

St. Joseph's/ Candler Health System	CLINICAL LABORATORY PROCEDURE Title: Guide to Microbiology Services/Procedures	Policy Number: CL-M017 Effective Date: 03/23/2026 Page 1 of 5
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Policy Statement

It shall be the policy of St. Joseph's/Candler Health System (SJ/C) Laboratories to provide designated Microbiology Services in accordance to standard microbiology practices. This policy is intended to be a short guide for commonly submitted specimens and is not intended to be all inclusive. For more detailed instructions regarding specimen collection, transport and manipulation of clinical specimens, refer to the Clinical Microbiology Procedures Handbook or other reference material.

Definitions

1. Routine Swab/E-swab: Bacterial Transport swab, Liquid Amies or Modified Stuarts used for aerobic/anaerobic bacterial cultures.
2. UVT: Universal Viral Transport Medium used for Molecular Viral/Bacterial Panels.
3. Carey Blair/Stool C&S Medium: Used for stool culture and molecular GI Panel testing.
4. O&P Vials: 10% Formalin and PVA preservative vials used for the collection of stool specimens submitted for ova/parasite testing.
5. Urine C&S vial: Vacutainer with Boric Acid and/or Sodium Borate/Formate preservative used for transport of urine for culture.
6. CSF: Cerebral Spinal Fluid
7. BFCS: Body Fluid Culture/Smear (naturally occurring sterile fluids)
8. TISCS: Tissue Culture/Smear

Specimens Requirements

1. Each specimen submitted to the Microbiology laboratory must be labeled according to policies CL-A009, 6049-PC and 6205-PC. For specimens submitted without a Meditech label, all containers must include a collection date/time, collector's name or initials, specimen source and microbiology test(s) or accompanied test requisition.
2. Identify the source of the specimen to guide the selection of proper media and other tests.
NOTE: Clinical information should be included if/when unusual pathogens are suspected. Failure to supply pertinent information could result in the inability of the laboratory to isolate the true etiologic agent.
3. Evaluation of the specimen for adequacy:
 - a. Specimens must be submitted in the proper transport container.
 - b. The specimen volume must be adequate to perform all tests requested.
 - c. The specimen submitted must be appropriate for the test ordered.
4. Suboptimal specimens should not be used for testing. If the specimen cannot be recollected and the physician insists on testing, a note describing the specimen quality shall be placed on the report along with a disclaimer for interpreting results. The following specimens shall be considered suboptimal:
 - a. Routine culture of anaerobes from throat, sputum, urine, feces and wounds contaminated with feces,
 - b. Swabs, tissues or biopsy material received dried, or with minimal specimen.
 - c. Specimens received in non-sterile containers (except feces),

- d. Foley catheter tips,
- e. Blood cultures collected in anything other than appropriate blood culture media,
- f. Respiratory specimens that do not meet criteria by gram stain,
- g. Specimens received in an unapproved collection container/transport container,
- h. Fresh cultures not received within appropriate time limit,
- i. Specimens that exceed the acceptable time limit of the transport media/received in an expired transport media or held at an inappropriate temperature,
- j. Catheter tips or hardware for AFB/Fungus.

Specimen Collection and Requirements for Routine Aerobic Bacterial Cultures

Routine swabs, when properly used, can maintain the viability of most micro-organisms for up to 48 hours. However, specimens should be transported to the laboratory within one hour after collection to avoid the loss of any fastidious micro-organisms such as anaerobes or *Neisseria*. Do not refrigerate swabs as some microbes are sensitive to cold temperature.

1. Wounds

- a. Open/surface wounds
 - i. Clean sinus tract opening or wound surface to limit normal flora.
 - ii. Culture the base of the wound, not the surrounding skin.
- b. Abscess/ulcerative lesions/deep wounds
 - i. Biopsy or curette.
 - ii. Aspirate/drainage submitted in sterile containers or in a sterile syringe after the needle has been removed. **NOTE:** Deep penetration of the wound or insertion of a needle into an abscess or removal of infected tissue should only be performed by a physician or trained registered nurse.

2. Intravenous or intra-arterial catheters

- a. Carefully remove after the skin site has been disinfected.
- b. Cut off approximately 2-3 inches of the distal tip aseptically and submit in a sterile container.

3. Throat cultures

- a. Swab any visible lesion. **NOTE:** Do not swab the side of mouth or tongue. Culture beyond the uvula.
- b. If certain fastidious organisms are suspected, alert the laboratory with an appropriate notation. (Examples: *Corynebacterium diphtheriae*, *Bordetella pertussis* or *Neisseria*)

4. Respiratory/expectorated sputa

- a. Instruct patients to provide a deep cough specimen to avoid contamination of saliva from the throat and mouth.

5. Stool for culture

- a. If collected in a clean container, ensure immediate transport to the laboratory.
- b. Preferably, submit stools in Cary-Blair/Stool C&S transport medium. **NOTE:** Do not refrigerate stool as *Salmonella* and *Shigella* may not survive.
- c. A rectal swab is acceptable if the swab is taken by proctoscopy exam and swabbed beyond the anal sphincter.

6. Cervical, rectal or mouth swabs or penile exudate for culture of *Neisseria gonorrhea*

- a. Submit in transport media immediately. **NOTE:** Do not refrigerate.
- b. As an alternative, the swab can be plated immediately onto Thayer Martin and Chocolate agar media.

7. Urine culture

- a. Submit fresh specimens within 1 hour. If this is not possible the specimen may be stored refrigerated up to 24 hours.
- b. Preferably, submit in a Urine C&S tube, which remains stable for 48 hours at room temp.
- 8. Anaerobic cultures:
 - a. Are automatically included in CSF, TISCS and BFCS.
 - b. Will be performed on other types of specimens when requested and only if the source does not have normally occurring anaerobic flora.
 - c. If fresh, the specimen should be transported to the lab within an hour and the specimen processed upon receipt. Fresh specimens should not be refrigerated.
 - a. Specimens submitted in transport media are stable for 48 hrs.
- 9. Sterile body fluids
 - a. Collect several mLs in a sterile container.
 - b. May be submitted in blood culture bottles.
 - c. Body fluids submitted on swabs are sub-optimal. Call for more specimen. If additional specimen is not available note the specimen is suboptimal on results.
- 10. Tissue/biopsy material
 - a. Submit in a sterile container as soon as possible to prevent drying.
 - b. All tissue should remain at room temperature for transport.
- 11. Blood cultures: 2-3 sets collected using separate collection time/sites. **NOTE:** See the Blood Sampling Procedure (6049-PC) for further instruction.
- 12. CSF/Spinal Fluid
 - a. CSF must be submitted in designated CSF collection tubes.
 - b. Shunt fluid may be submitted in a routine sterile container.
 - c. Minimal suggested volumes:
 - i. Bacterial culture: Submit at least 2-3mLs (but no minimal required).
 - ii. AFB/Fungus culture: 1-2mL.

Collection of Specimens for Mycobacterial (AFB) Cultures

With the exception of Blood or Bone Marrow, collect all specimens submitted for Mycobacteriology (AFB) in a sterile container.

- 1. Sputum specimen
 - a. Collect 5 to 10mL of early morning sputum (not saliva).
 - b. Three consecutive early morning specimens are generally recommended to establish diagnosis.
- 2. Bronchial washings/bronchial brushing
 - a. Submit in sterile containers/traps.
 - b. Remove the suction tubing and place a screw cap on the container to prevent leakage.
- 3. Gastric washing specimens
 - a. Collect an early morning specimen (before breakfast).
 - b. Specimens must be received in the laboratory immediately to allow neutralization of the specimen.
- 4. Urine specimens
 - a. Collect an early morning for best results.
 - b. Collection of 3 consecutive early morning urine specimens is suggested to detect 90-95% of cases of urinary tract tuberculosis.
 - c. Submit at least 20mLs.
 - d. 24-hour urines are generally unacceptable due to difficulty in decontamination.
- 5. Blood/bone marrow

- a. Collection requires a specialized collection tube (Mycolytic vial). This tube must be acquired from the laboratory prior to the time of collection.
- b. Alternatively, the blood can be submitted in a sodium heparin tube.
- c. See the Blood Sampling Procedure (6049-PC) for further instruction.

Collection of Specimens for Mycology (Fungus) Cultures

Follow the collection methods above with the exception of hair, skin scrapings, nails, blood and bone marrow.

1. Skin scrapings
 - a. Gently scrape the skin using a wooden applicator or glass slide at the active margin of the lesion.
 - b. Submit in a dry, sterile container.
2. Hair
 - a. Using forceps, collect a minimum of 10-12 infected hairs keeping the base of the shaft intact.
 - b. Submit in a dry, sterile container.
3. Blood/Bone marrow for Fungus culture
 - a. Collect in routine blood culture bottles.
 - b. A Sodium Heparin tube is acceptable.
 - c. Verify test order code is FUNGUS, BLD/Bone Marrow.

Collection of Specimens for Molecular Testing

1. Respiratory Bacterial/Viral Panels: Naso-pharyngeal collection using a UVT medium.
2. GI Panel: Stool submitted in Cary-Blair or Stool C&S transport. **NOTE:** Fill the vial to collection line.
3. CSF Meningitis Panel: Minimal of 0.5mL CSF specimen in a CSF collection tube.

Collection of Specimens for Parasitology Studies

1. Stools: Place specimens in O&P preservative vials within 30 minutes of passage.
2. Blood parasite studies: Refer to Hematology procedures.

Culture Reporting and Retention

All cultures are reported as soon as possible. Preliminary results of significance are reported prior to final identification to allow the physicians to begin therapy if indicated.

Cultures are typically kept for the minimal following times prior to being reported as “No Growth.” Times may be adjusted depending on the suspect organism/source.

Random or clean catch Urine = 18-24 hrs.

Cath/Suprapubic urine = 48 hrs.

Respiratory cultures = 48 hrs.

Wound/Eye/Ear = 72 hrs.

Sinus Culture = 4 days

Blood Cultures = 5 days

MRSA/Spectra culture = 24 hrs.

Sterile Body Fluid Cultures = 5 days

CSF = 7 days

GC/Genital Cultures = 72 hours

Stool Cultures = 72 hours
AFB = 6 weeks
Fungus = 4 weeks

For further information see CL-M017 Job Aid 1.

Approved:

Signature

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References: Leber, Amy L. and Carey-Ann D. Burnham, *Clinical Microbiology Procedures Handbook*, 5th ed, ASM Press 2023.

Jorgensen, James H., et al. *Manual of Clinical Microbiology*. ASM Press, 2015.

Former Policy Number(s): CL-G009

Printed copies are for reference only. Please refer to the electronic copy for the latest version.