

# ORAL FLUID COLLECTION IN PIGS

## SUPPLIES NEEDED

The supplies needed for oral fluid collection are simple and inexpensive to acquire. The following is a list of supplies that may be used during the sample collection:

1. 3-strand twisted undyed cotton rope\* (1/2 inch for nursery pigs, 5/8" for grow/finish and adult pigs.)
2. Clean plastic bag – you can use a plastic boot, Ziplock bag, or semen collection bags.
3. Side cutters, knife or scissors – may be used to cut cotton rope from the pen divider or bracket.
4. Snap-cap, screw-top tube or red top tubes\* – Collection tubes may include most tubes with a cap. However, make sure that tubes do not contain additives such as EDTA or heparin. If using glass blood collection tubes, use only red-top tubes (without additives.)
5. Permanent marker
6. Gloves – wear disposable gloves to prevent contamination of oral fluid samples. If you squeeze down the rope and the rope is not in the bag, wearing disposable gloves is recommended.
7. Bracket (optional) – occasionally, pigs will untie ropes from pen dividers, so a bracket or device to secure the rope may be needed. Also, brackets are useful when sequential collections are made. 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 brackets.

\*Rope can be purchased from farm supply or hardware stores. Other sources include [www.knotandrope.com](http://www.knotandrope.com) (1/2" cotton rope - \$0.40/foot; 5/8" cotton rope - \$0.65/foot.) Sample tubes can be obtained from the vet clinic you will submit the samples through.

Pre-made kits can be purchased from ITL Biomedical. These kits include the rope, plastic bags, collection tube, and gloves. They only sell by the case – 36 kits for \$189 plus shipping. [www.itlbiomedical.com/animal/products-animal/](http://www.itlbiomedical.com/animal/products-animal/). 1-888-411-2851



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Wisconsin recently implemented rules that will require pigs moving into or within the state to test for Porcine Reproductive and Respiratory Syndrome (PRRS) and Swine Enteric Coronavirus Disease (SECD.) The goals of the rule change are to control and reduce prevalence of PRRS and SECD, and to prevent spread on positive sites. This is done through testing and when needed, implementing herd plans on positive sites.

One way to test herds of swine for PRRS and SECD is through oral fluids collection. To meet the requirements in Wisconsin's rule, blood samples are also acceptable. The rule states that farms may collect blood samples from 8 swine for any sized herd. There are also other samples that can be collected – swab, processing fluids, etc. – if approved by the Wisconsin Department of Agriculture.

## COLLECTING ORAL FLUID

1. Determine the number of samples that you need to collect. To meet the requirements in Wisconsin's rule, 1 oral fluid sample for farms with less than 150 pigs is needed. If your farm has more than 150 pigs, you will need to collect 3 oral fluid samples.
2. Suspend the rope in the pen. The rope should be tied to a sturdy gate in a clean area of the pen where several pigs are able to reach it at the same time. Try to avoid tying the rope near waterers and feeders. The rope should be long enough to reach the shoulder of the pigs, but should be trimmed if longer to avoid fecal contamination. Let the pigs chew on the rope for 20-30 minutes. For nursery pigs, untwisting the rope into smaller strands makes it easier for them to chew on.
3. Wring the sample out of the rope into a plastic bag. Wear disposable gloves to prevent contamination of the oral fluid samples. Insert the wet end of the rope into a clean plastic bag. Strip the rope so the fluid accumulates in the corner of the bag.
4. Cut a corner of the plastic and drain fluid into the collection tube. Since the large particles will sink to the bottom and account for a large portion of the sample, try to collect at least 5 ml of oral fluids. Be sure to label the tube with a pen and barn number if you want it for future reference.
5. Refrigerate until you are able to get the sample to the vet clinic. Samples that are not tested within 24 hours of collection should be immediately frozen.
6. Take the samples to a local veterinary clinic for submission to a veterinary diagnostics lab. Discuss with your veterinarian whether you should run a PCR or ELISA test. (See back page for more details.)

# TROUBLESHOOTING TIPS

- Pigs are more active in the morning. If pigs are inattentive to the rope, the afternoon collections may take more time than the standard 20-30 minutes. If reluctant to approach the rope, pigs can be trained by placing a rope in the pen to play with or by flavoring these practice ropes with sugar solutions. The pigs will then more aggressively chew on the diagnostic sample ropes in the future. These training ropes should be discarded. Do not collect diagnostic samples from ropes contacting the floor or from flavored ropes. Samples submitted should not contain large amounts of organic material such as feed or fecal material.
- What kind of tests do I use to test for PRRS and SECD? Options available to test for PRRS and SECD include an ELISA or PCR test. A PCR (polymerase chain reaction) test detects the presence (or absence) of virus circulating in the animals; a positive PCR would indicate that the pig is either actively shedding virus due to infection or had been recently vaccinated. An ELISA test (enzyme-linked immunosorbent assay) detects antibodies to PRRS and SECD in the pig; a positive ELISA test would indicate that the pig was either previously exposed to the live virus or had been vaccinated.
- For more information on Wisconsin's PRRS and SECD rule, go to:
  - [https://datcp.wi.gov/Pages/Programs\\_Services/SwineMovement.aspx](https://datcp.wi.gov/Pages/Programs_Services/SwineMovement.aspx)
  - <http://www.wppa.org/proposed-changes-control-prrsped/>

Information compiled from University of Minnesota College of Veterinary Medicine Veterinary Diagnostics Lab and 'Oral Fluid Collection in Pigs' brochure from Iowa State University and The Center for Food Security & Public Health.