

**PENGARUH MINYAK KULIT BIJI METE (*Anacardium occidentale*)
SEBAGAI SUMBER FENOL TERHADAP SINTESIS PROTEIN
MIKROBA RUMEN BERDASARKAN EKSKRESI DERIVAT PURIN
URIN SPOT SAMPLING PADA KAMBING BLIGON**

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INTISARI

Penelitian yang dilaksanakan memiliki tujuan untuk mengetahui pengaruh kadar minyak kulit biji mete terhadap sintesis protein mikroba dengan metode derivat purin teknik *spot sampling* pada kambing Bligon. Penelitian menggunakan 12 ekor kambing Bligon jantan. Kambing dibagi menjadi 3 kelompok perlakuan level minyak kulit biji mete yang diberikan yaitu 0 mg/kg BK, 100 mg/kg BK, 200 mg/kg BK. Pakan basal yang diberikan terdiri dari hijauan (rumput raja 30:35 rendeng) dan konsentrat (*pollard* 25:10 bungkil kedelai). Penelitian terdiri dari periode adaptasi selama 21 hari dan periode koleksi selama 3 hari. Selama periode koleksi dilakukan pengambilan sampel urin spot sampling pada pukul 11.00-14.00. Pengujian sampel urin di Laboratorium Biokimia Nutrisi Fakultas Peternakan Universitas Gadjah Mada meliputi penentuan kadar kreatinin, dan derivat purin yang terdiri dari allantoin, xanthin-hipoxanthin, dan asam urat yang dilakukan secara spektrofotometrik. Data yang didapat digunakan untuk melakukan estimasi protein mikroba rumen dari derivat purin dalam urin *spot sampling*. Data kemudian dianalisis dengan analisis variansi berdasarkan rancangan acak lengkap pola searah. Untuk mengetahui perbedaan nilai rerata antar perlakuan di uji menggunakan *Duncan Multiple Range Test*. Hasil penelitian menunjukkan tidak terdapat perbedaan nyata pada Ekskresi derivat purin, estimasi sintesis protein mikroba dan efisiensi sintesis protein mikroba dengan penambahan minyak kulit biji mete sebesar 0 mg/kg BK, 100 mg/kg BK, 200 mg/kg BK. Ekskresi derivat purin yang didapatkan hasil berkisar 0,94 sampai 1,24 mmol/hari. Estimasi sintesis protein mikroba yang didapatkan berkisar 0,69 sampai 0,95 gram/ N hari. Nilai efisiensi sintesis protein mikroba mendapat hasil berkisar 2,69 sampai 3,28 gram/kg DOMR. Berdasarkan penelitian dengan penambahan minyak kulit biji mete hingga 200mg/Kg BK dengan metode koleksi urin *spot sampling* tidak mempengaruhi sintesis protein mikroba.

Kata kunci : Derivat purin, Kambing Bligon, Minyak kulit biji mete, *spot sampling*.

**THE EFFECT OF CASHEW NUT SHELL LIQUID (*Anacardium
occidentale*) AS A SOURCE OF PHENOL ON RUMEN MICROBIAL
PROTEIN SYNTHESIS BASED OF THE EXCRETION OF DERIVATES
PURINE URINE SPOT SAMPLING IN BLIGON GOATS**

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ABSTRACT

The research is conducted to find out the effect of cashew nut shell liquid (CSNL) amount on microbial protein synthesis with purine derivative method spot sampling technique in Bligon goats. The study used 12 male Bligon goats. Goats are divided into 3 groups of treatment of CSNL amount given, that is 0 mg / kg DM, 100 mg / kg DM, 200 mg / kg DM. The basal feed provided consists of forage (king grass 30:35 peanut straw) and concentrate (pollard 25:10 soybeans meal). There is an adaptation period of 21 days and a collection period of 3 days. During the collection period, spot sampling was conducted at 11.00-14.00. Testing of urine samples in Nutritional Biochemistry Laboratory, Faculty of Animal Science, Gadjah Mada University includes determination levels of creatinine and purine derivatives consisting of allantoin, xanthin-hypoxanthin, and uric acid by spectrophotometric. The data obtained were used to estimate microbial protein synthesis from purine derivatives in spot sampling urine. The data were then analyzed by analysis variance based on completely randomized design with a unidirectional pattern. To find out the difference in the mean value between treatments, the *Duncan Multiple Range Test* was tested. The results showed that there was no significant difference in the excretion of purine derivatives, estimation of microbial protein synthesis and efficiency of microbial protein synthesis with the addition of CSNL of 0 mg/kg DM, 100 mg/kg DM, 200 mg/kg DM. The purine-derived excretions obtained ranged from 0.94 to 1.24 mmol/day. Estimated microbial protein synthesis obtained ranged from 0.69 to 0.95 g/N day. The value of the efficiency of microbial protein synthesis ranged from 2.69 to 3.28 grams/kg DOMR. Based on research, the addition of CSNL up to 200mg/Kg BK with spot sampling urine collection method did not affect microbial protein synthesis.

Key words : Cashew nut shell liquid, Purine derivatives, spot sampling, Bligon goat.