

Overview

Useful For

Detection of acid-fast bacilli in clinical specimens

Reflex Tests

| Test Id | Reporting Name | Available Separately | Always Performed |
|---------|-----------------------------|----------------------|------------------|
| TBT | Concentration, Mycobacteria | No, (Bill Only) | No |
| TISSR | Tissue Processing | No, (Bill Only) | No |

Testing Algorithm

When this test is ordered, the reflex tests may be performed at an additional charge.

See [Meningitis/Encephalitis Panel Algorithm](#) in Special Instructions.

Special Instructions

- [Meningitis/Encephalitis Panel Algorithm](#)

Method Name

Auramine-Rhodamine Stain

NY State Available

Yes

Specimen

Specimen Type

Varies

Ordering Guidance

For the preferred test for rapid, direct detection of *Mycobacterium tuberculosis* from clinical specimens, order MTBRP / *Mycobacterium tuberculosis* Complex, Molecular Detection, PCR, Varies.

Necessary Information

Specimen source is required.

Specimen Required

Submit only 1 of the following specimens:

Specimen Type: Body fluid
Container/Tube: Sterile container
Specimen Volume: 1 mL

Specimen Type: Bone marrow
Container/Tube: SPS/Isolator System or green top (lithium heparin)
Specimen Volume: Entire collection

Specimen Type: Gastric washing
Container/Tube: Sterile container
Specimen Volume: 10 mL
Collection Instructions: Neutralize specimen within 4 hours of collection with 100 mg of sodium carbonate per 5 to 10 mL of gastric wash.

Specimen Type: Respiratory
Sources: Bronchoalveolar lavage fluid, bronchial washing, sputum
Container/Tube: Sterile container
Specimen Volume: 4 mL
Collection Instructions: Collect 3 respiratory specimens for acid-fast smears and culture in patients with clinical and chest X-ray findings compatible with tuberculosis. These 3 specimens should be collected at 8- to 24-hour intervals (24 hours when possible) and should include at least 1 **first-morning** specimen.

Specimen Type: Stool
Supplies: Stool Collection Kit, Random (T635)
Container/Tube: Sterile container
Specimen Volume: 5-10 g

Specimen Type: Tissue
Container/Tube: Sterile container
Specimen Volume: 5-10 mm
Collection Instructions: Collect a fresh tissue specimen.

Specimen Type: Urine
Container/Tube: Sterile container
Specimen Volume: 2 mL
Collection Instructions: Collect a random urine specimen.

Specimen Type: Swab
Additional Information: Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Recovery of mycobacteria and aerobic actinomycetes from swabs is variable.

Sources: Wound, tissue, or body fluid
Container/Tube: Culture transport swab (noncharcoal) Culturette
Specimen Volume: Adequate specimen
Collection Instructions:

1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate.
2. Obtain secretions or fluid from source with sterile swab.
3. If smear and culture are requested or both a bacterial culture and mycobacterial culture are requested, collect a second swab to maximize test sensitivity.

Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

[-Microbiology Test Request](#) (T244)

[-General Request](#) (T239)

Specimen Minimum Volume

Body fluid: 0.5 mL

Respiratory specimen: 3 mL

Fresh tissue: pea-sized piece

If a mycobacterial culture is also requested:

Body fluid: 1.5 mL

Respiratory specimen: 3 mL

Fresh tissue: pea-sized piece

Reject Due To

| | |
|--|--------|
| Blood or serum Prepared slide, glass slide, microscope slide | Reject |
|--|--------|

Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---------------|--------------------------|--------|-------------------|
| Varies | Refrigerated (preferred) | 7 days | |
| | Ambient | 7 days | |

Clinical & Interpretive

Clinical Information

Mycobacterium tuberculosis is a leading infectious disease cause of death worldwide. The Centers for Disease Control and Prevention has reported a rise in the incidence of tuberculosis associated with AIDS, foreign-born cases, and increased transmission in high-risk populations. There has also been a rise in the number of *M tuberculosis* strains that exhibit resistance to one or more antituberculosis drugs. The public health implications of these facts are considerable. Because *M tuberculosis* is readily spread by airborne particles, rapid diagnosis and isolation of infected persons is important. Nontuberculous mycobacteria infections also cause significant morbidity and mortality in humans, particularly in immunocompromised persons. Detection of acid-fast bacilli in sputum specimens allows rapid

identification of individuals who are likely to be infected with mycobacteria while definitive diagnosis and treatment are pursued.

Reference Values

Negative (reported as positive or negative)

Interpretation

Patients whose sputum specimens are identified as acid-fast positive should be considered potentially infected with *Mycobacterium tuberculosis*, pending definitive diagnosis by molecular methods or mycobacterial culture.

Cautions

Artifacts may exhibit nonspecific fluorescence and be confused with organisms.

Clinical Reference

1. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: Controlling Tuberculosis in the United States. Am J Respir Crit Care Med. 2005;172:1169-1227
2. American Thoracic Society: An Official ATS/IDSA Statement: Diagnosis, Treatment, and Prevention of Nontuberculous Mycobacterial Diseases. Am J Respir Crit Care Med. 2007;175:367-416

Performance

Method Description

Auramine-rhodamine fluorochrome stain prepared and read with fluorescent microscope.(Pfyffer GE, Palicova F: General characteristics, laboratory detection, and staining procedures. In Manual of Clinical Microbiology. 10th edition. Edited by J Versalovic, KC Carroll, G Funke, et al: Washington, DC, ASM Press, 2011, pp 472-502)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

1 day

Specimen Retention Time

3-7 days

Performing Laboratory Location

Rochester

Fees & Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

87206
87176-Tissue processing (if appropriate)
87015-Mycobacteria culture, concentration (if appropriate)

LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---------|-----------------------------------|--------------------|
| SAFB | Acid Fast Smear For Mycobacterium | 676-7 |

| Result ID | Test Result Name | Result LOINC® Value |
|-----------|-----------------------------------|---------------------|
| SAFB | Acid Fast Smear For Mycobacterium | 676-7 |