

**PENGARUH PENAMBAHAN MINYAK KULIT BIJI METE  
(*Anacardium occidentale*) SEBAGAI SUMBER FENOL  
TERHADAP SINTESIS PROTEIN MIKROBIA RUMEN  
BERDASAR EKSRESI DERIVAT PURIN  
DALAM URIN KAMBING BLIGON**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh kadar minyak kulit biji mete terhadap metabolit purin dan filtrasi ginjal pada kambing Bligon. Penelitian ini menggunakan 12 ekor kambing Bligon jantan dengan berat  $\pm 18$  kg. Kambing dibagi menjadi 3 kelompok sesuai dengan level minyak kulit biji mete diberikan yaitu level 0 mg/kg BK, 100 mg/kg BK, 200 mg/kg BK. Pakan basal yang diberikan terdiri dari hijauan (rumput raja dan rendeng, 30:35) dan konsentrat (*pollard* dan bungkil kedelai, 25:10). Penelitian ini terdiri dari periode adaptasi selama 21 hari dan periode koleksi 7 hari. Selama periode koleksi dilakukan pengambilan sampel urin 24 jam, sedangkan sampel darah diambil pada akhir masa koleksi. Pengujian sampel urin dan darah di Laboratorium meliputi penentuan kadar kreatinin, allantoin, xanthin/hipoxanthin, dan asam urat. Dari data tersebut dapat diperhitungkan laju filtrasi ginjal, tubulus load, dan reabsorpsi derivat purin. Data yang didapat dianalisis dengan analisis variansi menggunakan acak lengkap pola searah. Untuk membedakan nilai rerata antar perlakuan di uji menggunakan *Duncan new Multiple Range Test* (DnMRT). Berdasarkan hasil penelitian dapat diketahui penambahan minyak kulit biji mete dengan jumlah penambahan 0 mg/kg BK, 100 mg/kg BK, 200 mg/kg BK tidak berpengaruh nyata terhadap total kadar derivat purin plasma, total ekskresi derivat purin, dan laju filtrasi ginjal. Total kadar derivat purin plasma yang diperoleh berkisar 206 sampai 240 mmol/l, untuk total ekskresi derivat purin hasil yang diperoleh berkisar 1,339 sampai 2,056 mmol/hari, laju filtrasi ginjal yang diperoleh berkisar 88,99 sampai 119,51 l/hari, nilai sintesis protein mikrobia diperoleh hasil berkisar 1,14 sampai 1,67 g N/hari, dan hasil efisiensi pasokan mikrobia nitrogen berkisar 4,45 sampai 5,67 g N/kg DOMR. Dari data yang diperoleh dapat disimpulkan bahwa pemberian minyak kulit biji mete hingga pemberian 200 mg/kg BK tidak mempengaruhi sintesis protein mikrobia.

**Kata kunci:** Minyak kulit biji mete, Derivat purin, Sintesis protein mikrobia.

**THE EFFECT OF ADDITION OF CASHEW NUT SHELL OIL  
(*Anacardium occidentale*) AS A SOURCE OF PHENOL  
ON SYNTHESIS OF RUMEN MICROBIA PROTEIN  
BASED ON DERIVATE PURIN EXCRETION  
IN URIN GOAT BLIGON**

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**ABSTRACT**

This study was conducted to evaluate the effect of cashew nut shell oil on purine metabolism and kidney filtration of bligon goats. A total 12 male Bligon goats with 18 kg body weight was used in this study. The goats were divided into three groups based on difference levels of cashew nut shell oil levels 0 mg/kg BK, 100 mg/kg BK, 200 mg/kg BK. The main feed were forages (king grass and peanut straw, 30:35) and concentrate (white brand and soybean meal). This study was consisted of adaptation period (21 days) and collecting period (7 days). Urine were collected every 24 hours and blood collected at the end of collecting period. Urine and blood were analysed creatinine, allantoin, xanthine/hypoxanthine, and uric acid levels. The rate of kidney filtration, tubulus load, and purine derivate reabsorption were calculated from those data. The data was analysed variant one way design and difference between means were analysed by *Duncan new Multiple Range Test* (DnMRT). Total levels of plasma purine derivate, purine derivate excretion, and kidney filtration were not affected addition cashew nut shell oil in any difference levels. Levels of plasma purine derivate ranged from 206 to 240 mmol per l, for purine derivate excretion levels ranged from 1,399 to 2,056 mmol per days, and kidney filtration levels ranged from 88,99 to 119,51 l per days. The protein synthesis value of microbes was 1,14 to 1,67 g N per day and microbes nitrogen efficiency value was 4,45 to 5,67 g N per kg DOMR. In conclusion, the addition of cashew nut shell oil until levels 200 mg/kg BK were not affected microbial protein synthesis.

**Keyword** : Cashew nut shell oil, Purine derivate, microbial protein synthesis.