SLIDE REVERSED PASSIVE LATEX AGGLUTINATION TEST A SIMPLE, RAPID AND PRACTICAL METHOD FOR EQUINE SERUM AMYLOID A (SAA) PROTEIN DETERMINATION

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A semi quantitative latex agglutination test for equine SAA levels was established by mixing serum with a 1% latex suspension containing 0.2 μm particles coated with affinity-purified antibodies at 250 ng/cm^2 latex. The agglutination was performed on a glass slide at room temperature after a 60-minute incubation. The assay employed an SAA-enriched high density lipoprotein as the primary standard. This test was reliable and reproducible. The results correlated with those of the sandwich enzyme-linked immunosorbent assay ($r=0.953$).

Serum amyloid A (SAA) has been clinically evaluated as one of the sensitive acute-phase reactants in horse serum. The equine SAA score was measured with this assay. In mares during the perinatal period, after delivery, it increased quickly and reached a peak value on day 3 postpartum, and then began to decrease at 2 weeks postpartum, returning to within the normal range by 3 months postpartum. In a horse with experimentally induced inflammation, the SAA score increased quickly and reached a peak value at 6 to 24 hours after the treatment. It then returned to the normal range within 3 to 4 weeks in association with the disappearance of local inflammatory signs. The SAA score was high in most horses with clinical signs of inflammation.

It was concluded from these data that the latex agglutination test is a simple, rapid and practical assay for clinical laboratories to measure SAA in horse serum.