

Guidelines for collection and international shipment of avian influenza samples to HSADL

(A) Sampling Procedure

1. Safety requirements for personnel

- safety glasses/goggles,
- FFP2 masks
- disposable overalls
- strong impenetrable gloves
- boots/disposable shoe-covers This protective equipment must be provided to anyone expected to be in contact with the potentially hazardous biological material

2. Sample Collection

On live birds

- Tracheal swabs, cloacal swabs or fresh faeces (at least one gram of faeces)
- Clotted blood, serum

On dead birds

- Intestinal contents (faeces) or cloacal swabs and tracheal swabs.
- Samples from trachea, lungs, air sacs, intestine, spleen, kidney, brain, liver and heart.
- Whole fresh dead birds (death <24h)

Swab-collection technique:

The sterile swab is inserted in the cloacal and taken out again in a rotating move, the dirty part of the swab is broken off and placed it in a sterile tube (cryovial of 2ml) and tightly closed. The cryovial must contain a transport medium for viruses: VTM or PBS + antibiotics as indicated by the OIE.

Composition of virus transport media (VTM)

Viral transport medium for collection of throat and nasal swabs can be made as follows:

1. Add 10g veal infusion broth and 2g bovine albumin fraction V to sterile distilled water (to 400 ml).
2. Add 0.8 ml gentamicin sulfate solution (50 mg/ml) and 3,2 ml amphotericin B (250 µg/ml).
3. Sterilize by filtration.
4. Dispense in 2-5 ml sterile container and store at 4 degrees C until used.
5. Virus transport medium for PCR work.
6. The medium should not contain any phosphate.
7. Specimens can be collected directly in lysis buffer available commercially, or in alcohols.

3. Storage:

Keep PBS and antibiotics preservation (transport) medium for swab storage in cryovials at: +4°C if delivery to the laboratory within 48 h; - 80°C if longer delay necessary (-20 °C if no other possibility).

4. **Cold chain:** Use dry ice (ratio of 1 volume of sample for 6 volumes of dry ice) or liquid nitrogen in suitable containers (at least -80°C).
5. **Forwarding:** Before engaging in any shipment, contact the HSADL (for information on the transport conditions and regulation for import of the samples. Transport must be as fast as possible and should not exceed 72 hours otherwise, there is a risk of interruption in the cold chain and loss of sample integrity. Implement transport by air freight according to the IATA international regulations. No airline company will allow anyone to be carrying such samples on board (hand-carried samples not allowed).

6. **Challenges faced in transport:**

- To keep the sample cold at all time.
- The specimens must be packaged so as to arrive at the laboratory in good condition and prevent any leakage during shipment. (see procedures for packaging). The Dangerous Goods Regulations (DGR) describes explicit requirements to be complied with for packaging and shipment of diagnostic specimens, by means of air transport.

7. **Packaging**

The packaging should consist of at least three components:

- water-proof primary container(s);
- (an absorbent layer)
- a water-proof secondary packaging;
- an outer packaging of adequate strength, and with at least one surface having minimum dimensions of 100 mm × 100 mm for labelling.

8. **Shipping Samples**

Labelling of the container: The label UN 3373 must be present (included with the standard packaging kits) as well as a label specifying the kind of refrigeration used (dry ice or liquid nitrogen). A specific labelling may be required by the recipient country (ask the intended reference laboratory before shipment)

9. **Documents to provide:**

- Export licence from the exporting country
- Import licence from the recipient country (to be obtained in advance from the recipient OIE reference laboratory)
- Pro forma invoice of declaration of product value
- Declaration of dangerous goods by the expediting agent.

(B) Procedure of shipping biological samples for the diagnosis of Avian Influenza to the High Security Animal Disease Laboratory (HSADL), India.

1. Packaging Requirements:

All the materials must be placed in leak-proof containers. At least two layers of packaging should be used and the inner layer treated lightly with disinfectant.

The outer packaging must be marked as follows:

ANIMAL PATHOGEN - PACKAGE ONLY TO BE OPENED AT THE AVIAN INFLUENZA LABORATORY, HSADL, BHOPAL, INDIA.

IMPORTATION AUTHORIZED BY LICENCE NUMBER.... *.... ISSUED UNDER the ANIMAL IMPORTATION OF THE PATHOGENS ORDER

- Insert the following **LICENCE NUMBER:-**
- **SHIPPING ADDRESS: High Security Animal Disease Laboratory (HSADL), Anand Nagar, Bhopal (MP), PIN: 462021, India.**
- Packages should be sent by **AIR MAIL** or **AIR FREIGHT**. If sending by **AIR FREIGHT** it is essential that the **AIRWAY BILL NUMBER** is given to the laboratory by **FAX, telephone, or Email** before the arrival of the samples. Packages sent by air freight should be clearly marked: **CARE OF TRANSGLOBAL** to ensure rapid processing at the airport.
- **Notification of Shipment:** Please notify the **High Security Animal Disease Laboratory (HSADL), India** of the shipment details before dispatch.
