

Testing Horses for West Nile Virus

Testing Live Horses

IgM Capture ELISA :

This test detects acute infections in animals - usually within 6 days post-infection and will up to 2 months post-infection. Vaccinated animals WILL NOT test positive. After 2 months, infected animals will test negative. IgM ELISA is used for detecting recent natural exposure and is useful in supporting a clinical diagnosis.

IgG Capture ELISA :

This ELISA detects infections in animals from approximately 2 weeks post-infection until 1one year or even longer. Vaccinated animals WILL test positive. IgG ELISA may be useful for evaluating immune status.

NOTE: Virus isolation for WNV on whole blood or CSF is generally unsuccessful, due to the low level of viremia in infected horses.

Testing Dead/ Euthanized horses

PCR testing (polymerase chain reaction)

PCR can detect fairly low numbers of viral particles and can be performed on post mortem tissue specimens. The diagnostic tissues for horses are central nervous system (brainstem, cerebellum and spinal cord). PCR on cerebral spinal fluid is usually unsuccessful. Proper tissue handling precautions should be taken, and includes gloves, masks, eye protection and protective clothing. Remember that rabies should be included in the differential diagnosis.