

BVD PCR EAR NOTCH TESTING

The NDSU-VDL frequently evaluates BVDV detection strategies. Immunohistochemical analysis of formalin-fixed samples has been the method offered for detecting PI animals. Based on the validation of a newer method, the most cost effective and sensitive strategy we can now offer is to test pools of 15 ear notches by PCR, and then individually test samples within positive pools. The cost per pool is \$30.00 for the first pool, and \$15.00 for each additional pool. Samples will be run twice a week, usually on Tuesday and Thursday. Please contact the laboratory if you are planning on sending in a large number of notches. Individuals from positive tubes will be retested using either PCR or antigen capture ELISA testing after discussion with the referring veterinarian and owner. It is recommended that positive individuals be retested again a month later to confirm their PI status.

Immunohistochemical analysis of formalin-fixed tissues will continue to be available for testing smaller numbers of notches. The price is \$20.00 for one sample and \$25.00 for up to six samples on a slide.

Interpreting results

1. "BVDV Not Detected"
2. "Positive" - means the virus was identified in the pool - may be the result of a persistently infected animal or an acutely infected animal.

Equipment Needed:

1. Ear Notching tool that yields a 1cm square notch
2. Red Top blood tube (no additive or gel). Formalin is **NOT** needed. This assay uses reagents that are provided by the lab for PCR analysis.
3. Shipping container that holds individual consecutively labeled tubes in slots.
4. Disinfectant for rinsing the notching tool; 10% bleach will work.
5. Clean rinse water (between notching and disinfection).
6. Do not vaccinate or tattoo at the same time samples are taken.

Collection Procedure:

1. Label red top collection tubes with the animal IDs and number the tubes consecutively.
2. Dip notching tool in disinfectant then rinse away disinfectant with clean water.

Residual disinfectant on the notching tool will give false negative results, therefore thorough rinsing is required.

3. Take a proper size ear notch (approximately 1 cm X 1 cm) from a clean portion of the ear. Place notch into a labeled, dry, red top tube.
4. Record animal identification numbers on a serology request form.

Ear notch must be free of dirt, feces, tattoo ink or BVD vaccine.

How to ship:

Ship on ice. If the sample will not get to the lab the next day, freeze the sample and ship on ice. Samples may be kept in the freezer up to one month and shipped together. The shipping address is:

Post Office Mail Address:

Veterinary Diagnostic Laboratory
NDSU Dept. 7691
PO Box 6050
Fargo, ND 58108-6050

UPS or Fed Ex Address:

Veterinary Diagnostic Laboratory
NDSU Van Es Hall
1523 Centennial Blvd.
Fargo, ND 58102

Call the VDL at 701-231-8307 or 701-231-7527 if you have any questions.