



Sample Collection and Submission Advice – Companion Animals

Sample submission

This guide provides information on sampling and sample requirements. If you have questions please check our website or call 0131 535 3130 and our professional technical staff will be pleased to assist. Package samples in accordance with Post Office regulations.

To enable us to handle samples efficiently please follow the guidelines below:

- Do not send unlabelled samples
- Do not cover tubes in sticky tape. If lids are screwed on tightly they will not leak. If there is a need to further seal tubes we recommend using electrical insulation tape.
- Do not send hypodermic needles.
- Sample from patients on chemotherapy drugs must be indicated on the submission form, as such samples require special handling in order to comply with health and safety regulations.
- Results will only be provided to the submitting veterinary surgeon, unless express written permission has been given to release them to the owner or other third party.
- Turnaround times are stated against each product. These are based on laboratory working days and are a guideline only.
- Litigation cases require specific procedures to ensure appropriate chain of custody; please advise in advance if this is the case.

Microbiology

Microbiology sample collection guidelines

- Ensure that sampling is from the lesion, avoiding contamination from surrounding tissue. This is particularly important for urine where a cystocentesis sample is recommended for bacteriology.
- Please use sterile plain tubes, containers or swabs for submission of all microbiology samples - boric acid containers are recommended for urine culture. Many additives in blood tubes are bacteriostatic and thus their use reduces isolation rates. If tissue samples are to be submitted please wrap in moist material to prevent drying out (do not immerse in fluid).
- When swabbing a lesion for bacteriology please use swabs that contain a transport medium as this preserves organism viability better than dry swabs.
- Faecal samples should be stored refrigerated until the sample is submitted.
- When submitting fluids for culture please ensure that the plain container is completely filled with the fluid so as to exclude air, as the presence of oxygen will potentially lead to loss of strict anaerobes from the sample.
- Generally samples that are >48 hours old are unsuitable for bacteriology due to reduced organism viability.



Urinary Tract Disease



syringe. Do not forcibly eject blood through a needle; remove the needle prior to transferring the sample in a blood tube

- When filling tubes, fill the plain tube first to avoid any risk of carry over of anticoagulants. In particular small amounts of EDTA can interfere with several biochemistry tests
- With serum gel tubes please centrifuge sample if possible to separate red cells from the serum.
- Ensure plain tubes are clotted and clot retraction has occurred before centrifuging. Note that the sample requirements indicate the volume of serum/plasma that is required, not the volume of whole



Container types

Blood tubes show the name of the tube on its label – please check before adding blood and do not rely on the lid colour as this varies. The letters shown for each tube type are used in the assay lists below:

- Serum gel/plain tubes (S) (red or white lids): Serum tubes contain no anticoagulant and thus blood clots in these tubes. The serum gel tubes should be centrifuged prior to submission to prevent haemolysis affecting the serum. The resulting serum is used for biochemistry and endocrinology tests.
- Lithium heparin tube (H) (green or orange lids): Contains an anticoagulant that prevents clotting. Plasma can be used for biochemistry and endocrinology. The whole blood can be used for haematology, and for exotic species it is preferred to blood taken in to EDTA. It is also used for some molecular tests. Ensure the tube is filled to the appropriate level.
- Potassium EDTA tube (E) (red or pink lids): Contains a chelating agent which acts as anticoagulant and preserves cellular morphology. It is used for haematology and for fluid aspirates (e.g. pleural/peritoneal effusion, synovial fluid etc). It is important that the tube is filled to the correct level to preserve cellular morphology.
- Separated EDTA plasma (ES): This is required for endogenous ACTH estimation. Centrifuge the EDTA sample and place the plasma into a plain tube (not serum gel tube).
- Fluoride-oxalate tube (F) (yellow or grey lids): Oxalate is an anticoagulant whilst fluoride prevents glucose metabolism by cells. This tube is required for glucose estimation.
- Citrate tube (C) (lilac or green lids): Citrate is an anticoagulant and tubes containing this are used for clotting factor and fibrinogen assay, and may be used for haematology.

Histopathology & Cytology service

Histopathology sample collection guidelines

- Provision of a full history, patient details and description of the lesion enables more accurate interpretations.
- ‡ For adequate fixation samples fix in 10% neutral buffered saline (10:1 ratio of formalin to tissue). For large biopsies it is appropriate to fix the tissue in a large pot in the practice for a few days. Completely fixed tissue can be submitted in a sealed bag or small pot with formalin soaked gauze to keep it moist. To allow formalin to penetrate large biopsies make 0.5-1cm wide incisions through the



Cytology sample collection guidelines

- Cytology sample may be obtained by aspiration, scraping or imprints. Slides may be made by smearing the aspirate or making a squash preparation. When making smears please ensure a thin film is created. Islands of material on the slide will be too thick for examination.
- Provision of a full history, patient details and description of the lesion enables more accurate interpretations.
- Submit labelled air-dried, unstained smears. Smears may be fixed in methanol for 5 minutes, but if