



MICROBIOLOGY TESTS AND SPECIMEN COLLECTION GUIDELINES

Microbiology Tests	Culture includes:	Turn around time
Aerobic culture and sensitivity	ID, MIC and sensitivities	Varies depending on source
Anaerobic culture	Identification only	7-10 days
Ear culture	ID, MIC and sensitivities	Varies
Fecal culture	ID, MIC and sensitivities, screens for <i>Salmonella</i> , <i>Shigella</i> , and <i>Klebsiella</i> spp.	Varies
Skin culture	ID, MIC and sensitivities	Varies
Fungal culture	Isolation only	30 days – if growth occurs, specimen will be sent to University of Texas San Antonio fungal lab for identification and sensitivity (for an additional fee).

GENERAL CULTURE GUIDELINES

- Whenever possible, specimens should be obtained before antimicrobial agents have been administered.
- Wait 48 hours after cessation of antimicrobial agents to obtain culture specimens.
- Use sterile technique in collecting the specimen.
- When transport systems are used, always cap the specimens and ensure tube tops are firmly secured.
- Provide an adequate amount of specimen. When several cultures are requested and specimen is collected by culturette, it is best to provide one swab for each culture requested.
- The specimen must be adequately labeled with clinic/patient information, sample source, test requested, and date of sample. When possible, the suspected disease should be included on the submission form.
- Source of culture must be included on submission form. Be as specific about the source as possible. Example: Deep tissue wound between digits. **Failure to provide a source will delay in the planting and work up of the culture.**
- Anaerobic culture submission: Use a **separate** Aimes/Copan transport culturette. All specimens for Anaerobic culture should be held at room temperature. **Refrigeration will compromise isolation of fastidious anaerobic organisms.**





AEROBIC CULTURE AND SENSITIVITY

Several specimen types are acceptable for aerobic culture.

- Specimens can be sent on **Aimes/Copan swabs** (sterile swab with Aimes transport gel).
- **Biopsy specimens or pieces of tissue** for culture should be sent in a sterile container with a small amount of sterile physiological saline to keep tissue from drying out.
- **Orthopedic hardware** (screws, etc.) and **foreign bodies** for culture should be submitted in a dry, sterile container. **No additive necessary.**
- **Catheter tips** should be submitted in a dry, sterile container. **No additive necessary.**
- **Specimens collected by syringe** should be aseptically transferred to a red top tube, sterile tube or cup. Samples submitted in syringes with needles still attached are unacceptable and will not be processed.
- Specimens received in **formalin or EDTA are *not* acceptable** for culture.
- Swabs that contain mostly pus often provide no growth on cultures due to the toxic effect of the white blood cells. The most productive specimens are obtained by **swabbing deep** into an infected wound or **obtaining fluids** from an actively infected tissue.
- Most Aerobic Culture swabs (culturette) can be refrigerated until planting.



ANAEROBIC CULTURES

Anaerobic cultures should be submitted **on a separate Aimes/Copan culturette** (sterile swab with Aimes transport gel). All Anaerobic cultures should be processed within 48 hours of collection

- Proper collection of anaerobic samples is imperative. Several methods which avoid contamination by normal flora are:
 1. syringe aspiration of fistulous tracts or draining wounds
 2. cystocentesis
 3. thoracocentesis
 4. use of guarded Teigland swabs
 5. curettage
 6. tissue biopsy
- After collection, keep specimen at **room temperature** as fastidious organisms may be lost otherwise.



FECAL CULTURES

- **Stool cultures** should be submitted in **clean dry container** (fecalyzer or sterile blue top tube). Copan swabs are also acceptable but not ideal.
- **Rectal specimens** may be submitted on a Copan swab.
- **Anaerobic** fecal cultures are **not recommended** unless a specific pathogenic organism is suspected. Normal stool contains large numbers of different anaerobic bacterial species.
- Isolation of pathogenic bacteria such as *Salmonella* sp. will be reported along with antibiotic sensitivities.

URINE CULTURE

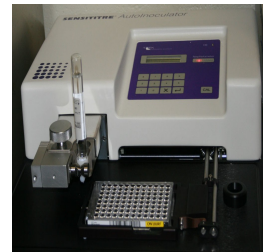
- All urine specimens should be submitted in a sterile blue cap urine tube or red top tube.
- Urine from cystocentesis is the preferred specimen for urine culture. Mid-stream/clean-catch and specimens from catheterization are acceptable, if performed with aseptic technique.
- Refrigerate urine samples after collection to prevent overgrowth of both pathogenic and/or normal flora bacteria.
- Urine received in a **sterile tube** will be given a **quantitative colony count**.
- Susceptibility testing is provided for all pathogenic bacteria isolated.
- Urine specimens on hold **are not ideal** for culture **after 48 hours**. Cultures performed on older specimens are more apt to produce **false positive or negative results**.

CSF for CULTURE

- Submit separate aliquot of CSF in sterile blue capped tube. Do not submit on a culturette.
- Keep specimen at **room temperature**.

SUSCEPTIBILITY TESTING

- Angell Laboratory will provide Antimicrobial Susceptibility information and MIC results on pathogens with CLSI guidelines.
- The laboratory uses the TREK Diagnostics Sensititre System for the identification and AST information. No additional disks will be dropped for MIC or antimicrobial information.



ITEMS THAT MAY DELAY RESULTS OR PROCESSING OF CULTURES

- Source for culture is not indicated on the submission form.
- Incomplete or inadequate patient information, submission form, or sample labeling.
- Dry swab received for culture or specimen dried out.
- Specimen submitted in improper container.
- Inadequate specimen for number of tests requested.
- Various factors that render a specimen inadequate for request.
(Examples: specimen placed in formalin or EDTA; container broke or leaked in transit)