



Animal &
Plant Health
Agency

Guidance for veterinary practitioners for the submission of diagnostic samples from domestic pet mammals when TB is suspected.

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APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.

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Background

Current animal health legislation requires veterinarians who suspect tuberculosis (TB) during the post mortem examination of a domestic pet mammal (cats, dogs, ferrets, rabbits, etc.) to notify Animal and Plant Health Agency (APHA) without delay. The identification of the bacterium responsible for bovine TB, *Mycobacterium bovis* (*M. bovis*) by laboratory examination in the tissues, secretions, excretions of a live domestic pet mammal must also be notified. Clinical suspicion of TB in a living pet mammal, is not currently notifiable.

APHA has validated a [polymerase chain reaction \(PCR\) test](#) which can detect *M. bovis* directly from tissue samples collected at post-mortem examination. The test can also be utilised on fresh (unfixed) biopsy samples obtained from live domestic pet mammals. The major advantage of the PCR test is that it typically takes only three weeks to obtain a result as opposed to microbiological culture, which typically takes 6-22 weeks. The assay can also differentiate from *M. bovis* or another species within the mycobacterium complex.

Samples from domestic pet mammals submitted to APHA laboratories for tuberculosis investigation will be subjected to PCR testing in the first instance. Samples identified as positive for *M. bovis* by PCR testing will subsequently undergo bacteriological culture to allow for Whole Genome Sequencing (WGS) clade to be obtained and facilitate epidemiological investigations.

Samples which are PCR negative for *M. bovis* but are PCR positive for *Mycobacterium tuberculosis complex* (MTBC) will undergo additional PCR testing for *Mycobacterium microti*. The assay for the latter is still in the process of a validation and results should be interpreted with caution.

In England, in most cases specimens (i.e. biopsy tissues) from these animals can be submitted privately for PCR testing and/or culture to APHA at full cost recovery, or to another laboratory such as those belonging to universities, NHS Trusts, Public Health Agencies, or private companies.

Mycobacterial testing (PCR and/or TB culture) of samples submitted to APHA is currently available free of charge to the submitting private vet/pet owner if:

- the domestic pet mammal is kept on a farm with susceptible livestock in England and there is a reasonable suspicion of TB infection
- the domestic pet mammal is kept in Scotland or Wales and it is agreed that there is a reasonable suspicion of TB infection.

Or if:

- the pet mammal is kept in England and meets more detailed 'triage' criteria (please contact APHA to discuss).

In Scotland, private vets may submit carcasses of domestic pet mammals suspected of being infected with TB or tissue samples from them to private laboratories (including to Scotland's Rural College (SRUC)) who will undertake post mortem examinations, histopathology and sampling at

the owners'/vets' expense. If the private (primary) laboratory suspects TB, they will continue to submit their samples or isolates to an APHA Laboratory for further testing at government expense.

In Wales, tissue samples from pet mammals, or carcasses will be accepted by APHA Laboratories for further laboratory confirmation of TB, at no cost to the owner, where:

- a. both the clinical history and the results of additional investigation, such as radiography, blood tests, or histopathology carried out by the owner's veterinary surgeon support a likely diagnosis of TB; or
- b. there is other strong supporting evidence, such as close contact with another animal suspected or confirmed with TB, or the animal has been fed on raw pet food, or raw milk linked to a likely potential source.

The Welsh Government will not pay for the collection of the samples, or any private diagnostic investigation outlined above. Cases that do not fit these criteria may be considered on an exceptional basis.

Practitioners should discuss with APHA Field Services prior to submitting samples to APHA Laboratories. An APHA field vet will advise whether the suspect case is eligible for testing free of charge. Contact details can be found at [GOV.UK](https://gov.uk).

If the carcass/samples are eligible for government-funded testing, an APHA field vet will provide you with a Material for Examination Form (TB50) to accompany your submission.

For all sample submissions: Please collect samples of fresh tissue (up to 20g) without adding any transport medium. If the tissue has been frozen, please indicate this on the submission form. The dispatched samples must meet the UN3373 packaging requirements. The tissue samples should be placed in a leak-proof pot which is then double-bagged and subsequently contained in a larger leak-proof pot or bio-jar and finally placed in an outer cardboard box. Submission paperwork should be sealed in a plastic envelope which then placed between the bio-jar and the outer cardboard box or taped on the outside of the latter.

Specific submission requirements for chargeable mycobacterial testing

Please use form BA.704, available on [Vet Gateway](#) for chargeable submissions to APHA.

The form must be fully completed with the name of your nearest local APHA Field Services office, the postcode of the owner and your contact email address. Failure to provide a contact email address will result in a £10.00 fee for a hard copy of each report to be sent via Royal Mail.

The box must be labelled clearly:

APHA Starcross VIC
TB Diagnosis Section
Surveillance and Laboratory Services Department
Staplake Mount
Starcross
Devon
EX6 8PE

If the animal has died or has been euthanased and you wish a post mortem examination (PME) to be carried out for the purpose of TB diagnosis, please contact APHA (see link above for contact details) in the first instance to discuss arrangements for PME. You will be advised on whether the examination is eligible for government-funded testing and on location of the nearest suitable PME site.