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VETERINARY-SANITARY EVALUATION OF RABBIT MEAT CONTAMINATED WITH CYPERMETHRIN

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Abstract:

The quality of rabbit meat poisoning was analyzed and evaluated on the basis of veterinary-sanitary, bacteriological, organoleptic and biochemical tests.

Keywords: cypermethrin, bacterioscopic, organoleptic, biochemical.

RELEVANCE OF THE TOPIC.

In order to create favorable conditions for the development of the rabbit industry, improve new local breeds, introduce modern methods of competitive local technologies in the field of rabbit breeding and genetics, as well as further development of the industry, the Cabinet of Ministers Resolution No. 647 "On measures" was approved.

Sustainable supply of meat, milk, eggs and other livestock products in the domestic consumer market, expanding the fodder base of livestock, poultry and fisheries, increasing the production of competitive products in domestic and foreign markets and scientifically based methods and intensive The widespread introduction of technology is very relevant today.

The greatest damage to rabbits is caused by parasites. Pyrethroid drugs are now widely used to protect rabbits from these pests, syrax, cypermethrin, sumi-alpha, neo-stamozon, superkiller-E karate and other similar drugs. However, as a result of violation of the requirements for the storage, transportation and use of such drugs in practice, there are cases of poisoning in rabbits, especially as a result of repeated use of drugs in high doses and for a short time.

Given these unforeseen adverse events, we conducted experiments to assess the veterinary and sanitary quality of rabbit meat products poisoned by the drug cypermethrin, which belongs to the group of pyrethroids. The purpose of such studies is to provide the necessary practical recommendations in determining the degree of suitability for consumption of compulsorily slaughtered meat products in the case of pyrethroid poisoning in rabbits, as well as their veterinary and sanitary quality.

Object and methods of research: Our experiments were carried out on 18 rabbits at the farm "Tarnov Sabzavtlari" in Aqdarya district of Samarkand region.

Residual amounts of pyrethroids in the internal organs and tissues of rabbits that were forcibly slaughtered as a result of poisoning were determined using a thin-layer chromatography method recommended by M.A.Klisenko et al. The methods of compulsory slaughter of rabbit meat products developed by V.A.Makarov and others are used.

As an example, rabbit meat, smears prepared and sealed from the surface and inner layers of muscle tissue, were examined under a microscope. Toxicological tests were also performed to determine the residual content of cypermethrin in rabbit meat.

RESEARCH RESULTS.

Orgonoleptic examination. When organoleptic characteristics of moistened meat of poisoned rabbits were studied, the cut position of the meat was relatively flat, the weakly absorbed muscles in the surrounding muscle tissue were red and dark red, there are some signs of bruising. The veins in the muscle tissue are full of blood, the incision surface is slightly moist, sticky to the touch, the fat is bright red and crumbly. The muscles are relaxed and have an odor that is not typical of rabbit meat.

When a sample of this meat was boiled, a large number of crusts and blisters formed on the surface of the soup. The soup is cloudy and has an unpleasant odor. Such organoleptic quality indicators were observed during the forced slaughter of poisoned rabbits during the first week of the experiment.

14 days after intoxication, organoleptic examinations revealed that the surface of the moistened meat of rabbits was dry, yellowish-blue and bright red marks were clearly visible on them. The moisture content of the was low and in some places bright reddish colors appeared and were flexible. The skin and inner fat are yellow and the flesh has a distinctive odor. When this rabbit meat was boiled, the soup became clear and fragrant and on the surface of the soup we saw the accumulation of large droplets of fat.

Based on the results obtained, the conclusion is that the quality of rabbit meat slaughtered during the first week after acute poisoning with cypermethrin, especially on days 1-7, after the second week of poisoning (after 14 days) showed that it was much lower than its counterparts. Meat products with such characteristics are usually unfit for human consumption and are disposed of as technical waste.

Biochemical examination - changes in the biochemical parameters of rabbit meat contaminated with cypermethrin, quantitatively significant for veterinary and sanitary, hydrogen ions (pH), acid oxidation coefficient (Coke) and amino-ammonia nitrogen in meat (Aaa) amount, as well as benzidine, farmolin and color oxidation reactions were detected 24 hours after slaughter of rabbits (maturity of quality meat products).

Biochemical parameters of rabbit meat acutely poisoned with cypermethrin

Table 1

Groups	Checked after feed stop, (day)	Biochemical parameters					
		pH	K k.o	A a.a	Reactions:		
					benzidin li	farmolin li	color oxidizer
Experience:1	1	6,90	0,22	2,00	negative	positive	positive
2	-II-	6,80	0,27	1,92	-II-	-II-	-II-
3	7	6,60	0,32	1,60	negative	positive	positive
4	-II-	6,50	0,35	1,56	-II-	-II-	-II-
5	14	6,05	0,42	1,26	positive	suspicious	suspicious
6	-II-	6,10	0,40	1,14	-II-	negative	negative
7	25	6,05	0,42	1,12	positive	negative	negative
8	-II-	6,00	0,44	1,16	positive	suspicious	negative
Control: 9	1	6,05	0,42	1,14	positive	negative	negative
10	7	6,10	0,40	1,26	positive	suspicious	negative
11	14	6,00	0,44	1,16	positive	negative	suspicious
12	25	6,05	0,42	1,26	positive	suspicious	negative

During the first two weeks after acute poisoning from the drug cypermethrin, we witnessed significant changes in the sanitary quality of biochemical analysis of slaughtered rabbit meat and these products are unfit for consumption, indicates that. After 2 weeks of poisoning, the pH of compulsorily slaughtered rabbits was around 5.90-6.00 (control 5.75-6.00), the degree of acid oxidation was 0.42-0, 48 (control 0.42-0.46) amino-ammonia nitrogen content was 0.87 mg or less, benzidine sample was positive and formalin and color oxidation reactions were negative.

These data showed that the biochemical parameters of rabbit meat in the experiment, which was acutely poisoned with cypermethrin and forcibly slaughtered during the first two weeks, were similar to those of sick rabbit meat.

CONCLUSIONS.

1. Fertilization of meat pathogenic microflora was not observed in the meat of acutely poisoned rabbits with a non-lethal dose of cypermethrin obtained from forced slaughter.

2. Results of veterinary-sanitary assessment of rabbit meat poisoned with cypermethrin, compulsory slaughter of rabbit meat in the first two weeks after acute exposure to improve its organoleptic and biochemical quality with its indicators, it showed that it resembled the meat of a sick rabbit. Such products are usually unfit for human consumption and are disposed of as technical waste.

3. Organoleptic and biochemical parameters of rabbit meat, which were forcibly slaughtered 14 days after the poisoning, are similar to completely healthy rabbit meat, but the fat in them. Chemical analysis of tissues and internal

organs (liver, lungs, kidneys) revealed the presence of residual amounts of cypermethrin to a certain extent in the composition of these organs and tissues. This also indicates that these products are unfit for human consumption.

This type of meat can be boiled for only 2.5 hours and can be used as animal feed or for the production of meat and bones.

4. In case of pyrethroid poisoning in rabbits, we recommend that they be slaughtered 28 days after the poisoning.

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