



## Johnne's Disease ELISA

**General condition information:** Johne's is a prevalent disease of the digestive system, spread to calves by oral ingestion of the bacteria (*Mycobacterium Avium Paratuberculosis* - MAP) excreted by infected animals. Manure is the primary source of new infections, but transmission can also take place directly from cow to fetus and via milk produced by infected cows. Calf exposure should be minimized by providing an environment and diet free of fecal contamination.

**Results presentation (Value):** The Johne's test is an antibody ELISA, with individual animal results presented as an S/P ratio and bulk tank results presented as absorbance units (ELISA Score). An S/P ratio is determined by dividing the absorbance units (ELISA Score) of the sample in question by the ELISA Score of a positive control analyzed alongside the test sample(s). Both the S/P ratio and ELISA Score, are directly correlated with the amount of target antibody present in the sample.

### **Results interpretation (Final Result):**

Bulk Tank Milk: In the current test, an ELISA score greater than 0.1 absorbance units is considered a positive result and indicates the animal(s) may be infected with MAP, the causative agent of Johne's disease.

Individual Milk and Serum Samples: In the current test, an S/P ratio score greater than 0.4 units (milk) or 0.7 units (serum) is considered a positive result and indicates the animal(s) may be infected with MAP, the causative agent of Johne's disease. An S/P ratio between 0.3 and 0.4 (milk) or 0.6 and 0.7 (serum) is considered suspect and should be retested at a later date.

\*NOTE: Animals that are within 7 days of freshening have a high probability of giving false positive results when tested with the AntelBio Milk ELISA because of the presence of colostral antibodies.

### **Test performance:**

Bulk Milk: Sensitivity = 52%; Specificity = 98% in herds with an approximate prevalence of greater than 5%  
Milk: Sensitivity = 52%; Specificity = 98%  
Serum: Sensitivity = 68%; Specificity = 99%

### **Links to additional information:**

[Johne's Milk ELISA Technical Review](#)  
[Johne's Testing Options](#)  
[Johne's Program Topics](#)

This diagnostic assay, as with any biological test, may occasionally produce false positive or false negative results. Interpretation of positive and negative results should consider clinical, historical and epidemiological information relevant to the animal(s) under test. Therefore, animal husbandry decisions rest solely on the herd owner, and any consulting veterinarian or animal health advisor. Antel BioSystems, Inc. accepts no responsibility for any loss or damage, howsoever caused, arising from the interpretation of results. Test results pertain only to those animals tested.

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