

# Microbiology Collection and Handling

## General Information

---

1. All specimens for culture, except stools, must be sent in proper sterile containers, which are properly labeled with the patient's full name, DOB and source of specimen, date and time of collection. Stool may be submitted in a clean non-sterile container.
2. Fill our requisition completely, including patient's full name, DOB, ordering physician, type of specimen (source), time collected and test ordered.
3. Send all specimens for any type of culture to the laboratory as soon as possible after collection. The time a specimen is collected for culture must be recorded on the requisition.
4. **Do not submit leaking specimens to the laboratory.** This is a health hazard for those handling the specimen. (All specimens are to be placed in transport bags).
5. Urine specimens for culture should be refrigerated if not brought to laboratory within one hour, unless transferred into gray top culture tube.
6. Stools for Clostridium Difficile should be received in the laboratory as soon as possible or within 24 hours of collection.
7. Stool for Occult Blood – Pick up cards and dietary instructions from the laboratory.
8. Swab specimens for Neisseria gonorrhoea must be brought to the lab immediately.
9. Cultures for anaerobic organisms should be sent in an anaerobic culture swab and transported to the lab as soon as possible.
10. The process of generating a quality bacteriology test result begins with the proper collection and transport of the specimen.
11. Specimens should be collected with as little external contamination as possible. Whenever possible specimens should be obtained before antibiotics administered.
12. Wound and body fluid specimens should be submitted within one hour after collection.
13. If a specimen is submitted in a syringe the needle **must** be removed before transportation to the laboratory.



<p><b>Decubitis Ulcer</b></p>	<p>of the wound with 70% alcohol. Aspirate if possible. If swab used, obtain at the time of incision, drainage or debridement of wound. If anaerobic culture ordered collect in anaerobic swab or transport syringe within 30 min of collection.</p>	<p>Room temp</p>	<p>Swabs may not provide good clinical information.</p>
<p><b>Biopsy/Bone/Tissue</b></p>	<p>1) Cleanse surface with sterile saline. 2) Tissue biopsy or needle aspirates are the sample of choice. Submit in a sterile container. Syringes are also acceptable.</p>	<p>Room temp</p>	<p>Fluid samples are preferable to swabs dipped in fluid.</p>
<p><b>Sterile Body Fluids</b></p> <p>Abdominal Ascites Bile Synovial Pericardial Peritoneal Pleural</p>	<p>3) If a biopsy or aspirate is not possible, swab base of ulcer with routine culture.</p> <p>1) Submit in</p>	<p>Room temp</p>	<p>Fluid samples are preferable to swabs dipped in fluid.</p>

<p><b>CSF</b></p>	<p>sterile container without formalin. Specimen may be kept moist with sterile 0.85% saline.</p>		
<p><b>Blood Culture</b></p>	<ol style="list-style-type: none"> <li>1) Disinfect overlying skin area with iodine tincture.</li> <li>2) Generally, specimens are obtained via percutaneous needle aspiration or surgery.</li> <li>3) Transfer fluid to sterile container or blood culture bottles with syringe. (disinfect top of bottles) Syringes are acceptable for culture.</li> </ol>	<p>Room temp</p> <p>Room Temp</p>	<p>Usually tube 2 is submitted to Microbiology.</p> <p>A blood culture set consists of an aerobic and anaerobic bottle for adults and older children. For children, a set is a single pediatric bottle.</p>
<p><b>Mycobacteria</b></p>	<p>The physician generally obtains these samples.</p>	<p>Room temp</p>	
<p><b>Catheter tips</b></p>	<p>ASCEPTIC TECHNIQUE IS CRITICAL TO PROPER BLOOD CULTURE</p>	<p>Room temp</p>	<p>Pick-up special Bactee bottle from the Microbiology Dept</p>

<p><b>Ear, inner</b></p>	<p>COLLECTION. Please refer to procedure.</p> <p>Follow procedure as described for routine cultures.</p> <p>1) Cleanse around the site with alcohol. 2) Aseptically remove the catheter and clip off 5 cm of the distal tip directly into a sterile container.</p>	<p>Room temp</p>	<p>Foley cath tips are not acceptable. Acceptable catheters include: CVP, central, Hickman, Broviac, arterial, peripheral, umbilical, Swanz-Ganz</p> <p>Typanocentesis should be reserved for recurrent, complicated or chronic persistent otitis media.</p>
<p><b>Outer ear</b></p>	<p>1) For an intact eardrum, clean ear canal with a soap solution. 2) Collect fluid by aspirating with a syringe. Sample may be submitted in a syringe, sterile container or routine culture swab.</p>	<p>Room temp</p>	
<p><b>Eye, conjunctiva</b></p>	<p>3) For ruptured</p>	<p>Room temp</p>	<p>If otitis externa is suspected, vigorous swabbing is needed as simple surface swabbing may miss a</p>

	<p>eardrum, collect fluid on a flexible shaft swab.</p>		streptococcal infection.
<b>Eye, Cornea (scrapings)</b>	<ol style="list-style-type: none"> <li>1) Use a moistened swab to remove any debris or crust from the ear canal. Discard swab.</li> <li>2) Obtain sample by firmly rotating the routine culture swab in the outer canal.</li> </ol>	<p>Room temp</p> <p>Refrigerate</p> <p>Refrigerate</p>	
<b>Genital, Female</b>	<ol style="list-style-type: none"> <li>1) Premoisten swab appropriate for the tests ordered with sterile saline unless sufficient exudate is present.</li> <li>2) Roll swab over the conjunctiva.</li> <li>3) The clinician may opt to inoculate culture plates directly at time of collection.</li> <li>4) May submit</li> </ol>	<p>Room temp</p> <p>Refrigerate</p> <p>Room Temp</p>	

<p><b>Cervix</b></p>	<p>sample on routine culture swab.</p> <p><i>Bacterial/fungus:</i> Routine culture swab</p> <p><i>Viral culture:</i> Viral culture media</p> <p><i>Chlamydia culture:</i> viral transport media</p> <p>Viral transport media available from laboratory.</p> <p>1) The physician usually obtains these samples. 2) May opt to inoculate directly onto culture plates. A swab may also be submitted for routine culture.</p> <p>3) For viral cultures, place some of the scrapings and /or exudate into viral culture media.</p>	<p>Room temp</p> <p>Refrigerate</p> <p>Room temp</p> <p>Room temp</p> <p>Refrigerate</p>	<p>Cervical specimens are not recommended for prenatal screening for group B strep.</p> <p>Cervical specimens are not recommended for anaerobic culture.</p>
<p><b>Vagina</b></p>	<p>Fluid is aspirated via c-section, amniocentesis or intrauterine catheter. Submit in sterile</p>	<p>Room Temp</p>	<p>Routine genital culture includes screen for N. Gonorrhoea. Viral media available from laboratory.</p>

<p><b>Bartholin Gland</b></p>	<p>container.</p> <ol style="list-style-type: none"> <li>1) Examine cervix with speculum without the use of lubricants.</li> <li>2) Remove mucus and or secretions from the cervix with a swab.</li> <li>3) Discard this swab.</li> <li>4) Sample the endocervical canal with the swab appropriate for the test ordered.</li> </ol>		<p>STD probe available for GC and Chlamydia.</p> <p>Must be brought to laboratory immediately.</p>
<p><b>Genital lesion</b></p>	<p><i>Bacterial/fungus</i> Routine culture swab</p> <p><i>Viral</i> Viral culture media</p> <p><i>STD DNA Probe</i> Swab from STD probe collection kit</p> <p><i>Wet mount</i> Swab in a red top tube with at least 1 ml sterile saline added at the time of collection.</p> <p><i>Chlamydia culture</i> Viral culture media</p> <p><i>Screen for GC</i> Routine culture swabs</p>	<p>Room Temp</p>	

<p><b>Genital male</b></p>	<ol style="list-style-type: none"> <li>1) Wipe away excessive amount of secretions or mucus with a swab and discard.</li> <li>2) Obtain secretions from the mucosal membrane of the vaginal vault with the swab appropriate for the test ordered.</li> </ol>	<p>Room Temp</p> <p>Refrigerate</p>	
<p><b>Hair</b></p>	<p>Follow same collection guidelines indicated for Cervical specimens above.</p> <ol style="list-style-type: none"> <li>1) Disinfect skin with 2% iodine tincture.</li> <li>2) Aspirate fluid from ducts.</li> <li>3) Sample may be submitted on routine culture swab.</li> </ol> <ol style="list-style-type: none"> <li>1) Clean the lesion with sterile saline and carefully remove the</li> </ol>	<p>Room Temp</p> <p>Refrigerated</p> <p>Room Temp</p> <p>Refrigerated</p> <p>Room temp</p>	<p>Routine genital culture includes screen for N. gonorrhoea. Viral media available from laboratory.</p>

<p><b>Nail</b></p>	<p>surface with a sterile scalpel blade. 2) While pressing the base of the lesion, firmly sample the exudate and cellular material with the swab appropriate for the test ordered.</p>	<p>Room Temp</p> <p>Room Temp</p>	<p>Can be used for GC and Chlamydia.</p>
<p><b>Respiratory tract Lower</b></p>	<p><i>Bacterial/fungus</i> Routine culture swab</p>		
<p><b>Sputum, expectorated</b></p>	<p><i>Viral</i> Viral culture media</p>		
<p><b>Sputum, induced</b></p>	<p>1) Patient should not have urinated within the past hour. 2) Insert swab appropriate for the tests ordered approximately 4 cm into the urethral lumen. Rotate swab 2-3 times to obtain adequate sample.</p> <p><i>Bacterial/fungus</i> Routine culture swab</p>	<p>Room Temp</p> <p>Room Temp</p>	
<p><b>Tracheal aspirate</b></p>	<p><i>Viral</i></p>		

<p><b>Respiratory tract, Upper</b></p> <p><b>Nasal Swab</b></p>	<p>Viral culture media</p> <p><i>STD DNA probe</i> Swab from the STD collection kit.</p> <p><i>Chlamydia</i> Viral culture media</p> <p><i>GC screen</i> Routine culture swab</p>	<p>Room Temp</p>	<p>Specimen must be brought to laboratory as soon as possible after collection. Specimen will be evaluated for contamination with saliva.</p>
<p><b>Nasal Wash</b></p>	<ol style="list-style-type: none"> <li>1) With forceps, collect at least 10-12 affected hairs with the bases of the shafts intact.</li> <li>2) Place the hairs in a sterile container.</li> </ol> <ol style="list-style-type: none"> <li>1) Wipe nail with 70% alcohol.</li> <li>2) Clip away the affected areas and collect material or debris from under the nail.</li> </ol> <ol style="list-style-type: none"> <li>3) Submit in sterile container.</li> </ol>	<p>Room Temp</p>	<p>Specimen must be brought to laboratory as soon as possible after collection.</p> <p>Bring to laboratory as soon as possible after collection.</p>
<p><b>Nasopharynx</b></p>	<ol style="list-style-type: none"> <li>1) Have patient</li> </ol>	<p>Room Temp</p> <p>Specimen must be put on ice immediately after collection.</p>	<p>Do not use Gel swab for PCR</p>

<p><b>Oral</b></p>	<p>gargle or rinse with water.</p> <p>2) Instruct patient to cough deeply to produce a sample from the lower respiratory tract and not saliva.</p> <p>3) Collect sample in sterile container.</p>	<p>Refrigerate</p> <p>Room Temp</p> <p>Room Temp</p>	<p>Must bring to laboratory immediately. Only a wash is accepted</p>
<p><b>Throat</b></p>	<p>1) Have the patient gargle or rinse with water.</p> <p>2) Have patient inhale approximately 25 ml of 3-10% saline with the aid of a nebulizer.</p> <p>3) Collect sample in sterile container.</p> <p>Place aspirate or washing into sputum trap container.</p> <p>1) Insert swab premoistened with sterile saline into nares.</p> <p>2) Rotate swab</p>	<p>Room temp</p> <p>Refrigerate</p>	<p>Transport to laboratory immediately.</p> <p>Available from laboratory.</p> <p>If C. diphtheria or B. pertussis ordered, contact laboratory for special media prior to collection.</p>

	<p>against the nasal mucosa.</p> <ol style="list-style-type: none"> <li>1) Using the bulb method, suction 3-5 ml saline into bulb.</li> <li>2) Insert bulb into nostril; instill saline with one squeeze.</li> <li>3) Release bulb to collect nasal specimen put into sterile cup.</li> </ol>	<p>Room Temp</p>	
<b>Sinus</b>		<p>Refrigerate</p>	<p>Cultures of nasal drainage, throat or nasopharynx generally do not correlate well with the etiologic agent of a sinus infection.</p>
	<p><i>RSV antigen</i> Nasal wash</p>	<p>Room Temp</p>	
<b>Skin Scrapings</b>		<p>Room Temp</p>	
	<p><i>Influenza A/B antigen</i> Nasal wash or swab</p>	<p>Room Temp</p>	
<b>Gastrointestinal tract</b>		<p>Room Temp</p>	<p>Note if Neisseria gonorrhoea is suspected.</p>
<b>Fecal specimens</b>	<p>Insert wire mini-tip swab via the nose into the nasopharynx. Rotate slowly to absorb secretions.</p> <p><i>Bacterial/fungus</i> Mini-tip culture swab</p> <p><i>RSV antigen</i> Nasal wash</p>		<p>Used to detect Group A strep antigen.</p> <p>Culture for Group A streptococcus only.</p>

	<p>1) Remove oral secretions or debris from the surface of the infected area with a swab and discard.</p> <p>2) Using the swab appropriate for tests ordered, sample the site vigorously, avoiding areas of normal tissue.</p> <p><i>Bacterial/fungus</i> Routine culture swab</p> <p><i>Viral</i> Viral culture media</p>	<p>Room Temp</p>	
	<p>1) Depress tongue down with a sterile tongue depressor.</p>	<p>Room Temp</p>	<p>All stool specimens should be brought to laboratory as soon as possible after collection.</p>
	<p>2) Firmly sample inflamed areas, exudate and or lesions with the swab appropriate for the test ordered.</p>	<p>Room Temp</p>	
	<p><i>Bacterial/fungus</i> Routine culture swab</p> <p><i>Viral</i></p>	<p>Room Temp</p>	<p>Kits for pinworm from laboratory. Hemocult slides and dietary instructions are also available from laboratory. If three stools ordered, collect three specimens on three different</p>

<b>Rectal Swabs</b>	<p>Viral culture media</p> <p><i>Rapid Strep test</i> Routine culture swab Do not use Gel swab</p> <p><i>Strep Screen</i> Routine culture swab</p>	Refrigerate	days.
	<ol style="list-style-type: none"> <li>1) Decontaminate the nasal cavity.</li> <li>2) Aspirate sample from the sinus cavity.</li> <li>3) Submit syringed sample.</li> </ol>		Liquid or soft stool
	<ol style="list-style-type: none"> <li>1) Cleanse the area with 70% alcohol.</li> <li>2) Scrape area at the active margin of the lesion. Do not draw blood.</li> <li>3) Place scrapings into sterile container.</li> </ol>	Room Temp	
	<ol style="list-style-type: none"> <li>1) Pass stool directly into a sterile or clean, wide-mouth, leakproof</li> </ol>		

	<p>container.</p> <p>2) Pass stool into clean, dry bedpan, and transfer to container.</p> <p>3) Cover toilet seat with plastic wrap and transfer to clean or sterile container.</p> <p>4) For infants or toddlers line diaper with plastic wrap before placing on child</p> <p><i>Bacterial culture</i> Clean or sterile container.</p> <p><i>Rotavirus</i> Clean or sterile container.</p> <p>Clostridium Difficile Clean or sterile container.</p> <p><i>Campylobacter</i> <i>Shigatoxin</i> <i>Antigen</i></p> <p><i>Pinworm</i> Pinworm collection kit</p> <p>Specimens should be collected first thing in the morning before a</p>		<p>Gram stains performed for fecal leukocytes only.</p> <p>Note if N. gonorrhoea suspected.</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------

	<p>bowel movement. Press sticky side of collection kit firmly against perianal area. Return paddle to container.</p> <p><i>Ova and Parasites</i> Require a clean container</p> <p><i>Hemoccult</i> Hemoccult test slide or stool in clean container</p> <p>Put a small amount of stool on the test slide and smear in a small circle. Close flap on the test slide and return the slide to the lab. Written instructions and dietary directions are available.</p> <p><i>Fecal leukocytes</i> Clean or sterile container.</p> <ol style="list-style-type: none"><li>1) Pass the tip of a sterile swab approximately one inch beyond the anal sphincter.</li><li>2) Carefully rotate the swab to sample the</li></ol>		
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	<p>anal crypts, and withdraw the swab.</p> <p><i>Bacterial culture</i> Routine culture swab Not applicable specimen cannot do complete culture including Shiga Toxin and Campylobacter antigen from rectal swab</p>		
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--