Device**
- White top rayon swab

**Rejection Criteria**
- Dry swabs
- Expired swabs

**Storage and Stability**
Specimens should be immediately sent to the laboratory to ensure prompt and accurate results.

### Neisseria gonorrhoea - See Gonorrhea Amplified for PCR Method

**See GC Culture for Culture Method**

### Nocardia Culture

**Use**
- Detection of Nocardia infections from sterile sites and respiratory specimens

**Precautions & Labeling**
- All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
Specimen Source
Sterile specimens including but not limited to: biopsy specimens, fluid specimens, drainage specimens
Nocardia is also isolated and identified in respiratory specimens including sputum and bronchial cultures
Specimen Collection
Specimens submitted should be either respiratory or sterile specimens submitted as outlined in collection manual
Collection Device
Sterile Leak Proof Container for sterile fluids, biopsies, drainages, bronchial and sputum specimens
Transport Device
Sterile Leak Proof Container for sterile fluids, biopsies, drainages, bronchial and sputum specimens

Rejection Criteria
Swab specimens are not appropriate specimen collection devices

Storage and Stability
Specimens should be sent promptly to the laboratory to ensure accurate culturing of Nocardia species.

### Occult Blood - Hemocult

**Use**
The Hemocult test is a rapid test used to detect fecal occult blood, a possible indicator of gastrointestinal disease.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Stool

**Specimen Collection**
Collect stool in a sterile leak proof container or on a hemoccult card

**Collection Device**
Sterile Leak Proof Container or Hemoccult Card

**Transport Device**
Stool in a Sterile Leak Proof Container

Or Stool submitted on a Hemoccult Card

**Rejection Criteria**
Rectal Swab
Stool samples contaminated with urine

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
If submitted on Hemoccult card and the card is expired

Storage and Stability

Uninoculated Hemoccult card can be stored at room temperature (15 to 30°C), away from heat and light and are stable until the expiration date on the box.

Samples submitted on the hemoccult card are stable up to 14 days.

**Ophthalmology Culture - See Eye Culture section for Ophthalmology specimens**

**If collected by an ophthalmologist then orderable is Ophthalmology culture**

**pH, Gastric Fluid**

**Use**

Gastroccult® is a rapid screening test designed for detecting the presence of occult blood and determining the pH of gastric aspirate.

**Precautions & Labeling**

Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Gastric aspiration obtained by nasogastric intubation

**Collection Device**

Sterile Leak Proof Container

**Transport Device**

Sterile Leak Proof Container

**Rejection Criteria**

Non gastric secretion specimens

**Storage and Stability**

Testing should be performed immediately after specimen collection. Delivery to the laboratory as soon as possible.

**Ortho SA Nasal Complete - Cepheid Xpert**

**Use**

The Cepheid Xpert SA Nasal Complete Assay performed in the GeneXpert® Dx System (Xpert MRSA) is a qualitative *in vitro* diagnostic test designed for rapid detection of *Staphylococcus aureus* (SA) and methicillin-resistant *Staphylococcus aureus* (MRSA) from nasal swabs in patients at risk for nasal colonization.

**Precautions & Labeling**

Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Nares

**Specimen Collection**

1) Open the Cepheid Collection Device by peeling back the outer packaging.
2) Ask the patient to tilt his/her head back. Insert dry swabs approximately 1–2 cm into each nostril.
3) Rotate the swabs against the inside of the nostril for 3 seconds. Apply slight pressure with a finger on the outside of the nose to help assure good contact between the swab and the inside of the nose.
4) Using the same swabs, repeat for the second nostril, trying not to touch anything but the inside of the nose.
5) Remove the plastic transport tube. Twist off the tube cap and discard it. Place the swabs into the plastic transport tube. The swabs should go all the way into the tube until they rest on top of the sponge at the bottom of the tube. Make sure the red cap is on tightly.

Note: The swabs should stay attached to the red cap at all times.
6) Label the plastic transport tube with patient ID and send to the laboratory.

Because the detection of MRSA is dependent on the number of organisms present in the sample; reliable results are dependent on proper specimen collection, handling, and storage.

**Collection Device**

Double Plastic Swabs - Red Cap

**Transport Device**

Double Plastic Swabs - Red Cap

**Rejection Criteria**

- Swabs not submitted in correct swab orders
- Orders placed more than once during an admission stay
- Dry swabs
- Expired swabs

**Storage and Stability**

Specimens should be immediately sent to the laboratory to ensure prompt and accurate results.

---

**Pneumocystis Carinii Cysts (PCP Smear)**

**Use**

The use of a direct, fluorescent-antibody procedure provides a simple, highly specific procedure for the detection of Pneumocystis jirovecii.

**Precautions & Labeling**

All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Freshly collected induced sputum, bronchial wash or bronchoalveolar lavage samples

**Specimen Collection**

**Sputum – induced**

1) Using a wet toothbrush and sterile water or saline, brush the buccal mucosa, tongue, and gums for 5 to 10 minutes prior to the procedure. Do not use tap water or toothpaste.
2) Rinse the patient’s mouth thoroughly with sterile water or saline Using an ultrasonic nebulizer; have the patient inhale 20 to 30 mL of 3% NaCl solution.
3) Collect the induced sputum in a sterile leak proof cup

**Bronchial washing and Bronchial lavage (BAL) - Bronchial Culture**

1) Pass the bronchoscope transnasally or transorally in nonintubated patients or via the endotracheal tube in intubated patients.
2) Inject sterile nonbactetrostatic 0.85% NaCl (generally 5 to 20 mL aliquots) from a syringe through a biopsy channel of the bronchoscope.
3) Collect sample:
   a) Collect BAL sample by carefully wedging the tip of the bronchoscope into an airway lumen and instilling a large volume of sterile, nonbacterostatic (greater than 140 mL). The sample returned contains secretions distal to the bronchioles and alveoli.
   b) For bronchial washing, sample the major airways, the same area sampled by endotracheal aspirate.
4) Gently suction the recovered specimen into a sterile container before administering the next aliquot. In general 50% to 75% of the saline instilled in recovered in the lavage effluent. Keep aliquots separate.
5) Discard the initial fluid as contaminated and submit the rest for culture and staining. Aliquots
from the same site may be combined for microbiology cultures and smear. Consult with the physician before combining aliquots for different sites.
6) Do not send these samples through the tube station.

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Sterile Leak Proof Container</th>
</tr>
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<tbody>
<tr>
<td>Transport Device</td>
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<table>
<thead>
<tr>
<th>Rejection Criteria</th>
<th>Specimens submitted that are not from approved sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage and Stability</td>
<td>Testing should be performed immediately after specimen collection. Delivery to the laboratory as soon as possible.</td>
</tr>
</tbody>
</table>

### Quantitative Bronchial Culture w/Gram Smear

**Use**
For isolation and identification of respiratory pathogens in bronchial lavage specimens.

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Bronchial Lavage

**Specimen Collection**
1) Pass the bronchoscope transnasally or transorally in nonintubated patients or via the endotracheal tube in intubated patients.
2) Inject sterile nonbactetrostatic 0.85% NaCl (generally 5 to 20 mL aliquots) from a syringe through a biopsy channel of the bronchoscope.
3) Collect sample:
   a) Collect BAL sample by carefully wedging the tip of the bronchoscope into an airway lumen and instilling a large volume of sterile, nonbacterostatic (greater than 140 mL). The sample returned contains secretions distal to the bronchioles and alveoli.
4) Gently suction the recovered specimen into a sterile container before administering the next aliquot. In general 50% to 75% of the saline instilled is recovered in the lavage effluent. Keep aliquots separate.
5) Discard the initial fluid as contaminated and submit the rest for culture and staining. Aliquots from the same site may be combined for microbiology cultures and smear. Consult with the physician before combining aliquots for different sites.
6) Do not send these samples through the tube station.

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<tr>
<td>Transport Device</td>
<td>Sterile Leak Proof Container</td>
</tr>
</tbody>
</table>

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
Rejection Criteria: Specimens submitted on swabs

Storage and Stability: Specimens should be obtained before antibiotics/antimicrobials are administered.
Specimens should be delivered promptly to the laboratory for culturing.

**Respiratory Syncytial Virus Antigen - RSV Ag**

**Use**
For the detection of respiratory syncytial virus antigen in nasopharyngeal specimens

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
Nasopharyngeal aspirate or swab

**Specimen Collection**
1) With the patient’s head tilted back, remove the swab and guide the swab up through the nasal passages to the posterior nasopharynx.
2) Return the swab to the tube.

**Nasopharyngeal aspirate NPak Method**
1) Position the patient - The patient should lie on their back with neck extended to allow pooling of the aspirate in the nasopharynx.
2) Attach the leur catheter and (for regular culture) generously lubricate. RSV and influenza testing is affected by lubricant in the sample (increases indeterminate results); do not use generous amounts of lubricant for these samples.
3) Expel the appropriate volume of saline from the syringe according to age or patient comfort.
   a) 0-3 years old: 1 cc
   b) 3-10 years old: 2 cc
   c) 10 – adult: 3 cc
4) Instruct the patient to hold their breath. Advance the catheter along the floor of the nose to the age appropriate marking that is on the catheter or until resistance is met abutting the nasopharynx.
5) The syringe plunger is then pushed and pulled. The aspirate sample is adequate if at least 1 cc is collected.
6) For RSV, influenza, or viral culture, place 2-3 cc of the sample in the appropriate transport media (BD UVT)

**Non-NPak Method**
1) Attach mucus trap to suction outlet and sterile catheter, leaving wrapper on catheter
2) Without applying suction and with the patient’s head tilted approximately 70°, remove the wrapper and insert the catheter into the nose, directed posteriorly and toward the opening of the external ear.
3) Apply suction as follows:

**Patient Age Catheter Size* (French) Suction Pressure:**

<table>
<thead>
<tr>
<th>Patient Age</th>
<th>Catheter Size</th>
<th>Suction Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premature infant</td>
<td>6</td>
<td>80-100 mmHg</td>
</tr>
</tbody>
</table>

*French catheter size is determined by the child’s age and is used to approximate the appropriate size for the patient.

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Infant 6 80-100 mmHg  
Toddler/Preschooler 8 100-120 mmHg  
School age 8 100-120 mmHg  
Adolescent/Adult 8 100-120 mmHg

*The depth of insertion necessary to reach the posterior pharynx is equal to the distance between the anterior nares and the external opening of the ear. The catheter should remain in the nasopharynx for a minimal period of time, not to exceed 10 seconds.

4) Using a rotating motion, slowly withdraw the catheter. Hold the trap upright to prevent secretions from going into the pump.
5) Rinse the catheter with approximately 2.0 mL physiologic saline.
6) Place 2-3 cc of the sample in the appropriate transport media

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>BD UVT – Universal Viral Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Device</td>
<td>BD UVT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rejection Criteria</th>
<th>Specimens not submitted in BD UVT</th>
</tr>
</thead>
</table>
| Storage and Stability | Deliver to the laboratory as soon as possible. Prompt deliver ensures rapid testing procedures  
If a delay is encountered in specimen processing, storage at 2-8 °C for up to 72 hours is permissible. |

**Rotavirus Antigen**

**Use** For the rapid detection of rotavirus antigen in stool specimens

**Precautions & Labeling**  
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical
**Specimen Source**
- Stool or rectal swab

**Specimen Collection**
- At least 1 gram of sample should be submitted in a sterile container.

**Collection Device**
- Sterile Leak Proof Container

**Transport Device**
- White top rayon swab

**Rejection Criteria**
- Specimens submitted on expired or dry swabs
- Specimens submitted in any preservative

**Storage and Stability**
- For the best results, specimens should be collected after onset of symptoms and sent to the laboratory within 1 hour of passage.

**Shiga Toxin - Routinely screen for w/stool culture orderable (do not need to order separately)**

**Use**
- For the detection of Shiga Toxins 1 & 2 from direct fecal specimens from community acquired diarrhea cases

**Precautions & Labeling**
- All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**
- Fresh stool samples

**Specimen Collection**
- Sterile Leak Proof Container

**Collection Device**
- Sterile Leak Proof Container

**Transport Device**
- Sterile Leak Proof Container
Rejection Criteria
Storage and Stability

**Spore Test**
Use
Biological Chemical Indicators are used for monitoring all common healthcare facility steam sterilization

Precautions & Labeling
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Uncrushed Attest indicator (sterilized ampule)

Specimen Collection
Attest Ampules 1261,1262
Steris Verify Ampules

Collection Device
Attest Ampules 1261,1262
Steris Verify Ampules

Transport Device
Attest Ampules 1261,1262
Steris Verify Ampules

Rejection Criteria
Expired Attest indicators
Ampules that are received crushed

Storage and Stability
Specimens should be immediately sent to the laboratory to ensure prompt and accurate results.

**Sputum Culture**
Use
For isolation and identification of respiratory pathogens from sputum sources

Precautions & Labeling
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Expectorate sputum, induced sputum, **Tracheostomy, or endotracheal aspirate**

**Sputum – expectorated**
1) DO NOT have the patient rinse mouth and gargle prior to sputum collection.
2) Instruct the patient not to expectorate saliva or post nasal discharge into the container
3) Collect specimen resulting from deep cough in a sterile leak proof cup.

**Sputum – induced**
1) Using a wet toothbrush and sterile water or saline, brush the buccal mucosa, tongue, and gums for 5 to 10 minutes prior to the procedure. Do not use tap water or toothpaste.
2) Rinse the patient’s mouth thoroughly with sterile water or saline Using an ultrasonic nebulizer; have the patient inhale 20 to 30 mL of 3% NaCl solution.
3) Collect the induced sputum in a sterile leak proof cup.

**Tracheostomy and endotracheal aspirate**
1) Aspirate the specimen into a sterile sputum trap.
2) Aseptically transfer the sputum sample to a sterile leak proof cup
3) Tracheosomy aspirate culture is only to be performed when clinical pneumonia is present.

Written by: Christin Reuter
Date: 05/17/2017
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**Device**

**Transport**

**Device**

Sterile Leak Proof Container

---

**Rejection Criteria**
Specimens submitted on swabs

**Storage and Stability**
If transport is delayed, store specimens at 2-8°C until samples can be transported and processed by the laboratory

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**Stool Culture - R/O Salmonella, Shigella, Campylobacter, E. coli O:157 & Shiga Toxins 1 & 2**

**Use**
Detection of etiologic agents that cause bacterial gastroenteritis

**Precautions & Labeling**
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Device**
Sterile Leak Proof Container

**Device**
Or Cary-Blair transport medium

---

**Specimen Source**
Rectal Swabs (not the specimen of choice, only should be used in NICU/peds patients)

**Stool**

**Collection**

1) Collect in a sterile bedpan, not contaminated with urine, soap, or disinfectant. Stool portions containing pus, blood, or mucus should be transferred into a sterile container or other transport mentioned below.
2) Minimum of 1mL per test is required.
3) Antacids, barium bismuth, anti-diarrhea medication or oily laxatives should not be used prior to collection of the specimen.
4) Diapers are not acceptable. Stool should not be taken from the toilet bowl.

**Rectal swab**
Pass the swab through the anal sphinter, carefully rotate, and withdraw. Swab of rectal wall lesions, sigmoid colon during proctoscopy, or sigmoidoscopy preferred.

**Duodenal aspirate or other invasive GI samples** should be collected by physician.

**Device**
Sterile Leak Proof Container

**Device**
Or Cary-Blair transport medium

---

Written by: Christin Reuter

Date: 05/17/2017

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Written by: Christin Reuter  Date: 05/17/2017
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Rejection Criteria / Numbering and Timing of Stool Specimens
Leaking specimens
Specimens submitted in preservative other than Cary-Blair

The following should be taken into consideration when submitting specimens for pathogen recovery:
1. No more than two specimens per patient should be submitted without prior consultation with an individual who can explain the limited yield provided by additional specimens
2. Specimens should not be submitted on inpatients after the third hospital day, without prior consultation
3. Test stool for Clostridium difficile toxin for all patients with clinically significant diarrhea and a history of antibiotic exposure. Consider C. difficile testing as an alternative to routine microbiologic studies for inpatients who have test requests for routine enteric pathogens

Stool in Cary-Blair transport medium

Rejection Criteria / Numbering and Timing of Stool Specimens
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Stool should be sent fresh within 1 to 2 hours of passage or placed in the appropriate preservative(s) and temperatures for prolonged transport time.

Streptococcus pneumoniae Urinary Antigen

Use
Streptococcus pneumoniae urinary antigen test is a rapid test for the detection of Streptococcus pneumoniae in urine of patients with pneumonia. This test is intended to be used in conjunction with culture and other methods for diagnosis.

Precautions & Labeling
All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

Specimen Source
Unpreserved urine

Specimen Collection
Specimens should be sent in non-preservative yellow top vacutainer tubes

Collection Device
Yellow Top Vacutainer

Transport Device
Yellow Top Vacutainer

Storage and Stability
Stool should be sent fresh within 1 to 2 hours of passage or placed in the appropriate preservative(s) and temperatures for prolonged transport time.
**Stability**
transport is delayed specimens should be refrigerated.

<table>
<thead>
<tr>
<th><strong>Throat Culture - See Beta Strep Culture</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tissue Culture - See Biopsy Culture</strong></td>
</tr>
<tr>
<td><strong>Trichomonas Wet prep</strong></td>
</tr>
</tbody>
</table>

**Use**

To detect *Trichomonas vaginalis* in direct saline (wet) mounts

**Precautions & Labeling**

All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Vaginal, urethral, or penile discharge or urethral-mucosa scrapings

**Specimen Collection**

Specimens may be collected on a cotton or Dacron swab. The swab may be placed in a red top tube with no additives for transport. A small amount of physiological saline (0.85% NaCl) between 0.5mL and 1.0 mL, MUST be added to keep the sample moist.

Collect urine specimens in a yellow top urine Vacutainer or sterile specimen container without preservative. Do not refrigerate

**Collection Device**

Swab placed in a red top tube with no additives

**Transport Device**

Red Top Tube with no additives

**Rejection Criteria**

Refrigerated specimens

**Storage and Stability**

*T. vaginalis* does not survive long outside its host’s environment. Samples must be delivered within 1 hour after collection for optimal observation of motile trophozoites.

For better recovery of *Trichomonas vaginalis*, as well as *Gardnerella vaginalis* and *Candida* species MIC.40301.02 BD Affirm for Candida, Gardnerella, and Trichomonas is suggested as a more accurate test. ATTS kit must be used for collection, but can be provided to the unit via the tube system. The ATTS kit allows *Trichomonas vaginalis* to remain viable for up to 72 hours.

<table>
<thead>
<tr>
<th><strong>Urinalysis w/Micro - For orders from Levindale, Northwest and Outpatient Sites</strong></th>
</tr>
</thead>
</table>

**Use**

Macroscopic and microscopic examination of urine

**Precautions & Labeling**

All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Urine

**Specimen Collection**

A freshly voided urine sample collected by the “clean catch” method is the specimen of choice. A “clean catch” urine is recommended to prevent the possibility of a positive leukocyte test caused by leukocytes external to the renal urinary system.

**Collection Device**

Yellow Top Vacutainer

**Transport Device**

Yellow Top Vacutainer

Written by: Christin Reuter
Date: 05/17/2017
Effective Date: 05/19/2017
Rejection Criteria
Specimens submitted in tubes containing preservative
Specimens not refrigerated if not submitted in a timely manner

Storage and Stability
Urines kept at room temperature are stable for one hour. If the specimen is not processed within an hour after collection, cap the container tightly and store at 2 - 8°C.

Urinalysis is available 24 hours/7 days a week. STAT eligible.

<table>
<thead>
<tr>
<th>Urinalysis w/Micro w/Reflex to Cx Order Set - For Sinai ED/Inpatient’s only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>Macroscopic and microscopic examination of urine</td>
</tr>
<tr>
<td><strong>Precautions</strong></td>
</tr>
<tr>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td><strong>Specimen Source</strong></td>
</tr>
<tr>
<td>Urine</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td>A freshly voided urine sample collected by the “clean catch” method is the specimen of choice. A “clean catch” urine is recommended to prevent the possibility of a positive leukocyte test caused by leukocytes external to the renal urinary system.</td>
</tr>
<tr>
<td><strong>Collection Device</strong></td>
</tr>
<tr>
<td>Yellow Top Vacutainer</td>
</tr>
<tr>
<td><strong>Transport Device</strong></td>
</tr>
<tr>
<td>Yellow Top Vacutainer</td>
</tr>
</tbody>
</table>

Rejection Criteria
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Specimens not refrigerated if not submitted in a timely manner

Storage and Stability
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Urinalysis is available 24 hours/7 days a week. STAT eligible.

<table>
<thead>
<tr>
<th>Urine Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>Determination of urinary tract infection</td>
</tr>
<tr>
<td><strong>Precautions</strong></td>
</tr>
<tr>
<td>All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)</td>
</tr>
<tr>
<td><strong>Specimen Source</strong></td>
</tr>
<tr>
<td>Urine preferably collected in tubes with preservative</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td><strong>Clean-Catch Midstream</strong></td>
</tr>
<tr>
<td>1) Avoid contamination of urine with labia or prepuce.</td>
</tr>
<tr>
<td>2) Cleanse the urethral area with sponge or soap.</td>
</tr>
<tr>
<td>3) Pass the first-void urine into the toilet.</td>
</tr>
<tr>
<td>4) Collect the midstream urine in a sterile container.</td>
</tr>
</tbody>
</table>

Written by: Christin Reuter          Date: 05/17/2017
Effective Date: 05/19/2017
Indwelling catheters (Foley) –

Use the Luer-Lok Access device to obtain a urine sample.
1) Peel off the paper backing from the BD Vacutainer Luer-Lok Access Device package and set aside.
2) Occlude drainage tubing a minimum of 12 inches below the sampling port by bending the tubing. Secure the tubing with a clamping device and allow time for urine to fill the tubing from the point of clamp to slightly above the clamping device.
3) Use an antiseptic wipe to clean the surface of the Bard EZ-Lok Sampling Port
4) Aseptically attach a BD Vacutainer Luer-Lok Assess device over the center of the sampling port. DO NOT touch the inside of the access device. Holding the outside of the holder, push the access device into place then rotated clockwise to fit securely.
5) Collect urine by pushing the BD Vacutainer tube(s) into the holder portion of the access device. Remove the tube when completely full.

Straight catheterization
1) Cleanse the urethral opening with soap and water. Rinse the area with wet gauze pads
2) Aseptically, insert catheter into bladder.
3) After allowing approximately 15mL to pass, collect urine to be submitted in a sterile container.

Suprapubic aspiration, cystoscopy or other surgical procedure is acceptable.

<table>
<thead>
<tr>
<th>Collection Device</th>
<th>Transfer urine from sterile container to appropriate vacutainer tubes using a urine transfer straw</th>
</tr>
</thead>
</table>

Note: Always collect the gray top tube first

<table>
<thead>
<tr>
<th>Transport Device</th>
<th>Grey Top Vacutainer</th>
</tr>
</thead>
</table>

| Rejection Criteria | Unlabeled specimens
|--------------------|---------------------|
| Storage and Stability | Bagged urine is not appropriate for culture
| Urine cultures in preservative can be processed up to 48 hours. |
| Urines not in preservative can be processed for culture up to 24 hours |

<table>
<thead>
<tr>
<th>Urine Culture Pregnancy - UCpreg</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Urine Culture</td>
</tr>
<tr>
<td>Use</td>
</tr>
<tr>
<td>Urinary culture order to be utilized for patients who are pregnant</td>
</tr>
</tbody>
</table>

| Urine Culture Pediatric - UCpeds |

Written by: Christin Reuter   Date: 05/17/2017
Effective Date: 05/19/2017
**See Urine Culture**

**Urine Culture order to be utilized for pediatric patients**

**Urine Culture Pre Op - UCpreop**

**See Urine Culture**

**Urine culture order to be utilized for pre operative patients**

**Vaginitis DNA Probe See - Affirm™ Bacterial Vaginitis/Vaginosis Panel**

**Candida species, Gardnerella vaginalis and Trichomonas vaginalis**

**Wet Prep - See Trichomonas Wetprep**

**Wound Culture - See Aerobic Wound culture and/or Anaerobic Wound Culture**

**Yersinia Culture**

**Use**

For the detection of pathogenic *Yersinia* species in stool specimens. *Yersinia* species are not routinely screened for in Stool Cultures. A separate orderable, Yersinia Culture is available to rule out *Yersinia* pathogens.

**Precautions & Labeling**

All patient specimens must be handled as containing potential biohazards using Universal Standard Precautions. Specimens must be labeled with at least two patient identifiers (Name, DOB, Medical record number, or Social Security Number)

**Specimen Source**

Stool

Rectal Swab

**Specimen Collection Device**

See Stool Culture

**Transport Device**

See Stool Culture

**Rejection Criteria**

See Stool Culture

**Storage and Stability**

See Stool Culture