

Poultry owners who want to show, sell, or trade their birds in Texas, must have their flocks certified as free from pullorum disease and fowl typhoid under the Texas Pullorum-Typhoid Program, which is managed by the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL).

Today, not all flock owners are commercial corporations or rural backyard growers. Urban flocks are on the rise, and many new owners have only two or three birds to provide eggs. Testing these birds is as imperative as testing at commercial producers because these birds come into regular contact with other family pets, increasing health risks.



TVMDL maintains two laboratories dedicated to poultry diagnostics, located in Center, Texas and Gonzales, Texas. With the help of TVMDL, veterinarians can learn the best method to perform a live-bird tracheal swab and also to safely take a blood sample from poultry; the two samples TVMDL uses to test for diseases like avian influenza, infectious bronchitis or Newcastle disease. Veterinarians service the Texas animal health industry by certifying poultry are healthy.

Tracheal Swab

A tracheal swab is the suggested method for taking a sample from the upper respiratory tract. TVMDL recommends swabbing a live bird in a well-lit area so that the larynx is visible.

Timing the opening and closing of the larynx helps to ensure the insertion of the swab into the trachea. The main concern when swabbing is to avoid swabbing just the mouth, pharynx, or esophagus.

Supplies needed to perform a trachea swab include a polyester (dacron) swab with a plastic shaft, brain heart infusion (BHI) broth in tube (recommended 3 mL), and a zip-to-lock style bag.

To properly control the bird during the swab, place the thumb and index finger on either side of the beak, helping to hold the mouth open. Then, insert the swab into the trachea. After swabbing, place the swab in the BHI broth; swirl vigorously. Next, remove the swab from the BHI tube by pressing it against the tube sides repeatedly so that excess liquid is off the swab, then cap the tube. Dispose of the swab.

Use only one swab per bird and, if testing multiple birds at one location, pool no more than five swabs per tube of BHI broth. Keep the BHI broth cool. Label the tube and place in zip-to-lock style bag; the bag should be labeled with bird's location and owner's contact information.

Blood Collection

Supplies needed include a 3 or 5 mL syringe, 20-gauge 1.5-inch needle, red top tube, and a zip-to-lock style bag.

Using the syringe and needle, prepare for collection by pulling the plunger back to break the seal and prevent sudden suction that can cause the vein to collapse. Next, identify the brachial vein in the wing; this vein will provide sufficient blood.

Once the area is identified, remember to pull back the plunger gently to avoid collapsing the vein. If the blood flow stops, rotate the needle to move the bevel from the vein wall. If a hematoma forms and impedes blood flow, attempt collection from the other side.

Remove the needle from the syringe and transfer the sample to a red top tube without vacuum assistance. Collect at least 1 mL of blood, more if possible; however, leave at least one-fourth of the tube empty and recap the tube. Allow clotting with the tube in a slanted or horizontal position. Incubate at room temperature until the blood separates into a cell clot and clear-to-yellow translucent serum. If shipping the clot and serum will take more than 24 hours, separate the serum from the clot.

Clearly label the zip-to-lock style bag for shipping or delivery. Ship with a cold pack.

For more information, visit tvmdl.tamu.edu or call the Center laboratory at 936.598.4451, the Gonzales laboratory at 830.672.2834, or the College Station laboratory at 1.888.646.5623.