

# COMPARATIVE PERFORMANCE STUDY OF FOUR DIFFERENT SEROLOGICAL TESTS FOR THE DIAGNOSIS OF DROMEDARY BRUCELLOSIS

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## ABSTRACT

This study was aimed at evaluating reliable serological tests for diagnosing brucella infection in dromedaries. All four types of serological tests used in this study were based on detection of brucella antibodies, not Brucella antigen. Three different serological tests were compared with the routine OIE recommended Rose Bengal Test (RBT) performed at the Central Veterinary Research Laboratory (CVRL), Dubai. Our comparative results showed no significant differences on 353 dromedary sera between complement fixation test (CFT-Animal and Plant Health Agency) and MSA™ Camel Brucella Rapid Ab test. The CFT-APHA sensitivity was determined to be 98.98% and MSA™ Rapid Camel Brucella Ab test was 97.96%. FPA performed the worst among the three with sensitivity at 84.69%. MSA™ Camel Brucella Rapid Ab test rank the highest in specificity at 99.92%, followed by CFT at 98.43%. FPA again performed inferior in specificity compared to the other two tests. In conclusion, CFT and MSA™ Camel Brucella Rapid Ab tests are reliable tests comparable to RBT test used in this study. Since CFT test cannot be performed in the field, hence the new MSA™ Camel Brucella Rapid Ab test is also suitable for field testing with its high sensitivity and specificity, which is comparable to Rose Bengal Test (RBT) for the diagnosis of dromedary Brucellosis.

**Keywords:** Camel brucellosis, CFT, FPA, rapid test, RBT, serology