General Selection, Collection and Submission of Virology Specimens

1. Clinical virology samples should be collected as soon as possible following the onset of illness.

2. Please refer to the Detailed Guide in the Selection and Collection of Virology Specimens with regards to the information on the selection and collection of specimens for virology testing. The table shows the tests that are available for specific viruses, the recommended specimens for each test and information on the collection procedure and transport device that can be used.

3. All specimens must be properly identified and labeled.

    a) The samples must be identified with Animal ID or laboratory or hospital number.

    b) Samples for molecular diagnostic tests, negative staining EM or virus isolation must be labeled with the name of the specimen (e.g. nasal swabs, blood swabs etc) while the name of the organ/organs must be identified in samples for VI, FAT or molecular diagnostic tests.

    c) Paired serum samples must be labeled as acute (A) or convalescent (C).

4. The specimens for VI should be collected aseptically, refrigerated promptly and sent to the laboratory as soon as possible after collection. If the samples cannot be sent within 24 hours, freeze them at -70˚C to -80˚C if possible, or refrigerate them at 4°C if low temperature freezing is not available. Do not freeze samples for virus isolation at -20˚C (regular freezer temperature).

    a) The swabs should be squeezed directly on a viral transport medium.

    b) Tracheal or bronchoalveolar washings should be placed in a screw cap sterile container or viral transport medium.

    c) Tissues (3-5 cm) should be collected as aseptically as possible, and should be put in sterile container.

5. Approximately 3-5 cm tissues should be collected for FAT. If possible, collect areas with lesions and adjacent normal tissues. Collect samples from 2 or 3 areas. Submit each tissue sample in an individual tightly sealed Whirl-Pak bag that is properly labelled. For smaller animals and birds, include the whole organ.

6. For negative staining Electron Microscopy, 5-10 g or 5-10 ml of feces or intestinal fluid should be put in a small wide-mouth screw cap container. If possible, feces should be collected directly from the animal. Submit scabs for papular stomatitis in calves, Orf in

sheep and Poxviruses. Collect vesicular fluid using a 26 gauge needle and dispense in a dry vial. Also include the membrane that covers the vesicle. Store at 4°C (refrigerator) soon after collection.

7. For serology, at least 2.0 ml of serum is needed. Collect blood in red top vacutainers - 10 ml of blood can generate 3-5 ml of serum. Allow the sample to clot for 30-60 minutes at room temperature. Release the clot using a sterile applicator stick, spin down and transfer the serum supernatant to a sterile tube. If a centrifuge is not available, remove the clot and set aside the serum. Store serum at 4°C (refrigerator).

    a) For serodiagnosis, paired serum samples are recommended. The first sample is collected at the onset of illness, and the convalescent sample is collected 2-3 weeks later. Acute serum samples should be stored at -20°C (regular freezer temperature) while waiting for the convalescent samples.

    b) There are situations where submitting a single serum sample is necessary. Please specify the reasons on your submission form.