
Lab Dept: Microbiology/Virology

Test Name: BLOOD CULTURE, FUNGUS

General Information

Lab Order Codes: BCF

Synonyms: Culture, Blood for Fungus; BC, Fungal; Culture, Blood for Yeast; Blood Culture, Yeast; Fungus Culture, Blood

CPT Codes: 87103 – Culture, fungi isolation, with presumptive identification of isolates; blood

The following testing may be added if appropriate based on findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87106 – Culture, fungi definitive identification, each organism; yeast (if appropriate)

87107 – Culture, fungi definitive identification, each organism; mold (if appropriate)

87077 – Aerobic isolate, additional methods required for definitive identification, each isolate (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)

87186 – Susceptibility studies, microdilution or agar dilution, each multi-antimicrobial, per plate (if appropriate)

Test Includes: Culture and identification of yeast and filamentous fungi. Positive results are called immediately to the physician or patient's nurse. 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: Results are reported when received. All positive results are reported immediately by phone to the physician or patient's nurse. Negative cultures are final after 3 weeks.

Special Instructions: Obtain special collection tube from the Microbiology lab (see [Container](#)).

Specific site and date/time of collection are required for specimen processing. Specify the fungal species suspected. *Malassezia furfur* requires olive oil for growth.

Specimen

Specimen Type: Whole blood

Container: Wampole ISOLATOR™ 1.5 microbial (yellow top) tube. Obtain from Materials (storeroom item #14892).

Volume: 1.5 mL blood

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 the ISOLATOR™ 1.5 tube with 70 % alcohol and allow to dry.
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 1.5 mL of blood and aseptically inoculate the ISOLATOR™ 1.5 tube by puncturing the stopper using a blood transfer device. Removing the stopper will increase the risk of contamination. **Do not force the blood into the ISOLATOR™ 1.5 tube. This will cause the top to pop off.**
7. Gently invert the tube 4-5 times to mix the contents.

Prep with CloraScrub™ Swab with 3.15% CHG

1. Disinfect the stopper of the ISOLATOR™ 1.5 tube with 70 % 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 1.5 mL of blood and aseptically inoculate the ISOLATOR™ tube by puncturing the stopper using a blood transfer device. Removing the stopper will increase the risk of contamination. **Do not force the blood into the ISOLATOR™ 1.5 tube. This will cause the top to pop off.**
7. Gently invert the tube 4-5 times to mix contents.

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 ISOLATOR™ 1.5 tube with 70 % alcohol 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 1.5 mL of blood and aseptically inoculate the ISOLATOR™ tube by puncturing the stopper using a blood transfer device. Removing the stopper will increase the risk of contamination. **Do not force the blood into the ISOLATOR™ 1.5 tube. This will cause the top to pop off.**
6. Gently invert the tube 4-5 times to mix contents.
7. Following collection, remove the iodine using the Frepp® applicator or an alcohol pad.

Line Draw (All ages):

1. Disinfect the stopper of the ISOLATOR™ 1.5 tube with 70% alcohol and allow to dry.
2. Prep catheter port by scrubbing the hub for 30 seconds using chlorhexidine gluconate (CHG) and allowing to dry.
3. Aseptically collect 1.5 mL of blood through the injection port/cap. Blood may be collected without first drawing a discard.
4. Collect 1.5 mL of blood and aseptically inoculate the ISOLATOR™ tube by puncturing the stopper using a blood transfer device. Removing the stopper will increase the risk of contamination. **Do not force the blood into the ISOLATOR™ 1.5 tube. This will cause the top to pop off.**
5. **Gently invert the tube 4-5 times to mix contents.**

Transport/Storage:

Onsite collections:

- Transport to the Microbiology Laboratory immediately at room temperature. **Do not refrigerate.**
- When transporting through the pneumatic tube system, package ISOLATOR™ 1.5 tube separately to avoid breakage.

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.

Sample Rejection:

Improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements); clotted specimen; 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 after 21 days
Critical Values:	All positive results will be called to the physician or patient's nurse.
Limitations:	<ul style="list-style-type: none"> ● Insufficient specimen volume decreases the recovery of organisms. The dilution of the SPS in the ISOLATOR™ will be inadequate and may inhibit growth. ● A single negative culture does not rule out disseminated fungal infection. If disseminated or deep fungal infection is strongly suspected, biopsy of the appropriate tissue and/or bone marrow aspiration for sections and fungus culture should be considered.
Methodology:	Wampole ISOLATOR™ system
References:	<p>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</p> <p>Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC</p> <p>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</p>
Updates:	<p>3/2/2009: Updated collection information for venipuncture options.</p> <p>3/23/2010: Updated CPTs</p> <p>6/16/2010: Line draw preparation update</p> <p>11/10/2014: Added offsite collection.</p>