
Lab Dept: Microbiology/Virology

Test Name: BRUCELLA CULTURE

General Information

Lab Order Codes: BRCL

Synonyms: Culture, Brucella

CPT Codes: 87040 – Culture, bacterial; blood, with isolation and presumptive identification of isolates

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.

87077 – Aerobic isolate, additional methods required for definitive identification of isolates (if appropriate)

Test Includes: Isolation and identification of *Brucellae*. Positive cultures will be reported immediately by phone to the physician or patient's nurse, and Infection Prevention.

Logistics

Lab Testing Sections: Microbiology

Referred to: Positive cultures will be referred to the Minnesota Department of Health for confirmation

Phone Numbers: MIN Lab: 612-813-5866

STP Lab: 651-220-6555

Test Availability: Daily, 24 hours

Turnaround Time: *Brucella* sp. may be recovered in as little as 3 days; negative cultures are final at 10 days.

Special Instructions:

- Contact Microbiology. Special handling is required for the recovery of *Brucella* sp. from blood cultures.
- **Specimen site** and **date/time of collection** are required for processing.

Specimen

Specimen Type: Blood or bone marrow

Container: BACTEC™ PEDS PLUS/F aerobic medium (pink cap)

Draw Volume: 3 mL blood; 1 - 3 mL bone marrow

Collection: **BLOOD:**
Venipuncture for patients greater than 26 weeks gestation OR greater than 2 weeks of age:

Prep with ChloraPrep Sepp® Applicator with 2% CHG

1. Remove the protective cap from the bottle, disinfect the stopper of the bottle with 70 % alcohol and allow to dry.
2. Break the Sepp® ampule to release the 2% CHG.
3. Apply the ChloraPrep® 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 2-6 mL of blood per set and aseptically inoculate the bottles using a blood transfer device.

Prep with ChloraScrub™ Swab with 3.15% CHG

1. Remove the protective cap from the bottle, disinfect the stopper of the bottle 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 2-6 mL of blood per set and aseptically inoculate the bottles using a blood transfer device.
7. If ≤ 1 mL blood is obtained, inoculate only the aerobic (pink) bottle only.

Venipuncture for patients less than 26 weeks gestation AND less than 2 weeks of age:

Prep with 2% tincture of iodine:

1. Remove the protective cap from the bottle, disinfect the stopper of the bottle 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 2-6 mL of blood per set and aseptically inoculate the bottles using a blood transfer device.
6. If ≤ 1 mL blood is obtained, inoculate only the aerobic (pink) bottle only.
7. 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 2-6 mL of blood through the injection port. Blood may be collected without first drawing a discard.
 3. Aseptically inoculate the bottles using a blood transfer device.

Bone marrow:

1. Prepare puncture site as for surgical incision.
2. Collect 1 - 3 mL of bone marrow and aseptically inoculate the bottle using a blood transfer device or place an 18 gauge needle on syringe.

Special Processing:	Handle all cultures in a biosafety hood; <i>Brucella sp.</i> is a class III microorganism and highly contagious. Blind subcultures are performed at 5 days.
Transport/Storage:	Transport to the Microbiology Laboratory immediately at room temperature. Do not refrigerate.
Sample Rejection:	Specimen with a transit time exceeding 2 hours after collection; specimen not submitted in appropriate transport container; improperly labeled specimen; 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
Critical Values:	The physician or patient's nurse and Infection Prevention will be notified of all positive cultures.
Methodology:	BACTEC FX/BACTEC™ 9240 Fluorescent Series
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>3/23/2010: CPT Updates</p> <p>6/20/2012: Amended Critical Value statement</p> <p>10/15/2012: TAT, Container and Collection information updated</p>