

Penentuan Waktu Ekuilibrasi pada Pembekuan Semen Kuda Menggunakan Bahan Pengencer Susu Skim

(Determination of Equilibration Time of Stallion' Semen Freezing with Extender Skim Milk)

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ABSTRACT: The objectives of this experiment were to determine the best equilibration time with extender skim milk in order to maintain the quality of frozen stallion semen. The semen was collected from three 5-8 years old stallions using artificial vagina. The semen characteristics and quality were evaluated macro- and microscopically and extended with skim milk extender (1:1). The semen was centrifuged at 3000 rpm for 15 minutes. Supernatant was removed and the pellet was re-extended with skim milk extender with 5% glycerol. The extended semen then packed in mini straw (0.5 mL), equilibrated at 5°C for 1 hr (E₀, 2 hrs (E₂) and 3 hrs (E₃), frozen in the liquid nitrogen (N₂) vapor for 15 minutes and then stored in liquid N₂ container for 24 hrs. The straw than thawed at 37°C for 30 seconds. The percentages of sperm motility and viability were observed. The result of this research showed that there were no significant differences between equilibration at 1, 2 and 3 hrs on the percentages of sperm motility with the average of post thawed motility was $23.60 \pm 7.10\%$. The equilibration time affected the sperm viability ($P < 0.05$) in all stallions, with the percentages of viable sperm between 38.10 % and 46.50%.

Key Words: Equilibration, frozen semen, stallion