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| <b>Test</b>  | Acid-Fast Smear and Culture  |
| <b>Test Description</b>                                | <p>The Acid-Fast Smear and Culture tests involve the screening of fluids and tissues from miscellaneous body sites for the presence of mycobacteria, including <i>Mycobacterium tuberculosis</i> complex.</p> <p><u>Acid-fast Smears</u> are made after processing the specimen and detects the presence of bacteria with large amounts of lipids in the cell wall. The acid-fast stain is not specific for mycobacteria since other microorganisms can stain positively; also, the stain cannot differentiate <i>Mycobacterium tuberculosis</i> from nontuberculous mycobacteria. If detected, acid-fast bacilli are enumerated.</p> <p><u>Acid-fast Culture</u> further monitors for the growth of mycobacteria over an 8-week period and is more sensitive than the smear because it can detect very small numbers of mycobacteria in a clinical sample.</p> <p>Mycobacteria that grow on culture media will typically be identified to the species level using Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF-MS).</p> <p>Antibiotic susceptibility testing and genotyping (<i>Mycobacterium tuberculosis</i> complex only) are performed as reflex tests. Antibiotic susceptibility testing for mycobacteria other than <i>Mycobacterium tuberculosis</i> complex is performed by request. These tests require referral to other laboratories.</p> |
| <b>Acceptable specimens and collection information</b> | <ol style="list-style-type: none"> <li>1. Sputum—expectorated or induced<br/>An early-morning sputum should be collected on three consecutive days. A volume of 5–10 mL should be collected. The minimum acceptable volume is 1 mL. Specimens consisting of saliva only will have low sensitivity.</li> <li>2. Urine<br/>First morning clean catch urines are the specimen of choice. 24-hour collections are not acceptable. The minimum acceptable volume is 10 mL.</li> <li>3. CSF<br/>The minimum acceptable volume is 1 mL. Volumes less than 5 mL limit the usefulness of a smear.</li> <li>4. Other sterile body fluids<br/>The recommended collection volume is 5–15 mL. The minimum acceptable volume is 1 mL.</li> <li>5. Abscess aspirate<br/>The recommended collection volume is 5–15 mL. The minimum acceptable volume is 1 mL.</li> <li>6. Tissue</li> </ol>  |

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|  | <p>At least 1 gram of tissue is recommended, although smaller quantities can be tested. Do not immerse in saline or other liquids or wrap in gauze.</p> <p>7. Stool<br/>At least 2 grams of formed specimen or 1–5 mL of liquid specimen is recommended. Stool specimens should be collected into a sterile container without preservative.</p> <p>8. Gastric lavage<br/>The minimum acceptable volume is 1 mL.</p> <p>9. Blood<br/>5 mL of whole blood should be collected in a BACTEC Myco/F Lytic tube. AFB smears are not performed directly from blood. The minimum acceptable volume is 1 mL.</p> <p><i>Note: Except for blood (which is collected in the BACTEC Myco/F Lytic tube), specimens should be collected in a sterile container. Specimens that have leaked from their collection container or that have less than the minimum acceptable volume will be rejected.</i></p> |
| <b>Specimen storage</b>                      | Specimens, except for blood, should be stored refrigerated at 2–8 °C. Unincubated blood in a BACTEC Myco/F Lytic tube should be kept at room temperature or at 35 °C.  |
| <b>Specimen transporting/shipping</b>        | <p>Specimens, except for blood, gastric lavage, and urine specimens, should be transported/shipped refrigerated (ice packs) and received by the laboratory to ensure that processing can occur <b><u>within 7 days</u></b> from the time of collection.</p> <p><u>Blood in a BACTEC Myco/F Lytic tube</u> should be shipped at room temperature and received within 1 day from the time of collection.</p> <p><u>Gastric lavage</u> specimens should be shipped refrigerated and must be received by the laboratory within 4 hours of collection for immediate processing.</p> <p><u>Urine specimens</u> should be shipped refrigerated and processed within 24 hours of collection.</p>   |
| <b>CPT code</b>                              | 87015 and 87206 (smear), 87116 (culture)   |
| <b>Test fee</b>                              | Refer to the posted fee schedule   |
| <b>Result availability (turnaround time)</b> | Smear results are typically reported within 1 business day after specimen receipt. Positive culture results are faxed to submitters upon first detection and identification over the 8-week culture period. Negative specimens require 8 weeks for culturing to be completed. Please allow for at least 1 month for susceptibility testing results after an acid-fast organism is successfully isolated. Time to isolation varies depending on the extent of bacterial contamination in the specimen, the growth characteristics of the organism, and other factors.   |