

THE EFFECT OF TROUT LIVER EXTRACT ON THE CLINICAL PARAMETERS OF LAMBS

¹Khatamov Tolmas Tulkinovich, ²Khalikov Abror Azamovich, ³Sulaymonov Ma'ruf
Abduxolikovich, ⁴Saliev Erkin Mamashukurovich

^{1,2,3,4}Samarkand State University of Veterinary Medicine, Livestock and Biotechnologies

<https://doi.org/10.5281/zenodo.7605740>

Abstract. *This article describes the pulse, respiration and body temperature of 4-5 month-old lambs when using trout liver extract for experimental purposes.*

Keywords: *metabolism, biostimulator, conservation, enzymes, trace elements, glycerophosphate dehydrogenase, macronutrients, trace elements, immunophore, nucleopeptide, neurohumoral.*

Introduction

Natural veterinary drugs play an important role in obtaining quality products from farm animals. Based on this, a number of regulatory legal documents aimed at the development of the pharmaceutical industry have been adopted in recent years. In our country, the efforts of scientists and manufacturers are aimed at increasing the production of competitive products in stable demand on the market, as well as expanding its types in order to activate the processes of modernization and advanced development of the production of high-quality and effective veterinary drugs in order to further reduce their imports.

The relevance of the topic

The fact that tissue preparations act on the human body and animals as a powerful stimulator of vital processes has been known for a long time. In particular, they increase the overall tone of the body, activate the activity of its most important physiological systems, improve metabolic processes, increase resistance to negative environmental factors and at the same time certainly have a stimulating effect on the productivity of animals. In addition, tissue preparations also have a noticeable effect on the activity of individual enzymes involved in the digestion of nutrients and stimulation of the central and peripheral nervous systems [2;3,6].

The use of tissue preparations on animals contributes to an increase in tissue oxygenation and respiration, which is characterized by an increase in the activity, in particular, of the enzyme glycerophosphate dehydrogenase, a relatively short period of oxidation of ketoacids, which contributes to a decrease in the total concentration of carbon deposition products in urine [1;7].

It is known that drugs (biostimulants) obtained from raw materials of animal origin primarily have a general stimulating effect on the body and further on this background have a selective effect on the relevant vital organs and systems. In this case, the nervous system occupies the only dominant position in the processes of neurohumoral regulation, coordinating vital metabolic processes, influencing the integration of the vital activity of the organism as a whole and its connection with the external environment. As is known, there is a close relationship between micro- and macroelements, as well as between other biologically active substances in the animal body. Given this feature, most biologically active substances have found application in the manufacture and release of drugs used for the prevention and treatment of various diseases of animals and birds [4;8].

It is known that tissue preparations widely used in animal husbandry are practically harmless, contain natural biologically active substances, organic acids, vitamin complexes, trace elements, enzymes and other substances. In this regard, our goal was to study the effect of the obtained trout liver extract, in particular, on the clinical parameters of animals [5].

Object and methods of research

In order to study this issue, we conducted experiments on lambs kept at the Petrol Agro Business livestock farm in the Kattakurgan district of the Samarkand region. 20 heads of 4-month-old lambs were selected for the experiments. They were divided into 4 groups of 5 lambs in each group, that is, one control and 3 experimental groups, and the selection was carried out according to the principle of “homogeneous pairs”.

The drug was not used in the control group, at the same time, the lambs of the first experimental group were administered 1.0 g of the immunotropic drug orally 1 time a day. The lambs of the second experimental group were administered 3.0 ml of a nucleopeptide preparation once a week intramuscularly. And lambs of the third experimental group were intramuscularly injected with trout liver extract at a dose of 0.1 ml/kg 1 time per week. The experiments were carried out for 28 days.

The body temperature of the control group lambs at the beginning of the experiments averaged 39.4 ± 0.04 °C, and at the end of the experiments averaged 39.1 ± 0.02 °C. The number of heartbeats per minute averaged 139.6 ± 5.5 times, by the end of the experiment increased to 135.4 ± 4.6 times, the respiratory rate for 1 minute increased from 60.6 ± 2.6 times to 58.8 ± 2.6 times.

The body temperature of the lambs of the first experimental group at the beginning of the experiments averaged 39.5 ± 0.02 °C, and by the end of the experiments - an average of 38.8 ± 0.04 °C. The number of heartbeats per minute averaged 140.6 ± 4.5 times, by the end of the experiments increased to 130.4 ± 3.6 times, the respiratory rate for 1 minute increased from 61.1 ± 2.6 times to 56.1 ± 2.5 times.

The average body temperature of lambs of the second experimental group at the beginning of the experiments was 39.5 ± 0.04 °C, and by the end of the experiments - 38.9 ± 0.02 °C. The number of heartbeats per minute averaged 140.6 ± 4.5 times, and by the end of the experiments - an average of 132.8 ± 3.7 times, the respiratory rate for 1 minute - from 60.9 ± 2.6 times to 56.9 ± 2.5 times.

The average body temperature of the lambs of the third experimental group at the beginning of the experiments was 39.5 ± 0.03 °C, and by the end of the experiments - 39.0 ± 0.03 °C. The number of heartbeats per minute averaged 140.5 ± 3.6 times, by the end of the experiments - an average of 134.1 ± 3.8 times, the respiratory rate for 1 minute increased from 60.8 ± 2.6 times to 57.8 ± 2.5 times.

The clinical indicators of the conducted studies by periods during the experiment are given in the following table.

Clinical indicators of lambs in experiments

Groups	Period	Body temperature °C	Number	
			Pulse (beats/min)	Breathing (Col.min.)

The control group.	at the beginning of the experience	39,4±0,04	139,6±5,5	60,6±2,6
	after 7 days	39,3±0,04	138,9±4,8	60,3±2,4
	after 14 days	39,3±0,03	136,5±4,7	59,9±2,3
	after 21 days	39,2±0,04	135,9±4,6	59,4±2,7
	after 28 days	39,1±0,02	135,4±4,6	58,8±2,5
1 experimental group (Immunophore)	at the beginning of the experience	39,5±0,04	140,6±4,5	61,1±2,6
	after 7 days	39,3±0,03	138,9±3,8	59,8±2,4
	after 14 days	39,1±0,03	135,5±3,7	58,5±2,3
	after 21 days	38,9±0,02	133,9±3,6	57,2±2,7
	after 28 days	38,8±0,02	130,4±3,6	56,1±2,5
2 experimental group (Nucleopeptide)	at the beginning of the experience	39,5±0,04	140,6±4,5	60,9±2,6
	after 7 days	39,4±0,03	139,5±4,2	60,3±2,4
	after 14 days	39,3±0,03	138,5±4,7	59,9±2,3
	after 21 days	39,2±0,02	135,7±3,5	58,9±2,7
	after 28 days	38,9±0,02	132,8±3,7	56,9±2,5
3 experimental group (Trout Liver Extract)	at the beginning of the experience	39,5±0,03	140,5±3,6	60,8±2,6
	after 7 days	39,4±0,05	139,6±4,8	60,4±3,4
	after 14 days	39,3±0,03	138,7±3,7	59,7±2,3
	after 21 days	38,2±0,04	136,2±4,5	58,7±2,7
	after 28 days	39,0±0,03	134,1±3,8	57,8±2,5
	P<	0,03	0,06	0,07

Resume

Tissue preparations activate physiological processes and thereby accelerate the growth of animals, increase the body's resistance, tissue preparations are natural preparations and are harmless to animals compared to other drugs.

The conducted experiments established that when using tissue preparations, both already known and in the studied, statistically significant differences in body temperature, heart rate and respiratory rate of lambs of the control and experimental groups were not observed.

REFERENCES

- Xatamov, T. T., Xoliqov, A. A., & Avezimbetov, S. (2022). FOREL BALIG'I JIGARIDAN TAYYORLANGAN "BIOSTIMVET" PREPARATINI QUYONLARNING O'SISH VA RUVOJLANISHIGA TA'SIRI. *AGROBIOTEXNOLOGIYA VA VETERINARIYA TIBBIYOTI ILMIY JURNALI*, 501-505.
- Khalikov, A. A., Abdullaevich, N. A., Tolkinovich, K. T., & Ugli, O. S. K. (2021). EFFECTIVENESS OF ELEOVIT PREPARATION WITH TISSUE PREPARATIONS IN CALVES. *Galaxy International Interdisciplinary Research Journal*, 9(12), 538-540.
- Azamovich, K. A., Abdullaevch, N. A., & Tolkinovich, K. T. (2021). Effectiveness of Eleovit Preparation with Tissue Preparations in Calves. *European Journal of Life Safety and Stability (2660-9630)*, 12, 74-76.

4. Хатамов, Т. Т. (2020). Использование биогенных стимуляторов в ветеринарии и фармацевтические требования к ним. *Life Sciences and Agriculture*, (3-1), 44-46.
5. Tulkinovich, K. T. (2022, August). EFFECT OF TROUT FISH LIVER EXTRACT ON GROWTH AND DEVELOPMENT OF RABBIT. In *E Conference Zone* (pp. 39-41).
6. Tulkinovich, X. T. (2022, April). FOREL BALIG 'I JIGARI EKSTRAKTINI QORAKO'L QO'ZILARI QONINING BIOKIMYOVIY KO'RSATKICHLARIGA TA'SIRI. In *E Conference Zone* (pp. 355-357).
7. Khamdamovna, J. S., & Klichev, Z. (2022). CORRECT ORGANIZATION OF DRIVING IN KARAKUL SUBJECTS. *Galaxy International Interdisciplinary Research Journal*, 10(5), 6-8.
8. Jiyamurodova, S. X., & Klichev, Z. S. (2022, November). QORAKO'L QO'ZILARINING O'SISH DINAMIKASI. In *E Conference Zone* (pp. 121-124).