
Lab Dept: Microbiology/Virology

Test Name: ABCESS CULTURE AND GRAM STAIN

General Information

Lab Order Codes: AC

Synonyms: Culture, Abscess

Related information: Refer to [Wound Culture](#).

CPT Codes: 87070 – Culture, bacterial; any other source except urine, blood or stool, aerobic, with isolation and presumptive identification of isolates
87205 – Smear, primary source with interpretation; Gram or Giemsa stain for bacteria, fungi or cell types

The following testing may be added if appropriate based on findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87076 – Anaerobic isolate, additional methods required for definitive identification of isolates
87077 – Aerobic isolate, additional methods required for definitive identification, each isolate (if appropriate)
87106 – Culture, fungi, definitive identification, each organism, yeast (if appropriate)
87107 – Culture, mold, definitive identification, each organism, mold (if appropriate)
87147 – Culture, typing; immunologic method, other than immunofluorescence. (e.g., agglutination grouping), per antiserum. (if appropriate)
87184 – Susceptibility studies, disk method, per plate (if appropriate)
87185 – Enzyme detection (eg, beta lactamase), per enzyme (if appropriate)
87186 – Susceptibility studies, microdilution or agar dilution, each multi-antimicrobial, per plate (if appropriate)
87206 – Smear, primary source with interpretation, fluorescent and/or acid fast stain for bacteria, fungi or cell types (if appropriate)

Test Includes: Gram stain, culture for aerobes and less fastidious anaerobes if appropriate. All aerobic organisms will be identified. Anaerobic organisms will be characterized or identified depending on the nature of the culture. Susceptibilities will be performed if requested.

Logistics

Lab Testing Sections: Microbiology

Phone Numbers: MIN Lab: 612-813-5866

STP Lab: 651-220-6555

Test Availability:	Daily, 24 hours
Turnaround Time:	Preliminary reports are available at 24 hours; final results reported within 5 days.
Special Instructions:	Specimen site and date/time of collection are required for specimen processing. Indicate suspected organisms and diagnosis. If a <i>Mycobacterium</i> species (AFB, TB) or fungus is suspected, request AFB Culture or Fungal Culture .

Specimen

Specimen Type:	Pus, fluid or aspirated material. Aspirated material is superior to a swab specimen. If a swab must be used, collect two, one for aerobes and one for anaerobes.
Container:	<ol style="list-style-type: none">1. Aerobes: Swab transport medium or sterile container.2. Anaerobes: Anaerobic transport medium.<ul style="list-style-type: none">● Swab specimens: BD Port-A-Cul (Available from Materials/Storeroom Supply Item # 14536)● Fluids: BD Port-A-Cul vial (Available from Microbiology) <p>Anaerobic transport system instructions:</p> <ul style="list-style-type: none">● Store in dark at room temperature.● Discard if media turns pink/purple.● Discard after expiration date.
Volume:	0.5 - 5 mL pus, fluid or aspirated material
Collection:	<ol style="list-style-type: none">1. Disinfect skin surface with 70% alcohol. Allow to dry.2. Aspirate specimen directly into the syringe. Remove air from syringe.3. Aseptically transfer material into an anaerobic transport vial for fluids or sterile container.4. If the specimen must be transported in the syringe, replace the needle with a sterile Leur cap.5. If unable to aspirate, 2 swabs are required. Pass a swab deep into the lesion and firmly sample the lesion's advancing edge. Place swab into a culturette transport system for aerobes. Repeat with second swab and place in Port-a-Cul tube for anaerobes.

Transport/Storage:

Onsite collections: Transport to the laboratory immediately at room temperature. **Do not refrigerate.** Refrigeration may inhibit the viability of anaerobic organisms.

Offsite collections: Specimens must be promptly transported to the laboratory, with the next available courier, not to exceed 24 hours from the time of collection.

- Transport aerobic swab or aspirate refrigerated.
- Transport anaerobic swab or aspirate at room temperature.

Sample Rejection:

Improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements); specimen not submitted in appropriate transport container; insufficient volume; external contamination. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

Interpretive**Reference Range:**

No growth

Alert Value:

- Gram-negative rods identified as ESBL or Carbapenemase producers will be called to the physician or patient's nurse. Infection Prevention will be notified.
- If MRSA is isolated for the first time, and the patient location is not Emergency department, the result will be called to the physician or patient's nurse.
- Any culture positive for potential agents of Bioterrorism – *Bacillus anthracis*, *Brucella*, *Burkholderia mallei/pseudomallei*, *Franciscella tularensis*, or *Yersinia pestis* will be called to Infectious Disease and/or Infection Prevention.

Limitations:

Specimens are routinely screened for rapid growing anaerobes (e.g., *Bacteroides fragilis* group, *Clostridium perfringens*, *Fusobacterium*, and anaerobic gram-positive cocci). Fastidious anaerobes may not be recovered despite significant efforts to collect and properly submit a specimen. If fastidious anaerobes are suspected, specifically order [Anaerobic Culture](#).

Any specimen submitted for microbial culture can be contaminated with colonizing organisms that are not contributing to disease. Organisms most likely to contaminate specimens of this type include, but are not limited to, *Corynebacterium* sp. and coagulase-negative staphylococci. However, these organisms may be pathogenic in certain settings.

Slow-growing *Mycobacterium* sp. or *Nocardia* sp. that may cause abscesses will not be recovered in routine bacterial cultures even if present, since extended incubation periods or special media are necessary for their isolation. Cultures for these organisms should be specifically requested.

Methodology:

Culture

References:

Cook, JH, and M Pezzlo (1992). Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In HD Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington DC

Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Miller, J Michael, and HT Holmes (1999) Specimen Collection, Transport, and Storage In PR Murray et al, (ed), Manual of Clinical Microbiology, 7th edition, American Society for Microbiology, Washington DC, pp 33-104

Updates:

3/22/2010: CPT Updates

6/19/2012: Added Alert Value.

6/20/2012: Alert Value amended