



LIVESTOCK DNA TECHNOLOGY SERVICE  
OF VITA-TECH LABORATORIES LLC

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# INSTRUCTIONS FOR SUBMITTING SAMPLES FOR DNA TESTING

## Shipping Information

Genmark  
3591 Anderson Street, Suite 104  
Madison, WI 53704

## Hair Samples (Sheep, Pig, and Freemartin testing please refer to blood sample collection)

When pulling hair roots for DNA testing it is very important to pull coarse, heavy hairs from the animal. The best source of coarse hairs is the switch of the tail followed by the top of the neck. Hairs pulled from the animal's side are unsuitable for DNA testing because they are very fine and have little root material. Pulled hairs should have a visible root "ball" or "hook" at the tip.

Keep in mind that this testing is very sensitive – one hair root can provide enough DNA for several tests. To reduce the risk of cross-contamination, check your hands between animals to ensure that no hairs are carried from one animal to the next.

Collecting hair roots is simple and affordable, however, some factors can interfere with DNA testing and delay your test results!

1. Ensure that hair roots are relatively clean and not covered with fecal matter.
2. Avoid pulling hairs from a show animal that's been treated with various fitting supplies – the residue inhibits the DNA test reagents.
3. Avoid submitting extremely fine hairs – if you can't see the root ball or hook then try pulling hair from a different location. To collect hair roots, grasp 10 to 15 hairs close to the skin from the switch of the tail. Wrap hairs around your fingers for leverage and pull smoothly but with enough force to pull out the hairs. You may need to pull two or three times to obtain 30 or 40 usable hairs that can be submitted for testing. Cut off the hair shafts, leaving 3-4 inches of hair including the root end.

Note: use of a tool such as pliers or forceps is not recommended because you may pull out chunks of skin or cause breakage of the hair shaft and loss of root material, not to mention extreme discomfort to the animal!

Enclose hair roots in a sealable plastic bag or letter size envelope and label bag or envelope with animal I.D. (one plastic bag or envelope per animal).

- Hair roots can be stored indefinitely at room temperature.
- The accuracy of DNA testing between blood or hair roots is the same.
- Turn-around time of test results is the same whether blood or hair roots are submitted.
- Hair roots can be collected from an animal at any age, even a baby calf immediately after birth.
- Non resident U.S. customers should call for permit information and include appropriate import permit with hair shipments.

## Blood Samples

1. At least 2cc of whole blood (not serum) must be collected in EDTA (purple top) blood tubes.
  - It is very important that the blood does not clot. An anticoagulant is used in the purple top tubes to keep the blood from clotting.

After collecting blood in the tube, the tube must be mixed thoroughly by inverting 5-10 times.

2. Use a new needle/syringe for each animal.
  - The sensitivity of the test can detect very small quantities of contaminating blood that may result in invalid typing.
3. Blood should arrive at the laboratory within 48 hours of the time it is drawn. It is highly encouraged to ship blood at the beginning of the week to avoid samples sitting in transit over a weekend. Blood samples may be stored in the refrigerator for up to two days and shipped on a Monday if blood is collected late in the week. Second day shipping by U.S. Postal Service Priority Mail, Federal Express or UPS is sufficient.

### HOT WEATHER

90°+

When temperatures exceed 90°F for extended periods, please include a cold pack with the samples.

### COLD WEATHER

40°-

When temperatures are below 40°F, please pack samples in an insulated container to avoid freezing.

4. Ship samples to: Genmark, 3591 Anderson Street, Suite 104, Madison, WI 53704 along with completed submission form and payment.
5. Non resident U.S. customers should call for permit information and include appropriate import permit with blood shipments. Permits are available from Genmark.