

## **MOTILITAS SPERMATOZOA KAMBING PERANAKAN ETAWAH YANG DICUCI DENGAN LARUTAN *KREBS- RINGER PHOSPHATE GLUCOSE* DALAM DUA MACAM PENGENCER YANG BERBEDA**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui motilitas *spermatozoa* kambing Peranakan Etawah (PE) yang dicuci dengan larutan *Krebs-ringer phosphate glucose* dalam dua macam pengencer yang berbeda. Semen ditampung dari empat ekor kambing PE dengan menggunakan metode vagina buatan seminggu satu kali pada pagi hari selama dua setengah bulan. Semen diuji kualitasnya meliputi volume, wama, bau, pH, konsistensi, konsentrasi, motilitas, persentase *spermatozoa* hidup dan abnormalitasnya. Volume semen yang diperoleh dibagi menjadi dua, bagian pertama tanpa diiakukan pencucian dan bagian kedua dilakukan pencucian. Bagian pertama, dilakukan pengenceran dengan menggunakan sitrat-kuning telur glukosa dan susu skim glukosa Bagian kedua, dilakukan pencucian dua kali. Kemudian ditambahkan bahan pengencer seperti pada bagian pertama Penyimpanan semen pada suhu 5<sup>0</sup>C. Pengamatan motilitas dilakukan setelah 24 jam, 48 jam dan 72 jam. Data kualitas semen dianalisis dengan mean dan standard deviasi, sedangkan perbedaan kualitas semen segar dengan semen yang dicuci (motilitas *spermatozoa*, konsentrasi, dan persentase *spermatozoa* yang hidup) dianalisis dengan menggunakan uji t-test. Motilitas *spermatozoa* dianalisis dengan menggunakan analisis variansi split plot pola faktorial 2x2x3. Hasil penelitian menunjukkan bahwa pencucian memberikan pengaruh yang nyata, sedangkan bahan pengencer tidak berpengaruh nyata, namun terdapat interaksi ( $P < 0,01$ ) antara pencucian dengan bahan pengencer. Efek lama penyimpanan menunjukkan pengaruh yang sangat nyata, lalu dilanjutkan dengan uji Tukey. Hasil analisis variansi menunjukkan bahwa terdapat interaksi antara pencucian dengan lama penyimpanan dan antara pencucian, bahan pengencer, dan lama penyimpanan, namun tidak terdapat interaksi antara bahan pengencer dengan lama penyimpanan.

Kata Kunci : Motilitas, *Spermatozoa*, Kambing Peranakan Etawah, Pencuci *Krebs-ringer-phosphate-glucose*, Pengencer

## **THE MOTILITY OF ETAWAH CROSSBRED GOATS SPERM WASHED IN A KREBS-RINGER PHOSPHATE GLUCOSE SOLUTION AND DILUTED IN TWO DIFFERENT EXTENDERS**

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### **ABSTRACT**

The research was conducted to investigate the motility of Etawah crossbred goats spermatozoa washed in a Krebs-Ringer phosphate glucose solution and diluted in two different extenders. Semen was collected weekly for two and a half months from four Etawah crossbred goats using artificial vagina method. Semen was evaluated for its quality such as volume, colour, smell, consistence, pH, motility, concentration, percentage of life sperm, and abnormality. Collected semen was divided into two parts, first part of volume was not washed and it was diluted with egg yolk-citrate glucose and skim milk glucose, and the second part of volume was washed twice, and further added with egg yolk-citrate glucose and skim milk glucose. Diluted semen was stored in refrigerator ( $5^{\circ}\text{C}$ ) with different periods of preservation. Data of semen quality were analyzed by means and standard deviation, and the different quality of fresh semen and washing semen (motility, concentration, and percentage of life sperm) were analyzed by t-test. The motility of sperm were analyzed using factorial  $2 \times 2 \times 3$  split plot design. The result showed that washing semen had significant effect but were not significant for diluent, interaction between washing and diluent. However there were different ( $P < 0.01$ ), for the periods of preservation. The analysis of variance showed that there were interaction between washing and the periods of preservation and between washing, the diluent, and the periods of preservation, but there were no significant difference for the interaction between the diluent and the periods of preservation.

**Key Word : Motility, Sperm, Etawah Crossbred Goats, a Krebs-ringer phosphate  
glucose solution, Diluent**