

Testing of camelids

0.1 ml of both avian and bovine Tuberculin should be injected intradermally on the right (avian) and left (bovine) sides of the thoracic cage in the axilla. This area generally has no or very little fibre, so the injection sites may not need to be clipped or shaved before the skin thickness is measured and the tuberculin injected. If the animals have no eartags, tattoos or other permanent markings, they can be identified for testing purposes using temporary (e.g. spray) marks.

Equipment

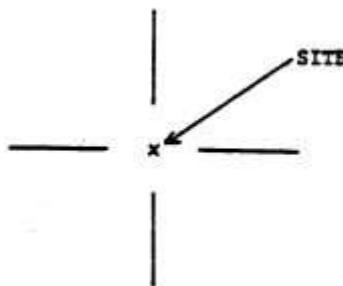
- disposable 1 ml syringes graduated to 0.1cc and fine needles 25/26G needles should be used. The syringes to be used for avian tuberculosis should be marked with red tape;
- ** engineer's (Vernier) callipers or the equivalent (as for deer), which are calibrated to measure accurately to at least 0.5 mm (see comments below) must be used by the testing vet for all officially requested tests and must be strongly recommended to all other vets carrying out private tests;
- marker pens will be required to mark the test sites;
- sharps container for used needles, etc.

** There are numerous vernier callipers available on the market; vernier callipers are intended for use by the engineering industry, with no equivalent vernier calliper available specifically for Veterinary use.

Animal Health has recently completed field assessments on various types of engineering vernier callipers and analysed the results of the previous field trial. A suitable calliper has been identified; 6 inch vernier calliper, with a digital display and calibrated to 0.01mm. For Health and Safety reasons the vernier callipers undergo modification before they are made available to Animal Health.

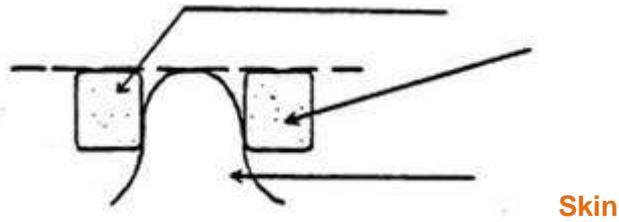
Test Technique

- Syringes and needles must be sterile before use;
- Mark the injection sites with the marker pen as shown in the diagram;



Raise a fold of skin at each site, measure accurately with the callipers and record the measurement to the nearest 0.5mm.

To achieve as uniform a standard of measurement as possible the following measurement technique should be adopted:



The calliper jaws should be aligned with the fold of skin as shown in the diagram above.

Measurements will be influenced by skin tension, by the amount of pressure placed by the callipers and by the amount of skin picked up for measurement. Make every effort to standardise the conditions for both injections and readings.

Use of Vernier Callipers

- The Vernier callipers may measure in 'inches' and 'mm'. The operator must ensure the setting is set to 'mm' throughout the test;
- The Vernier callipers must be set to zero for each animal;
- It is recommended a replacement battery is kept within the case (batteries to be purchased and provided locally);
- The Vernier callipers may be cleansed and disinfected using the protocol provided for battery operated clippers

Injection of tuberculin

- Draw 0.1ml of tuberculin into the appropriate syringe. Insert the 25/26 gauge needle with the bevel edge outwards obliquely into the prepared area.
- Make the injection of 0.1ml of the appropriate tuberculin so that it is lodged intradermally and check that a pea-like nodule is palpable.
- If such a nodule is not present and it is likely that the tuberculin has been injected subcutaneously, a further injection should be made in the same axilla 8-10 cm away (3 to 4 inches).
- Re-measure the fold of skin at each site after 72 hours and record again to the nearest 0.5 mm along with description of the reaction.
- During testing it is important that needles should be changed frequently as they can become blunt very quickly.

Health & Safety Warning

Unlike cattle, camelids can spit a mixture of gastric contents and saliva. This is a potential zoonotic risk. Please take appropriate health and safety precautions

Reading and Interpretation

Tested camelids will be considered potentially infected (reactors) if a positive reaction (i.e. >2mm increase or detectable oedema) is observed at the bovine tuberculin injection site 72 (\pm 4) hours after injection and the increase in skin thickness at the

bovine injection site exceeds that measured at the avian injection site. Any other animals will be considered negative. Test results should be recorded on the standard cattle test charts and submitted promptly to the DVM.

If a camelid fails the skin test, the whole herd will be placed under Article 18 or 17 or 16 restrictions, if not already in force.