Oral Fluid Sample Collection Guide

A guide to more comprehensive, noninvasive sample collection for disease monitoring and surveillance in commercial pig herds
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Oral Fluid Testing

Testing of swine oral fluids represents a convenient and cost-effective tool for disease monitoring and surveillance in commercial pig herds. Groups of pigs can be collectively surveyed for exposure to diseases such as porcine reproductive and respiratory (PRRS) virus by collecting the oral fluids deposited when the pigs chew on a rope hanging within the pen.

This method provides a more comprehensive picture of the herd status compared to sampling individual pigs by bleeding a random selection of the herd. It is also a noninvasive means of sample collection.

The new IDEXX PRRS OF Ab Test is a sensitive same-day test for PRRS antibody detection that supports the emerging use of oral fluids for frequent surveillance of pig herds. Call IDEXX Customer Support at +1 800 548 9997 for product information.

Supplies

The supplies needed are simple and inexpensive to acquire and may be ordered through IDEXX (IDEXX Oral Fluid Collection Kit). In the absence of the kit, the following is a list of recommended materials for oral fluid sample collection:

- Undyed, unbleached, 3-strand twisted 100% cotton rope; 1/2 in. (1.3 cm) diameter for nursery, grow/finish and adult pigs.
  Before hanging, rope base should be unwound to encourage pigs to interact with the strands.
- A new plastic bag, single-use plastic boot or semen collection bag to collect oral fluids.
- A postmortem knife or scissors to cut bag and drain oral fluids.
- Snap-cap, screw-top or red-top tubes to hold collected samples.
  Sample tubes include those with a cap. However, the tubes must not contain additives such as EDTA or heparin. If glass blood collection tubes are used, choose only red-top tubes (without additives).
- A permanent marker to label tubes.
- Disposable gloves to prevent contamination of the rope or oral fluid samples.
- An optional bracket or other durable extension to suspend rope farther into the pen and facilitate more pigs interacting with the rope.
  A bracket may be used if pigs untie the rope from the pen dividers. Also, brackets are useful for sequential collections. The type of bracket or how it is hung may need to be modified depending on the layout of pens and pen dividers. Tools may be needed to secure the brackets.
Oral Fluid Collection Steps

1 Collection Rope Setup

- Place rope in a clean area of the pen divider or gate, away from feed or water.
- Hang 1 rope per pen of 30 or fewer pigs. In larger groups, distribute multiple ropes in different areas of the pen. Each oral fluid sample collected should represent 20–30 pigs. Pooling of oral fluid samples is not recommended. When monitoring a barn of pigs every 2 weeks, collect oral fluid samples from the same pens each time. This reduces variation in results due to between-pen differences. For further sampling information, please talk to your IDEXX representative about the IDEXX PRRS monitoring guides.
- Rope(s) should hang at pig shoulder height when tied to pen divider.
- Hitch or tie the rope to the bracket or penning and unravel the strands.

2 Collection Rope Exposure Time

- Oral fluids will be absorbed as pigs chew on ropes.
- Ropes should remain in the pens for 20–30 minutes to ensure adequate exposure to the majority of the pigs in the pen.
- If a rope becomes untied/lands on the floor, discard it and hang a new rope for sample collection.

3 Sample Extraction

- Wear disposable gloves to prevent contamination of oral fluid samples.
- Insert the wet end of the rope into a clean plastic boot or bag.
- Strip the rope so the fluid accumulates in the corner of the bag or flows into the tube, if the tube is connected to the bag.

4 Transferring the Sample

- Cut a corner of the plastic bag, drain fluids into the sample tube and attach cap. If using a bag with a connected tube, disconnect tube before capping.
- Properly label each tube with sampling date, barn, pen and any other necessary information.
- A minimum sample of 2.0 mL is recommended.
- Discard all ropes after collection. Never reuse ropes, plastic bags or sample tubes. Never leave ropes in the pens after sampling is finished.
- Do not pool oral fluid samples.
- While at the farm, place oral fluid samples on ice before transporting to an office or laboratory for shipping.

5 Shipping and Handling

- Be sure all tubes are tightly sealed and packaged with ice before shipping.
- Overnight delivery is preferred, as it ensures timely arrival of chilled samples for best results.
Note: Information presented in this brochure is abstracted from the Oral Fluids Collection poster developed in collaboration by the United States Department of Agriculture, the American Association of Swine Veterinarians, the National Pork Board and The Center for Food Security and Public Health.

To view the oral fluid sampling video, please visit idexx.com/swine.

References

For more information about oral collection and the new IDEXX PRRS OF Ab Test, or to learn more about swine health management, please visit idexx.com/swine.