

Vetpath is a specialist veterinary laboratory dedicated to providing our clients with the finest laboratory diagnostic service. A team of veterinary pathologists and medical scientists with extensive experience in veterinary diagnostic pathology forms the core of the Vetpath team.

VN News

OCTOBER 2017

Serum fructosamine concentration

Fructosamine is a glycosylated amine formed when glucose binds to amino acids on serum proteins (especially albumin). This parameter is used to assist in diagnosis of diabetes mellitus and in monitoring response to insulin therapy.

Increased serum fructosamine concentration is suggestive of persistent hyperglycaemia and helps confirm the diagnosis of diabetes mellitus. Patients with transient hyperglycaemia due to stress usually have fructosamine concentrations within the reference range.

VETPATH has recently performed a stability study on serum fructosamine to determine the effect of storage on this parameter. The findings of the study indicate that **serum fructosamine concentration is only reliably stable for 24 hours after collection**, with the concentration increasing or decreasing after 24 hours of storage. This means that the time taken for the sample to arrive at the laboratory must now be taken into consideration when you are submitting samples for fructosamine. Try to collect samples earlier in the week if submitting from a rural or interstate practice, or if adding on fructosamine measurement to an existing panel, please call the laboratory as soon as possible to minimize storage time.



Ionized calcium

Ionized calcium (iCa) is the metabolically active form of calcium in the body, providing a more accurate reflection of physiological calcium compared with total calcium.

Measurement of iCa requires special sample handling as this parameter is affected by both pH and storage time. It is important to follow the instructions below to ensure the test is accurate.

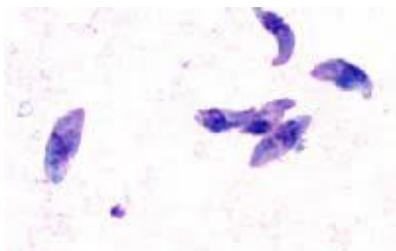
- A red top serum tube must be filled to the nominated capacity to minimize the air in the sample.
- Do not remove the lid after collection.
- The tube must arrive at the laboratory within 2 hours of collection (this may require a taxi).
- Contact the laboratory to organize sample transport.
- The test is performed at a referral laboratory in Perth with results being available the same day as submission.

How do I interpret a titre?

Determining whether an antibody titre is positive or negative can be difficult, and we commonly have vets calling to confirm that they are interpreting the dilutions correctly.

Antibody titres are confusing not only because they are expressed as a dilution, but because the concept of a more diluted sample corresponding to a higher titre seems counter intuitive. But the key to interpreting a titre is to understand how the test is performed.

An antibody titre is determined using serial dilutions. For some tests the dilution begins at 1:2, but for other tests the first dilution is higher (eg 1:16). The diluted samples are tested for the presence of detectable antibody. The assigned titre is indicative of the last dilution in which antibody is detected. Therefore, the **higher the titre** (and therefore the dilution), the **greater the amount of antibody** in the original blood sample.



New PCR panels now available at Vetpath

Vetpath is now offering a number of new panels to help with diagnosis of infectious diseases in specific body systems.

Equine respiratory panel (BAL/TW or swab):

- Equine Herpesvirus 1
- Equine Herpesvirus 4
- *Rhodococcus equi*
- *Streptococcus equi* subspecies *equi*
- *Chlamydia psittaci*

Canine respiratory panel (BAL/TW or swab):

- *Bordetella bronchiseptica*
- *Streptococcus equi* subsp. *zooepidemicus*
- Canine Adenovirus type 2
- Canine Herpesvirus type 1
- Canine Parainfluenza virus
- *Mycoplasma cynos*

Canine neurological panel (CSF only):

- *Toxoplasma gondii*
- *Cryptococcus sp*
- *Angiostrongylus sp*
- *Neospora caninum*
- Canine Distemper virus

Feline neurological panel (CSF only):

- *Toxoplasma gondii*
- *Cryptococcus sp.*
- Feline coronavirus

Equine (adult) GI/diarrhea panel (faeces):

- *Lawsonia intracellularis*
- *Clostridium difficile* toxin A/Toxin B
- *Clostridium perfringens* Toxin A/Toxin B
- *Salmonella sp*
- Equine Coronavirus

Equine (foal) GI/diarrhea panel (faeces):

- *Clostridium difficile* Toxin A/Toxin B
- *Clostridium perfringens* toxin A/CPE toxin/cpb2 toxin/netF toxin
- *Salmonella sp*
- Equine Coronavirus
- Rotavirus
- *Cryptosporidium sp*

The results obtained from multiplex PCR panels must be interpreted in conjunction with the history, clinical signs, signalment, and vaccination history of the patient.



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