

ABSTRAK

POTENSI TEPUNG CANGKANG KERANG DARAH TERHADAP PROFIL KADAR T3 SAPI JANTAN DI KAMPUNG TERNAK JOGJA

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Cangkang kerang darah (*Anadara granosa*) mengandung zinc sebagai mikromineral yang berperan sebagai salah satu komponen enzim iodothyronine deiodinase 2, yaitu enzim yang mengkonversi tiroksin (T4) menjadi *triiodothyronine* (T3). Zinc juga diketahui berguna untuk membantu ikatan T3 dengan reseptornya. Hormon T3 berfungsi untuk pengaturan metabolisme tubuh termasuk menstimulasi sekresi testosteron melalui peningkatan reseptor LH. Penelitian ini bertujuan untuk mengetahui profil kadar T3 di serum darah tujuh sapi jantan yang diberi campuran pakan tepung cangkang kerang di Kampung Ternak Jogja. Tepung cangkang kerang sebanyak 90 gram/ekor diberikan pada tujuh ekor sapi jantan di waktu pagi dan sore setiap hari selama 35 hari. Sampel darah diambil pada minggu nol, satu, dua, tiga, empat, dan lima setelah pemberian tepung cangkang kerang. Sampel serum darah kemudian dianalisis T3 menggunakan metode ELISA. Hasil penelitian menunjukkan bahwa rata-rata kadar T3 minggu nol adalah $1,35 \pm 0,62$ ng/mL; minggu satu $1,39 \pm 0,63$ ng/mL; minggu dua $1,35 \pm 0,67$ ng/mL; minggu tiga $1,23 \pm 0,52$ ng/mL; minggu empat $1,44 \pm 0,62$ ng/mL; dan minggu lima $1,27 \pm 0,64$ ng/mL. Analisis statistik menunjukkan bahwa tidak ada perbedaan signifikan setiap minggunya. Berdasarkan hasil penelitian, dapat disimpulkan bahwa pemberian tepung cangkang kerang selama 35 hari tidak berpengaruh signifikan terhadap profil kadar T3 sapi.

Kata kunci: sapi, *triiodothyronine* (T3), tepung cangkang kerang darah, ELISA.

ABSTRACT

THE POTENTIAL OF BLOOD COCKLE SHELL FLOUR ON THE T3 LEVEL PROFILE OF BULL IN KAMPUNG TERNAK JOGJA

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Blood cockle shells (*Anadara granosa*) contain zinc as a micromineral that acts as one of the components of the enzyme iodothyronine deiodinase 2, an enzyme that converts thyroxine (T4) to triiodothyronine (T3). Zinc is also known to be useful for helping T3 bind to its receptors. The T3 hormone regulates body metabolism, including stimulating testosterone secretion by increasing LH receptors. This study aims to determine the T3 levels in the blood serum of seven bulls fed a mixture of blood cockle shell flour feed in Kampung Ternak Jogja. Cockle shell flour of 90 grams/bull was given to seven bulls in the morning and evening every day for 35 days. Blood samples were taken in weeks zero, one, two, three, four, and five after the blood cockle shell flour was given. Blood serum samples were then analyzed for T3 using the ELISA method. The results showed that the average T3 levels in week zero were 1.35 ± 0.62 ng/mL; week one 1.39 ± 0.63 ng/mL; week two 1.35 ± 0.67 ng/mL; week three 1.23 ± 0.52 ng/mL; week four 1.44 ± 0.62 ng/mL; and week five 1.27 ± 0.64 ng/mL. Statistical analysis showed that there was no significant difference each week. Based on the results of the study, it can be concluded that the administration of blood cockle shell flour for 35 days did not have a significant effect on the T3 profile of bulls.

Keywords: bulls, triiodothyronine (T3), blood cockle shell flour, ELISA