

Taking a Blood Sample - without tears and haemolysis

- Ideally sample when fasted, this will prevent post prandial lipaemia and secondary haemolysis; fasting may not be possible with rabbits and exotics. The exception is post feeding bile acids.
- Choose a quiet, calm environment and use firm but gentle restraint. Stressed, struggling animals and hurried procedures increase the likelihood of sample haemolysis and elevated muscle enzymes.
- Avoid sedation when possible, sedatives such as medetomidine may cause transient, marked hyperglycaemia.
- Sample from a large easily accessible vein, usually the jugular, cephalic or saphenous vein but species variations apply.
- Clip and swab the site, this helps to identify the vein, use pressure as appropriate to raise the vein.
- Use the largest needle possible and a syringe appropriate for the volume of blood required. Too large a syringe will create excessive negative pressure and increase the risks of haemolysis. "Vacutainers" generally are not recommended for small animals; they may collapse the vein and increase the risk of haemolysis.
- Use steady pressure to withdraw the plunger. For small patients it may be possible to collect blood from the hub of the needle directly into the collection tube.
- If repeated blood sampling is indicated, or the sample is drawn prior to chemotherapy, place an indwelling catheter.
- Remove the needle from the syringe prior to transferring blood into appropriate collection tube(s). Express blood gently and fill to the correct level - usually indicated by a horizontal line on the tube. Tubes containing anticoagulant should be capped and rolled gently to prevent clot formation.
- Do not transfer samples from EDTA into alternative tubes (eg when blood is initially aliquoted into the wrong collection tube), this has a detrimental effect on the measurement of Alkaline Phosphatase, Calcium, Potassium and coagulation studies.
- When taking blood for a haemogram make a fresh smear immediately, with blood from the syringe barrel, not the EDTA or Heparin tube. This will help to preserve cell morphology and increase the likelihood of detecting feline Mycoplasma Spp. in cats with suspected Feline Infectious Anaemia.
- Samples should be stored in a cool, dark place before analysis or dispatch to the laboratory.
- Samples for biochemistry can be centrifuged (plain or heparinised blood) or allowed to clot (plain or gel tube) to harvest the serum or plasma. Removal of the cellular components will prevent haemolysis and is particularly useful when samples are sent to an external laboratory.

