

***In vivo* study of the general toxic properties of a probiotic preparation based on lactic and propionic acid microorganisms**

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Abstract

In this paper, the study of general toxic properties of probiotic preparation based on lactic and propionic acid microorganisms was carried out. Establishment of class of acute toxicity of studied liquid form of the drug was based on fundamental document OECD 423 "Acute Toxic Class Method" (2001). In the study of acute toxicity, the physiological state, growth rate, morbidity and safety, changes in the parenchymal organs of laboratory animals were assessed. The results of determining the acute toxicity of probiotic preparation showed that a single oral administration of it in various doses did not lead to the death of animals during the experimental period, all the main indicators of their vital activity were within the physiological norm and did not differ from the control. The condition of all groups of animals remained satisfactory, no violations of the functional activity of the digestive and urinary systems were revealed. Body temperature, respiration and heart rate of the animals were within normal limits. Shown 100% safety of animals, no toxic signs at 1000-fold increase in the dose of the liquid form of probiotic were not observed. The study of the irritating effect of the drug was carried out on the mucous membrane of the right eye of animals, applying one drop of the sample under the upper eyelid, on the anterior segment of the eye. Consideration of the possible reaction of the mucous membrane of the experimental eye, eyelid and cornea was carried out 15 minutes (fast reaction) after exposure to the drug suspension and after 24, 48 hours of observation (delayed-type hypersensitivity). Evaluation of the effect of the probiotic drug on the conjunctiva showed that the suspension of strains of microorganisms does not cause irritation, both immediately after instillation and throughout the entire study period.

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