

PARAMETERS OF TOXICITY OF FEROSOL-2 AND RESORPTION OF IRON IN THE ORGANISM OF PIGLETS

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Summary. The article refers to the resorption of the bivalent iron of Ferosol-2 (F-2) from the gastrointestinal tract of piglets, its local effects on the stomach and the duodenum as well as the parameters of its toxicity. The antianemic mixture P-2 was created by the Laboratory of Experimental and Clinical Pharmacology of Lithuanian Veterinary Academy. The preparation contains ferric oxalate, zinc sulfate, manganese sulfate, copper sulfate, cobalt chloride, ascorbic acid and saccharose.

By means of the calculation procedures for the alternative physiological activity of drugs in white mice it was determined that the LD50 of F-2 amounts to 4,3-4,6 g/kg body weight (table 1) therefore it is attributed to the low toxicity preparation group.

Local effects were evaluated by means of pathomorphological and histological examinations, however no perceptible changes of the stomach and duodenum of guinea-pigs caused by the preparation, were stated.

The maximum resorption of bivalent iron occurs during the first hour after an individual oral administration of 2 ml of the preparation (0,22 g Fe²⁺) (Figure 1). The results obtained show that the most intensive resorption of iron takes place during the first 6 hours after the administration of F-2. The dynamics of the level of free transferrins also confirm the regularity of iron resorption - the level of iron rises in the serum since they combine with iron and carry it over to the place of deposition and use.

Keywords: Ferosol-2, parameters of toxicity, resorption of iron, local activity.