



Collection of Specimens for Detection of Influenza from Swine

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Recommended specimens for detection of influenza virus from swine:

1. Nasal swab
2. Lung tissue

1. Nasal swabs:

DO NOT pool swabs from individual pigs.

Use sterile dacron tip swab with plastic shaft at least 6 inch/15 cm in length.

- A. The pig should be properly restrained with the head positioned upward to allow easy access to the nasal cavity. Anesthesia is not needed.
- B. Insert a sterile Dacron swab into the nasal cavity in a dorsal-medial direction and gently swab the surface of the nasal mucosa using a circular motion to cover as much of the nasal mucosal surface as possible. The swab will collect nasal mucosal secretions and surface epithelium.
 - Avoid touching the skin with the swab as you enter the nasal cavity
 - It is important not to scrape too hard, as drawing blood is undesirable
 - Using the same swab, remove the Dacron swab from one nostril and repeat the same procedure in the other nostril
 - Approximate depth to insert swabs for optimal sample:
 - 1 cm for piglets 0 to 4 weeks-old
 - 2 cm for nursery pigs from 4 to 7 weeks-old
 - 3 to 4 cm for fattening pigs > 7 weeks of age
- C. Once the nasal swab has been collected, vigorously mix the swab in a transport media designed for maintaining viruses (viral transport media or PBS).
- D. The volume of viral transport media should be sufficient to cover the head of the swab.
- E. To remove the swab handle, back the swab out of the tube slightly and bend the handle back and forth over the edge of the tube until it breaks. Alternatively, scissors or wire cutters can be used to cut the swab handle.
- F. The swab handle should be short enough to allow the tube to close tightly and long enough to allow for easy retrieval once the tube reaches the laboratory.
- G. Clearly label with appropriate identification and immediately refrigerate or chill.
 - It is important for the specimen to remain cold (approximately 4C) from the collection to the shipping process. A constant cold chain should be maintained.
- H. Store on wet ice (at approximately 4C) and ship refrigerated in an upright position to reduce chances of leakage.
- I. Do not pool swabs from more than one pig into a single tube.

2. Lung Tissue:

- A. Collect multiple sections of lung tissue from affected areas. Fresh lung tissue should be collected as autolysis will cause the production of enzymes which can inactivate virus or be inhibitory to PCR.
- B. Samples should be at least half-dollar size or approximately 3-4 grams.
- C. Include the junction of normal and abnormal lung tissue.
- D. Double bag and clearly label with appropriate ID and refrigerate or chill immediately. For preservation of the specimen it is necessary to maintain a cold chain from the point of collection through shipping and receipt of the testing laboratory.
- E. Do not pool tissues from more than one pig in a bag. Lung tissue from each individual animal should be packaged separately.

