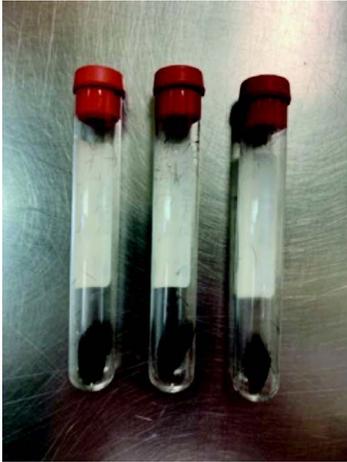


Best Practice Sample Submission

Ear Notches



Submission Guidelines

- Submit a fresh sample of ear tissue approximately 1 cm x 1 cm (use 1/2 inch notching pliers, disinfect ear notching instruments/equipment between each sample, making sure to thoroughly rinse the disinfectant before collecting the next sample).
- Place ear notches individually in an empty plain sterile red top or plastic snap cap tubes.
 - Red top: 5ml or 10ml
 - Snap cap: 5ml or 14ml
- Do not submit ear notches in serum separator tubes (red & gray cap). The gel will negatively affect sample viability.
- Check that the cap is securely closed before packing
 - 0.5ml snap cap tubes need to be double snapped
- Record the tube number consecutively on each tube with permanent marker (i.e. 1,2,3,4, etc).
 - Do not include Animal IDs on the tube label as this can cause confusion.
Following these labeling instructions will greatly expedite sample processing.
- Place tubes in blood tube boxes in numerical order.
- Complete a list of tube IDs and send with the submission form (i.e. 1=animal XXX, 2=animal YYY, 3=animal ZZZ, etc).

- Tubes should be sent chilled on ice packs, observing proper shipment procedures.
- Samples can be stored frozen but need to be tested within 30 days of collection.
- Samples not submitted as such are subject to an additional processing fee per tube in addition to the probability of delay in testing and reporting.

Helpful information

Submitted ear notches for BVD screening will be processed and then pooled in groups of up to 50 samples for PCR testing. If a pool tests positive, individual samples will be tested by antigen capture ELISA to identify potential persistently infected animals.

Pooling samples in groups of 50 or less substantially reduces the per-animal diagnostic cost compared to currently available individual tests, yet maintains a reasonable number of samples to test individually in the event a pool is positive.

It is necessary to understand that pooled diagnostic procedures such as this should be considered screening tests only. Pooling procedures can result in decreased sensitivity over individual tests. In cases in which individual animals are represented as BVD PI-test negative (e.g. purebred animals for sale), individual diagnostics utilizing the fresh ear notch antigen capture ELISA, formalin-fixed ear notch IHC, or serum PCR should be performed.

PCR procedures, due to their enhanced sensitivity, may detect transiently infected animals more often than other tests such as the ear-notch antigen capture ELISA. Therefore, it is possible to experience scenarios in which a pool is PCR-positive but the individual samples are negative on the follow-up individual ear-notch tests (*as per Drs. Chris Chase and Jane Christopher-Hennings, South Dakota State University, Brookings, SD*).