THE CONTENT OF SELECTED MINERALS IN THE TIBIO-TARSAL BONE IN 14-MONTH-OLD OSTRICHES *(STRUTHIO CAMELUS)* AS INFLUENCED BY SEX AND PLACE OF THE BONE

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Summary. The content of the following mineral elements: calcium, magnesium, copper, iron, zinc and manganese collected from the specific places of the tibio-tarsal bones of healthy 14-month-old ostriches was determined for the first time.

Mineralisation was conducted in laboratory microwave system Ethos 900 by Milestone.

The research showed that concentration of a given element is dependent on the place of the studied bone. In the case of magnesium, copper and zinc, the content of the minerals was the highest in the shaft of the bone, whereas in the case of calcium, iron and manganese – in the proximal epiphysis. Interesting observations concern iron whose content was several times higher in the proximal epiphysis of the tibio-tarsal bone 9.38 (mg/kg of the fresh mass) in relation to other fragments of the bone. It seems to be connected with the high vascularisation of the proximal epiphysis located close to the pelvic bone in which active angiogenesis takes place.

Concentration of calcium in the tibio-tarsal bones of 14-month-old ostriches is statistically significantly higher in females. For the proximal epiphysis it equals 17979.12 (mg/kg of the fresh mass), for te shaft – 11548.41(mg/kg of the fresh mass), for the distal epiphysis – 16005.89 (mg/kg of the fresh mass).

The research also showed that sex is not the factor that differentiates the content of minerals in bones in a significant way (only concentration of calcium depends on sex).

The achieved results may be considered a kind of standard while determining the content of elements. Defining the values of parameters in healthy ostriches will allow to compare them with those of individuals with disorders of the bone structure.

Keywords: bones, mineral composition, ostrich.