
Lab Dept: Microbiology/Virology

Test Name: BODY FLUID CULTURE AND GRAM STAIN

General Information

Lab Order Code: BF

Synonyms: Culture, Abdominal Fluid; Culture, Ascites fluid; Culture, Joint fluid; Culture, Bile fluid; Culture, Body fluid; Culture, Pericardial fluid; Culture, Pleural fluid; Culture, Synovial fluid; Ascites fluid culture; Abdominal fluid culture; Bile fluid culture; Joint fluid culture; Pericardial fluid culture; Peritoneal fluid culture; Pleural fluid culture; Synovial fluid 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 the specimen submitted, findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87015 – Concentration (any type), for infectious agents
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)
87076 – Anaerobic isolate, additional methods required for definitive identification of isolates
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 7 days.
Special Instructions:	<ul style="list-style-type: none"> • Specimen site and date/time of collection are required for specimen processing. • If an anaerobic infection is suspected, i.e., <i>Actinomyces</i> species. Refer to Anaerobic Culture. If a <i>Mycobacterium</i> species (AFB, TB) or fungus is suspected, request AFB Culture or Fungal Culture.

Specimen

Specimen Type:	Aseptically aspirated body fluid (excludes cerebrospinal fluid, blood, and urine) from a normally sterile site. Do not submit swabs.
Container:	<p>Sterile container or syringe AND in addition: BACTEC® PEDS PLUS/F blood culture bottle (pink cap) may be used for joint fluids.</p> <p>Note: Results may be delayed if only a bottle is submitted for culture.</p>
Volume:	<p>Peritoneal dialysis (PD) fluid: 10 – 15 mL</p> <p>Other fluids: 1 – 15 mL (Minimum: 0.5 mL)</p>
Collection:	<p>If percutaneous collection, prepare skin as for blood culture.</p> <ol style="list-style-type: none"> 1. Aspirate fluid with a sterile syringe and needle. 2. Expel air bubbles from syringe. 3. Aseptically transfer specimen into sterile container. 4. If the specimen is of a small amount and must be transported in a syringe, replace the needle with a sterile Lem cap. 5. Additionally BACTEC® PEDS PLUS/F blood culture bottle (pink cap) may be used for joint fluids. However, results may be delayed if only a bottle is submitted for culture.
Transport/Storage:	<p>Onsite collections: Transport to the laboratory immediately at room temperature. Do not refrigerate. Refrigeration inhibits the viability of certain anaerobic organisms. Do not transport through the pneumatic tube.</p> <p>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.</p>

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

Critical Values:

- Significant isolates from a sterile site will be called to the physician or patient's nurse.
- Infection Prevention will be notified with gram stain results that appear to be gram-negative cocci/diplococci.

Limitations: Specimens are routinely screened for rapid growing anaerobes (*B. fragilis* group, *Clostridium perfringens*, etc.). If an anaerobic infection is suspected, i.e., *Actinomyces species*, refer to [Anaerobic Culture](#).

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: 3/23/2010: CPT updates
3/7/2011: CPT updates
6/20/2012: Amended Critical Value