

FRUCTOSAMINE

SAMPLE REQUIRED:

Serum (0.5 mL) or clotted blood (1.5 mL)

BLOOD TUBE REQUIRED:

Plain (red top) or Gel (yellow top) tube

Indications:

- To assist in the diagnosis of diabetes mellitus in dogs and cats.
- In particular, fructosamine is useful to help differentiate between diabetes mellitus and stress hyperglycaemia (particularly in cats with a blood glucose > 12 mmol/L).
- For monitoring glycaemic control in diabetic dogs and cats.

Protocol:

- It is preferable to fast the animal for 12 hours prior to sample collection, though a random sample can be used if necessary.
- Collect blood sample.
- Store sample at 4°C. If transport to the laboratory will be delayed (> 12 hours), the sample should be centrifuged and the serum separated.



Notes:

- Fructosamine is a glycosylated serum protein and provides an assessment of average blood glucose over the preceding 2-3 weeks in dogs and possibly a shorter timeframe in cats (7-10 days). It is not affected by acute increases in blood glucose (e.g. due to stress or excitement).
- In cats, a persistently stressful state may occasionally produce a significant elevation in fructosamine.
- Fructosamine concentration is affected by factors that alter the half-life of serum proteins. Hypothyroidism in dogs may increase serum fructosamine concentration. Hyperthyroidism in cats and severe hypoproteinaemia may decrease serum fructosamine concentration.
- Significant decreases in fructosamine concentration can occur if samples are kept at room temperature for more than a few hours (e.g. a 10% decrease can occur in 12 hours).
- Fructosamine concentration will not detect animals experiencing the Somogyi phenomenon while receiving insulin therapy.