

Evaluation of three *Brucella* soluble antigens used in an indirect Elisa to discriminate S19 vaccinated from naturally infected cattle

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An O-polysaccharide (O-chain) and a hot-water extracted polysaccharide (PS), both obtained from *Brucella abortus* 1119-3, and a *B. melitensis* 16M native hapten (NH) were evaluated by indirect enzyme linked immunosorbent assay (ELISA) on three groups of cattle sera. The sera tested were: (a) 75 sera from cows naturally infected with *B. abortus*; (b) 130 sera from non-infected and non-vaccinated cattle; and © 61 sera from non-infected heifers recently vaccinated with *B. abortus* Strain 19 (S19). Sensitivity (Se), specificity (Sp) and the capability to discriminate vaccinated cattle (ADV) were determined. Using PS antigen, Se was 100% and the Sp was 97.7%, while the highest Sp was obtained by using the O-chain (99.2%). For the NH antigen, Se was 94.7% and the Sp was 90.0%. The ADV of the three antigens was approximately 85%. Statistical analysis showed significant differences between O-chain/PS and O-chain/NH antigens. The agreement among antigens determined by kappa coefficient was 0.899 for