

How to Collect a Fecal Sample

BACKGROUND

An animal's feces (excrement, stool) can provide important information about the function of internal organs, including pancreatic and intestinal health, the presence of intestinal parasites, and many other useful indicators. Therefore, microscopic evaluation of a sample of the feces is an important, noninvasive test that many veterinarians use for identifying the causes of certain illnesses and gastrointestinal (GI) disorders.

GETTING STARTED

Materials needed for collecting a fecal sample include:

- Latex medical-type gloves (can be purchased in a drugstore or pharmacy)
- Plastic ziplock bag or other small, plastic container that can be sealed
- Plastic disposable spoon.

When collecting a fecal sample, it is important to remember that with improper technique, there is a health risk to you: if the feces contain an infectious organism, *that organism can be infectious to people*. Examples of these infectious organisms include several types of GI worms, coccidia, *Giardia*, and *Toxoplasma*. Utmost hygiene is essential. Wearing medical-type latex exam gloves is appropriate for collecting a fecal sample, and whether you wear them or not, it is essential that you avoid any chance of fecal-oral transmission of germs. This means:

- Wash your hands immediately after completing the collection of the sample, before touching your face, clothes, or anything else
- Keep the container (ziplock bag, other) wide open when depositing the sample so as to not contaminate the edges
- Avoid bending or placing tension on the plastic spoon when collecting the sample so there is no risk of spreading the sample (flicking/splashing)

Properly done, fecal sample collection is simple, safe, and medically important for your pet.

TROUBLESHOOTING BEFOREHAND

For a valid analysis, the feces should be submitted to the veterinarian within 24 hours of being passed by the pet, and preferably within 12 hours. If this is not possible, the sample should be kept in a cool area (but not frozen) out of direct sunlight.

In multi-cat or multi-dog households, it can be challenging to know with certainty which pet produced which feces. For dogs, a basic first step is to allow a dog to defecate without other dogs present, either on a walk or in an enclosed area like a yard. If he/she is not accustomed to this, then waiting for the pet to become comfortable may take some extra time.

When many puppies live together and diarrhea is noted, it can be difficult to determine the exact source—which puppy has the diarrhea? And is it just one of them or more than one? The simplest but most time-consuming approach is to watch the puppies until each one has defecated. If this is not possible, an alternative approach is to add a small piece of a nontoxic wax crayon in the pups' food, with a different color for each puppy. Keep track of which color goes with which puppy, and when the crayon color is then passed in the diarrhea, the color identifies which puppy has

diarrhea. It is important to note that even though only one puppy may have diarrhea, a veterinarian may recommend treating all puppies with a dewormer. Puppies often expose each other to parasites or acquire parasites together at birth or in the milk during nursing.

Before beginning, it is important to note that pregnant women and any person with a compromised immune system (such as someone undergoing chemotherapy) should not be collecting fecal samples. Additionally, because of the risk of exposure to toxoplasmosis in cat fecal samples, pregnant women are warned by their physicians to have someone else in the household clean cat litterboxes once daily for the duration of their pregnancy. (Toxoplasmosis can be present in a cat's stool even in the absence of diarrhea.)

PROCEDURE: HOW TO COLLECT THE SAMPLE

To collect a sample from a cat litterbox, scoop the feces from the litterbox with the disposable plastic spoon and seal it (with the spoon in the bag) in a ziplock bag. It will not harm the sample if some litter is included. If the stool is formed/solid, it may be possible simply to invert the plastic bag inside out, use it as a glove to pick up the feces, and invert it with the feces inside and seal.

To collect a sample from a dog, walk the dog on-leash outside. Confirm that the feces sample to be collected is fresh and not old. Collect the sample with a plastic spoon or, if the feces is firm, use the inverted plastic bag approach, as described above. Only a small amount of feces (approximately 1 tablespoon) is necessary for most testing. If the sample is watery or if the pet has very little patience for leash walking, it may be necessary for one person to walk the pet and a second person to collect the sample.

AFTERWARDS

Dispose of latex gloves and any leftover materials (e.g., plastic spoon if you did not put it in the ziplock bag) appropriately, and wash your hands immediately.

The fresher the fecal sample is, the better it is for analysis. Ideally, a sample should be examined at your veterinary hospital within 4 hours of collection, but samples that are up to 24 hours old are still valuable. If immediate delivery of the sample to the veterinary hospital is not possible, store the sealed container in a cool, dry place away from sunlight and deliver within 24 hours. Then dispose of the latex gloves and paper towels appropriately.

ALTERNATIVES AND THEIR RELATIVE MERITS

Fecal analysis is the simplest test for evaluating a dog or cat's intestinal symptoms like diarrhea. Up to three analyses may have to be performed to identify a parasite, because the parasite eggs may be shed only intermittently. If a fecal analysis is negative (no parasites or parasite eggs seen), further testing may be needed if the problem persists for weeks or longer and does not respond to initial treatment. Such tests can include abdominal ultrasound (to examine the structure of the intestines), blood tests (to evaluate general function of the liver, kidneys, blood cells, pancreas, and other organs), x-rays (to show the position and proportions of the internal organs), and intestinal biopsy, either via endoscopy or surgery.

FREQUENTLY ASKED QUESTIONS

My dog only goes outside to urinate and defecate. How can he/she have GI worms or parasites?

The eggs of worms and parasites are microscopic and cannot be seen. They are carried and passed on to pets through the stool of wildlife, and in this way, a dog takes in the worm eggs when sniffing the ground. These same eggs also are often passed from mother to puppy at birth or in the milk during nursing.

My pet is on a monthly dewormer. Why did my vet recommend a fecal analysis?

Not all infectious organisms are worms. A pet can be on a monthly dewormer and still be exposed to other parasites (like protozoa)

that cause diarrhea. Additionally, there are other reasons for examining a fecal sample beyond parasites, including fecal enzymes and bacteria, that can explain a pet's symptoms and identify the best treatment.

My pet's diarrhea is very watery. How can I collect it?

It is best to collect it directly from the ground or floor (or litter, for cats' litterboxes) immediately after it has been passed. Use the technique described above, keeping in mind that 1 tablespoonful is usually sufficient, and that some contamination with soil or litter is acceptable. Alternatively, your veterinarian may have to keep your pet in the hospital, typically overnight, in order to collect the sample necessary for testing.

Practice Stamp or Name & Address