

EVALUATION PROTOCOL FOR DNA EXTRACTION OF *Brucella* spp. IN BOVINE SEMEN

(*AValiação de protocolo de extração de DNA de Brucella spp. em SÊMEN BOVINO*)

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Brucellosis is an infectious disease of zoonotic character and great importance in animal production, as well as a public health matter. It is caused by bacteria of the genus *Brucella*, which cause unilateral or bilateral epididymitis and orchitis in bulls and can lead to sub-fertility and sterility. Asymptomatic bulls become important disseminators of the disease in herds. Therefore, this study evaluates the extraction protocol of DNA of *Brucella* spp. from bovine semen *in natura*. The semen samples of 33 bulls used for natural mating underwent PCR diagnostic tests (Lise Enzyme protocol by Proteinase and Phenol:Chloroform-PK), Buffered Acidified Antigen (AAT) and Semen plasma agglutination (SPA). The PK protocol was effective in the extraction of *Brucella* spp. Of the 33 bulls tested, eight were positive to PCR (24.24%), six (18.18%) to the SPA reagent, and from the 23 animals with blood serum sample, one (4%) was positive for AAT. Only one animal was positive in SPA and AAT, and not reactive in PCR. On the other hand, seven animals had semen reactive in PCR, and negative tests for SPA and AAT. Therefore, the results indicate the need for association of direct laboratory tests, such as PCR, with indirect tests AAT and SPA, for a more accurate diagnosis of brucellosis, when using samples of bovine semen.

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