



APHA Briefing Note 05/16 Private TB Camelid Blood Testing

Purpose

1. To remind private veterinary practices of the private camelid TB blood antibody test service available from APHA (since October 2014) for the purpose of voluntary herd health surveillance and pre- and post-movement testing. The test is available for South American camelids resident in England, Scotland and Wales that are not under TB restrictions or currently undergoing statutory TB testing.

Background

2. Based on the information from GB and other countries, camelids are considered incidental, spillover hosts of *Mycobacterium bovis*. In most cases these animals become infected through contact with one of the maintenance hosts and vectors of infection in GB (i.e. badgers and cattle), or environment, feed or equipment contaminated by their secretions and excreta. However, there have been instances of contagion within and between camelid herds resulting in serious TB outbreaks, and camelids can behave as amplifiers (vectors) of *M. bovis* infection for other animals with which they come into contact. Natural transmission of the bacterium has been documented between tuberculous alpacas, from alpacas to close human in-contacts and possibly to cattle. Additionally, incidents of TB in other European countries have been conclusively linked to the movement of infected camelids from British herds that escaped detection during pre-export skin testing.
3. Infection of camelids in GB has been shown to be most prevalent in those areas endemic for TB in cattle, with the genotype of the *M. bovis* isolate usually reflecting the predominant local genotype in cattle and badgers.

Test characteristics and price

4. As part of the drive to eradicate TB in camelids, specific legislation was introduced in England in October 2014 (mirroring the legislation already in place in Wales) after consultation with the camelid industry, the British Veterinary Camelid Society and building upon collaborative research work at APHA published in 2012.
5. One of the outcomes of this work was the generation of a high specificity camelid antibody test that may be used for camelids not under TB restrictions, for the purpose of pre- and post-movement or sales/export, voluntary health checking or to exclude bTB from a differential diagnosis in a case of ill-health.
6. The test is a combined serum antibody test, requiring one clotted blood sample to be delivered to the APHA routine testing laboratory at Starcross. The two test components comprise the OIE-registered *M. bovis* IDEXX ELISA (Idexx Laboratories Inc., USA), and the DPPVetTB lateral flow rapid antibody test (Chembio Diagnostic Systems, USA), both adapted for camelid antibody detection by APHA. The combination of these two tests with a *Serial Test* readout (both tests must give a positive result for the animal to be regarded as infected) provides a Specificity of 99.7% and a Sensitivity of 56.5%.
7. Permission to test must be obtained from APHA prior to the commencement of testing (this applies to all types of TB test in camelids whether provided by APHA or elsewhere). The application form (TN184) to request a TB test can be found at:

http://ahvla.defra.gov.uk/external-operations-admin/library/documents/tuberculosis/TN184_1015.pdf

The blood sample Submission Form (TN186) can be found at:
<http://ahvla.defra.gov.uk/vet-gateway/surveillance/forms.htm>

Test price - £18.80/test (5+ samples) or £21.75/test (<5 samples)

For further information

- The Tuberculosis (Deer and Camelid) (England) Order 2014:
http://www.legislation.gov.uk/uksi/2014/2338/pdfs/uksiem_20142338_en.pdf
- The Tuberculosis (Deer and Camelid) Slaughter and Compensation (England) Order 2014:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/386400/tb-deer-compensation.pdf
- The Tuberculosis (Wales) Order 2011:
<http://www.legislation.gov.uk/wsi/2011/692/schedule/paragraph/2/made>
- The Tuberculosis in Specified Animals (Scotland) Order 2015:
http://www.legislation.gov.uk/ssi/2015/327/pdfs/ssi_20150327_en.pdf
- GOV.UK information for farmers on dealing with TB in non-bovine animals:
<https://www.gov.uk/guidance/how-to-deal-with-non-bovine-tb-in-your-animals>
- Rhodes et al., 2012, Evaluation of gamma-interferon and antibody tests in alpacas, Clin. Vaccine Immunol., 19(10).
- APHA testing laboratory: General email: Starcross@apha.gsi.gov.uk
Tel. 01626-891121

Issued: 24 March 2016