Lab Dept: Microbiology/Virology

Test Name: AFB CULTURE, BLOOD

General Information

Lab Order Codes: MYCOB

Synonyms: Blood Culture, Mycobacteria; Acid-Fast Blood Culture; Culture, Blood for AFB (Acid-Fast Bacilli); AFB Culture, Blood; AFB Culture; Culture; Mycobacteria Culture, Blood; BC, Acid Fast

CPT Codes:
87116 – Culture, tubercle or other acid-fast bacilli any source, with isolation and presumptive identifications of isolates
87118 – Culture, mycobacterial, definitive identification, each isolate, MALDI-TOF Mass Spec AFB (if appropriate)
87150 – Id, Mtb Speciation, PCR (if appropriate)
87150 – Mycobacteria Probe Ident, Broth (if appropriate)
87150 – Mycobacteria Probe Ident, Solid (if appropriate)
87153 – Mtb PZA Confirmation, pcnA sequence (if appropriate)
87153 – Mycobacteria Identification by Sequencing (if appropriate)

Test Includes: Culture and identification of mycobacteria, drug resistant studies if appropriate. All positive results are reported immediately by phone to the physician or patient’s nurse and Infection Control.

Logistics

Lab Testing Sections: Microbiology

Referred to: Mayo Medical Laboratories (MML: CTBBL)

Phone Numbers:
MIN Lab: 612-813-5866
STP Lab: 651-220-6555

Test Availability: Daily, 24 hours

Turnaround Time: Within 60 days, positive results are reported when identified A final negative report will be issued after 60 days.

Special Instructions: Specific site and date/time of collection are required for specimen processing. Do not submit more than 1 or 2 blood cultures per acute illness. Specimen must be processed within 72 hours of draw.

Specimen

Specimen Type: Whole blood
**Container:**

- **Preferred:** Green (Sodium Heparin) top tube
- **Acceptable:** Green (Lithium Heparin) top tube or Isolator tube

**Volume:**

- **BLOOD:** 5 - 10 mL

**Collection:**

- **BLOOD:**
  - Venipuncture for patients greater than 26 weeks gestation OR greater than 2 weeks of age:
  - **Prep with CloraPrep Sepp® Applicator with 2% CHG**
    1. Disinfect the stopper of green top tube.
    2. Break the Sepp® ampule to release the 2% CHG.
    3. Apply the CloraPrep® solution using a back-and-forth friction scrub for 30 seconds.
    4. Allow the area to dry for 30 seconds.
    5. If the site must be touched during venipuncture, disinfect the gloved fingers.
    6. Collect 5-10 mL of blood and aseptically inoculate green top tube.
  - **Prep with CloraScrub™Swab with 3.15% CHG**
    1. Disinfect the stopper of the green top tube with alcohol and allow to dry.
    2. Open the Chlorascrub™Swab package, do not unfold wipe.
    3. Apply the Chlorascrub® wipe using a back-and-forth friction scrub for 15 seconds.
    4. Allow the area to dry for 30 seconds.
    5. If the site must be touched during venipuncture, disinfect the gloved fingers.
    6. Collect 5-10 mL of blood and aseptically inoculate the green top tube using a needleless system.

- Venipuncture for patients less than 26 weeks gestation AND less than 2 weeks of age:
  - **Prep with 2% tincture of iodine:**
    1. Disinfect the stopper of the green top tube and allow to dry.
    2. Scrub venipuncture site with 70% alcohol for 1 minute using the Frepp® applicator. Allow to dry.
    3. Using the Sepp® applicator, apply 2% tincture of iodine to site starting at the center and moving outward in concentric circles. Allow to dry, approximately 30 seconds.
    4. If the site must be touched during venipuncture, disinfect the gloved fingers.
    5. Collect 5-10 mL of blood and aseptically inoculate the green top tube.
    6. Following collection, remove the iodine using the Frepp® applicator or an alcohol pad.

**Line Draw (All ages):**
1. Prep catheter port by scrubbing the hub for 30 seconds using chlorhexidine gluconate (CHG) and allowing to dry.
2. Aseptically collect 5-10 mL of blood through the injection port. Blood may be collected without first drawing a discard.
3. Aseptically inoculate the green top tube using a needleless system.

**Transport/Storage:**

**Onsite collections:** Transport to the laboratory immediately.

**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.

Store and send to Mayo 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; anticoagulants other than heparin or sodium polyanethole sulfonate (SPS). 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.

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**Interpretive**

**Reference Range:** Negative
If positive, mycobacteria is identified.
A final negative report will be issued after 60 days of incubation.

**Critical Values:**

Positive cultures will be called to the physician or patient’s nurse and Infection Control.

**Limitations:**

● Results must be interpreted in conjunction with the patient’s history and clinical picture because false-positive results may occur due to specimen contamination.

● A negative result does not rule-out mycobactemia. The organism may be present at quantities below the limit of detection or may be transiently present.

● If Mycobacterium genavense is suspected, indicate on request form or contact laboratory. Mycobactin J (an iron supplement) will then be added to the culture to support growth.

**Methodology:**

Continuously monitored automated broth culture instrument with conventional methods for identification of Mycobacteria

**References:**

[Mayo Medical Laboratories](https://www.mayoclinic.org) January 2016
Updates:

10/31/2006: Added alternate tube for collection when Isolator tubes are not available.
4/24/2008: Removed the use of alternate green top tube when Isolator tubes are unavailable.
6/16/2010: Line draw preparation update
11/10/2014: Added offsite collection
2/15/2016: Moved from Hennepin County Medical Center to Mayo.
Bone Marrow now considered non-blood by Mayo.