



STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Oral Swab Collection Procedures:

Objective: Monitor Arbovirus activity through detection of arboviral RNA in oral swab samples taken from dead birds (specimen collection should be limited to members of the corvid family and raptors).

Background: Certain bird species, in particular crows and other members of the family *Corvidae*, suffer high mortality rates from natural infection by arboviruses (generally WNV). In the American crows the brain is the most sensitive organ to test for the detection of WNV infection. However, experimental infection studies determined that oral swabs for corvid species are as sensitive as brain tissue for the detection of the infectious virus particles and viral RNA. The oral swab testing has been validated through comparison of oral swabs and organ tissue from naturally infected birds. Oral swab testing in other species is still undergoing research.(1)

Mailing Directions: Oral swab specimens collected from the field should be mail to OLS the day of collection. If this is not possible the specimen must be refrigerated and sent to the OLS the following morning, unless this is on Friday. Specimens should not be mailed on Fridays due to the delay in receipt at lab. Specimens should be mailed in the box provided or other suitable box and labeled as a “wildlife diagnostic specimen”. Specimens do **not** need to be packaged with ice packs. Before submitting specimens, call IDEP (558-5358) to obtain a West Virginia ID #.

Testing Procedure: Specimens will be analyzed using the NASBA method to detect arboviral RNA.

Materials Provided in Kit:

- Mailing box for up to 3 specimens
- 3 tubes of media
- 6 swabs
- 3 sets of disposable gloves
- 3 large plastic ziplocks for covering the bird carcass
- 3 biohazard bags
- 1 N95 mask

Note: Additional kits will be sent to counties as OLS receives specimens from each county. However, if you run out of kits, call 558-3530 and ask for the arbovirus lab.

BUREAU FOR PUBLIC HEALTH
OFFICE OF LABORATORY SERVICES
167 11th Avenue
South Charleston, West Virginia 25303-1134

Phone: (304) 558-3530

FAX: (304) 558-2006

Collection Procedures:

1. Open the collection kit bag and remove all the components.
2. Before beginning collection of oral swab put on disposable gloves and mask.
3. Carefully tear open the swab wrapper at the bottom so that the cotton swab remains covered. Place it to one side until needed.
4. Avoid direct contact with the dead bird by using disposable gloves and handling the carcass only with plastic bags (1).
5. Invert the large plastic ziplock bag, reaching through the bag pick up the dead bird carcass and pull through the bag turning it right side out with the bird inside (1).
6. Place the bagged carcass down on a flat surface with the opening of the bag facing away from you.
7. Holding on to the head of the bird with the plastic bag, carefully pry open the beak and swab the inner beak, oral cavity and throat. Leave the swab in the oral cavity.
8. Open the specimen tube containing transport media.
9. Remove the oral swab from the oral cavity and place it into the specimen tube breaking off the wooden shaft if needed.
10. Tightly replace the cap and write the WV ID # (obtained by calling IDEP 558-5358) directly on the tube with a permanent marker. This same ID # should also be written on the corresponding laboratory submission form.
11. Make sure that the submission form is completely filled out.
12. Place the specimen tube into a biohazard bag and seal it.
13. Place the submission form into the side pocket of the biohazard bag containing the corresponding specimen.
14. Place the bagged specimen and form into the OLS mailing box and submit to OLS (according to mailing directions above).

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References:

1. Oral Swab Collection from Dead Birds for West Nile Virus (WNV) Surveillance.
Komar, N. CDC
2. Virginia State Lab, unpublished data.

OLS Address: Office of Laboratory Services
Arbovirus testing (avian)
167 11th Ave.
South Charleston, WV 25303

For question regarding this protocol or to obtain a WV ID # for submitting specimens, contact IDEP at 558-5358.

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