

## **PENGARUH PENAMBAHAN EKSTRAK DAUN SUNGKAI (*Peronema canescens*) PADA BAHAN PENGECER SITRAT KUNING TELUR DAN WAKTU PENYIMPANAN TERHADAP KUALITAS SEMEN CAIR KAMBING SAANEN**

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### **INTISARI**

Penelitian ini mengkaji pengaruh penambahan ekstrak daun sungkai (*Peronema canescens*) pada pengencer sitrat telur terhadap kualitas semen kambing Saanen setelah penyimpanan 5°C. Penelitian dilaksanakan di Fakultas Peternakan UGM menggunakan semen kambing Saanen umur 2,5 tahun yang dikoleksi dengan vagina buatan setiap satu kali dalam seminggu. Bahan pengencer yang digunakan yaitu sitrat kuning telur dengan penambahan ekstrak daun sungkai. Semen cair dibagi dalam tiga kelompok perlakuan, yaitu tanpa penambahan ekstrak (P0), penambahan ekstrak 10% (P1) dan penambahan ekstrak 15% (P2). Selanjutnya, semen disimpan pada suhu 5°C selama 24 dan 48 jam. Variabel yang diamati meliputi motilitas (%), viabilitas (%), abnormalitas (%), dan membran plasma utuh (MPU) (%). Data dianalisis menggunakan ANNOVA pola faktorial 3x2 dan dilanjutkan uji DMRT. Hasil penelitian menunjukkan penambahan ekstrak daun sungkai berpengaruh nyata terhadap motilitas, viabilitas, abnormalitas, dan MPU spermatozoa ( $P < 0,05$ ). Motilitas dan viabilitas, untuk masing-masing perlakuan P0, P1 dan P2 yaitu  $62,00 \pm 4,22\%$ ,  $73,00 \pm 6,75\%$  dan  $80,00 \pm 6,67\%$ ;  $69,22 \pm 4,23\%$ ,  $74,28 \pm 5,60\%$  dan  $82,20 \pm 4,67\%$ . Abnormalitas dan MPU untuk masing-masing perlakuan adalah sebesar  $9,90 \pm 1,64\%$ ,  $9,57 \pm 1,96\%$  dan  $8,01 \pm 1,60$ ;  $77,72 \pm 5,93\%$ ,  $83,15 \pm 3,17\%$  dan  $89,65 \pm 3,80\%$ . Lama penyimpanan berpengaruh nyata terhadap motilitas, viabilitas, abnormalitas dan MPU ( $P < 0,05$ ). Nilai motilitas, viabilitas, abnormalitas, dan MPU untuk penyimpanan pada 5°C selama 24 dan 48 jam adalah  $71,66 \pm 4,23\%$ ;  $74,52 \pm 6,41\%$ ; dan  $83,50 \pm 6,06\%$ . Disimpulkan bahwa penambahan ekstrak daun sungkai dalam pengencer sitrat kuning telur dan lama penyimpanan berpengaruh terhadap motilitas, viabilitas, abnormalitas, dan MPU. Hasil terbaik diperoleh pada penambahan ekstrak daun sungkai 15% dan penyimpanan 48 jam.

Kata kunci: Abnormalitas, Ekstrak Daun Sungkai, Kambing Saanen, Membran Plasma Utuh, Motilitas, Sitrat Kuning Telur, Viabilitas

## THE EFFECT OF ADDITION OF SUNGKAI LEAF EXTRACT (*Peronema canescens*) AND STORAGE TIME ON THE QUALITY OF SAANEN GOAT LIQUID SEMEN WITH EGG YOLK CITRATE DILUTER

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### ABSTRACT

This research examines the effect of adding sungkai leaf extract (*Peronema canescens*) to egg citrate diluent on the quality of Saanen goat semen after storage at 5°C. The research was carried out at the UGM Faculty of Animal Science using the semen of 2.5 year old Saanen goats which were collected using an artificial vagina once a week. The diluent used is egg yolk citrate with the addition of sungkai leaf extract. Liquid semen was divided into three treatment groups, without adding extract (P0), adding 10% extract (P1) and adding 15% extract (P2). Next, the semen is stored at 5°C for 24 and 48 hours. Variables observed included motility (%), viability (%), abnormality (%), and intact plasma membrane (MPU) (%). Data were analyzed using ANNOVA with a 3x2 factorial pattern and continued with the DMRT test. The results showed that the addition of sungkai leaf extract had a significant effect on spermatozoa motility, viability, abnormality and MPU ( $P < 0.05$ ). Motility and viability, for each treatment P0, P1 and P2, were  $62.00 \pm 4.22\%$ ,  $73.00 \pm 6.75\%$  and  $80.00 \pm 6.67\%$ ;  $69.22 \pm 4.23\%$ ,  $74.28 \pm 5.60\%$  and  $82.20 \pm 4.67\%$ . Abnormality and MPU for each treatment were  $9.90 \pm 1.64\%$ ,  $9.57 \pm 1.96\%$  and  $8.01 \pm 1.60$ ;  $77.72 \pm 5.93\%$ ,  $83.15 \pm 3.17\%$  and  $89.65 \pm 3.80\%$ . Storage time had a significant effect on motility, viability, abnormality and MPU ( $P < 0.05$ ). The motility, viability, abnormality and MPU values for storage at 5°C for 24 and 48 hours were  $71.66 \pm 4.23\%$ ;  $74.52 \pm 6.41\%$ ; and  $83.50 \pm 6.06\%$ . It was concluded that the addition of sungkai leaf extract in egg yolk citrate diluent and storage time affected motility, viability, abnormalities and MPU. The best results were obtained with the addition of 15% sungkai leaf extract and storage for 48 hours.

Keywords: Abnormalities, Sungkai Leaf Extract, Saanen Goat, Intact Plasma Membrane, Motility, Egg Yolk Citrate, Viability