Finn Pathologists
The Veterinary Pathologists

Sample Storage Guidelines

Samples should be as fresh as possible, ideally received at lab within 24 hours of sampling.

If there is a delay, e.g. over weekend, then it would be better to delay sampling, particularly for PCR and microbiology.

Some samples will be viable for longer, and we will be able to provide useful results from some older samples, test dependent.

Approximate length of time that particular samples are likely to be useful for, as long as they have been stored appropriately before sending, are stated below.

If in doubt about the usefulness of a stored sample, please feel free to ring and discuss before submitting.

Haematology – up to 3 days.

Whole blood in EDTA for mammals, whole blood in heparin for exotics. Refrigerate. Also submit an air dried smear. Do NOT refrigerate slides.

Blood group for mammals – up to 3 days.

Whole blood in EDTA. Refrigerate.

Coagulation – up to 2 days.

For most accurate results analysis should occur within 24 hours of sampling. Whole blood in citrate for Clauss Fibrinogen, D Dimers, clotting times. Ensure tube is filled to line.
Refrigerate.

Chemistry, Serology (including allergy) or Endocrinology– up to 6 days

Centrifuge as soon as possible after the clot has formed, and separate the serum into another plain tube. Discard the original tube. If using a gel tube spin as soon as clot has formed (for small animal samples, large animal samples are best spun but can be left whole). Refrigerate.

Serum gel tubes should not be used for endocrine tests or drug assays.

Chemistry Tests with particular requirements

Check price list for exact sample requirements.

- **Glucose** – up to 6 days.
  Refrigerate separated serum. Allow clot to form, but separate within 30 minutes of sampling. OXF, refrigerate.
- **Insulin** – should arrive at lab within 24 hours of sampling. Refrigerate separated serum or serum gel tube. Send with ice pack.
- **Ionised calcium** – should arrive at lab within 24 hours of sampling. Refrigerate separated serum in plain tube NOT gel. Must be handled anaerobically, see price list for full details.
- **Pro-BNP** – EDTA plasma, sample must be separated within 1 hour of sampling and should arrive at lab within 24 hours of sampling. Refrigerate.

Over, please ⇨

Tests that require samples to be chilled or frozen.

Chilled – ring lab for advice re longevity as will depend on test; frozen can remain viable for several days. The main challenge with these samples is ensuring they remain chilled or frozen in transit.

Please refer to price book for tests that have particular requirements, e.g. those that must be submitted chilled or frozen and/or protected from light e.g. VWF antigen, endogenous ACTH, PTH, PTHrp, Renin, Taurine, Vit D, Vit E, acetylcholine receptor antibodies, 2M antibodies. NEVER freeze whole blood cells. Freeze the separated plasma or serum. Discard the original tube. Please label the separated sample as either plasma or serum. We endeavour to use reliable courier services, however delays can occasionally occur so we recommend that if possible you take extra sample and keep the spare in your freezer (not a frost free freezer), which should avoid you needing to resample if there is a delay and the original sample defrosts en–route.

Cytology – up to 3 days, except CSF which must be at lab within 24 hours of sampling.

Fluids e.g. CSF, thoracic, abdominal, cystic, synovial; CSF; urine; in EDTA. Also submit air dried smear/s if possible.

Washes e.g. tracheal, guttural pouch, uterine, prostatic, in EDTA. Also submit air dried smear/s if possible.

If culture is required, then extra fluid should be submitted in a plain tube.

All samples should be refrigerated apart from slides. Slides can be stored for months as long as not subject to condensation.

Biopsies in formalin for histology

Will depend on size of biopsy and volume of formalin, but potentially several days. Room temperature.

Do NOT store or package formalin preserved samples with cytology or blood samples, as formalin fumes can severely damage the morphology of cells.

PCR

DNA/RNA will degenerate with age, and samples should ideally be at lab within 24 hours of sampling. Fresh tissue and faeces are particularly prone to degeneration from proteases present in the sample. These are best kept refrigerated prior to submission.

Other samples can be stored at room temperature, and swabs should be stored in the dark.

Microbiology

Viability of organisms can vary, so ideally samples should be at lab within 24 hours of sampling.
All samples except swabs and culture bottles should be refrigerated. Swabs should be stored in the dark and at room temperature until submitted to the laboratory.

Blood cultures (and sterile fluids inoculated into blood culture bottles) should be submitted for incubation immediately following sampling for reliable results. If incubation facilities are available the bottles may be incubated at 35-37°C until submission to the laboratory otherwise store in the dark and at room temperature.

Faeces for culture should ideally NOT be refrigerated, but faeces for parasitology should ideally be refrigerated.

We do not encourage use of boric acid preservative for urine, but if it is used the pot should be filled to the line and it should NOT be refrigerated.

Immunology

Most small animal tests require separated serum – up to 6 days. Refrigerate. Please call lab for non -serum tests or tests for equine or farm animals.

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