ANIMAL BLOOD BANK®

"Blood Banking for Every Hospital" Series

Title: **COLLECTION OF WHOLE BLOOD INTO MULTIPURPOSE BLOOD DONOR BAGS**

Lessons in Lifesaving
1-800-2 HELP K9
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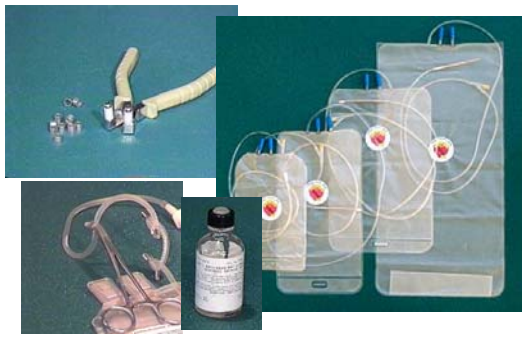
Multipurpose blood donor bags come in several sizes to provide a means of blood collection from animals in a wide range of sizes. Anticoagulant must be added to these dry bags. The amount of anticoagulant will vary depending on the volume of blood to be drawn. A general rule of thumb for most citrate based anticoagulants is 14-16 mL of anticoagulant per 100 mL of blood collected. The shelf life of the blood will vary depending on the type of anticoagulant used. When collecting blood use aseptic techniques at all times.

Materials needed for blood collection in multipurpose blood donor bags

1. Multipurpose blood donor bag.
2. Needle if bag does not have pre-attached needle.
3. Anticoagulant.
4. Guarded hemostat.
5. Aluminum sealing clips.
6. Tubing sealer stripper or household pliers.



Instructions for collecting blood in multipurpose blood donor bags.

1. Clamp donor tubing just behind donor needle or needle adapter with guarded hemostat.
2. For bags without pre-attached needles, select desired size needle and attach to needle adapter.
3. Using a needle and syringe or a burette set, add the appropriate volume of anticoagulant to the bag through the rubber injection port on the bag. Sterility must be maintained during this process.
4. Charge donor tubing with anticoagulant by releasing pressure on the hemostat and squeezing anticoagulant into the donor tubing up to the needle. Clamp off donor tubing again. To reduce clotting in the tube, it is very important to have the donor tubing filled with anticoagulant at start of blood flow.
5. Prepare the venipuncture site.
6. Remove needle cover, hold off jugular, and accomplish venipuncture. Release hemostat. NOTE: a major cause of blood collection failure is due to poor venipuncture and needle positioning. It is imperative that the needle slide smoothly into the vein clear up to the hub.
7. To prevent clotting during blood collection the blood MUST flow through the anticoagulant into the bag. This is accomplished by having the bag laying on its side or hanging upside down during collection. In large animals a length of rope with a clip may be used to suspend the bag in an upside down position. Attach the clip to the hanger at the base of the bag so the bag is hanging with its ports down. Tie the other end of the rope around the donors neck or attach to a collar. The bag should be as low to the ground as the donor tubing will allow. Hanging the bag aids in keeping the donor and the bag together if the donor should become uncooperative and reduces the frequency of aborted donations.
8. If gravity flow is used, mix blood and anticoagulant frequently during collection and immediately after collection.
9. Collect the desired volume of blood. The volume may vary +/- 10% based on the volume of citrate based anticoagulant used. It is recommended that a scale be used to monitor the volume of blood flowing into the bag.
   [Note: l mL of blood equals 1.06 gm of blood so the final container should weigh (1.06g x desired volume of blood) + the weight of the container including the anticoagulant.]
10. After desired amount of blood has been collected, release pressure on jugular if applied and clamp donor tubing next to needle.
11. Remove needle from vein.
12. If using a tube stripper, strip blood from donor tubing into bag, mix and allow tubing to refill. **Do not remove the hemostat which would allow blood to flow freely into the bag and introduce contaminated air.**
13. Seal donor tubing by using aluminum sealing rings, an electric sealer or by tying knots in the tubing.
14. Cut needle from donor tubing and discard in a manner consistent with established biohazard procedures.
15. If the tubing was stripped it may be divided into segments and the segments used for crossmatching or testing the blood. If the tubing was not stripped, the blood will be clotted and the tubing should be sealed close to the bag and the tubing containing the clotted blood should be discarded.
16. Blood should be stored at 1-6 degrees C.
17. Infuse blood within the amount of time recommended for the anticoagulant used. Sodium Citrate- 48 hours, ACD and CPD- 21 days, CPDA-l- 35 days. Heparin is not recommended for blood collection.

Blood collected in a bag should be administered through an unvented blood administration set.

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