



### Old Cat Profile.

The CTDS Old Cat Profile is a low cost profile useful in identifying many of the common conditions seen in older cats including renal and hepatic disease, diabetes mellitus, hyperthyroidism and FIV infection. It provides a more focused approach to investigating thin old cats in poor condition than many of the "off the peg" in clinic packages of chemistry tests.

As with all CTDS profiles case specific veterinary interpretation, comments on further testing and possible therapeutic approaches are included when a history is provided.

**Tests included:** Full Blood Count, total protein, urea, creatinine, ALT, Alkaline Phosphatase, sodium, potassium, S/P, Glucose, total T4 + FIV.

**Samples:** 1ml separated serum or 1ml Lith hep plasma, 1ml EDTA, 1ml Oxalate, air-dried smear

**Reported:** Same day as receipt

**Cost:** £28 + VAT (£23 without haematology)

**Request code:** OCP

### New profile – Feline Endocrine Profile.

We are pleased to be able to add an additional profile to our portfolio that is the Feline Endocrine Profile. Designed with a slightly extended biochemistry profile this profile may be preferred in cases of old cats where the clinical signs are vague and non specific, where pre-existing renal or hepatic disease or diabetes has been identified or where the cat is clearly systemically unwell at presentation. In these cases the additionally biochemistry assays relating to the liver, which include bile acids, additional protein assays and full electrolytes may be useful as part of the initial panel of laboratory data. All of the assays included in the feline profile are included in addition to T4.

**Tests included:** Full Blood Count, total protein, albumin, AG ratio, urea, creatinine, ALT, Alkaline Phosphatase, total bilirubin, sodium, potassium, S/P, calcium, glucose, GGT, cholesterol, bile acids, chloride, inorganic phosphate, CK + total T4.

**Samples:** 1ml separated serum or 1ml Lith hep plasma, 1ml EDTA, 1ml Oxalate, air-dried smear

**Reported:** Same day as receipt

**Cost:** £34 + VAT (£29 without haematology)

**Request code:** FPT4

### How to take quality serum samples.

As a general rule serum samples should be submitted for all profiles and screens as well as endocrinology, biochemistry, drug monitoring and most serological tests.

Serum is the fluid part of blood that remains when it has been allowed to clot. In healthy animals it should be clear and a pale yellow, straw colour (3).

When red blood cells remain in contact with serum, autolysis occurs and intracellular contents leak into the serum. This can affect biochemistry analysis and induce erroneous results and eventually the red cells may lyse causing haemolysis (2). While many tests are affected by haemolysis, potassium, total bilirubin and phosphorous are most affected.

We recommend the use of serum gel tubes since, after centrifugation, the gel forms an impermeable barrier between the red cells and the serum. If separated correctly there is no need to decant the serum further.



1. Unpun Gel    2. Partial spun Gel    3. Complete spun Gel

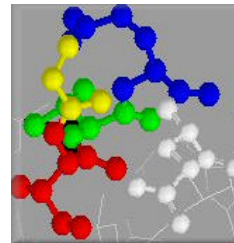
### Protocol:

- Take blood sample and fill the labelled gel tube slowly (having first removed the needle from the syringe).
- Allow the blood to clot for approximately 30 minutes (1 hour for equines and exotics).
- Centrifuge the tube at high speed for 5-10 minutes ensuring that after centrifugation the gel has formed a clear barrier between the cells and the serum (3). (If this has not happened then recentrifuge, as the most likely cause of this is that the blood had not fully clotted prior to centrifugation).
- Submit the serum tubes with request and any other tubes to CTDS.

(Please contact the lab, review page 4 of the pricelist or visit our website for a comprehensive list of sample requirements or if you require additional sample quality sheets).

### Fructosamine

Fructosamines are stable complexes of carbohydrates and proteins that are produced by an irreversible, nonenzymatic glycosylation of serum proteins. Fructosamine (glycated serum protein) measurements are useful in diagnosing and monitoring diabetes mellitus in both cats and dogs. The test is highly sensitive and can be used to distinguish non-diabetic transiently hyperglycaemic cats from diabetics with chronic hyperglycaemia.



Insulin molecule

A single measurement of fructosamine indicates the average glucose concentration over the previous 1-3 weeks and its assay can therefore be used to assist in the diagnosis of diabetes mellitus as well as monitoring the effectiveness of insulin therapy in diabetic patients. Fructosamine values are not

influenced by acute fluctuations in blood glucose making them more useful than single glucose measurements taken from stressed or anorexic patients, or animals on glucose containing IV fluids. In some cases however they can be used in conjunction with serial glucose curves to assess the short and long term response to insulin administration.

### Interpretation

Elevated fructosamine occurs in cases of persistent hyperglycaemia in cases of undiagnosed or poorly controlled diabetes mellitus. By using fructosamine, animals can be quantitatively evaluated for the degree of control of their diabetes. Importantly, in cats in particular, low results can alert the possibility of excessive therapy and likely sub clinical hypoglycaemia before potentially deleterious clinical signs are seen. Decreased fructosamines may also occur in insulinomas (although glucose and insulin should also be measured to confirm the diagnosis), feline hyperthyroidism (due to increased protein turnover) and hypoproteinaemia. There can also be artefactual reductions in fructosamine associated with lipaemic samples so where possible fasted samples are recommended.

**Sample requirements:** 0.5ml Separated Serum

**Reported:** Same day as receipt

**Cost:** £10 + VAT

**Request code:** B6

For further information or advice on the monitoring and treatment of diabetic patients please contact the lab.