

OCHSNER CLINIC FOUNDATION - DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE
 MICROBIOLOGY SPECIMEN COLLECTION GUIDELINES

Version 06-12-2020

Specimen Type (reference)	Collection		Replica Limits	Comments
	Guidelines	Device and/or minimum vol		
NOTE: E-swab can be used for aerobic and anaerobic cultures				
Abscess	Remove surface exudate by wiping with sterile saline or 70% Ethanol	Sterile cup or syringe (no needle). Swab transport system (culturette or E-swab).		Tissue or fluid is always superior to swab specimen. If swabs must be used, collect 2 - 1 for culture, 1 for Gram stain
Open	Aspirate if possible, or pass swab deep into lesion and firmly sample lesion's advancing edge.	swab transport system (culturette or E-swab)	1/day from same source	
Closed	Aspirate abscess wall material with needle and syringe. Aseptically transfer all material into anaerobic transport device or vial.	Anerobic transport system >= 1ml (E-swab or Port-A-Cul)	1/day from same source	Sampling of surface area can introduce colonizing bacteria not involved in infectious process. Deliver to lab.
Bite Wound	See Abscess			Do not culture animal bite wounds <=12 hrs old (agents are usually not recovered) unless wounds are on face or hand or unless signs of infection are present.

<p>Blood Culture</p>	<p>Disinfection of culture bottle: • Apply 70% isopropyl alcohol to rubber stoppers and wait 1 min.</p> <p>Disinfection of venipuncture site: 1. Cleanse site with 70% alcohol, air dry. 2. Apply Chloraprep in back-and-forth motion with applicator for 30 seconds. 3. Allow to air dry 30-60 seconds. 4. Do not palpate vein at this point. 5. Collect blood.</p>	<p>Bacteria: blood culture vial (Bactec) Adult & Pediatric \geq 12 yrs old • resin (aerobic/gray) 8-10 mL/vial • lytic (anaerobic/purple 8-10 mL/vial)</p> <p>Pediatric < 12yrs old • 1-3 mL (Pediatric bottle - pink)</p> <p>Fungi and AFB • Lysis Centrifuge (Isolator tube)</p>	<p>3 sets in 24 hours</p>	<p>For Adults & Pediatrics \geq 12 yrs old blood culture collection: • minimum volume is 3mL/bottle. If only 3ml is collected, inoculate sample into adult aerobic bottle, indicate volume collected on the bottle. • Do not use Pediatric bottles (pink) for adult patients.</p> <p>For Pediatric < 12 yrs old blood culture collection: • minimum volume is 1.5mL/bottle</p> <p>For Pediatric or Adult insufficient (1 bottle only) • collections using LSID, scan both lab barcoded labels, apply one to bottle and send the extra lab barcoded label in the specimen transport bag to laboratory • For all Blood Culture collections: record date/time of collection along with source/site on collection label</p> <p>For Fungal and AFB blood culture collection: • adult 10mL (Isolator tubes can be obtained from Microbiology Laboratory)</p>
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Catheter				
IV	1. Cleanse skin around catheter site with alcohol. 2. Aseptically remove and clip 5-cm distal tip of catheter directly into sterile tube. 3. Transport directly to microbiology laboratory to prevent drying.	Sterile screw-cap tube or cup	None	Acceptable IV catheters for semiquantitative culture (Maki method);; central CVP, Hickman< Broviac, peripheral, arterial, umbilical, hyperalimentation, Swan-Ganz Not acceptable for anaerobic culture
Foley	Do not culture. Growth represents distal urethral flora.			Not acceptable for culture.
Cellulitis	1. Cleanse site by wiping with sterile saline or 70% alcohol. 2. Aspirate area of maximum inflammation (commonly center rather than leading edge) with fine needle and syringe. 3. Draw small amount of sterile saline into syringe. 4. Remove needle (with protective device), and cap.	Capped syringe or sterile tube	None	
CSF	1. Disinfect site with betadine or Chloraprep 2. Insert needle with stylet at L3-L4, L4-L5, or L5-S1 interspace. 3. Upon reaching subarachnoid space, remove stylet, and collect 1-2 ml of fluid into each of 4 leakproof tubes.	Sterile screw-cap tube Bacteria >=1ml Fungi >=1ml AFB >=1ml Virus >= 1ml	None	Obtain blood cultures also. If only 1 tube of CSF is collected, submit it to Microbiology Laboratory first; otherwise, generally submit Tube #2. Send to lab immediately.

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Decubitus ulcer	<ol style="list-style-type: none"> 1. Cleanse surface with sterile saline. 2. If biopsy sample is not available, vigorously swab base of lesion. 3. Place swab in appropriate transport system. 	Culturette, E-swab, or anaerobic transport system	1/day from same source	Decubitus swab provides little clinical information; discourage collection of this. Tissue biopsy sample or needle aspirate is specimen of choice.
Dental Culture: gingival, periodontal, periapical, Vincent's stomatitis	<ol style="list-style-type: none"> 1. Carefully cleanse gingival margin and supragingival tooth surface to remove saliva, debris, and plaque. 2. Using periodontal scaler, carefully remove subgingival lesion material and transfer it to anaerobic transport system. 3. Prepare smears collected in same fashion. 	E-swab or anaerobic transport system	1/day from same source	Periodontal lesions should be processed only by laboratories equipped to provide specialized techniques for detection and enumeration of specific agents.
Ear				
Inner	<p>Tympanocentesis is reserved for complicated, recurrent, or chronic persistent otitis media.</p> <ol style="list-style-type: none"> 1. For intact ear drum, clean ear canal with soap solution, and collect fluid via syringe aspiration technique. 2. For ruptured ear drum, collect fluid on a flexible short swab via auditory speculum. 	Sterile tube, swab transport (E-swab or culturette), or anaerobic transport system.	1/day from same source	If aspirate or biopsy, use anaerobic transport system, and transport for ≤2hr at RT for both aerobic and anaerobic cultures. Throat or nasopharyngeal cultures are not predictive of agents responsible for otitis media.

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Outer	<ol style="list-style-type: none"> 1. Use moistened swab to remove any debris or crust from ear canal. 2. obtain sample by firmly rotating swab in outer canal. 	Swab transport (E-swab or culturette)	1/day from same source	For otitis externa, vigorous swabbing is required because surface swabbing may miss streptococcal cellulitis.
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Eye				
Conjunctiva	<ol style="list-style-type: none"> 1. Sample both eyes with separate swabs (premoistened with sterile saline) by rolling swab over each conjunctiva. 2. Inoculate medium at time of collection. 3. Smear swabs onto 2 slides for staining. 	E-swab or Direct culture inoculation: BAP and CHOC	None	Sample both conjunctiva to determine indigenous microflora. Uninfected eye serves as a control.
Corneal scrapings	<ol style="list-style-type: none"> 1. Obtain conjunctival swab 2. Instill 2 drops of local anesthetic 3. Using sterile spatula, scrape ulcers or lesions, and inoculate scraping directly onto medium. 4. Apply remaining material to 2 clean glass slides for staining. 	E swab or Direct culture inoculation: BAP, CHOC and SAB	None	Collect swabs for culture prior to anestheitic application; corneal scrapings can be obtained after.
Feces				
Stool Culture	Pass directly into clean, dry container. Transport to microbiology laboratory.	Sterile, leakproof, wide-mouth container or enteric transport system, >=2g	1/day	Do not routinely perform stool cultures for patients whose length of stay was >3 days and admitting diagnosis was not gastroenteritis. However, consider <i>C. difficile</i> .
<i>Clostridium difficile</i>	Pass liquid or soft stool directly into clean, dry container. Soft stool is defined as stool assuming shape of its container.	Sterile, leakproof, wide-mouth container, >=5ml	7 days for previously tested negative or 30 days for previously tested positive	Bloody or liquid stools collected within 6 days of onset among patients with abdominal cramps have highest yield. Formed stools will be rejected.
<i>Escherichia coli</i> 0157				Detection of Shiga toxin I and II antigens are part of stool culture.
Leukocytes	Pass directly into clean, dry container. Transport to laboratory.	Sterile, leakproof, wide-mouth container		

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OCP	Pass directly into clean, dry container. Transport to laboratory in clean container or transfer to ECOFIX Collection System.	Sterile, leakproof, wide-mouth container or ECOFIX Collection System.	3 specimens within 10 day period for maximum yield.	Do not routinely perform stool cultures for patients whose length of stay was >3 days and admitting diagnosis was not gastroenteritis. However, consider <i>C. difficile</i> .
Rectal Swab	1. Carefully insert swab = 1in (2.54cm) beyond anal sphincter. 2. Gently rotate swab to sample anal crypts.	Swab transport	1/day	Reserved for detecting gonorrhea, <i>Shigella</i> and <i>Campylobacter</i> spp., and anal carriage of <i>Streptococcus pyogenes</i> or for patients unable to pass specimen. Feces should be evident on the swab.
Fistulas	See Abscess			
Fluids: abdominal, ascites, bile, joint, pericardial, peritoneal, pleural, synovial	1. Disinfect overlying skin with betadine or Chloraprep. 2. Obtain specimen via percutaneous needle aspiration or surgery. 3. Transport immediately to laboratory 4. Always submit as much fluid as possible; never submit swab dipped in fluid	Sterile screw-cap tube, E-swab or anaerobic transport system , >=1ml.	None	Store fluids for fungal cultures at 4°C.
Gangrenous tissue	See Abscess			Discourage sampling of superficial surface

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Gastric: wash or lavage fluid	Collect in early morning before patients eat and while they are still in bed. 1. Introduce nasogastric tube orally or nasally to stomach. 2. Perform lavage with 25-50 ml of chilled, sterile, distilled water. 3. Recover sample and place in leakproof sterile container. 4. Before removing tube, release suction and clamp it.	Sterile leakproof container	1/day	Specimen must be processed promptly because Mycobacteria die rapidly in gastric washings. Specimens not neutralized within 1 hr will be rejected.
Genital: female				
Amniotic	1. Aspirate via amniocentesis, cesarean section, or intrauterine catheter. 2. Transfer fluid to anaerobic transport system.	Sterile tube, >=1ml	None	Swabbing or aspiration of vaginal membrane is not acceptable because of vaginal contamination.
Bartholin	1. Disinfect skin with betadine or Chloraprep 2. Aspirate fluid from ducts.	Sterile tube, >=1ml	1/day	
Cervix	1. Visualize cervix with speculum without lubricant. 2. Remove mucus and/or secretions from cervix with swab, and 3. Firmly yet gently, sample endocervical canal with sterile swab.	Appropriate swab transport	1/day	Viral and chlamydial tests require separate collection and transport kits (Viral Transport Media) received on ice. DNA test for chlamydia/GC - collect Cepheid swabs. DNA testing for patients <14 years is a send out test; contact client services @24623 for proper collection device(s). Vaginosis requires BD Max UVE collection device. BD Affirm collection devices is needed at Baptist OB Urgent Care.
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Cul-de-sac	1. Submit aspirate or fluid. 2. Deliver to lab.	Anaerobic transport system >1ml (E-swab or Port-A-Cul); sterile tube	1/day	
Endometrium	1. Collect transcervical aspirate via telescoping catheter. 2. Deliver to lab.	Anaerobic transport system >1ml (E-swab or Port-A-Cul); sterile tube	1/day	
Products of Conception	1. Submit portion of tissue in sterile container. 2. If obtained by cesarean section, immediately transfer to anaerobic transport system and transport to lab	Sterile tube or anaerobic transport system (E-swab or Port-A-Cul)	1/day	
Urethra	1. Remove exudate from urethral orifice. 2. Collect discharge material on swab by massaging urethra against pubic symphysis through vagina.	Swab transport (culturette or E-swab)	1/day	If not discharge can be obtained, wash external urethra with betadine soap, and rinse with water. Then insert urethrogenital swab 2-4 cm into urethra, and rotate swab for 2 seconds.
Vagina	1. Wipe away excessive amount of secretion or discharge. 2. Obtain secretions from mucosal membrane of vaginal vault with sterile swab. 3. If smear is also requested, obtain it with a second swab.	Swab transport (culturette or E-swab)	1/day	For intrauterine devices, place entire device into sterile container, and submit at room temperature. Viral Cultures require Viral Transport Media received on ice. DNA test for chlamydia/GC - collect Cepheid swabs. DNA testing for patients <14 years is a send out test; contact client services @24623 for proper collection device(s). Vaginosis requires BD Max UVE collection device. BD Affirm collection devices is needed at Baptist OB Urgent Care.

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Genital: Male				
Prostate	1. Clean glans with soap and water 2. Massage prostate through rectum 3. Collect fluid on sterile swab or in sterile tube.	Swab transport or sterile tube	1/day	More relevant results may be obtained by also using urine specimens obtained immediately before and after massage.
Urethra	Insert urethrogenital swab 2-4 cm into urethra lumen, rotate swab, and leave it in place for at least 2 seconds.	Swab transport (culturette or E-swab)	1/day	
Hair: Dermatophytosis	1. With forceps, collect at least 10-12 affected hairs with basis of shafts intact 2. Place in clean tube or container	Clean container, 10 hairs	1/day	Collect scales, if present, along with scrapings of active borders of lesions. Note any antifungal therapy taken recently.
Nail: Dermatophytosis	1. Wipe nail with 70% alcohol. Use gauze (not cotton) 2. Clip away generous portion of affected area, and collect material or debris from under nail 3. Place material in clean container	Clean container, enough scrapings to cover head of thumbtack	1/day	
Pilonidal cyst	See Abscess			
Respiratory Tract: lower BAL, BBW, tracheal aspirate	1. Place aspirate or washing into sputum trap. 2. Place bursh in sterile container with saline	Sterile container, >=1ml	1/day	

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Sputum, expectorate	<ol style="list-style-type: none"> 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 specimen (not postnasal fluid). Collect into sterile container. 	Sterile container, >=1ml	1/day	<p>For pediatric patients unable to produce specimen, a tracheal aspirate may be collected.</p> <p>NOTE: Specimens collected from in-patients will be rejected if >10 squamous epithelial cells are present.</p>
Sputum, induced	<ol style="list-style-type: none"> 1. Have patient rinse mouth with water after brushing gums and tongue 2. With aid of a nebulizer, have patient inhale = 25 ml of 3-10% sterile saline. 3. Collect induced sputum into sterile container. 	Sterile container	1/day	<p><i>Histoplasma capsulatum</i> and <i>Blastomyces dermatitidis</i> survive for only short periods once specimen is obtained.</p> <p>NOTE: AFB culture includes smear</p>
Oral				
Upper Respiratory Tract	<ol style="list-style-type: none"> 1. Remove oral secretions or debris from surface with swab. Discard swab 2. Using a second swab, vigorously sample lesion, avoiding any areas of normal tissue. 	Swab transport (culturette or E-swab)	1/day	Discourage sampling of superficial tissue for bacterial evaluation. Tissue biopsy samples or needle aspirates are specimens of choice.
Nasal	<ol style="list-style-type: none"> 1. Use swab premoistened with sterile saline. Insert = 2cm into nares 2. Rotate swab against nasal mucosa 	Swab transport (culturette or E-swab)	1/day	Anterior nose cultures are reserved for detecting Staphylococci and Beta Streptococci carriers or for nasal lesions.

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Nasopharynx	<ol style="list-style-type: none"> 1. Gently insert NP swab into posterior nasopharynx via nose 2. Rotate swab slowly for 5 seconds to absorb secretions. Remove swab; place swab in transport medium. 	Flocked NP swab in Viral Transport Media Collection Device or Green or Blue E-Swab	1/day	Viral transport media is used for Respiratory Infection Panel. E-swab is used for bacterial cultures.
Throat	<ol style="list-style-type: none"> 1. Depress tongue with tongue pressor. Sample posterior pharynx, tonsils, and inflamed areas with sterile swab 	Swab transport (culturette or E-swab)	1/day	Throat cultures are contraindicated for patients with inflamed epiglottis. Throat swabs are inappropriate for Respiratory Viral or Respiratory Panel testing.
Skin: Dermatophytosis	<ol style="list-style-type: none"> 1. Clean affected area with 70% alcohol 2. Gently scape surface of skin at active margin of lesion. Do not draw blood. 3. Place sample in clean container. 	Clean container, enough scrapings to cover head of thumbtack	1/day from same site	If specimen is submitted between glass slides, tape slides together and submit in envelope.
Tissue	<ol style="list-style-type: none"> 1. Submit in sterile container. 2. For small samples, add several drops of sterile saline to keep moist. 3. Do not allow tissue to dry out. 4. Place in anaerobic transport system, or sterile container 	Sterile container; Anaerobic transport system (E-swab or Port-A-Cul)	None	Always submit as much tissue as possible. Never submit swab that has simply been rubbed over surface

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Urine				
Female, Midstream	<ol style="list-style-type: none"> 1. Thoroughly clean urethral area with soap and water 2. Rinse area with wet gauze pads 3. While holding labia apart, begin voiding 4. After several mls have passed, collect midstream portion without stopping flow of urine. 	Sterile wide-mouth container, >=1ml, or urine transport kit	1/day	
Male, Midstream	<ol style="list-style-type: none"> 1. Clean the glans with soap and water 2. Rinse area with wet gauze pads 3. While holding foreskin retracted, begin voiding. 4. After several ml have passed, collect midstream portion of urine without stopping flow of urine. 	Sterile wide-mouth container, >=1ml, or urine transport kit	1/day	
Straight catheter	<ol style="list-style-type: none"> 1. Thoroughly clean urethral area with soap and water 2. Rinse area with wet gauze pads 3. Aseptically insert catheter into bladder 4. Allow = 15 ml to pass, then collect urine to be submitted in sterile container. 	Sterile leakproof container	1/day	Not recommended for routine urine culture because of potential contamination risks. Procedure may introduce urethral flora into bladder.

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Indwelling catheter	1. Disinfect catheter collection port with 70% alcohol 2. Use needle and syringe to aseptically collect 5-10 ml of urine. 3. Transfer sample to sterile tube or container.	Sterile leakproof container	1/day	
Wound	See Abscess			

Abbreviations:

AFB	Acid-fast bacilli
BAL	Bronchoalveolar lavage
BAP	Blood agar plate
CHOC	Chocolate agar
CSF	Cerebrospinal fluid
CVP	Central venous pressure
EtOH	Ethanol
HSV	Herpes simplex virus
IV	Intravenous
RT	Room temperature
SAB	Sabouraud agar plate

Notes:

All viral culture requests must be received on ice within 1 day of collection

Transport all specimens in leakproof plastic bags with a separate compartment for the requisition.

E-swabs are acceptable for both aerobic and anaerobic cultures.