

## Sampling Goat/Sheep for BioPRYN

### Supplies Needed: Goat/Sheep

1. 3ml redtop Vacutainer blood tube (one per goat/sheep)
2. 3ml syringe with needle or 18 or 20 gauge x 1 inch vacutainer blood collection needles (one per goat/sheep)
3. Vacutainer needle/tube holder (if using needle and blood vacutainer)
4. Permanent marker (sharpie)
5. Sample submission form

Test Name	Samples must arrive on or prior to the time and/or day listed below	Test Days	Report Day
BioPRYN® Cattle or Goat/Sheep	By 2:00 pm of the testing date	Wednesday	Thursday

### Collecting Blood Samples (Goat/Sheep)

1. Clip the doe's neck to see the jugular vein. Use electric shears to shave a patch approximately 4 inches wide by 8 inches long. Shaving an area allows for easier viewing of the vein and provides a clean area in order to minimize the chance of introducing dirt or bacteria into the vein with the needle. Note: Blood sampling can be done with assistance or alone; however, producers who are new at blood sampling will benefit from having assistance.
2. The assistant should turn the head of the doe to the side, at a 30-degree angle, by holding the animal under its jaw to allow for easy access to the vein. The doe's body may also need to be restrained.
3. Another assistant or a blocking stand can help keep the doe from moving. Restraining a doe without assistance is better for those who have become proficient at drawing blood. The handler should straddle the doe, place his or her knees behind the doe's shoulders, and back the doe into a corner or against a wall to help control her hindquarters.
4. The doe's head should be turned opposite to the side of collection, once again at a 30-degree angle. Restraint of the head is accomplished by using the elbow and the upper arm to keep it held off to the side. This leaves both hands available for the blood collection. An unruly doe can be dangerous to the assistants, the person drawing the blood, and to itself. It is important to be gentle and patient when restraining the doe.
5. The easiest way to locate the vein is to draw an imaginary line from the middle of the doe's eye down the side of her neck. The vein can be located by applying pressure with the thumb or fingers in the groove on either side of the trachea and below the half-way point of the shaved area. The pressure will cause the vein to pop up and be easy to see.
6. Once the vein has been located, the area needs to be properly cleaned to keep bacteria out of the needle insertion site. This is accomplished using surgical scrub on the area. Apply a small amount of the surgical scrub to a few pieces of gauze. Squeeze some of the excess scrub out of the gauze before applying it to the animal to make the process easier.

7. The area should be cleaned by starting in the center and working out toward the edge. Never go back over a place that has already been wiped, because bacteria could be carried back into the clean area.
8. Once the area has been cleaned and the vein has been located, the blood can be drawn. This can be done using a needle, needle holder and a blood collection tube.
9. The needle holder should be guided into place with the right hand while the left hand is used to apply pressure to the vein. The vein should be easy to see and feel. Try to aim for the center so you will have more of a chance of placing the needle within the vein.
10. Inserting the needle does not require great force. Apply just enough pressure to break through the skin and enter into the jugular vein.
11. Once the needle is in place, apply pressure so that the blood collection tube is pushed onto the needle. If the needle is in the vein, blood will start to fill the container immediately. If this does not happen, gently withdraw the needle so that the tip comes to the outside of the wall of the vein and re-insert. Gentle prodding may be needed to achieve maximum blood flow.
12. Collect 2 ml or more of blood.
13. Before removing the needle, the handler should be sure to remove their left hand, to prevent blood from exiting through the insertion site. Also, be sure to remove the blood collection tube from the needle holder to prevent the loss of the vacuum in the blood collection tube. If the needle is removed from the skin first, the vacuum will be lost and a new blood collection tube will be needed.
14. After the needle has been removed from the skin, press fingertip over the area where the needle was inserted. A small red dot may appear on the doe's neck from the needle insertion site. This is normal and is nothing about which to be concerned.
15. Label the sample vials sequentially with the ear tag or ID. Use a permanent marker on the vial LABEL.
16. Labeling the tube correctly will assist the laboratory in sample organization and help speed results.
17. Place the tube in the refrigerator until shipment.
18. Unscrew the needle from the needle holder, discard the needle into a "sharps" container and re-use the needle holder. A new needle must be used for each doe.

**Keep all samples cool and out of the elements, in a cooler with an ice pack during the heat of the summer and out of freezing temperatures during the winter.**

#### **Shipping Samples: Cow or Goat/Sheep**

1. Securely package samples - use packing materials to prevent samples from breaking. Secure in plastic bags.
2. Include client information - Name, Address, Phone number, Fax Number, Email address
3. Include check if not an established client.
4. Ice not required, unless outside temperature is above 100 degrees.
5. Ship overnight if possible - prevents samples from sitting in a non temperature controlled environment (freezing/overheated warehouses).

#### **Shipping address/Contact Us**

Ag Health Laboratories  
445 Barnard Blvd.  
Sunnyside, WA 98944  
509-836-2020

## Frequently Asked Question about Goat/Sheep BioPRYN

### **Q. What is BioPRYN®?**

A. BioPRYN is a blood pregnancy test for ruminants, and has specific appeal for the U.S. dairy and meat goat industries because it delivers fast, accurate, safe and economical pregnancy detection results. The technology works on all ruminants, including cattle, sheep, goats, bison, deer, elk and moose.

### **Q. How does BioPRYN detect pregnancies?**

A. BioPRYN evaluates the blood (more specifically, the serum or plasma) of ruminants for a protein called Pregnancy Specific Protein B (PSPB). The PSPB is produced by the placenta, and therefore pregnant animals will have the protein in their blood. This makes the test more accurate than earlier attempts at pregnancy diagnosis which evaluated blood or milk for progesterone or other hormones that can occur in normally cycling animals.

BioPRYN uses enzyme-linked immunosorbent assay (ELISA) technology for processing, which contributes to its low cost and fast turn-around.

### **Q. How early in a pregnancy can animals be tested with BioPRYN?**

A. Goats can be tested at 30 days or later, after breeding. Animals that are detected open can then be immediately returned to aggressive breeding programs by natural means or by using hormones.

### **Q. What is the accuracy of BioPRYN?**

A. BioPRYN is greater than 99 percent accurate when the test identifies animals at least 30 days post-breeding as not pregnant with less than 1 percent showing false-nonpregnant (false-negative). Correct detection of non-pregnant animals is very important because giving prostaglandin to misdiagnosed pregnant doe will cause abortion.

The false-pregnant (false-positive) rate for the test is approximately 5 percent. A portion of this variance is due to higher early embryonic death, and not to test inaccuracy.

Inaccuracies can occur because of mislabeling of samples or cross contamination of one sample with another. A new needle and tube must be used for each animal.