

THE STUDY OF TOXIC PROPERTIES OF THE EXTRACT FROM THE PLUM LEAVES

Vehbi Mostafa, Senyuk I. V.

National University of Pharmacy, Kharkiv, Ukraine

citochrom@gmail.com

Introduction. Plum is widespread in Ukraine, has a large number of kinds. At the Department of Chemistry of Natural Compounds of the National University of Pharmacy we have obtained the total extract from the leaves of plum and studied its chemical composition.

Aim. We have been the pioneers in setting up an experiment to determine the toxic properties of the extract from the leaves of plum.

Materials and methods. The study of an acute toxicity of the extract from the leaves of plum has been conducted with the help of a rapid method by Pastushenko T.V. on mice and rats. The studying extract has been administered per os. The animals have been observed for a week. At a subsequent stage of studying the acute toxicity of the plant extract we have chosen a parenteral (intraperitoneal) administration way. Also we have determined the LD₅₀ for mice and rats.

Results and discussion. The obtained experimental data indicate a high toxicity of the studying extract in a single intragastric administration, that's why while conducting the research on the rats, they have been injected with the maximum dose of 20000 mg / kg, and the death of the animals has not been observed.

The analysis of experimental data has shown that the LD D₅₀ of the studying extract, in the case of an oral administration, is more for the rats and mice 15000 mg / kg. Thus, an extract from the plums leaves, according to the classification by K.K. Sidorov, can be classified as a practically harmless substances. Due to the further study of the toxic properties of the extract according to the experimental data, the LD₅₀ for the mice by an intraperitoneal injection is in the range of 3160-3980 mg / kg. It has been also found that the LD₅₀ of the studying extract for the rats is at the range of dosage of 3980-5000 mg / kg. LD₅₀ for the rats by an intraperitoneal injection is 4310 (3510-5120) mg / kg.

Conclusions. Thus, the extract from the plum leaves is a safe remedy and refers to the VI toxicity class due to the classification by Sidorov K. K.

The results of this study extend the information about biological activity of the plum leaves substances and can be used for the further, in-depth study of the pharmacological activity of the obtained extract.