PBS ELISA

Individually label all tubes with animal I.D. number. Keep samples cool (in a cooler with ice packs is fine) while sampling and ship overnight to the WSVL or hold in the refrigerator and ship the next day on ice packs. Ear notchers work well for sampling. It is imperative that the sampling device is flamed between animals to prevent BVDV contamination from occurring between samples. We can ship you tubes pre-filled with 2 ml of PBS @ $0.35 on the same day if you call before 3pm.

Cost: $5.00 per sample
Turnaround time: 1-3 days
Most cost-effective for 6 or fewer ear notches.

Ear notches
Animals of all ages, including calves less than three months of age, can be tested for persistent BVDV infection using the ear notch BVDV ELISA method.

The amount of ear notch soak buffer is related to the size of the ear notch. Refer to the table below for instructions regarding the amount of soak buffer. Alternately, less than 10 fresh samples can be shipped without buffer in sealed containers to prevent drying (whirl pack or red top tube). Over 10 samples not in tubes with PBS will be charged a $0.40 handling fee per tube. Do not treat the ear notch with a fixative (e.g., formalin).

<table>
<thead>
<tr>
<th>Ear notch size</th>
<th>Buffer size</th>
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<tbody>
<tr>
<td>Large ear notch (&gt;1 cm on at least one side)</td>
<td>2mL</td>
</tr>
<tr>
<td>Small ear notch (&gt;1 mm and &lt; 1 cm on at least one side)</td>
<td>250µL</td>
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Serum
Only serum samples from precolostral newborn calves or calves older than three months of age are suitable for testing with this ELISA kit. Maternal BVDV antibodies, which can be passed to newborn calves, can interfere with this ELISA and produce false-negative results. The level of maternal antibody decreases as the calf ages.

Polymerase Chain Reaction (PCR)
PCR is a sensitive test designed to detect the presence of the BVDV genome in blood, body fluids (swabs), ear notches or tissue samples.

Body fluids/swabs, whole blood (purple top tube), tissues: $35.00 per sample.
Turnaround time: ~2 days.
Pooled ear notch PCR
We can pool up to 24 individual ear notches (no serum). Ear notches must be received dry, in individual 10ml red-top tubes, and must be received within 72 hours of collection. Ear notches must be kept in a refrigerator or on ice following collection and during overnight shipment.

Cost: $35.00 per pool.
Turnaround time: ~2 days.
Most cost-effective for more than 7 ear notches.

Any ear notches received in PBS or inappropriate tubes will be run by ELISA.

If you have questions regarding BVDV or BVDV testing procedures please call Dr. Myrna Miller (307-766-9934, mmilller@uwyo.edu) or the Virology section (307-766-9933), or visit the WSVL website http://www.uwyo.edu/wyovet/

Positive Samples
A BVDV positive result may be an acutely or persistently infected animal. A definitive diagnosis that an animal is persistently infected can only be made after a second sample is taken at least three weeks after the initial sample and is also BVDV-positive. The second sample can be serum or ear notch ELISA, or PCR using a whole blood sample (purple top tube).

If the second test is negative, the animal was acutely infected and cleared the virus during the three week isolation period. A persistently infected animals is the main source of new infections in a herd.

Here is a pair of yearling calves which one is the PI? (They are both persistently infected)