

How to Collect a Urine Sample

BACKGROUND

There are many important reasons for needing to examine a dog or cat's urine sample, including detecting bladder infections, diabetes, and many other health problems. Usually the urine sample will be analyzed for concentration, red blood cells, white blood cells, bacteria, crystal content, and sugar. Additional tests, such as bacterial culture and sensitivity, can be performed as needed.

The way a urine sample is collected determines how it can be used; therefore, a certain collection method may be requested by your veterinarian. The simplest method is by free catch. A free-catch sample is caught midstream while the dog or cat is urinating. This type of sample is commonly acquired at home and then brought to the veterinary hospital. Other methods include cystocentesis and catheterization. During cystocentesis, a sterile needle is introduced painlessly through the abdominal wall and into the bladder, like an amniocentesis during pregnancy, and urine is drawn out with a syringe. With catheterization, a sterile tube (catheter) is passed into the bladder through the urethra, and the urine is allowed to drip out.

GETTING STARTED

The purpose of urine collection is to obtain a clean sample and provide it promptly to the veterinarian for testing.

If possible, it is ideal to collect the sample from the first urination of the day. This urine has been stored in the bladder overnight and will contain more cells for examination.

What you will need (dogs):

- Urine storage cup
- Urine collection cup
- Medical examination-type latex gloves

You may have been provided with a sterile cup for urine sample storage by your veterinarian. That is appropriate for transporting the urine sample to your veterinary hospital, but it may not be the best container for *collecting* the sample. Instead, it may be a lot easier to use a shallow, wide-mouthed, clean dish such as a margarine dish or an aluminum foil pie plate for collection, and then pour the sample into the cup for storage. It is also not necessary to fill the cup.

With urine samples, fresher is better. It is ideal to have a sample submitted to the veterinarian within 1-2 hours of collection, although up to 24 hours may still be useful for some tests. Contact your veterinary hospital to determine when to drop off your pet's sample.

TROUBLESHOOTING BEFOREHAND

If you can't bring in a sample immediately after collection, then it is best to refrigerate it. For hygienic reasons, it is best to seal the watertight collection cup inside a ziplock bag for extra protection from spillage. Important note: refrigerating a sample is acceptable, but freezing a sample is not, because freezing destroys much of the material being examined in the urine.

PROCEDURE FOR OBTAINING THE URINE SAMPLE

Dogs

It will work best if you are alongside your dog, so a leash-walk or staying within a few feet (1 meter) of the dog is advised. It may

take two people to accomplish collection of a clean sample—one person to walk the dog and one person to collect. If a dog is used to walking alone, it may just take some extra time for him/her to eliminate in front of you, and a longer walk is appropriate then.

- Put on the latex gloves.
- Hold the container by the edges. When the dog starts to urinate, allow a small amount of urine to flow first, and then after 2-3 seconds catch the stream of urine with your container.
- Female dogs will often squat close to the ground. A shallow, wide container such as an aluminum pie plate is best for sliding under a squatting dog. For very small female dogs, the clearance is minimal, and a homemade aluminum foil tray may be most effective. Some dogs are startled by the appearance of a tray under them while they are urinating, but most are not bothered or become accustomed to it after a few attempts. The pie plate or tray is held on the ground with one hand (don't let go of it) and the leash in the other hand while the dog completes urinating and gets up to walk away. Letting go of the plate/tray under the dog risks it being flicked up when the dog stands up, with urine spillage causing a mess and no sample.
- Male dogs tend to urinate without squatting, which makes urine collection easier. However, be aware that the slightest breeze can send this stream in an unexpected direction. Additionally, some dogs use their hind legs to scratch the dirt around after urinating. Protect yourself and your sample from spillage should this occur.
- With males or females, if you have used an alternative to the urine cup provided to you by your veterinary hospital for collection, transfer the sample into this cup, and seal it completely with the lid. If a cup was not provided to you, then transfer the sample into a clean, watertight container, and seal it with a lid. Deliver this sample to your veterinary hospital as soon as possible. If you are not leaving immediately, then refrigerate the sample until you leave.

Cats

Collection of a free-catch sample from a cat at home begins with cleaning and emptying the litterbox, without refilling it. Replace the normal litter with dust-free silica "litter pearls," which are clear plastic beads. Scatter the bottom of the pan with 1-2 cups (125-250 mL) of the beads. This provides something for the cat to push around in the box but prevents absorption of the urine. Pour whatever urine has not been absorbed into a storage container. Some cats are very particular and will not tolerate a change in litter. With these cats, it may be easiest to have the veterinarian collect a sample via cystocentesis (see above).

AFTERWARDS

After dropping the sample off at the veterinary hospital, you can expect most results to be available in 36 hours or less; exceptions are bacterial culture and specific urinary hormone assays, which require several days.

FREQUENTLY ASKED QUESTIONS

I collected a sample, but it has hair/leaves/snow in it. Is that a problem?

In general, free-catch samples must be free from debris or contamination from the environment. It is a matter of degree, so if you are concerned about contamination of the sample, be sure to describe the nature of the contamination to the veterinary technician when you drop the sample off.

How am I supposed to keep my pet from urinating so I can try to collect a sample at home?

Attempt to collect a sample first thing in the morning. With dogs, it may be helpful to keep them inside overnight, and plan to collect urine during an on-leash walk in the morning. With cats, you can attempt to collect urine at home by changing the litter as described above. Alternatively, restrict your cat from using a litterbox, and plan to take him to the veterinary hospital in the morning for cystocentesis. Do not put a towel in the carrier or anything else your cat could consider as a substrate for urinating on. Finally, if your cat's bladder is empty in the morning or if your cat urinates while on the way to the hospital, you may have to leave your cat at the hospital for several hours to wait for his bladder to fill again so the staff can acquire a sample there.

My pet is leaking urine all the time. What do I do?

In such circumstances, there is often very little urine stored in the bladder so a pet cannot void a normal volume of urine at one time.

This makes collection at home difficult, and your speed at catching the urine can help. Still, even with the best of efforts, the volumes of urine may be so small as to be impossible to collect. In this instance, collecting a sample off the floor may be the only means of collection. This is most easily done in the veterinary hospital where syringes are available to collect samples in this way. A urine sample that is collected off the floor is imperfect, but it can still yield important information.

The urine sample is mixed with feces/stool as well. Is that a problem?

Unfortunately, yes, because urine is much cleaner than feces. Fecal contamination can interfere with results. If there is obvious mixing of urine and feces in a litterbox, for example, then you should discard that sample and begin again.

I have several cats. How do I make sure I have a sample from one cat in particular?

If the cat in question uses only one litterbox, and no other cats use that litterbox, the process described above (with plastic litter beads) can be carried out. Otherwise, the urine sample should be drawn from your cat at the veterinary hospital via cystocentesis (see above).

Practice Stamp or Name & Address