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Cattle Tail Vein Blood Collection Instructions

Recommended supplies

Restraint equipment	Needle holder/vacutainer needle setup or syringe
Waterproof permanent marker	Vacutainer tubes
Sharps container	Alcohol wipes

Preparing the blood collection supplies

Using a needle holder/vacutainer needle setup: Remove the cover of the vacutainer needle (the shorter of the two sides) and screw the needle onto the needle holder. For safety, keep the cover of the sharp end of the needle until ready to puncture the skin of the animal. Insert the vacutainer tube into the open end of the needle holder until the stopper touches but is not punctured by the back portion of the needle. *Using a syringe/needle setup:* Remove the cover of a single use needle and screw onto the syringe. Hold these assembled materials in one hand or keep them in an accessible location such as a loose-fitting pocket.

Safely and properly restrain the animal

Safely and properly restrain the animal in a manner consistent with good-management practices. If uncertain about how to properly restrain an animal, contact your veterinarian or a trusted source for assistance. Some tips for restraining the animal:

- Use a cattle chute or lock-up stanchion

Tips for drawing blood using a needle holder/vacutainer needle setup

- 1.) With a free hand, lift the cow's tail to about a 45 degree angle above the back.
- 2.) Clean, aseptically, the area from which blood is to be drawn.
- 3.) Collect a sample.
 - a. *Using a needle holder/vacutainer needle setup*
 - i. Insert the needle through the skin of the tail about ½ inch deep and perpendicular to the tail. Do this at the underside, midline and at about 3 to 6 inches from the base of the tail. The tail is made up of concentric vertebrae. Direct the needle toward a vertebra, but not between vertebrae. If between vertebrae, the needle may go too deep and pass through the vein. You may feel the bone with the tip of the needle; the vein is at this location.
 - ii. Once blood appears at the base of the needle, push the Vacutainer tube onto the back portion of the needle to puncture the stopper. Hold the needle in position while the tube fills with blood; if the needle moves, the blood source may be lost and the tube will not fill. If the blood source is lost, probe with the needle to find the vein again, but do not withdraw the needle from the skin since the vacuum in the tube will be lost. If you do lose the vacuum, repeat the procedure with a new tube.
 - iii. Collect 2 cc's or more of blood, withdraw the needle, and remove the tube from the holder.
 - b. *Using a syringe and needle setup*
 - i. Insert the needle through the skin of the tail about ½ inch deep and perpendicular to the tail. Do this at the underside, midline and at about 3 to 6 inches from the base of the tail. The tail is made up of concentric vertebrae. Direct the needle toward a vertebra, but not between vertebrae. If between vertebrae, the needle may go too deep and pass through the vein. You may feel the bone with the tip of the needle; the vein is at this location.
 - ii. Pull back slightly on the plunger of the syringe to see a flash of blood. If blood appears, slowly pull back on the plunger to obtain 2 cc's or more of blood. If blood does not appear, reposition your needle and try again.
 - iii. Immediately transfer the blood from the syringe into a red top tube by using the needle from the syringe to puncture the stopper of the red top tube.
- 4.) Apply pressure to the site of the skin puncture to stop any bleeding. Dispose of the needles into a sharps container. Clean and reuse the needle holder if using one.
- 5.) Label the blood tube with the animal ID and a tube sequence number using a waterproof, permanent marker.
- 6.) Store samples at room temperature for 30-60 minutes and then store in the refrigerator until ready to ship.

Additional tips

- Blood may also be drawn using different techniques and supplies, but the blood should be transferred to a stoppered red top tube for processing.