

## 3.2 Serologic Testing

This part of the Accredited Veterinarian's Manual will provide the following information necessary for serologic testing:

- a. material and supplies
- b. serum samples - preparation and packaging
- c. submission forms
- d. shipping
- e. test results
- f. laboratory fees
- g. laboratories

### Objectives

1. Section 2 of the *Health of Animals Regulations* interprets "test" as including:
  - a. the collection of body tissue or fluid from an animal (e.g. serum);
  - b. the injection of an animal for the purpose of determining that animal's freedom from infection with disease (e.g. tuberculin testing).

### Materials and Supplies

2. The costs associated with needles, vials, packaging and shipping charges for transporting samples must be paid by the accredited veterinarian.

### Collection, Preparation and Packaging Serum Samples

3. The reliability of any diagnostic laboratory procedure depends directly on the type of specimens or samples received and on their condition. A separate sample must be submitted for each diagnostic test required. It is extremely important that animals are identified correctly and the information entered on the forms is complete and accurate.
4. Regardless of the type of specimen, the laboratory must receive a sample of good quality for diagnostic purposes. Use the safest and quickest means of shipment available and ship samples only during the week to avoid having them delayed in transit or held over at the laboratory on weekends or holidays.
5. For clotted blood samples:
  - a. use silicone-treated vials (red stopper), or serum separator tubes (SST), which should be centrifuged before shipping and the clot removed;
  - b. use disposable needles;
  - c. use a waterproof marker to number the vials;
  - d. use appropriate containers to ship the samples;
  - e. include all pertinent/required forms with the samples.

6. Each vial must be marked indelibly with the number corresponding to the one entered on the submission form in the column under VIAL NO. Label the vial, not the stopper.
7. Unless otherwise indicated, a minimum of a one mL sample of serum or 5 mL centrifuged SST sample is required for each test even if various tests are requested and are done at the same laboratory. Laboratories prefer serum samples to maintain sample integrity. For example, if brucellosis and leptospirosis tests are requested, two samples are required.
8. All samples for each test must be alpha-numerically identified and/or numbered sequentially to coincide with the identification recorded on the test chart(s). For a large number of samples, advise the laboratory of the shipment.
9. Vials should be shipped in boxes designed for this purpose.

## **Submission Forms**

10. Submission forms are available at the CFIA district office. For each test requested, a serum sample and a copy of the appropriate completed submission form must be sent to the laboratory.
11. Forms should be typed or printed and all copies must be legible. All information should be recorded on the form including ear tag numbers, tattoos or other types of identification. The type of test being requested, and the date and location where the specimens were collected should be recorded. Accredited veterinarians must include their name, address (including postal code) and telephone number, and must sign at the bottom of the form. The submitter code must also be indicated, as well as the identification code of the CFIA district office in which the animals are located.
12. For samples submitted to a federal or accredited laboratory, use CFIA 5159. Complete one form for each test requested. A laboratory notification number available from the district veterinarian must be included.
13. To send EIA samples to an accredited laboratory, use CFIA 3937.
14. If more than one horse is being tested for EIA, use CFIA 4679; however, CFIA 4679 can not be used for export purposes.
15. To send EBL-CHAH samples to an accredited laboratory, use CFIA 3841.

16. It is the responsibility of the accredited veterinarian to provide all information required, or to resubmit if a specimen is unfit for testing. Laboratories may refuse to conduct analysis of samples submitted with forms that are not fully complete. Refer to a CFIA district veterinarian for examples of completed forms, and for instructions on distribution of forms for samples being sent to federal laboratories.

## **Shipping Samples**

17. All the laboratories do not perform tests for all diseases. Therefore, it is essential that samples be shipped in a timely fashion to the appropriate laboratory to facilitate testing and avoid unnecessary delays. If uncertain check with a CFIA district veterinarian before shipping.
18. Vial breakage can result in re-bleeding an animal and significantly prolong laboratory test times. When shipping more than one container, ensure that they are individually identified and packaged to prevent breakage. In addition to a legal responsibility, a submitter has a moral obligation to ensure the safety of transportation industry workers and laboratory staff handling the specimen. The use of an appropriate container is a requirement when submitting samples to a laboratory.
19. Accredited veterinarians must make sure that the packaging and shipping procedure used complies with regulations concerning the transportation of such samples.
20. The laboratory submission forms should be placed in an envelope and attached to the outside of the protective containers.
21. The shipment of samples must never be entrusted to the animal owner or exporter. The accredited veterinarian must be able to maintain a chain of custody for samples shipped to their laboratories.
22. The accredited veterinarian is responsible for shipping costs.

## **Test Results**

23. Test results from accredited private laboratories are usually reported directly to the submitter and the CFIA district office. The accredited veterinarian is responsible for advising the owner of the results. Schedule testing so as to allow sufficient time to receive results (time required will vary from one region to another).
24. Test results reported from federal laboratories are generated through the Laboratory Sample Tracking System (LSTS). The test results will be provided to the accredited veterinarian by the local district office.

## Laboratory Fees for Testing

25. The accredited veterinarian is responsible for laboratory fees.

## Laboratories

26. Most testing, mandated by the *Health of Animals Act* and *Regulations* or conducted in response to a specific request by an importing country, is conducted in a federal laboratory providing diagnostic services for animal and plant health programs and would usually be submitted by the district veterinarian.
27. Private laboratories are accredited to conduct various tests for accredited veterinarians. The nature of the tests performed at these laboratories and the list of approved laboratories changes significantly from month to month. Ask a CFIA district veterinarian for the most up-to-date list. Similarly the laboratories maintain a list of accredited veterinarians for whom they are authorized to perform official tests. All specimens must be received on the appropriate submission form for the official test being requested. [Module 3.3 Approved Laboratories](#) lists current accredited laboratories. Update as necessary.