USE OF LATEX AGGLUTINATION TEST TO DETERMINE RABIES ANTIBODIES IN PRODUCTION OF RABIES ANTISERA IN HORSES

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Abstract. A therapeutic anti-rabies immunoglobulin for human use has been produced mainly in horses. The presently available seroneutralization test, the rapid fluorescent focus inhibition test (RFFIT), is laborious and rather difficult to carry out in horse farms. This study was undertaken to develop a simple latex agglutination test (LAT) for determining rabies antibodies in horse sera. LAT was validated by testing a total of 468 horse serum samples characterized by RFFIT. Of these, 253 of 260 samples with antibody titers of less than 100 IU/ml had agglutination score of 1+, whereas 174 of 208 samples with antibody titers equal to or greater than 100 IU/ml had agglutination scores of 2-4+. Results of LAT correlated with those of RFFIT ($r = 0.87$, $p < 0.0001$). LAT has the advantages of being rapid, simple to perform, easy to interpret, and applicable as an on-site testing tool for the estimation of rabies antibodies in horses.

Key words: rabies antibodies, LAT, RFFIT, horse sera

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