

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

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INTISARI

Penelitian dilakukan untuk mengetahui pengaruh penambahan ekstrak daun sungkai (*Peronema canescens*) pada bahan pengencer tris kuning telur dan lama penyimpanan terhadap kualitas semen cair kambing Saanen. Penelitian dilakukan di Laboratorium Fisiologi dan Reproduksi Fakultas Peternakan UGM. Semen dikoleksi dari kambing Saanen berumur 2,5 tahun. Semen ditampung satu kali dalam seminggu menggunakan vagina buatan. Semen diencerkan menggunakan tris kuning telur dan dikelompokkan ke dalam 3 perlakuan, yaitu kelompok kontrol (P0) tanpa penambahan ekstrak daun sungkai, kelompok perlakuan 1 (P1) penambahan 10% ekstrak daun sungkai, dan kelompok perlakuan 2 (P2) penambahan 15% ekstrak daun sungkai, selanjutnya disimpan pada suhu 5°C selama 48 jam. Daun sungkai di ekstraksi menggunakan metode maserasi dan dilakukan uji 2,2-difenil-1-pikrilhidrazil (DPPH) untuk mengetahui aktivitas antioksidan. Variabel yang diamati meliputi motilitas (%), viabilitas (%), abnormalitas (%), dan membran plasma utuh (MPU) (%). Data diolah dengan analisis varian pola faktorial 3x2, dilanjutkan dengan uji *Duncan multiple range test* (DMRT). Hasil penelitian menunjukkan bahwa penambahan ekstrak daun sungkai dan lama penyimpanan berpengaruh nyata terhadap motilitas, viabilitas, membran plasma utuh ($P < 0,05$), namun tidak berpengaruh nyata terhadap abnormalitas ($P > 0,05$). Penambahan ekstrak daun sungkai sebesar 0%, 10%, dan 15% pada tris kuning telur dengan penyimpanan 24 dan 48 jam menghasilkan motilitas (%) sebesar $66,00 \pm 8,94$; $76,00 \pm 5,48$; $86,00 \pm 5,48$ dan $64,00 \pm 5,48$; $76,00 \pm 5,48$; $84,00 \pm 5,48$, viabilitas (%) sebesar $76,40 \pm 3,68$; $82,53 \pm 4,32$; $86,60 \pm 3,68$ dan $70,50 \pm 4,90$; $76,86 \pm 5,48$; $84,90 \pm 4,55$, abnormalitas sebesar (%) $12,03 \pm 4,71$; $10,77 \pm 3,12$; $7,30 \pm 3,07$ dan $14,00 \pm 5,67$; $13,86 \pm 6,42$; $10,30 \pm 6,62$, dan MPU (%) sebesar $82,16 \pm 4,56$; $85,43 \pm 4,46$; $89,53 \pm 4,62$ dan $78,10 \pm 3,51$; $82,30 \pm 1,50$; $87,94 \pm 2,79$. Dapat disimpulkan bahwa penambahan ekstrak daun sungkai dan lama penyimpanan berpengaruh terhadap motilitas, viabilitas, membran plasma utuh, namun tidak berpengaruh terhadap abnormalitas. Hasil terbaik diperoleh pada penambahan ekstrak daun sungkai 15% dan penyimpanan 24 jam.

Kata kunci: Ekstrak daun sungkai, Kambing Saanen, Lama penyimpanan, Kualitas semen cair, Tris kuning telur

THE EFFECT OF SUNGKAI LEAF EXTRACT (*Peronema canescens*) ADDITION INTO EGG YOLK TRIS DILUENT AND STORAGE DURATION ON THE QUALITY OF SAANEN GOAT LIQUID SEMEN

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ABSTRACT

The aim of the research was to determine the effect of sungkai leaf extract (*Peronema canescens*) addition into the egg yolk tris diluent and storage duration on the quality of Saanen goat liquid semen. The research was conducted at the Physiology and Reproduction Laboratory, Faculty of Animal Science, UGM. Semen was collected from 2.5 year old Saanen goats. Semen is collected once a week using an artificial vagina. Semen was diluted using Tris egg yolk and grouped into 3 treatments, namely control group (P0) without adding sungkai leaf extract, treatment group 1 (P1) adding 10% sungkai leaf extract, and treatment group 2 (P2) adding 15% leaf extract. sungkai, then stored at 5°C for 48 hours. Sungkai leaves were extracted using the maceration method and a 2,2-diphenyl-1-picrylhydrazyl (DPPH) test was carried out to determine antioxidant activity. Variables observed included motility (%), viability (%), abnormalities (%), and intact plasma membrane (MPU) (%). The data was processed using 3x2 factorial pattern analysis of variance, followed by the Duncan multiple range test (DMRT). The results showed that the addition of sungkai leaf extract and storage time had a significant effect on motility, viability, and intact plasma membranes ($P < 0.05$), but had no significant effect on abnormalities ($P > 0.05$). The addition of 0%, 10% and 15% sungkai leaf extract to Tris egg yolk with 24 and 48 hour storage resulted in motility (%) of 64.00 ± 5.48 ; 76.00 ± 5.48 ; 86.00 ± 5.48 and 66.00 ± 8.94 ; 76.00 ± 5.48 ; 84.00 ± 5.48 , viability (%) was 76.40 ± 3.68 ; 82.53 ± 4.32 ; 86.60 ± 3.68 and 70.50 ± 4.90 ; 76.86 ± 5.48 ; 81.90 ± 4.55 , abnormality was (%) 12.03 ± 4.71 ; 10.77 ± 3.12 ; 7.30 ± 3.07 and 14.00 ± 5.67 ; 13.86 ± 6.42 ; 10.30 ± 6.62 , and MPU (%) was 82.16 ± 4.56 ; 85.43 ± 4.46 ; 89.53 ± 4.62 and 78.10 ± 3.51 ; 82.30 ± 1.50 ; 87.94 ± 2.79 . It can be concluded that the addition of sungkai leaf extract and storage time had effects on motility, viability, intact plasma membranes, but it had no effect on abnormalities. The best results were obtained when adding 15% sungkai leaf extract and storing it for 24 hours.

Key Words: Sungkai leaf extract, Saanen goat, Storage duration, Quality of liquid semen, Tris egg yolk