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EFFECT OF FICIN ENZYME ON SEMEN VISCOSITY IN DROMEDARY CAMEL

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ABSTRACT

The viscous nature of camel semen limits its processing, evaluation and preservation. Present study investigated the effect of *Ficin* enzyme on camel semen viscosity. Semen was collected using phantom and diluted with Shotor diluent. Following initial mechanical stirring (150 rpm for 5 min), semen sample was assigned into 2 groups (*Ficin* and Control), with three equal fractions for each group. *Ficin* was added at the concentration of 0.05 mg/ml after 5 minutes initial stirring (Time 0). All samples were stirred for another 10, 20 and 30 min. At each time point, semen viability was assessed and the rest of the fraction was centrifuged at 600g for 7 min at 25°C. Semen viscosity was eliminated in all enzyme treated fractions. In all control tubes, pellet could not be separated from supernatant after 10 and 20 min; whereas, after 30 min, pellets were separated from supernatant in 50% of the samples. Treated samples displaced better total motility 20 and 30 min after adding *Ficin* ($P<0.05$). Progressive motility was also higher in treated group compared to control 20 min after adding *Ficin* ($P<0.05$). No detrimental effects on semen viability parameters were noticed following the addition of enzyme. In conclusion, *Ficin* could reduce semen viscosity without compromising sperm viability parameters in dromedary camel.

Keywords: Camel semen, enzyme, *ficin* , protease, semen viscosity