

Common mistakes with DNA testing

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DNA tests can be used to confirm parentage, identify carriers of recessive conditions like curly calf or dwarfism, and more commonly, help producers learn the genetic merit of an animal and increase the accuracy of EPDs.

DNA testing is conducted through tail hair samples, blood tests, semen sampling and tissue sampling. While the sample collection process is relatively easy, all that work goes to waste if the samples are not useable.

It's easy to overdo or underdo collecting DNA samples. Real-life example: Once, a lab received the entire bottom half of a cow leg for sampling. On another occasion, a lab received two steaks and was asked to verify that they came from the same animal. While DNA sampling sounds intensive and highly technical, it really comes down to getting a useable sample and sending it safely to the lab. Here are some common mistakes producers make when collecting DNA samples for testing.

Take the right samples

Identify what you want to test for, and make sure you are collecting the type of sample best suited to that test. Some tests, like virus detection, require a certain type of sample, like an ear notch. Also, make sure the lab you are planning to use will accept that type of sample you are collecting.

Tissue samples

Make sure you keep the samples matched to the right animal. A conventional eartag punch will do the job, but there are also several commercial products available that come with tissue collection materials to help reduce human error.



Illustrations by Corey Lewis.

Tail hair samples

It's a common mistake to send the bottom half of a hair swatch instead of the roots. Make sure you send in tail swatches with the root bulbs still intact and under the protector. The DNA is found in the root bulb, not the tail hair itself, so keep in mind that the sample is useless without the roots.



 **Correct**



 **Incorrect**

Blood samples

- **DON'T** oversoak the FTA card. It won't dry completely and can become moldy. Only fill about 75 percent of the circle with blood.
- **DON'T** use clotted or partially dried blood for a sample.
- **DON'T** use blood from a tattooed area. The ink contaminates the sample.
- **DO** make sure the card is completely dry before storage to avoid mold contamination.



 **Correct**



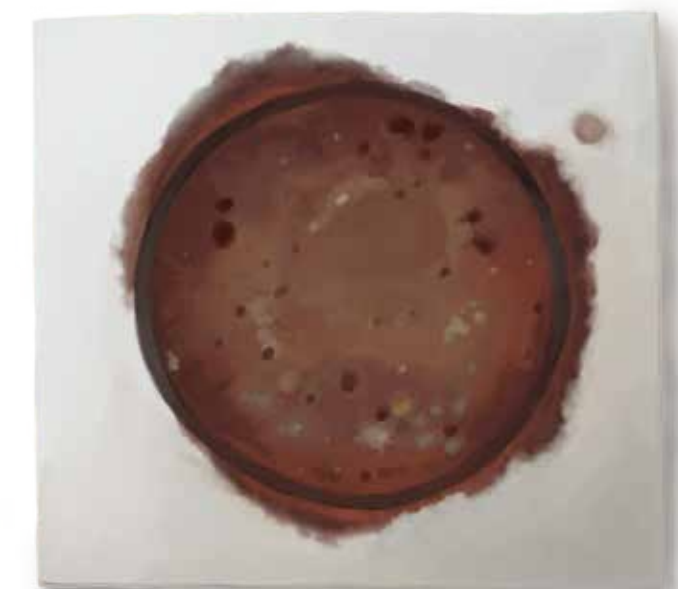
 **Oversoaked card**



 **Clotted blood**



 **Ink contamination**



 **Mold contamination**