

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES



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PHONE NUMBERS

Laboratory Client Services: 585-275-8181

Microbiology Labs: 585-275-7801

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

CONTAINER LIST FOR MICROBIOLOGY AND SEROLOGY/IMMUNOLOGY

NOTE: Unless otherwise stated, colored-top tubes describe B-D tubes in general use in the Hospital. Containers are stored at room temperature unless otherwise specified.

CONTAINER	DESCRIPTION AND NOTES
Anaerobic Transport Tube (Port-a-Cul(t))	Sterile screw-capped tube containing semi-solid reducing medium. <u>Purpose:</u> Transport of swab specimens for anaerobic bacterial culture. <u>Available</u> from Microbiology Lab (275-7801)
Anaerobic Transport Vial (Port-a-Cul(t))	Sterile serum-capped vial containing solid reducing medium. <u>Purpose:</u> Transport of fluid specimens for anaerobic bacterial culture. <u>Available</u> from Microbiology Lab (275-7801).
Blood Culture Bottles (BacT/Alert)	Sterile septum-capped vials containing tryptic soy broth with sodium polyanethole-sulfonate (an anticoagulant). One blood culture typically includes two bottles: Aerobic (blue top and label) and Anaerobic (lavender top and label). <u>Purpose:</u> Collection of blood for culture of bacteria and yeasts (e.g., Candida, Cryptococcus). <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Bordetella Pertussis Kit	One sterile nasal Transwab Culturette with Amies Charcoal Medium (For Culture), one plain sterile NP swab, Calcium Alginate (For DFA), and one slide with holder, lab requisitions, & specimen collection instructions. <u>Purpose:</u> Collection & transport of nasal specimens for Bordetella pertussis antigen, culture and PCR. <u>Available</u> from Client Services (275-8181).
Chlamydia Antigen Collection Kit (VIDAS)	Screw-capped tube containing sodium azide transport medium and sterile swab(s). Male kit contains a small swab on wire shaft for urethral sampling (blue package); female kit contains 2 medium swabs on plastic shafts for endocervical sampling (pink package). <u>Purpose:</u> Collection & transport of urogenital specimens for Chlamydia Antigen Test. Cannot be used for Chlamydia Culture or Amplification. <u>Available</u> from Client Services (275-8181).

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

CONTAINER	DESCRIPTION AND NOTES
Chlamydia Amplification Collection Kit (ProbeTec)	Swabs and transport tubes. Male kit (blue package) contains a small swab on a wire shaft for urethral sampling; female kit (pink package) contains 2 swabs (one large tipped swab for removing cervical mucus, one regular tipped swab for sampling the cervix). <u>Purpose:</u> Collection & transport of urogenital specimens for Chlamydia amplification. Cannot be used for Culture or Antigen Detection. <u>Available</u> from Client Services (275-8181).
Chlamydia Culture Transport Tube	Sterile screw-capped tube containing Virus/Chlamydia transport medium (VCTM). Store uninoculated tubes in refrigerator. <u>Purpose:</u> Collection & transport of eye, nasopharyngeal and rectal specimens for Chlamydia Amplification, and urogenital specimens from children. Cannot be used for Antigen Detection or Amplification. <u>Available</u> from Client Services (275-8181).
Clean container	Clean container of appropriate size with closure.
Culturette Swab	Sterile rayon tipped swab with ampule of Stuart's bacterial transport medium. <u>Purpose:</u> Collection & transport of swab specimens for aerobic bacterial and fungal culture & of anal, vaginal & urethral specimens for detection of select parasites (Trichomonas, Taenia, Trichuris, Ascaris, & Enterobius). Not recommended for collection & transport of specimens for viral culture. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Green top (Heparin) tube	10.0 ml green-top tube 16 x 100 mm Additives: Sodium Heparin (freeze-dried) Tube/stopper coatings: None/silicone <u>Purpose:</u> Collection & transport of blood for Cryofibrinogen. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

CONTAINER	DESCRIPTION AND NOTES
Isolator Blood Culture Tube	Adult: 10 ml yellow top tube (16 x 100 mm) containing polypropylene glycol, sodium polyanethole-sulfonate, disodium EDTA, saponin. Pediatric: 1.5 ml yellow top tube (10 x 50 mm) containing polypropylene glycol, sodium polyanethole sulfonate, saponin. <u>Purpose:</u> Collection of blood for culture of Mycobacteria (acid fast bacilli) and systemic fungi (e.g., Histoplasma, Coccidioides). <u>Available</u> from Microbiology Lab (275-7801).
Lavender top tube	10 ml lavender-top tube 16 x 100 mm Additive: EDTA (K3) (Potassium EDTA) Tube/stopper coatings: None/silicone <u>Purpose:</u> Collection & transport of blood for viral culture and CMV PCR; call Microbiology Lab (275-7801) for other viral PCR tests. Collection & transport of blood for Cryofibrinogen. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Ova & Parasite Kit	Specimen collection instructions and screw-capped jar containing sodium acetate-acetic acid-formalin. <u>Purpose:</u> Transport of specimens for ova and parasite exam when elapsed time between specimen collection and transport to the laboratory is likely to exceed 24 hours or if specimen cannot be refrigerated after collection. <u>Available:</u> Outside clients contact Client Services (275-8181). Not available to Medical Ctr locations.
Red Top Blood Collection Tube	10.0 ml red capped Vacutainer tube (16 x 100 mm) without additives. <u>Purpose:</u> Collection of blood for a wide variety of laboratory tests requiring serum or cellular components which have not been anticoagulated; required for PF4 Antibodies and Cold Agglutinins. Also used for viral culture of blood for Enterovirus and some viral PCR tests; call Microbiology Lab (275-7801) for additional information. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Red SST Tube	Serum separator tube with clot activator and gel for serum separation. Recommended for certain specimens collected at locations outside SMH where specimen delivery time may exceed 4 hours. Not acceptable for Blood Bank or Toxicology. <u>Purpose:</u> Collection of blood for a wide variety of laboratory tests requiring serum or cellular components which have not been anticoagulated; do NOT use for PF4 Antibodies or Cold Agglutinins. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

CONTAINER	DESCRIPTION AND NOTES
Sputum Collection Device	Sterile screw-capped 50 ml centrifuge tube seated inside a plastic frame to facilitate collection of expectorated lower respiratory specimens. <u>Purpose:</u> Collection and transport of lower respiratory specimens for culture of Mycobacteria (acid fast bacilli). <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Sterile Container	Sterile container. Note that most blood tubes in common use are not sterile.
Sterile Container	120 ml sterile cup with screw cap. <u>Purpose:</u> Collection and transport of specimens for aerobic bacterial culture, fungal culture, Mycobacterial (acid fast bacilli) culture, virus culture, C. difficile toxin, ova and parasite exam. Specimen types may include urine, tissue, fluid, pus, sputum, tracheal and transtracheal aspirates, bronchial washings, and stool. <u>Available</u> to Medical Center locations from Hospital Stores. Outside clients contact Client Services (275-8181).
Stool Culture Kit	Screw capped jar containing Carey-Blair buffer. (Red/pink color indicates correct buffering action). Yellow color indicates buffering action has been lost. Do not use if yellow.) <u>Purpose:</u> Collection and transport of stool for bacterial culture when the elapsed time between specimen collection and transport to the laboratory is likely to exceed 6 hours or if specimen cannot be refrigerated after collection. <u>Available:</u> Outside clients contact Client Services (275-8181). Not available to Medical Center locations.
Urine Container	Sterile screw cap container without preservatives for in-patient specimens. <u>Purpose:</u> Transport of unpreserved urine for bacterial, fungal and viral culture. <u>Available</u> from Microbiology (275-7801).
Urine Collection Kit	Sterile screw cap container with integrated transfer device, gray top tube with preservative for Culture, red top tube with preservative for UA; for outpatient specimens. <u>Purpose:</u> Transport of preserved urine for bacterial culture. <u>Available</u> from Client Services (275-8181).
Virus Culture Transport Tube	Sterile screw-capped tube containing Virus/Chlamydia transport medium (VCTM). <u>Purpose:</u> Transport of swab specimens for virus culture, viral antigen detection and Chlamydia Culture. Store uninoculated tubes in refrigerator. <u>Available</u> from Client Services (275-8181).

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

SPECIMEN LIST

ABSCESS, FISTULA, WOUND

Guidelines:

1. Remove surface exudate by wiping with sterile saline or 70% alcohol.
2. Aspirate if possible & aseptically transfer material into sterile container.
3. Or collect swab specimen by passing swab deep into lesion & firmly sampling lesion's advancing edge. Collect 2 swabs: 1 for culture & 1 for Gram stain.

Device & Volume:

- Use Sterile Leakproof Container for aspirated specimen.
- Use Culturette for swab specimens.
- Use Anaerobic Transport System (Port-a-Cul) if anaerobic infection is suspected.

Transport: < 24 hr, Room Temp.

Comments: Fluid or tissue sample is always superior to swab specimen.

BLOOD

Guidelines:

1. Disinfect culture vials or tube: apply 70% Isopropyl alcohol to rubber stoppers and wait 1 min.
2. Disinfect venipuncture site:
 - a. Cleanse with 70% alcohol
 - b. Swab concentrically, starting at center with iodophor
 - c. Allow iodine to dry
 - d. Do not palpate vein at this point
3. Collect blood.
4. After venipuncture, remove iodine from skin with alcohol.

Device & Volume:

Routine Bacterial & Yeast Culture:

2 BacT/Alert Blood Culture Vials
(Aerobic/blue + Anaerobic/lavender = 1 set)
Adults: 10 ml/set (5 ml in each vial)
Infants: 1-2 ml - Aerobic vial only

Acid Fast Bacilli, Histoplasma, Coccidioides Culture: Isolator Tube, 10 ml
(Isolator Tubes are available from Microbiology, 275-7801.)

Viral Culture: Lavender Top Tube, 10 ml

Transport: < 2 hr, Room Temp.

Comments:

Bacterial & Yeast Culture:

- Patient to be immediately started on new antibiotics or worsening condition after initial workup: 2-3 sets from separate sites within 30 min.
- Suspected infective endocarditis or intravascular infection: 3 sets from separate sites over 24-48 hrs.
- Other: 2 sets from separate sites within 24 hrs.

Viral Culture:

- Culture and PCR for Cytomegalovirus only unless otherwise specified.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

BODY FLUIDS: Amniotic, Ascites, Joint, Pericardial, Peritoneal, Pleural, Synovial, Thoracentesis

Guidelines:

1. Disinfect overlying skin with 2% iodine tincture.
2. Obtain specimen via percutaneous needle aspiration or surgery.

Device & Volume:

- Sterile Leakproof Container.
- If anaerobic bacteria are suspected, use Anaerobic Transport System (Port-a-Cul).
- Always submit as much fluid as possible. Swab dipped in fluid does not provide optimal inoculum for recovery of most pathogens.

Transport:

Bacteria, Fungi, AFB: < 1 hr, Room Temp.

Viruses: < 1 hr. If transport is delayed & viruses are the only microbes to be cultured, refrigerate specimen. Otherwise, hold at room temp.

Comments:

- Will be cultured for bacteria only unless otherwise specified.
- If viral culture is requested, provide clinical information & indicate suspected viruses.

BONE MARROW (see Tissues)

CEREBROSPINAL FLUID (CSF)

Guidelines:

1. Follow standard procedure for spinal tap.
2. Upon reaching subarachnoid space, remove stylet and collect 1-2 ml of fluid into each of 3 sterile leak proof tubes.
3. Submit Tube #2 to Microbiology (Tube #1 to Chemistry, Tube #3 to Hematology). If only 1 tube is collected, submit it to Microbiology first.

Device & Volume:

Sterile Screw Cap Tube
Fungi: 2 ml
AFB: > 5 ml adults
> 3 ml Pediatrics
Viruses: 1 ml

Swab dipped in fluid does not provide optimal volume for recovery of most pathogens.

Transport:

Bacteria, Fungi, AFB: <1 hr, Room Temp. - Never refrigerate.
Viruses: < 1 hr; 4 degrees C or send on ice.

Comments: For bacteria, fungi, also obtain blood cultures.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

EAR - Inner

Guidelines:

1. Intact ear drum: clean ear canal with soap solution & collect fluid via syringe aspiration.
2. Ruptured ear drum: collect fluid on flexible shaft swab via auditory speculum.
3. Typanocentesis is reserved for complicated, recurrent, or chronic persistent otitis media.

Device & Volume:

Fluid for Bacterial, Fungal, AFB, Viral Culture: Sterile tube.

Swab for Bacterial, Fungal Culture: Culturette.

Swab for Viral Culture: Cotton or dacron swab in Virus/Chlamydia Transport Medium (VCTM) - available from Microbiology Lab, 275-7801.

Transport:

Bacterial, Fungal, AFB Culture: Fluid, < 2 hr, Room Temp.

Swab, < 24 hr, 4 degrees C.

Viral Culture: < 24 hr, 4 degrees C.

Comments: None.

EAR - Outer

Guidelines:

1. Use a moistened swab to remove any debris or crust from ear canal.
2. Use a second swab to obtain sample; rotate firmly in outer canal.

Device & Volume:

Bacterial, Fungal Culture: Culturette swab.

Viral Culture: Cotton or dacron swab in Virus/Chlamydia Transport Medium (VCTM) - available from Microbiology Lab, 275-7801.

Transport:

Bacterial, Fungal Culture: < 2 hr, Room Temp.; < 24 hr, 4 degrees C.

Viral Culture: < 24 hr, 4 degrees C.

Comments: None.

EYE - Conjunctiva

Guidelines:

Sample both eyes with separate swabs (premoistened with sterile saline) by rolling swab over each conjunctiva.

Device & Volume:

Bacterial, Fungal Culture: Culturette swab.

Viral Culture: Cotton, dacron or rayon swab in Virus/Chlamydia Transport Medium (VCTM) - available from Microbiology Lab, 275-7801.

Transport:

Bacteria, Fungal Culture: < 2 hr, Room Temp.; < 24 hr, 4 degrees C.

Viral Culture: < 24 hr, 4 degrees C.

Comments:

Bacterial, Fungal Culture: Sample both conjunctiva to determine indigenous microflora. Uninfected eye serves as control.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

EYE - Cornea

Guidelines:

1. Obtain conjunctival swab specimens as described above.
2. Instill 2 drops of local anesthetic.
3. Using sterile spatula, scrape ulcers or lesions.
4. Inoculate scraping directly onto bacterial, fungal, &/or viral media.

Device & Volume:

Bacterial Culture: Direct Culture inoculation to Blood & Chocolate Agar plates.

Fungal Culture: Direct culture inoculation to Sabouraud's Agar.

Viral Culture: Place specimen in Virus/Chlamydia Transport Medium (VCTM).

Contact Microbiology Lab for on-site assistance with inoculation of media - 275-7801.

Transport:

Bacterial, Fungal Culture: < 2 hr, Room Temp.

Viral Culture: < 2 hr, 4 degrees C.

Comments:

Take swabs for culture prior to anesthetic application; obtain corneal scrapings after anesthetic application.

GASTROINTESTINAL TRACT - Stool - Bacterial Culture

Guidelines:

Bacterial, AFB Culture: Pass formed or liquid stool directly or transfer into sterile leak proof container. If specimen cannot be delivered to lab within 24 hrs, transfer it into container with Carey-Blair buffer.

Device & Volume:

- Formed Stool: > 2 g.
- Liquid Stool: > 5 ml.
- Sterile Leakproof Container if transport to lab is within 24 hrs.
- Stool Culture Kit containing Carey-Blair buffer if transport to lab is within 24-48 hrs. Kit is available from Client Services.

Transport:

- Unbuffered Specimen: < 24 hrs, 4 degrees C.
- Buffered Specimen: < 48 hrs, Room Temp.

Comments:

Specimens from inpatients for routine bacterial stool culture generally are not accepted if patient has been hospitalized > 4 days. Yield of bacteria associated with community acquired diarrhea from these patients is < 1%. (JAMA, 263:979-982)

Stool will be cultured for Salmonella, Shigella, Campylobacter and E. coli O157:H7 only unless otherwise specified. Culture for Yersinia, Vibrio, Bacillus Cereus, Clostridium botulinum must be specifically requested.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GASTROINTESTINAL TRACT - Stool - Clostridium Difficile Toxin Assay

Guidelines:

Pass liquid or soft stool into clean, dry container. Transfer portion to be tested into sterile leak proof container.

Device & Volume: Sterile Leakproof Container. 10mL

Transport: < 24 hrs, 4 degrees C.

Comments:

Soft stool is defined as stool assuming shape of its container.

Formed stool is unacceptable for C. difficile Toxin assay.

GASTROINTESTINAL TRACT - STOOL - Parasite Exam

Guidelines:

Pass stool into clean dry container. Transfer portion into sterile leak-proof container or jar containing sodium acetate-acetic acid-formalin (SAF) preservative. Purged specimens or those obtained from patients on antidiarrheals or from barium enemas are unacceptable.

Device & Volume:

Formed stool, 2 to 4 grams

Liquid stool, 5 to 10 mls

Sterile leak-proof container or SAF container

Transport:

Unpreserved specimen: transport to Microbiology Lab as soon as possible

Preserved specimen: routine transport

Comments:

Specimens from inpatients are generally not accepted if patient has been hospitalized for >5 days.

Concentrated stools are examined for Giardia and Cryptosporidium only unless foreign travel history or recent immigration is indicated. If recent foreign travel or immigration is indicated, specimens are also examined for worms/larva/eggs. Examination for Isospora, Cyclospora and/or Microsporidium must be specifically requested.

GASTROINTESTINAL TRACT - Stool - Virus Culture

Guidelines:

Pass formed or liquid stool into clean, dry container. Transfer portion to be cultured into sterile leak proof container.

Device & Volume:

- Formed Stool: 2-4 g.

Liquid Stool: 5 ml.

- Sterile Leakproof Container

Transport: 4 degrees C. Transport to Micro Lab as promptly as possible.

Comments: None

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GASTROINTESTINAL TRACT - Stool - Rotavirus Antigen

Guidelines:

Pass formed or liquid stool into clean, dry container. Transfer portion to be cultured into sterile leak proof container.

Device & Volume:

- Formed Stool: 2-4 g.
- Liquid Stool: 5 ml.
- Sterile Leakproof Container

Transport: < 24 hrs, 4 degrees C.

Comments:

Bulk stool is required for Rotavirus Antigen assay.

GASTROINTESTINAL TRACT - Rectal Swab - Bacterial Culture

Guidelines:

Carefully insert swab - 1 inch (2.5 cm) beyond anal sphincter. Gently rotate swab to sample anal crypts.

Device & Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, 4 degrees C.

Comments:

- Bacterial Culture: Specify Stool Culture, GC Culture only, Vancomycin-Resistant Enterococci (VRE)(For Group B Strep Surveillance refer to Genital Tract - Vaginal/Rectal).
- Feces should be evident on swab for Culture

GASTROINTESTINAL TRACT - Rectal Swab - Viral Culture

Guidelines:

Carefully insert swab - 1 inch (2.5 cm) beyond anal sphincter. Gently rotate swab to sample anal crypts.

Device & Volume:

Sterile cotton or dacron tipped swab. Place swab in Virus/Chlamydia Transport Medium (VCTM), break off excess applicator & seal tube cap tightly - available from Microbiology Lab, 275-7801.

Transport: < 24 hr, 4 degrees C.

Comments: Feces should be evident on swab for Culture

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GENITAL TRACT - Amniotic Fluid

Guidelines:

Aspirate via amniocentesis, cesarean section or intrauterine catheter.

Device & Volume:

Sterile Leakproof Container. >1 ml volume. If anaerobic bacteria are suspected, use Anaerobic Transport System (Port-a-Cul).

Transport: Room Temp. Transport to Micro Lab as promptly as possible.

Comments: Will be cultured for bacteria only unless otherwise specified.

GENITAL TRACT - Bartholin Aspirate

Guidelines: Disinfect skin. Aspirate fluid from ducts, cyst.

Device & Volume: Sterile Leakproof Container.

If anaerobic bacteria are suspected, use Anaerobic Transport System (Port-a-Cul).

Transport: Room Temp. Transport to Micro Lab as promptly as possible.

Comments: Will be cultured for bacteria only unless otherwise specified.

GENITAL TRACT - Cervix - N.gonorrhoeae (GC) or Yeast Culture

Guidelines:

1. Visualize cervix through speculum without lubricant.
2. Remove mucus &/or secretions from cervix with swab; discard swab after use.
3. Firmly yet gently sample endocervical canal with sterile swab by rotating for ~5 s. If lesions are present, swab them firmly.

Device & Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, Room Temp.

Comments: Specify GC culture only or Yeast Culture

GENITAL TRACT - Cervix - Virus Culture

Guidelines:

1. Visualize cervix through speculum without lubricant.
2. Remove mucus &/or secretions from cervix with swab & discard swab.
3. Firmly yet gently sample endocervical canal with sterile swab by rotating for ~5 s. If lesions are present, swab them firmly.

Device & Volume: Cotton or dacron tipped swab. Do not use calcium alginate swab.

Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C

Comments: None

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GENITAL TRACT - Cervix - Chlamydia Culture

Guidelines:

1. Visualize cervix through speculum without lubricant.
2. Remove mucus &/or secretions from cervix with swab & discard swab.
3. Firmly yet gently sample endocervical canal with sterile swab by rotating for ~5 s. If lesions are present, swab them firmly.

Device & Volume:

Use cotton or dacron tipped swab. Do not use calcium alginate or wooden shaft swab. Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C

Comments: None

GENITAL TRACT - Cervix - Chlamydia Antigen

Guidelines:

1. Visualize cervix through speculum without lubricant.
2. Remove mucus &/or secretions from cervix with swab; discard swab after use.
3. Firmly yet gently sample endocervical canal with sterile swab by rotating for ~5 s. If lesions are present, swab them firmly.

Device & Volume:

Use swab & transport container from Female VIDAS specimen collection kit, - available from Client Services, 275-8181.

Transport: < 48 hr, 4 degrees C or Room Temp.

Comments:

Sensitivity of the Chlamydia Antigen test compared to Chlamydia Culture is generally 85-90%. Higher sensitivity is achieved in populations with a high prevalence of chlamydia infection. Therefore, the antigen test generally is used for screening of such groups. The antigen test should not be used for cases of suspected abuse or rape.

GENITAL TRACT - Cervix, Urethra - Chlamydia Amplification

Guidelines for female endocervical swabs:

1. Visualize cervix through speculum without lubricant.
2. Remove mucus &/or secretions from cervix with large tipped swab provided in the collection kit for females; discard this swab after use.
3. Firmly yet gently sample endocervical canal with sterile swab by rotating for 15 to 30 seconds. Carefully withdraw the swab, avoiding the vaginal mucosa and place in the transport tube; cap tightly and label. (Note: A separate swab of the cervix using a culturette-type swab should be obtained for GC Culture, if needed for diagnosis.)

Guidelines for male urethral swabs:

1. Insert the mini-tip swab (provided in the collection kit for males) 2 to 4 cm into the urethra and rotate for 3 to 5 seconds. Withdraw the swab and place in the transport tube; cap tightly and label. (Note: a separate swab of the urethra using a culturette-type swab should be obtained for GC Culture, if needed for diagnosis.)

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

Guidelines for urine specimens:

1. Urine must be collected in a sterile screw cap leak proof container.
2. The patient should NOT have urinated for at least 1 hour prior to specimen collection.
3. Instruct the patient to collect the first part of the urine stream (NOT MIDSTREAM)
4. Instruct the patient to collect 15 to 20 mls only. Larger volume specimens may produce false negative results.

Device & Volume:

Use ProbeTec (pink packaging for females, blue packaging for males) swab & transport container - available from Client Services, 275-8181. Use sterile screw cap leak proof container for urine collection.

Transport:

For swab specimens, <4 days, 2 degrees C to Room Temp
For urine specimens, <4 days, 2 to 8 degrees C

Comments:

Not recommended for eye, nasopharyngeal, or rectal infections or cases of suspected sexual abuse.

GENITAL TRACT - Endometrial Aspirate

Guidelines:

Collect transcervical aspirate via telescoping catheter. Transfer sample into sterile leak proof container or anaerobic transport system

Device & Volume:

Sterile Leakproof Container. > 1 ml. If anaerobic bacteria are suspected, use Anaerobic Transport System (Port-a-Cul).

Transport: Room Temp. Transport to Micro Lab as promptly as possible.

Comments:

Will be cultured for aerobic bacteria only unless otherwise specified.

GENITAL TRACT - Lesion - Bacterial, Yeast Culture

Guidelines:

1. Clean lesion with sterile saline & remove lesion's surface with sterile scalpel blade.
2. Allow transudate to accumulate.
3. While pressing base of lesion, firmly sample exudate with sterile swab.

Device & Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, Room Temp.

Comments:

Will be cultured for bacteria only unless Yeast Culture is specified.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GENITAL TRACT - Lesion - Virus Culture

Guidelines:

1. Clean lesion with sterile saline & remove lesion's surface with sterile scalpel blade.
2. Allow transudate to accumulate.
3. While pressing base of lesion, firmly sample exudate with sterile swab.

Device & Volume:

Cotton or dacron tipped urethrogenital swab. Do not use calcium alginate. Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments:

For Syphilis DFA, contact Microbiology Lab for assistance at 275-7801.

GENITAL TRACT - Urethral - N. gonorrhoeae (GC) or Yeast Culture

Guidelines:

Female:

1. Remove exudate from urethral orifice. Collect discharge material on swab by massaging urethra against pubic symphysis through vagina.
2. If no discharge can be obtained, wash external urethra with disinfectant soap and rinse with water. Then insert urethrogenital swab 2-4 cm into urethra & rotate swab 2-3 times. Collect > 1 hr after urination.

Male:

Insert urethrogenital swab 2-4 cm into urethra, rotate swab & leave in place for at least 2 s.

Device & Volume: Swab in Transport Media (Culturette)

Transport: < 24 hr, Room Temp.

Comments: Specify GC Culture or Yeast Culture

GENITAL TRACT - Urethral - Virus Culture

Guidelines:

1. Collect > 1 hr after urination. Express & discard any exudate. Carefully insert urethrogenital swab 2-4 cm into urethra & rotate swab 2-3 times.
2. Place swab in Virus Transport Media (VTM) tube, break off excess applicator & seal tube cap tightly.

Device & Volume:

Cotton or dacron tipped urethrogenital swab. Do not use calcium alginate. Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments: None

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GENITAL TRACT - Urethral - Chlamydia Culture

Guidelines:

1. Collect > 1 hr after urination. Express & discard any exudate. Carefully insert urethro-genital swab 2-4 cm into urethra & rotate swab 2-3 times.
2. Place swab in Virus/Chlamydia Transport Medium (VCTM) tube, break off excess applicator & seal tube cap tightly.

Device & Volume:

Use cotton or dacron tipped urethro-genital swab. Do not use calcium alginate. Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments: None

GENITAL TRACT - Urethral - Chlamydia Antigen

Guidelines:

1. Collect > 1 hr after urination. Express & discard any exudate. Carefully insert urethro-genital swab 2-4 cm into urethra & rotate swab 2-3 times.
2. Place swab in Virus Transport Media (VTM) tube, break off excess applicator & seal tube cap tightly.

Device & Volume:

Use swab & transport container from Female VIDAS specimen collection kit, available from Client Services, 275-8181.

Transport: < 48 hr, 4 degrees C or Room Temp. Do not freeze.

Comments:

Sensitivity of the Chlamydia Antigen test compared to Chlamydia Culture is generally 85-90%. Higher sensitivity is achieved in populations with a high prevalence of chlamydia infection. Therefore, the antigen test generally is used for screening of such groups. The antigen test should not be used for cases of suspected abuse or rape.

GENITAL TRACT - Urethra - Chlamydia Amplification:

Refer to Genital Tract - Cervix, Urethra

GENITAL TRACT - Vaginal/Rectal - Group B Strep Surveillance Culture

Guidelines:

1. Screen pregnant women at 35-37 weeks with a vaginal and rectal swab (preferably a double swab culturette).
2. Place the swab just inside the introitus, without using a speculum, to collect specimen.
3. Place the other swab just inside the anal verge to collect specimen.
4. If only one swab is used, collect the vaginal specimen first then the rectal specimen.

Device and Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, Room Temp.

Comment: Specify Group B Strep Culture

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

GENITAL TRACT - Vaginal - Bacterial, Yeast Culture or Vaginitis/Vaginosis Screen

Guidelines:

1. Wipe away excessive secretions or discharge.
2. Obtain secretions from mucosal membrane of vaginal vault with sterile swab or pipette.
3. If lesions are present, swab them firmly.

Device & Volume: Swab in Transport Media (Culturette)

Transport: < 24 hr, Room Temp.

Comments:

Specify Bacterial Culture, Yeast Culture or Vaginitis/Vaginosis Screen (includes Candida/Gardnerella/Trichomonas).

GENITAL TRACT - Vaginal - Virus Culture

Guidelines:

1. Wipe away excessive secretions or discharge.
2. Obtain secretions from mucosal membrane of vaginal vault with sterile swab or pipette.
3. If lesions are present, swab them firmly.

Device & Volume:

Cotton or dacron tipped urethrogenital swab. Do not use calcium alginate. Transport in Virus/Chlamydia Transport Medium (VCTM) - available from Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments: None

GENITAL TRACT - Prostate

Guidelines:

1. Clean glans with soap & water.
2. Massage prostate through rectum.
3. Collect fluid on sterile swab or in sterile tube.

Device & Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, Room Temp.

Comments:

Will be cultured for bacteria only unless Yeast Culture or Cryptococcus is specified.

More relevant results may be obtained by also culturing urine specimens obtained immediately before & after massage. Ejaculate may also be cultured.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

HAIR - Dermatophytosis

Guidelines:

1. Select infected hairs by placing patient under UV light. Hair infected with some dermatophytes fluorescence under UV.
2. Remove 10-12 hairs with base of shafts intact.

Device & Volume: Sterile container.

Transport: < 24 hr, Room Temp.

Comments: None.

NAILS - Dermatophytosis

Guidelines:

1. Decontaminate surface of nail with 70% alcohol.
2. Scrape away outer portion & obtain scrapings from the deeper infected areas.

Device & Volume: Sterile container.

Transport: < 24 hr, Room Temp.

Comments: None.

RESPIRATORY TRACT - Bronchoalveolar Lavage (BAL), Bronchoscopy, Endotracheal Aspirate

Guidelines: Collect specimen in sterile container.

Device & Volume: Sterile leak proof container.

Transport: < 24 hr, 4 degrees C.

Comments: Will be cultured for bacteria only unless Fungal, AFB &/or Viral Culture are specified. Routine bacterial culture includes Legionella.

RESPIRATORY TRACT - Sputum - Expecterated

Guidelines:

1. Collect specimen under direct supervision of nurse or physician.
2. Have patient rinse or gargle with water.
3. Instruct patient to cough deeply to produce lower respiratory tract specimen - not postnasal fluid or saliva. Collect into sterile container.
4. For pediatric patients unable to produce specimen, respiratory therapist should collect via suction.

Device & Volume: Sterile Leakproof Container

Transport:

< 24 hr, 4 degrees C. S. pneumoniae recovery improves if specimen is transported to Micro Lab within 1 hr.

Comments:

Will be cultured for bacteria only unless otherwise specified.
Routine aerobic culture includes Legionella.
Direct Gram Stain is automatically performed with Bacterial Culture.
AFB Smear is automatically performed with AFB Culture.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

RESPIRATORY TRACT - Sputum - Induced

Guidelines:

1. Have patient rinse mouth with water after brushing gums & tongue.
2. With aid of nebulizer, have patient inhale ~25 ml of 3-10% sterile saline.
3. Collect induced sputum into sterile container.

Device & Volume: Sterile Leakproof Container

Transport:

< 24 hr, 4 degrees C. *S. pneumoniae* recovery improves if specimen is transported to Micro Lab within 1 hr.

Comments:

Will be cultured for bacteria only unless otherwise specified.
Routine aerobic culture includes *Legionella*.
Direct Gram Stain is automatically performed with Bacterial Culture.
AFB Smear is automatically performed with AFB Culture.

RESPIRATORY TRACT - Nasal Swab, Nasopharyngeal (NP) Swab - Bacterial Culture

Guidelines:

Nasal Swab:

1. Use swab premoistened with sterile saline. Insert swab ~2 cm into nares.
2. Rotate swab against nasal mucosa.

Nasopharyngeal Swab:

1. Gently insert swab into posterior nasopharynx via nose.
2. Rotate swab slowly for 5 sec to absorb secretions. Remove swab & place in transport media.
3. For *Bordetella pertussis*, collect 2 nasopharyngeal swabs. Submit 1 in transport media for culture. Smear the other on a DFA slide for direct detection of *B. pertussis*.

Device & Volume:

Nasopharyngeal Swab in Transport Media (Transwab Culturette). Pertussis collection/transport kits are available from the Client Services, 275-8181.

Transport: < 24 hr, Room Temp.

Comments:

Will be cultured for routine bacteria only unless otherwise specified. *B. pertussis* culture requires specific request.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

RESPIRATORY TRACT - Nasal Swab, Nasopharyngeal (NP) Swab - Virus Culture

Guidelines:

Nasal Swab:

1. Use swab premoistened with sterile saline. Insert swab ~2 cm into nares.
2. Rotate swab against nasal mucosa.

Nasopharyngeal Swab:

1. Gently insert swab into posterior nasopharynx via nose.
2. Rotate swab slowly for 5 sec to absorb secretions. Remove swab & place in transport media.
3. For Bordetella pertussis, collect 2 nasopharyngeal swabs. Submit 1 in transport media for culture. Smear the other on a DFA slide for direct detection of B. pertussis.

Device & Volume:

Use cotton or dacron swab. Place in Virus/Chlamydia Transport Media (VCTM), break off excess applicator & seal cap tightly. VCTM is available from the Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C

Comments:

Provide clinical information & indicate suspected viruses. Influenza A/B Antigen or RSV Antigen Detection test can be performed on NP Swab specimen in VCTM or on Nasal Wash specimen. Tests are available November - May. Influenza A/B or RSV Antigen Detection test must be specifically ordered. Will not be performed automatically in conjunction with Viral Culture.

RESPIRATORY TRACT - Nasopharyngeal Aspirate or Wash

Guidelines:

1. Pass appropriate size tubing or catheter into MP. Aspirate material with a small syringe & place in a sterile container.
2. If material cannot be aspirated, tilt patient's head back & instill 3-7 ml sterile saline until it occludes nostril. Respirate & deposit sample in a sterile container.

Device & Volume: Sterile Leakproof Container.

Transport: 4 degrees C, Transport to Micro Lab as promptly as possible.

Comments:

NP Aspirate or Wash specimens are generally submitted for Viral Culture. Please provide clinical information & indicate suspected viruses.

RESPIRATORY TRACT - Throat - Culture for S. pyogenes (Group A Beta Strep)

Guidelines:

1. Depress tongue with tongue depressor.
2. Sample posterior pharynx, tonsils & inflamed areas with sterile swab.

Device & Volume: Swab in Transport Media (Culturette).

Transport: < 24 hr, Room Temp.

Comments:

Will be cultured for GABHS and other beta-hemolytic streptococci only. Rapid Test for GABS performed if requested..

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

RESPIRATORY TRACT - Throat - Virus Culture

Guidelines:

1. Depress tongue with tongue depressor.
2. Sample posterior pharynx, tonsils & inflamed areas with sterile swab.

Device & Volume:

Use cotton or dacron swab. Place in Virus/Chlamydia Transport Medium (VCTM), break off excess applicator & seal cap tightly. VCTM is available from the Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments:

Provide clinical information & indicate suspected viruses. Influenza A/B antigen Detection test can be performed on Throat swab VCTM. Test is available November - May. Test must be specifically ordered - will not be performed automatically in conjunction with Viral Culture.

SKIN - Lesion, Vesicle - Bacterial, Yeast Culture

Guidelines:

1. For dry, encrusted lesions, culture is not recommended unless exudate is present.
2. Cleanse area with sterile saline.
3. Firmly sample margin of lesion with sterile swab.
4. If present, a sample of exudate may be submitted.
5. Place swab in transport media.

Device & Volume: Swab in Transport Media (Culturette)

Transport: < 24 hr, Room Temp.

Comments: Will be cultured for bacteria only unless Yeast is specified.
See also: Abscess

SKIN - Lesion, Vesicle - Dermatophyte Culture

Guidelines:

1. Decontaminate skin with 70% alcohol.
2. Use sterile surgical blade to gently scrape surface of skin at active margin of lesion to obtain superficial skin scales.

Device & Volume: Sterile Container

Transport: < 24 hr, Room Temp.

Comments: Specify Dermatophyte Culture on request.
See also: Abscess

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

SKIN - Lesion, Vesicle - Viral Culture

Guidelines:

1. Sample fresh vesicles. Older crusted vesicles may not contain viable virus.
2. Cleanse area with sterile saline.
3. Carefully open vesicle with sterile needle or scalpel.
4. Use cotton or dacron swab to collect fluid & cellular material by firmly sampling base of lesion.

Device & Volume:

Place in Virus/Chlamydia Transport Medium (VCTM), break off excess applicator & seal cap tightly. VCTM is available from the Client Services, 275-8181.

Transport: < 24 hr, 4 degrees C.

Comments:

For culture of AFB or Fungi other than Yeast and Dermatophytes, a tissue sample should be submitted (see below).

For VZV Antigen Detection test, consultation with the Virus Lab is required.

For assistance, call Microbiology & ask for the Virus Lab or the Microbiologist on call - 275-7801.

See also: Abscess

TISSUE - Biopsy & Surgically Obtained Samples, Bone Marrow - Bacterial, Fungal, AFB Culture

Guidelines:

1. Submit in sterile container.
2. For small samples of tissue, add several drops of sterile saline to keep moist.
3. Bone marrow is collected in yellow top tube.

Device & Volume: Sterile Leakproof Container.

If anaerobic bacteria are suspected, use Anaerobic Transport System (Port-a-Cul).

Transport:

Room Temp. Transport to Micro Lab as promptly as possible, < 2 hr.

Comments:

Will be cultured for bacteria only unless Fungal, AFB &/or Viral Culture are specified.

Always submit as much tissue as possible.

Swab specimens are not recommended. They do not provide optimal inoculum for recovery of pathogens.

To optimize recovery of pathogens, submit separate pieces of tissue for Bacterial & Viral Culture whenever possible.

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

TISSUE - Biopsy & Surgically Obtained Samples, Bone Marrow - Virus Culture

Guidelines:

1. Place separate piece of tissue in tube of Virus/Chlamydia Transport Media (VCTM).
2. Bone marrow is collected in yellow top tube.
3. If separate piece of tissue is not available for Viral Culture, submit single sample in sterile container for Viral & Bacterial Culture. (Bacterial culture cannot be performed on tissue samples in VCTM because it contains antibiotics.)

Device & Volume: Sterile Leakproof Container.

Transport: 4 degrees C, Transport to Micro Lab as promptly as possible, <2h.

Comments: None

URINE - Midstream - Bacterial, Fungal, Virus

Guidelines:

Female:

1. Clean urethral area with soap & water. Rinse with wet gauze pads or moist towelette.
2. While holding labia apart, begin voiding.
3. After several ml have passed, collect midstream portion.

Male:

1. Clean glans with soap & water. Rinse with wet gauze pads or moist towelette.
2. While holding foreskin retracted, begin voiding.
3. After several ml have passed, collect midstream portion.

Device & Volume:

1. Inpatient Specimens - Sterile Leakproof Screw cap Container ~5 ml.
2. Outpatient and Nursing Home Specimens - Sterile Leakproof Screw cap Container with integrated transfer device and 5 ml glass gray top tube containing preservative for culture. Push gray top tube into the integrated transfer port and hold in position until urine flow stops. Remove tube and shake vigorously. NOTE: Always fill gray top tube before UA tube when both are ordered to avoid contamination.

Transport:

Unpreserved specimens: < 24 hr, 4 degrees C.
Preserved Specimens: 48 hours, RT.

Comments:

Will be cultured for bacteria only unless otherwise requested.
Specify if Neisseria gonorrhoeae, Salmonella or Cryptococcus is suspected.

URINE - Indwelling Catheter

Guidelines:

1. Disinfect catheter collection port with 70% alcohol.
2. Use needle & syringe to aseptically collect 5-10 ml of urine.
3. Transfer sample to sterile leak proof container.

Device & Volume:

1. Inpatient Specimens - Sterile Leakproof Screw cap Container ~5 ml.
2. Outpatient and Nursing Home Specimens - Sterile Leakproof Screw cap Container with integrated transfer device and 5 ml glass gray top tube

MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

containing preservative for culture. Push gray top tube into the integrated transfer port and hold in position until urine flow stops. Remove tube and shake vigorously. NOTE: Always fill gray top tube before UA tube when both are ordered to avoid contamination.

Transport: < 24 hr, 4 degrees C.

Comments:

Indicate that specimen was collected through indwelling catheter.
Will be cultured for bacteria only unless otherwise requested.
Specify if *Neisseria gonorrhoeae*, *Salmonella* or *Cryptococcus* is suspected.

URINE - Straight Catheter

Guidelines:

1. Clean urethral area with soap & water. Rinse with wet gauze pads.
2. Aseptically insert catheter into bladder.
3. Allow ~15 ml to pass. Then collect urine for culture in sterile container.

Device & Volume:

1. Inpatient Specimens - Sterile Leakproof Screw cap Container ~5 ml.
2. Outpatient and Nursing Home Specimens - Sterile Leakproof Screw cap Container with integrated transfer device and 5 ml glass gray top tube containing preservative for culture. Push gray top tube into the integrated transfer port and hold in position until urine flow stops. Remove tube and shake vigorously. NOTE: Always fill gray top tube before UA tube when both are ordered to avoid contamination.

Transport: < 24 hr, 4 degrees C.

Comments:

Not recommended for routine urine culture because procedure may introduce urethral flora into bladder.
Indicate that specimen was collected via straight catheter.
Will be cultured for bacteria only unless otherwise requested.
Specify if *Neisseria gonorrhoeae*, *Salmonella* or *Cryptococcus* is suspected.

* Adapted from: Miller, J. Michael. 1996. A Guide to Specimen Management in Clinical Microbiology, pp. 120-129. American Society for Microbiology. Washington, D.C.