

**PENGARUH KULIT RAMBUTAN (*Nephelium lappaceum*) SEBAGAI SUMBER SAPONIN TERHADAP FERMENTASI DALAM RUMEN SECARA IN VITRO**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan kulit rambutan (*Nephelium lappaceum*) sebagai sumber saponin terhadap fermentasi dalam rumen secara *in vitro*. Delapan belas syringe 100 ml diisi dengan 300 mg substrat hijauan dan bekatul dengan perbandingan 60:40 serta 30 ml medium produksi gas *in vitro*. Syringe dibagi menjadi empat perlakuan dengan level saponin sebesar 0% (P1), 0.2% (P2), 0.4% (P3), dan 0.6% (P4) per ml medium kemudian diinkubasi 39° C selama 72 jam. Data yang diamati adalah jumlah protozoa, pH, konsentrasi NH<sub>3</sub>, dan protein mikrobial. Data yang diperoleh dianalisis variansi pola searah. Perbedaan karena perlakuan diuji dengan *Duncan's New Multiple Range Test*. Hasil penelitian menunjukkan bahwa jumlah protozoa menurun ( $P < 0,01$ ), sebesar 17,50%, 63,28%, 72,02% dengan pemberian level saponin berturut-turut 0.2%, 0.4%, 0.6% dibanding kontrol. Penambahan saponin tidak berpengaruh terhadap nilai pH, protein mikrobial, dan NH<sub>3</sub>. Dapat diambil kesimpulan bahwa penambahan saponin level 0,2% sudah mampu menurunkan jumlah protozoa dalam rumen dan tidak mengganggu fermentasi di dalam rumen.

(Kata kunci : Saponin, Kulit rambutan, Protozoa, pH, Protein mikrobial, dan Amonia)

## **THE EFFECT OF RAMBUTAN PEEL (*Nephelium lappaceum*) AS SOURCE OF SAPONIN ON IN VITRO RUMEN FERMENTATION**

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### **ABSTRACT**

This experiment was conducted to determine the effect of rambutan peel (*Nephelium lappaceum*) as source of saponin on in vitro rumen fermentation. Eighteen syringes were filled with 30 mg mixture of forage and concentrate (60:40) and 30 ml medium of gas production technique. Syringe as fermentor were divided into four group of treatments with saponin level of 0 % (P1), 0.2 % (P2), 0.4% (P3), and 0.6 % (P4) of medium and then were incubated at 39°C for 72 hours. Variable using analysis of were protozoa number, pH, ammonia concentration, and microbial protein. Data were analyzed using analysis of variance of one way design. The differences between mean values were analyzed by Duncan New Multiple Range test (DMRT). The result showed that protozoa number decreased ( $P < 0,01$ ), as much as 17.50%, 63.28%, 72.02% at saponin level of 0.2 %, 0.4 %, 0.6 %, respectively compared to control. Additional rambutan peel as source of saponin had no effect on pH value, microbial protein, and ammonia. It could be concluded that addition of saponin from rambutan peel 0.2 % of medium decreased the protozoa number in rumen and did not influence on rumen fermentation.

(Key words : Saponin, *Nephelium lappaceum* peel, Protozoa. pH, Microbial protein, and Ammonia)