



DNA Analysis of Psittaciformes

Determining the sex of birds through DNA analysis is based on the composition of the sex chromosomes. Males have two identical sex chromosomes (ZZ), and females have two different sex chromosomes (ZW). The CHD1 gene, present in both chromosomes, has polymorphisms of different lengths and, by amplifying it, it is possible to identify the sex of the birds.

The Doctor Vida system is a "lab-on-phone" that has revolutionized bird sexing. It allows the sex of Psittaciformes to be determined in less than an hour using feather samples and does not require laboratory procedures. The DoctorVida Pocket device combines amplification technology with real-time detection. The data is sent to the DrVida Pocket PCR app, which allows you to configure the test, follow it and access all the results.

Before Starting the Test

Material:

- Tube A (red)
- Tube B (blue)
- Plastic pipette C
- Scissors (not included)
- 70% alcohol, absorbent paper and gloves(not included)
- DrVida Pocket PCR App (free on App stores)
- Doctor Vida Pocket device(sold separately)

DrVida Pocket App: Install the DrVida Pocket PCR App and log in. If you are using it for the first time, create an account.

Collecting feathers: Disinfect your hands with 70% alcohol before collecting (gloves are recommended). Collect medium or large feathers from the tail or wing. If the feather shaft is large, use 3 to 4 feathers; if it is medium, use 4 to 5 feathers; and if it is small, use between 5 and 6 feathers. Avoid using feathers with blood on the shaft.

Reagents: Check that the tubes and pipette are not damaged and that no liquid has leaked out. The tubes should be thawed and upright so that they don't spill when opened. Tube B (blue) contains two immiscible liquids.

Report: Doctor Vida's Psittaciform DNA analysis issues a report with the results to the account email address. To do this, in the sample information, select the option "Assay with report at the end" and fill in the necessary details. For the report to be sent to an additional email, enter it in the "Email to send results to" box.

Laboratory Certificate and Bird Identity Card: To obtain these documents, after carrying out the test, send tube A (red) with the ring and species information, to the STAB VIDA laboratory and place a new order at clients.stabvida.com/sexing (QR with the website and step-by-step instructions on the back).

In the ordertype select the option "Sexing request" and then "STAB VIDA kit". In the bird information enter the necessary details, in the sample type choose the option "Feathers". In the "Kit barcode" field, enter the code found on tube A (red). When making the payment, choose the option "After the results have been delivered". When we receive the sample, it will be processed free of charge. In the same order, only place the samples that already have the laboratory service included.

Instructions for use

In the App, go to the main menu  and select "DNA Analysis of Psittaciformes".

1. Check that the reagents are thawed and that all the materials are in their place in the support box. Scan the QR code of the reagents present in the tube B (blue) or enter the information manually.
2. Connect the Doctor Vida Pocket device to the mains, either with a plug or a power bank. Scan the device's QR code or select it manually.
3. Enter the name of the sample by scanning the QR code in tube A (red) or by entering the information manually. Click on "Next Step" and check that all the data entered is correct. If you wish to edit any details, you can go back. When you're ready to start, click on "Start Assay"; once you've done this, you can't go back and edit the details.
4. Disinfect your hands and scissors with 70% alcohol and dry them well with paper. The use of gloves is recommended but optional.
5. Cut the feather calamus into tube A (red). Using your fingers, hold the feather just above the intended cutting point, and insert the calamus into the tube. Be careful to avoid cutting the downy feathers by lifting and holding them during this process. Proceed to cut with scissors close to the tube's opening to ensure the calamus remains inside. If the calamus is exceptionally large, cut the end that is in contact with the skin. Close the tube (A, red) and ensure that all the calami are submerged in the liquid. If not, shake the tube or tap the bottom of the tube firmly and repeatedly on a surface until the calami descend. Click to continue the test.
6. When the device displays a blinking red light, insert tube A (red) and screw on the white cap.

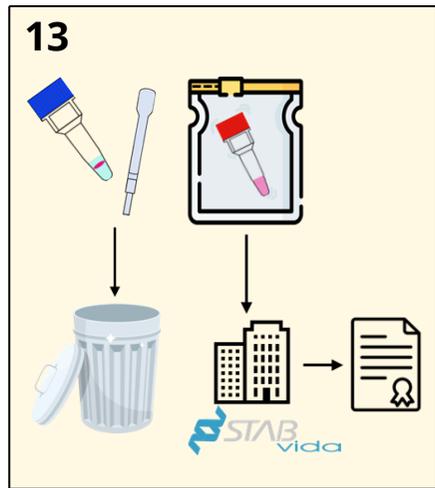
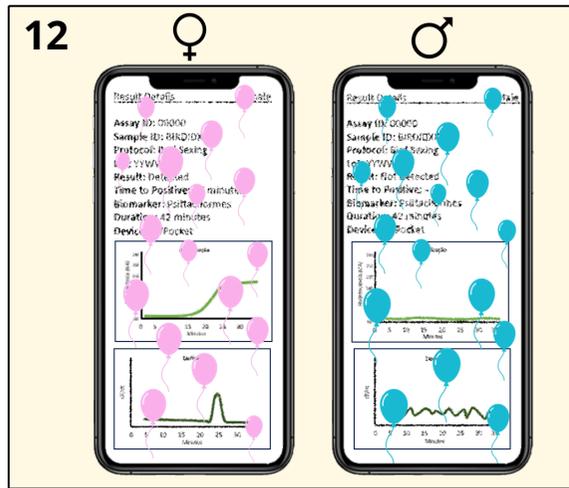
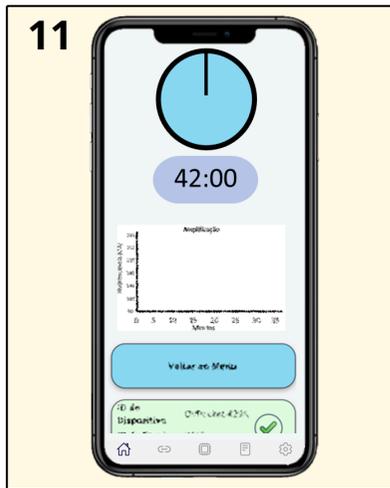
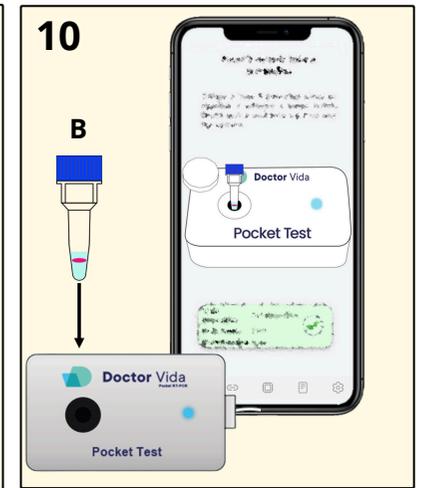
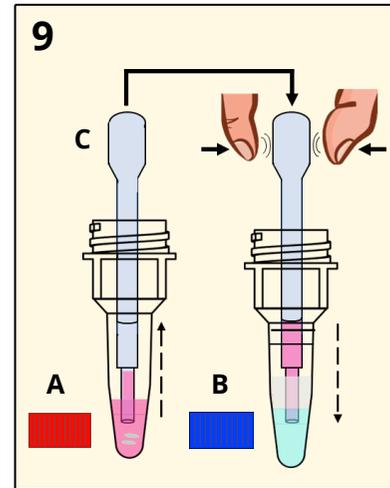
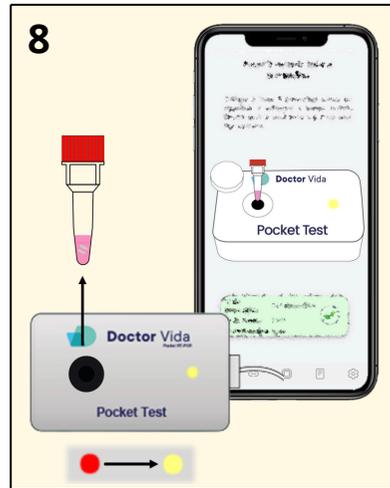
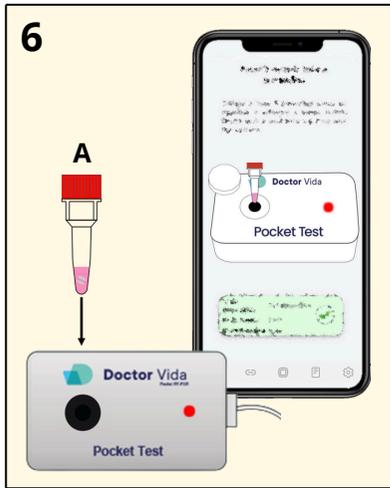
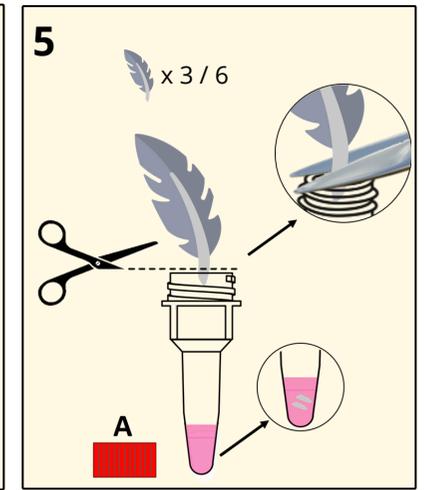
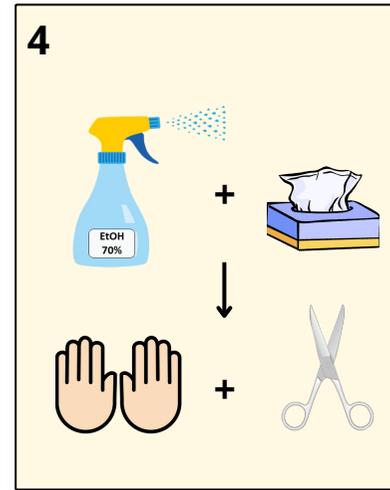
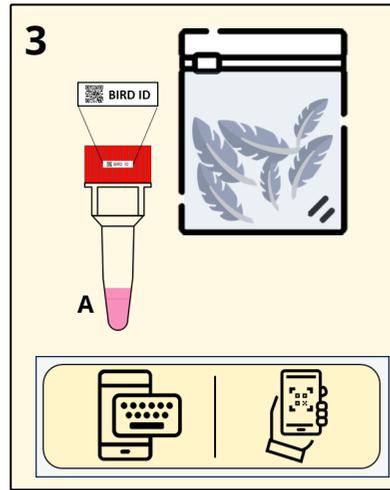
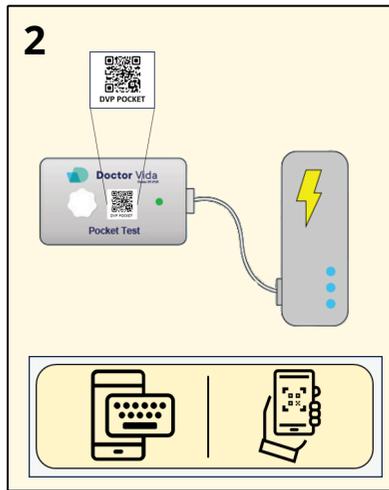
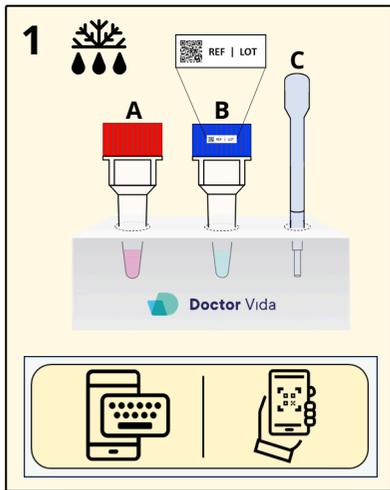
7. The 5-minute step begins when you hear a beep and the light turns solid.
8. When the device shows a blinking yellow light, remove tube A (red) and place it back in its position in the support.
9. Remove the caps from tube A (red) and tube B (blue). Drop the plastic pipette (C) into tube A (red) so that the pink liquid rises by capillary action. Ensure that no calamus is stuck in the pipette. Insert the pipette into the bottom of tube B (blue) and pinch the top end of the pipette to transfer the sample. Remove the pipette from tube B (blue) and only then release the tension on the pipette. Close both tubes tightly. Check for the presence of the sample in tube B (blue) by observing the pink color between the layers of oil and reagent. If there are air bubbles in tube B (blue), tap the tube or gently knock it against a surface.
10. When the device displays a blinking blue light, insert tube B (blue) and close it with the white cap.
11. The 42-minute step begin.
12. When the analysis is complete, you can check the result.
13. After the test is finished, discard the test kit materials (tubes, pipette, and support). Do not reopen the tubes to avoid contamination. To receive the sexing certificate and the bird identity card, place tube A (red) in a bag and send it to STAB VIDA.

Troubleshooting

1. **The calami do not descend into the pink liquid of tube A (red).** Push the calami into the liquid with an unused toothpick.
2. **An error occurs when starting the test. The phone screen goes blank at the start of the test.** Close and reopen the App and try to resume/start the test. If the error persists, unplug the device and plug it back in, then start the test again.
3. **An error/blank screen appeared during or at the end of the test. It's taking a long time to download the result.** Close and reopen the App and resume the test in the menu . In the menu  check that the device is paired. If it has a green border, select it and wait for the message to resume the test. Check that the result is in the menu . In the filters option, click on "Reset Filters" to access all the tests, even the incomplete ones.

Disclaimer

The Doctor Vida DNA test for Psittaciformes is a specialized test for determining the sex of birds of the Psittaciformes order, with an estimated accuracy of over 90%. Factors such as biological variability, sample integrity and other external influences can affect the quality of the results. Consequently, the results should be interpreted with care and, where necessary, confirmed using laboratory methods. STAB VIDA assumes no responsibility for decisions or consequences resulting from the use of this test, and the execution, interpretation and application of the results are the sole responsibility of the user.



Send your Doctor Vida samples to the STAB VIDA Laboratory

clients.stabvida.com/sexing Instructions

Contact us: drvida@stabvida.com
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Visit our online store: doctorvida.store