

[ENGLISH]

Avian Sample Collection Guide

Avian **Blood** Sample Collection

Precautions:

If you are inexperienced in handling birds, we recommend that samples to be taken by an experienced bird handler or by a veterinarian. This precaution is for you and the bird's safety.

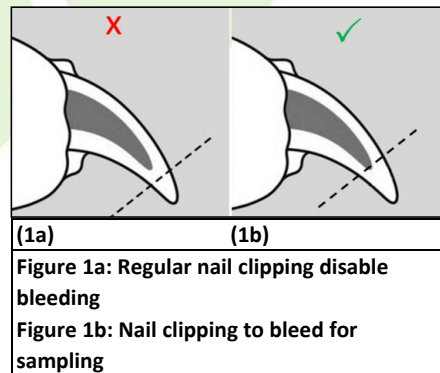
Materials

- i) Online Submission/ Printed Order Form
- ii) Nail clippers
 - ✓ Please clean the nail clippers with alcohol swab
 - ✓ Wash your hands before you collect sample from the next bird.
- iii) Coagulant (e.g. Styptic powder, starch, coagulant suitable for birds)
 - ✓ To stop bleeding from nail clipping
- iv) Alcohol swabs
 - ✓ For cleaning the nail clippers and bird's toenail
- v) Envelope/ Ziplock bag
 - ✓ 1 bird sample in 1 envelope/ ziplock bag. Do not mix different sample into the same bag.



Sample collection methods

1. Fill in details in Online Submission/ Order Form, then label the envelope / ziplock bag with: -
 - a. Owner's Name
 - b. Bird's Name/ Ring ID
 - c. Bird Species
2. Clean bird's toenail with alcohol swab.
3. Hold the bird safely, use cleaned nail clippers and clip the bird's toenail (refer **Figure 1b**) to get blood sample.
4. Gently squeeze the toenail a little if there is no blood.
5. Spot 1 to 3 small drops of blood on a dry and clean A4 paper. Let the blood dry for 1 hour on a clean surface.
6. Make sure the bird is no longer bleeding before placing back into cage or you can stop the bleeding by applying starch or other coagulant that is suitable for bird.



7. Insert the dried cut A4 papers into the individually prepared envelope/ ziplock bag.

NOTE: Do not mix different bird samples into the same envelope/ ziplock bag.

Each envelope/ ziplock bag should contains only 1 set of blood samples from the same bird.

8. Send the prepared samples to us at the address below.

Customers from Malaysia or other countries: -

APICAL SCIENTIFIC SDN. BHD.

No. 17, Jalan BS 7/1C, Taman Perindustrian
Bukit Serdang, 43300 Seri Kembangan,
Selangor Darul Ehsan, Malaysia

Attn: Avian PCR Test

Customers from Singapore: -

AXIL SCIENTIFIC PTE. LTD.

2 Tukang Innovation Grove, #06-01,
JTC MedTech Hub, Singapore 618305.

Attn: Avian PCR Test

[ENGLISH]

Avian Sample Collection Guide

Avian Feather Sample Collection

Precautions:

If you are inexperienced in handling birds, we recommend that samples to be taken by an experienced bird handler or by a veterinarian. This precaution is for you and the bird's safety.

Materials

- i) Online Submission/ Printed Order Form
- ii) Tweezer
 - ✓ Please clean the tweezer with alcohol swab
 - ✓ Wash your hands before you collect sample for the next bird.
- iii) Envelope/ Ziplock bag
 - ✓ 1 bird sample in 1 envelope/ ziplock bag. Do not mix different sample into the same bag.



Sample collection methods

1. Fill in details in Online Submission/ Order Form, then label the envelope / ziplock bag with: -
 - a. Owner's Name
 - b. Bird's Name/ Ring ID
 - c. Bird Species
2. Hold the bird safely, pluck the chest feathers as below:
 - a. Use tweezers to pluck the chest feathers
 - b. Grab the base of the feather close to skin of the bird's chest (refer **Figure 2**).
 - c. Pluck ONE (1) feather at a time. Total THREE (3) feathers are required.
 - d. The plucked feathers should have follicle (white coloration) at the end. Large feathers may contain some blood which shall be remained as it contains DNA for the testing.
3. Follow the instruction below to submit the collected feathers:
 - a. Do not touch the follicle/quill end of the feather sample.
 - b. For each bird, put their feathers into the individually prepared envelope or ziplock bag.

NOTE: Do not mix different bird samples into the same envelope/ ziplock bag.
Each envelope/ ziplock bag should contains only 1 set of feather samples from the same bird.
4. Send the prepared samples to us at the address below.

Customers from Malaysia or other countries: -

APICAL SCIENTIFIC SDN. BHD.

No. 17, Jalan BS 7/1C, Taman Perindustrian
Bukit Serdang, 43300 Seri Kembangan,
Selangor Darul Ehsan, Malaysia
Attn: Avian PCR Test

Customers from Singapore: -

AXIL SCIENTIFIC PTE. LTD.

2 Tukang Innovation Grove, #06-01,
JTC MedTech Hub, Singapore 618305
Attn: Avian PCR Test

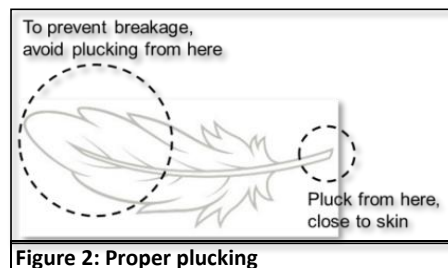


Figure 2: Proper plucking

[ENGLISH]

Avian Sample Collection Guide

Avian **Eggshell** Sample Collection

Disclaimer:

Compared to blood or feather samples that are taken directly from the individual bird, eggshell is a different biological sample that could cause identification error among birds. It is customer's responsibility to isolate the eggshell correctly before submitting it for the test.

Materials

- i) Online Submission/ Printed Order Form
- ii) Envelope/ Ziplock bag
 - ✓ 1 bird sample in 1 ziplock bag. Do Not Mix different sample in 1 bag.
- iii) Permanent marker pen



Sample collection methods

1. Fill in details in Online Submission/ Order Form, then label the envelope / ziplock bag with: -
 - a. Owner's Name
 - b. Bird's Name/ Ring ID
 - c. Bird Species
2. After the egg is hatched, carefully place the shell aside and label the bird's identity with a permanent marker pen.

NOTE: Do not clean the blood stains, and leave the egg membrane attached onto the eggshell.

The attached blood stains or egg membrane will be used for DNA test(s).

3. Allow the eggshell membrane to air dry naturally (~24 hours) or dry using incubator completely.

NOTE: Dried egg membrane prevents the growth of microbes that may affect the PCR result.

4. Insert the dried eggshell into the prepared envelope/ ziplock bag individually.
Eggshell does not need to be in one piece and can be broken, as shown in the **Figure 3** below.

NOTE: Do not mix different bird samples into same envelope/ ziplock bag.

One bird sample for each envelope/ ziplock bag.

5. Send the prepared samples to us at the address below.

Customers from Malaysia or other countries: -

APICAL SCIENTIFIC SDN. BHD.

No. 17, Jalan BS 7/1C, Taman Perindustrian
Bukit Serdang, 43300 Seri Kembangan,
Selangor Darul Ehsan, Malaysia

Attn: Avian PCR Test

Customers from Singapore: -

AXIL SCIENTIFIC PTE. LTD.

2 Tukang Innovation Grove, #06-01,
JTC MedTech Hub, Singapore 618305.

Attn: Avian PCR Test



Figure 3: Example of eggshell that is ready for PCR test.