NDSU VETERINARY DIAGNOSTIC LABORATORY

Serology Test Guide

The detection of a specific antibody response can provide indirect support for infection/disease. Submitting acute and convalescent (paired) serum samples are often critical for meaningful interpretation of titers. For most diseases paired serum samples should, on average, be collected 2-4 weeks apart. The presence of maternal antibody in animals less than six months of age and a history of vaccination can complicate interpretation.

- False negative results can occur when testing early in infection.
- Contaminated or hemolyzed sera can significantly affect results leading to false positive or false negative results.
    - Samples with moderate to severe levels of hemolysis will be rejected.
- Samples collected prior to colostrum intake are critical for diagnosis of in utero infections.

Sample Processing:

- Collect blood in a red top tube. Label the samples (animal ID and corresponding sample number from the submission form). Label acute or convalescent, if applicable.
- Allow the sample to clot at room temperature.
    - Note: Processing too quickly and delaying separation of the serum from the clot can increase the amounts of cellular products and degree of hemolysis, potentially affecting test results.
- Centrifuge the sample at 1000-1300 x g for 10 minutes.
- Remove the serum into a clean tube (no additives). Avoid transfer of any cellular elements.
- Maintain the sample at 4˚C. For best results, submit the sample to be received by the laboratory within 72 hours of collection.
- Package the sample for shipping. Include a submission form with the samples. Record any pertinent sample or case history information to help with the interpretation of results.
- Transport sample on ice pack. Avoid freeze-thaw cycles.
- >1 ml of sera is ideal to ensure adequate sample for all testing requested and allows for repeat or follow-up testing if needed.

Allow sample to clot (left tube). Hemolysis can hamper results (right tube).

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