



Animal Health Diagnostic Center

College of Veterinary Medicine, Cornell University
In Partnership with the NYS Dept of Ag & Markets

US Postal Service Address:
PO Box 5786
Ithaca, NY 14852-5786

Courier Service Address:
240 Farrier Rd
Ithaca, NY 14853

Bacteriology & Mycology

Phone: 607-253-3900
Fax: 607-253-3943
Web: diagcenter.vet.cornell.edu
E-mail: diagcenter@cornell.edu

AHDC FACT SHEET

Blood Culture Technique

Please follow these directions when filling blood culture bottles.

For greatest recovery of pathogens associated with bacteremia/septicemia, culture both aerobically and anaerobically (complete set) three times within 24 hours, from separate venipunctures. For gravely ill individuals, cultures may be taken at close intervals, such as every 15 or 20 minutes, prior to beginning antibiotic therapy.

- Aerobic culture and anaerobic culture each require separate bottles with different media.
- If the animal is currently being treated with antibiotics, draw blood immediately prior to next administration of antibiotic, or sample three days after treatment has stopped. Note on submission form that animal is on antibiotics if sample is taken at that time.
- For canine brucellosis culture, only a single aerobic bottle is required.

All animals:

1. Obtain the aerobic and anaerobic blood culture bottles. If they have been refrigerated, bring to room temperature. Plan to inoculate **1 anaerobic and 1 aerobic** bottle for **each blood draw**.
2. Label bottles with animal name/ID, date and time sample(s) are taken.
3. Clip hair and perform a complete surgical prep immediately prior to venipuncture.
 - Use normal procedures for aseptic surgical preparation.
 - Use povidone-iodine solution or alcohol chlorhexadine as the final skin preparation.
4. Allow the site to dry or wipe dry with sterile gauze pad.
 - Residue of surgical preparation solutions contaminating the blood sample may render the sample unsuitable for culture.
5. Select one (1) syringe and needle capable of collecting enough blood for **both bottles**. The bottle can be inoculated with any volume from **0.10 ml to 5 ml** of blood. Use the largest volume appropriate for size of animal from which specimen is collected. Generally bottles are inoculated using 1mL of blood from cats and small dogs, 2-3 mL from large dogs and neonatal horses and cattle, and 5 mL from adult livestock. Smaller volumes can be used from small exotic species.
 - Do not add any anticoagulant.
6. Aseptically collect blood.
7. **DO NOT UNSCREW CAP on blood culture bottles.**
8. Remove (pop off) protective top of the screw cap on the blood culture bottle.

9. Disinfect the visible part of the rubber stopper
 - Use 70% isopropyl or ethyl alcohol and allow to dry or wipe dry with a sterile gauze pad.
10. Replace drawing needle with sterile needle. Discard used needle.
11. Puncture rubber area of lid with the new sterile needle and transfer 0.10 ml to 5 ml of blood into each bottle **immediately** after collecting.
12. Gently invert bottle(s) to mix blood with blood culture media. Blood will not clot due to anticoagulants in media.

DO NOT REFRIGERATE BLOOD CULTURE BOTTLES AFTER INOCULATION. Protect from temperature extremes when handling and shipping back to lab (wrap in insulating materials or Styrofoam box)

Blood Culture bottles are available upon request from the Diagnostic Center; call Shipping at 607-253-3935 and ask for No. 1 EZ Draw Blood Culture Bottles for aerobic testing, and No. 2 EZ Draw Blood Culture Bottles for anaerobic testing.