

## **EXAMINATION OF BIOLOGICAL PROPERTIES OF EYE DROPS "PROPOLIS"**

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The bioavailability and the specific activity of eye drops was investigated in accordance with the MSS.

The object of this study is to determine the degree of exposure to the toxic eyedrops hydrophilic phenolic fraction of propolis on the weight of the animals, and the blood much less important organs gently with the route of administration - intravenous , since the commonly used method of applying eyedrops (instillation) was not found their side action.

For the experiment were selected 12 rabbits "Chinchilla", six of which served as controls. Three rabbits were administered 0.5 % solution, and the other three - solution of 1% concentration. Eye drops were administered to rabbits in a volume of 2-2.5 ml per 1 kg of animal body weight (within 10 sec - 1 mL) once per day. Blood sampling was carried out in dynamics before administration , then after 1 hour, day 10 and 20 days.

Biochemical and morphological analysis of the blood of rabbits during prolonged administration of 0.5 and 1% propolis solutions, eye drops was performed by the conventional method.

The data show that the eye drops of propolis when administered intravenously for 20 days did not have a material effect on the morphology of red blood cells . The number of erythrocytes and hemoglobin in the blood is not changed, and erythrocyte resistance ESR are normal. The drug has no toxic effect on the morphological composition of white blood animals. Besides that long-term intravenous administration in a double amount (1% solution) rabbits № 4-6 also does not increase the number of leukocytes in the blood and does not significantly affect the leukocyte formula. Harmlessness of 0.5 and 1% solution of propolis and proved virtually unchanged in blood sugar, total protein and its fractions.

The weight of animals in parallel, is also an important indicator of drug

indifference towards macroorganism.

The obtained results led to the conclusion that the eye drops do not show statistically propolis toxic effect on animal weight change even when intravenously ( $P > 0.5$ ).

For a more objective assessment of the safety of eye drops "Propolis" was held Pathological and histological examination of the internal organs of animals.

At the end of the experiment (after 20 days), rats were sacrificed by decapitation, and were subjected to analysis of brain, liver, spleen, gastrointestinal tract, kidneys, heart, lungs.

Effect of 0.5% solution of hydrophilic phenolic fraction of propolis for intravenous administration (in grams) weight to rabbits

№ rabbits	Mass rabbits ( in g) before administration	After administration of the drug		
		1 day	10 days	20 days
1	1850	1840	1870	1910
2	1930	1925	1910	1910
3	1720	1730	1700	1770
4	2020	2035	2050	2090
5	1500	1495	1500	1330
6	1800	1800	1790	1820
M	1803	1803	1803	1803
	7,0	7,9	8,5	9,3
	-	0,5	0,5	0,5

Studies have shown that eye drops with the hydrophilic fraction of propolis did not cause toxic, inflammatory, degenerative changes or from the tissues of the eye or the internal organs.

The study of the specific activity of eye drops found their anti-inflammatory, antiviral, restorative, radioprotective effect.