



## HEMATOLOGICAL INDICATORS OF ANIMALS USED IN CHLOROPHOS

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Article history:	Abstract:
<b>Received:</b> September 10 <sup>th</sup> 2021 <b>Accepted:</b> October 11 <sup>th</sup> 2021 <b>Published:</b> December 10 <sup>th</sup> 2021	The effects of 1% chlorophos emulsion on haematological (morphological) parameters in cattle are investigated. The effects of poisonous influence of the preparation on an organism of large hornet cattle have not been detected as a consequence of the examination of received data. The variations in haematological parameters in treated animals were within physiological limits.
<b>Keywords:</b> Organophosphorus compounds, emulsions, chlorophos (metrifonate), ectoparasites, hematological indications, invasive diseases.	

### TOPIC RELEVANCE.

Canals are blood-sucking insects that transmit a variety of invasive, infectious diseases to humans and animals. Furthermore, they reduce animal productivity, resulting in worse product quality. Meat quality deteriorates as the number of trace minerals, vitamins, and amino acids in the products decreases [4;1].

This is why a significant amount of money is spent each year on ectoparasite treatment and prevention.

Arachnoentomoses use organophosphorus, organochlorine, carbamate, and artificial pyrethroids, which have long-lasting characteristics and can kill insects and mites. These medications protect animals from ectoparasite attacks while also preventing them from becoming infected with illnesses that can be transmitted to humans. The insecticides listed above not only protect animals from ectoparasites, but they also cause major harm to them, or more specifically, acute and chronic poisoning [2;3].

More than 30 organophosphorus compounds are currently used in veterinary medicine and agriculture, and these poisons are divided into 2 groups.

1. Drugs with a contact effect cause rapid death when in contact with insects and canals. These include chlorophos, DDDF, metaphos, diphos, diazinon, isodrine, etaphos and others.

2. Systemic drugs are absorbed through the leaves and stems of plants and are toxic to insects. These include selector, takation, phase, butifos and others.

Poisoning of animals with organophosphorus compounds, including chlorophos, is common in livestock farms. Therefore, the intensive use of many chemicals to protect farm animals requires the need for toxicological studies in the fight against harmful ectoparasites. [1;3].

Chlorophos-white crystalline powder, well soluble in water, is widely used against plant pests instead of the banned DDT, for mice with moderate toxicity LD50-225-1260 mg/kg.

Animals with chlorophos are poisoned if they are fed with plants that have been exposed to systemic toxins before 6 days or before 6 weeks, or if the rules of disinfection of premises and use against animal ectoparasites are violated.

### THE PURPOSE OF THE STUDY.

Study of the toxicological effect of the drug chlorophos on the hematological parameters of the blood of cattle.

### OBJECT AND METHODS OF RESEARCH.

Our experiments were conducted on cattle at the Faravon Grand-Invest livestock farm in the Akdarya district of Samarkand region. Experiments were performed on cattle using 1% chlorophos emulsion against ectoparasites.

For the experiment, 2 groups of cattle were separated from the farm, 5 head of cattle in the 1st group and 5 head of cattle in the 2nd group.

In hematological examinations, blood counts were determined by generally accepted methods.

**RESEARCH RESULTS.**

We have tested the effectiveness of chlorophos in production conditions. In experimental cattle, we applied a 1% chlorophos emulsion against cattle ectoparasites by small volume spraying. It was found that the exposure to 1% chlorophos emulsion was 12 days. The data obtained indicate that the insectoacaracid effect of chlorophos is long enough. This feature has been shown to reduce the consumption of chlorophos in prophylactic measures in cattle.

The morphological composition of the blood in animals using chlorophos: the number of erythrocytes and leukocytes, the amount of hemoglobin was examined. In the experimental group of cattle using chlorophos, a decrease in erythrocyte count by 7, 61% was observed on day 3 of the experiment. No changes were observed in the experimental group. (Table 1)

**The number of erythrocytes in the blood of cattle treated with chlorophos (million/mcl)**

Table 1

Experimental groups	Before the experiment	Check time			
		1 day	3 days	7 days	10 days
Control	8,6±0,7	8,5 ±0,4	8,6±0,3	8,6±0,2	8,7±0,1
Experience	9,2±0,2	9,0 ±0,1	8,5±0,3	8,8±0,4	9,0±0,2

The effect on hemoglobin levels in experimental animals was also studied. In the experimental group of cattle using chlorophos, a decrease in hemoglobin levels of 6.37% was observed on day 3 of the experiment. No changes were observed in the experimental group. (table 2)

**The amount of hemoglobin in the blood of cattle treated with chlorophos. (g/l)**

Table 2

Experimental groups	Before the experiment	Check time			
		1 day	3days	7 days	10 days
Control	107,3 ±0,4	105,0±0,7	106,7±0,2	107,6±0,1	106,5 ±0,6
experience	111,2 ±0,4	108,9±0,1	104,4±0,2	110,5±0,5	111,1 ±0,3

The effect on leukocyte count in experimental animals was also studied. In the experimental group of cattle using chlorophos, an increase in leukocyte count by 10.2% was observed on day 3 of the experiment. No changes were observed in the experimental group (table 3).

**The number of leukocytes in the blood of cattle treated with chlorophos (thousand/mcl)**

Table 3

Experimental groups	Before the experiment	Check time			
		1 day	3days	7 days	10 days
Control	11,3 ±0,4	11,0±0,7	7,7±0,2	6,6±0,1	11,5 ±0,6
Experience	7,7 ±0,1	7,8±0,1	8,5±0,2	7,8±0,5	7,7 ±0,3

We also studied the leukocyte formula of the blood of experimental animals.. No changes in the leukoformula of cattle blood in the experimental group using chlorophos were observed.

The data obtained indicate that the drug chlorophos can be used in veterinary practice in the prescribed concentrations against animal ectoparasites.

**CONCLUSION.**

1. This is due to the fact that the drug does not exhibit the toxic effects of chlorophos on animal blood, detoxification processes and excretion of the drug by the body.

2. Chlorophos has no toxic effect on haematological parameters of animals when used at a concentration of 1% against ectoparasites in cattle.

**REFERENCES.**

1. Lujnikov E.A. Clinical toxicology Textbook. Moscow, 1994
2. Lysenko I.O. Study of haematological indicators in cattle treated with 0.025% diazinon emulsion. Bulletin s/he.samara, 2009
3. Roeder. D. Veterinary toxicology. Textbook Moscow, 2009
4. Panchenkova O.A. Protective effect of a new carboxime-based antidote in organophosphorus poisoning. Abstract. St. Petersburg, 2009