

ELISA for diagnosis of trypanosomosis.

Title of technology	Recombinant antigen based ELISA for diagnosis of surra in equids.
Preamble	
<p>Surra is one of the most important diseases of equines caused by <i>Trypanosoma evansi</i>, a haemoprotozoan. The parasite is transmitted mechanically by biting tabanids flies. The disease is prevalent in all agro-climatic parts of India. The routine diagnosis of surra either through conventional parasitological methods includes wet blood film test, stained blood smear, haematocrit centrifugation concentration technique. These methods are generally not very sensitive to detect chronic and sub-clinical forms of disease hence whole cell lysate antigen based serological methods (CATT, LATEX, IFAT and ELISA) are used for the detection of latent infection which have limitation of uniformity and use of laboratory animals for preparation of antigen. To address this issue, NRCE developed a recombinant antigen based ELISA for sensitive detection of antibodies in serum of equines against <i>T. evansi</i> infection.</p>	
Salient features	
<ul style="list-style-type: none">• The flagellar recombinant protein was used in ELISA kit• Recombinant antigen coated, blocked and dried plates are available for use and may be stored at 4°C for six months.• The diagnostic sensitivity and specificity of r-ELISA for detecting antibodies against <i>T. evansi</i> was calculated 0.92 (0.82-0.95) and 0.98 (0.96-0.99) in relation to whole cell antigen (WCL) - ELISA.• The test sensitivity and specificity is comparable to OIE recommended ELISA.• Test capacity: one ELISA plate can accommodate 42 test serum samples (in duplicate) alongwith reference positive and negative serum samples (in duplicate).• All the reagents are stable at 4°C for up to 6 months.	
Stakeholders	
<ul style="list-style-type: none">• Biopharmaceuticals• State Govt Veterinary Biologicals Production Units• Small Entrepreneurs• Equine farmers• Indigenous Horse Societies / Army/ Police Departments etc.,	
Economic benefits	
<ul style="list-style-type: none">• More sensitive in detecting antibodies in subclinical, chronic and latent phase of infection. r-ELISA can detect specific antibodies as early as day 14 post-infection.• r-ELISA kit is comparatively cheaper than the other diagnostic assays.	