

How to Collect a Mucosal Swab for DNA Analysis

BACKGROUND

Mucosa simply refers to the mucous membranes, which in a dog or cat, like in a person, include the moist, glistening surfaces of the gums (gingiva), lips, and inner surfaces of the eyelids (conjunctiva).

Mucosal swabs are simple, noninvasive samples that can provide cells from an animal's body to a laboratory for analysis. The main purpose for these is to analyze lineage (what breed of dog or cat is this?), to test for certain diseases that are of genetic origin as part of deciding whether or not to breed an individual (eye diseases, hypertrophic cardiomyopathy in cats, and others), and to screen for specific genetic defects that could affect the individual dog or cat's sensitivity to treatment (such as the MDR1/ABCB1 mutation, which causes excessive sensitivity to otherwise normal amounts of medications).

Collecting a mucosal swab is quick, easy, and can be done at home.

GETTING STARTED

Equipment/materials needed:

- Preordered DNA kit

TROUBLESHOOTING BEFOREHAND

Do not put yourself in harm's way or allow yourself to be bitten while trying to obtain a sample from your pet. If your pet is unwilling to cooperate, call your veterinary hospital; the staff can help you obtain a sample.

Withhold food from your pet for approximately 30 minutes prior to testing. This will prevent contamination of the sample with food particles.

Avoid extremes of temperature; above 90°F (32°C) or below freezing may harm some samples and decrease the yield of the test, causing an inconclusive result or a false-negative result. For the same reason, be sure to submit the sample promptly (send it the same day as you do the procedure below).

PROCEDURE

- Wash your hands. If you are obtaining multiple samples, wash your hands between samples.

- Open packaging and remove DNA swab; do not touch brush.
- With the pet's mouth closed, insert the brush into the cheek pouch. This is done simply by parting the lips (teeth can stay clenched) and advancing the brush between the cheek and the teeth.
- Roll brush outward, causing the brush to gently scrape against the inside of the cheek (inside surface of lip flap).
- Continue rolling brush against the cheek/lip flap 30 seconds (try to avoid touching teeth).
- Withdraw the brush, insert it into its protective case or envelope, and return to your veterinarian or directly to the laboratory by mail, as directed.

AFTERWARDS

Since mucosal swabs are easy to obtain, there is no cleanup or treatment once the sample has been collected.



Correct use of a brush for collecting a mucosal sample. The bristles, which are hidden under the lip, are gently scraping against the inside (mucosal) surface of the lip flap, which collects the sample.

FREQUENTLY ASKED QUESTIONS

What if I accidentally drop the brush?

The goal is to collect as many cells from the cheek as possible and prevent contamination. If your brush is obviously contaminated with visible dirt or debris from the floor, order a new brush and use it to get a new sample.

My pet's teeth touched the swab. Is this okay?

Yes, simply make sure to brush the cheek for the entire 30 seconds.

How do I return the swab?

Instructions should be provided with the swab, including how and where to submit it.

Do I need to refrigerate?

The instructions should tell you if you need to refrigerate the sample; most samples do not have to be refrigerated or chilled for shipping.

Practice Stamp or Name & Address

Also available in Spanish.