Effect of mixed basic salts on live performance and trace metals in growing rabbits infected with *Fasciola hepatica*

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**Abstract**

The aim of our study was to assess the effects of mixed basic salts on growth and liver trace metals content of rabbits infected with *Fasciola hepatica*. Chinchilla rabbits were experimentally infected with *Fasciola hepatica* and treated with triple hydroxy crystals newly synthesized \((\text{Zn}_{10}\text{Cu}_{10}\text{Co}_{10}\text{Mn}_{10}\text{Zn}_{10}\text{Cu}_{10}\text{Al}_{10})(\text{OH})_{3}\text{SO}_{4}\text{H}_{2}\text{O}\) and \((\text{Zn}_{10}\text{Cu}_{10}\text{Co}_{10}\text{Mn}_{10}\text{Zn}_{10}\text{Cu}_{10}\text{Al}_{10})(\text{OH})_{3}\text{SO}_{4}\text{H}_{2}\text{O}\). Body weight gain, feed intake, feed conversion, mortality and trace metals (Zn, Mn, Co, Cu, Al) were studied on day 14th and 60th p.i. Trace metals were established by AAS. Trace metal imbalance was observed in acute and chronic fasciolosis - reduced levels of metals. Supplementation of Zn, Co, Mn – salt influenced positively Mn, Zn and Co content and Zn, Co, Cu - salt increased Co, Cu and Zn levels. BWG and mortality were changed positively by the both salts. Feed intake and feed conversion were not influenced by treatment with both salts. Treatment with Zn-Co-Mn salt has more beneficial effects on BWG in the rabbits (infected or uninfected) and liver trace metal imbalance associated with acute and chronic fasciolosis than Zn-Co-Cu salt.

*Key words:* trace metals, mixed basic salts, *Fasciola hepatica*.

**Introduction**

Rabbit breeding is an important branch of animal production. Rabbit meat is of high quality and safety. The susceptibility of rabbits to various parasitic infections as well as high mortality of young rabbits after weaning, however, hinder the development of the rabbit industry.

Mineral compounds play an important role in the treatment of metabolic disturbances appeared under parasitoses (Gabrašk et al., 2003; Gálvez-Morros et al., 1995; Tscheva-Gaytandzhieva et al., 2002). Neutral salts are more often used to correct infected host mineral deficiencies but their longer usage can cause some negative adverse effects (depressed growth, higher mortality, vomiting) (Vázquez et al., 1990). Experiments are carried out recently with hydroxyl (basic) salts of 3d transition elements which are better toler-