ABSTRACT

Evatriyani Oktafadila. 24020120130109. Weight and Histological Structure of Musculus Gastrocnemius Lateral Broiler (*Gallus domesticus*) After Feeding Spirulina and Nanokitosan. Supervised by Muhammad Anwar Djaelani dan Kasiyati.

The purpose of this study was to analyse the effect of the addition of spirulina in feed, nanocitosan as a drink and the interaction between the two on the increase in musculus gastrocnemius lateral mass, length ratio of musculus gastrocnemius and tibia bone, total fibers and diameter of musculus gastrocnemius. This study was conducted for 8 months in a battery cage at Jl. Peirintis Kemerdekaan No.30, Pudak Payung, Banyumanik District, Semarang City, Central Java, then continued with the preparation of histology at the Wates Veterinary Centre, Yogyakarta and observation of histological preparations at the Animal BSF Laboratory in the Biology Study Program, Faculty of Science and Mathematics, Diponegoro University. The study used a factorial Completely Randomised Design (CRD) 2x3 with 6 treatments and 4 replicates each treatments, namely feeding with added spirulina 0%, 3%, 6% and nanokitosan 0% and 5%. This study used broiler chickens aged 6 weeks and meat samples used were 24 musculus gastrocnemius. The parameters observed were musculus gastrocnemius lateral mass, length ratio of musculus gastrocnemius and tibia bone, total fibers and diameter of musculus gastrocnemius. The data obtained were analysed using Two-way ANOVA. The results stated that the provision of spirulina and nanokitosan and the interaction of the combination had no significant effect ($P>0.05$) on the musculus gastrocnemius lateral mass, length ratio of musculus gastrocnemius and tibia bone, total fibers and diameter of musculus gastrocnemius. Based on the research that has been carried out, it can be concluded that supplementary feeding of spirulina and nanokitosan and their combination, does not play a role in the musculus gastrocnemius mass, the ratio of musculus gastrocnemius and tibia bone, the diameter of muscle fibres and the total of muscle fibres in broiler.

Keywords *: diameters, length ratio of musle-bone, muscle fiber length, muscle fiber*