

# Sample Collection Information

When considering DNA testing of any deer, the sampling method is important. The DNA analysis procedure is very sensitive to contamination by very small numbers of deer cells from other deer. The inclusion of two different deer's cells will result in questionable analysis or, worse, incorrect identification. Blood sampling should be performed using a new needle and vacutainer for each animal (commonly used for sampling for brucellosis testing). Alternatively, tissue pieces (ie. ear nicks) can be used for testing, but must be stored in alcohol immediately after cutting for shipment to the laboratory. Samples collected from the same animal will produce identical genetic profiles. Each sample submitted requires an Animal Registration or Parentage form be filled out completely.

## Blood

1. Collect at least 3ml of blood using a standard Vacutainer® vial (PURPLE top tube) containing anti-coagulant. Store cold, but **do not freeze**. During summer it is necessary to ship whole blood on ice to preserve the sample overnight.

## Tissue Samples

1. Tissue samples include: earplugs, meat, bone (containing marrow) or DNA dart. We recommend approximately 1 cubic centimeter of tissue (1 square centimeter for the earplug). Clean cutting utensil in 10% bleach and rise with water between samples.
2. It is imperative that the sample be immediately stored in 70% alcohol (70% isopropyl or rubbing alcohol will work). GREEN top storage tubes can be provided. Storage containers must be leak proof and unbreakable.

## Antler

Antler core samples are taken from the base of hard antlers, which have been cut off, or from antlers, which have been shed. Antlers still in velvet are not good a source for a sample. NADeFA® Registry bags can be provided upon request.

Antler core samples are collected from each animal, placed into a Ziploc sample bag and then placed into the mailing envelope. Label each sample bag after collecting the sample.

If sampling several animals in the same session, make sure all residue from the previous sample is removed before the next sample is collected. This will reduce the possibility of mixing samples.

1. Use a ¼ inch drill bit with a variable speed drill. The sample should be taken from the hardest region within the antler core. Avoid any regions that are porous or contain air pockets.
2. Grasp the antler firmly and drill slowly to a depth of ¼ to ½ inch. Using the slowest effective speed will prevent overheating of the sample.
3. All samples should be collected onto a plain sheet of clean paper. Use a new sheet of paper for each collection.
4. Deposit the antler shavings into the plastic Ziploc sample bag. Label the bag with the owner's name, animal's name, and year born and put it into the mailing envelope.
5. **Clean the drill bit** of all antler core material. This can be done by using a 10% bleach (1 part bleach to 9 parts water) solution. Preparation area must be cleaned of any antler core dust or shavings before beginning the next sample.

## **Hair**

Hair samples should contain the long, thick white hairs from the neck or underside of the tail. Hair root samples are collected and placed into the sample envelope.

If sampling several animals in the same session, ensure there are no hairs remaining from the previous animal on your hands or utensils used for pulling the hairs. This will reduce the possibility of sample contamination.

1. Pull (**DO NOT CUT**) 20-30 hair strands. Grasp the hair close to the skin and pull sharply. Examine the ends of the hair for the presence of root bulbs. Hair roots are required for DNA testing. If

the majority of the hair strands lack the root ends, discard hair and start again.

2. Place hair strands inside paper envelope. NADeFA® Registry envelopes can be provided by request. Label the sample envelope with owner's name, animal ID, sex, year born and place into the mailing envelope.

## **Semen**

Semen straws should be kept frozen. Used straws with cotton plug intact can be used.

## **Shipping**

Clients are responsible for shipping costs. Surround tube (blood or alcohol) with bubble wrap and place in the shipping envelope. Blood must be sent with a cold pack by overnight mail. All other sample types may be sent by regular services. Hair envelopes and antler bags can be provided by the NADeFA® Registry to its clients.

Make your check payable to **NADeFA Registry/DNA Solutions** and mail with the sample to 840 Research Parkway, Suite 551, Oklahoma City, OK 73104. Shipping should have a form of tracking.

Samples may be shipped by:

- U.S. Mail (First Class or Express Mail)
- UPS
- Federal Express
- DHL

Please note that there is **NO** weekend mail delivery.