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# JOHNE'S DISEASE ANTIBODY ELISA

## Outline

Johne's disease (paratuberculosis) is caused by infection with Mycobacterium paratuberculosis. It causes wasting and diarrhoea in cattle, sheep, deer and goats.

## TEST: Johnes Antibody ELISA

This is a serology test to determine if the animal has an antibody level consistent with infection by M. paratuberculosis. This test will not determine if the animal is shedding the bacteria. Faecal culture is currently the most sensitive test to determine whether bacteria are being shed.

**Sample Type:** Serum (red top tube or EDTA plasma), minimum volume 1ml. This test can only be performed on individual samples. It cannot be pooled. IDEXX's ELISA test is suitable for cattle, sheep and goats. Deer and alpaca/llama samples are referred to another laboratory.

**Turnaround Time:** 2-3 days after the sample is received.

**Results:** The results for the Johne's Ab test are reported as positive, negative and equivocal results. The interpretations are as follows:

### Johne's ELISA Interpretation: Positive Result

Specificity estimates range from 95% to 100%. Therefore, a positive result is reliable evidence of Mycobacterium paratuberculosis infection.

### Johne's ELISA Interpretation: Negative Result

The sensitivity of the Johne's ELISA ranges 85% to 90% for clinically infected bovines. The majority of infected cattle with clinical signs will be ELISA positive.
The sensitivity in small ruminants (sheep and goats) is considered to be much lower, especially as clinical signs are frequently not so obvious.

### Johne's ELISA Interpretation: Equivocal Result

This finding is indicative of low Mycobacterium paratuberculosis antibody level or a non-specific serological cross-reaction. If the clinical suspicion is high consider a repeat ELISA in three to four weeks, or consider having faeces examined for acid fast organisms.