



AFB CULTURE, MYCOBACTERIAL CULTURE (clinical specimens)

Synonym(s): Culture for Mycobacterium Species, TB Culture

Back To Previous Page (javascript: history.go(-1))

Lab Section Category	Mycobacteriology Click here to find out more about the write-up (/clinical-departments-centers/pathology/pathology-handbook/lab-discipline-special-instructions/pages/mycobacteriology.aspx).
Specimen Required	Sputum, bronchoalveolar lavage, CSF, body fluids, gastric lavage, tissue, urine, pus, etc

<p>Method</p>	<p>Culture by MGIT non-radiometric method and LJ solid media. Alternate media include 7H10/11 solid media.</p> <p>Includes reflex testing as follows:</p> <p>1. TB susceptibility testing</p> <p>First-line susceptibility testing for <i>M. tuberculosis</i> (MGIT method) for the first MTBC isolate cultured from new TB cases and upon follow-up at 6-8 weeks. Second-line panel (ofloxacin, kanamycin, ethionamide) testing is automatically performed for isolates resistant to isoniazid, rifampin or ethambutol; and extended-line testing (capreomycin, clofazimine, PAS) for XDR isolates (resistant to isoniazid, rifampin, ofloxacin and kanamycin). If MTBC is isolated in tissue from infants <2 years old, subspeciation of <i>M. bovis</i> subsp BCG will be performed instead of drug susceptibility testing.</p> <p>2. Identification of NTM from clinically significant sites like blood, bone marrow, BAL, bronchial wash, CSF, skin and tissue. For sputum isolates, this involves identification of every 2nd NTM out of 3 and every 3rd NTM if isolated after 3 months from the second; and if isolated from smear-positive specimens.</p> <p>Special requests and charges apply for the following:</p> <ul style="list-style-type: none"> - <i>M. tuberculosis</i> isolates that do not meet the above criteria for reflex susceptibility testing - Pyrazinamide susceptibility testing of <i>M. tuberculosis</i> - Extended-line susceptibility testing for <i>M. tuberculosis</i> e.g. Capreomycin, clofazimine and PAS - Identification of NTM isolated from sputa that do not meet the above criteria for reflex testing - Subspeciation of <i>M.tuberculosis</i> complex** e.g. BCG, <i>M. bovis</i> etc
<p>Test Result</p>	<ul style="list-style-type: none"> - <i>M. tuberculosis</i> complex**isolated. - Susceptibility test result pending / refer to previous cultures for susceptibility test results. - Presumptive nontuberculous mycobacteria isolated*** - AFB culture overgrown with non-mycobacterial organism/s. - No growth of AFB

Turnaround Time	<p>Receipt of specimen to detection of growth (average: 21 days). Affected by type of organism, specimen received and prior antibiotic treatment.</p> <p>Detection of growth to final identification (range of 2 days to 4 weeks, average 5-7 days for MTBC). Affected by slow growing mycobacteria, mixed cultures requiring additional processing and repeat cultures.</p> <p>Negatives: 8 weeks; 6 weeks for Myco-F lytic samples</p>
Day(s) Test Set up	Monday - Saturday
Remarks	<p>** <i>M. tuberculosis complex includes M. tuberculosis, M. bovis, M. bovis BCG, M. africanum, M. canettii and M. microti.</i></p> <p>*** <i>Less than 1% of acid-fast bacteria isolated may include weakly acid-fast aerobic actinomycetes like Nocardia, Rhodococcus, Gordonia and Tsukemurella species.</i></p>

[Back To Previous Page \(javascript: history.go\(-1\)\)](#)

Change History Notes

- 16 Oct 2015 06:10 PM**
Remove "BACTEC 460 Radiometric" as alternate media

- 18 Sep 2017 02:46 PM**
Amend spelling for Clofazimine

- 15 Jan 2018 06:34 PM**
Added in "If MTBC is isolated in tissue from infants <2 years old, subspeciation of *M. bovis* subsp BCG will be performed instead of drug susceptibility testing." under TB ST.

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