

BOVINE VIRAL DIARRHOEA ANTIGEN (BVD_{Ag}) ELISA TEST



Outline

Bovine Viral Diarrhoea Virus is a pestivirus which causes Bovine Virus Diarrhoea (BVD) / Mucosal Disease (MD). A closely related virus, Border Disease Virus (BDV) causes Border Disease/Hairy Shaker Disease in sheep. BVD virus causes two types of infection.

Persistently Infected (P.I.) animals were born with BVD infection and will have it all their lives. They are the main source of new infections as they can pass the disease on to all susceptible animals they come into contact with. P.I. animals will remain BVD Ag positive and BVD Ab negative in most cases.

Transiently Infected (T.I.) animals have acquired a BVD virus infection from another infected animal. They create an antibody response to clear the infection and retain antibodies to the virus which help to protect them against re-infection. T.I. animals will initially test positive for BVD Ag and in >14 days time be BVD Ag negative and BVD Ab positive (seroconverted).

TEST: BVD Antigen ELISA

This is a serology test to determine the presence of **viral antigen** which indicates a **current infection**. Repeat testing is required to determine if the infection is transient or persistent. The interval between tests should be long enough to allow for the elimination of viral antigen from the system of a transiently infected animal (21-28 days). Animals that test positive after this period may be considered persistently infected.

Sample Types:

For Cows: Serum (red top tube), minimum volume 1ml or ear notch

For Calves <3 months old: EDTA or ear notch

For aborted foetus: Ear notch

For Sheep: EDTA (purple top tube), minimum volume 3ml.

Note: *This test can only be performed on individual samples. It can not be pooled but there is a pooled BVD Ag PCR test available for >3 samples.*

Turnaround Time: Usually 1-2 days after samples are received.

Results: The results for the BVD antigen test are reported as positive, equivocal or negative.

BVD Antigen ELISA INTERPRETATION (POSITIVE RESULT):

There is evidence of a persistent or transient BVDV infection. To differentiate consider re-testing in 10-14 days. A subsequent positive result confirms persistent infection whilst a subsequent negative result is confirmation of a transient infection.

BVD Antigen ELISA INTERPRETATION (NEGATIVE RESULT):

There is no evidence of persistent or transient BVDV infection. Please note: Serum can be used for BVDV antigen testing on cattle older than three months. Cattle younger than three months require an EDTA blood or ear notch.

**Any questions regarding this test, contact the Serology Dept on our NZVP
Freephone Number: 0800 838 522 ext 2**