Often the use of antibiotic course therapy to animals leads to indigestion and to the development of long-standing diarrhea. Such state increases the recovery period the animals significantly and contributes to the development of postprimary pathologies and in severe cases can lead to death of the animal.

It is a common practice when, correction of feeding, the prescription of antidiarrheal drugs which slow intestinal motility (Loperamide is an opioid-receptor agonist and acts on the $\mu$-opioid receptors in the myenteric plexus of the large intestine), enterosobents (Smecta) does not lead to significant improvement in the state of the animals and reduction the severity of diarrhea. Synbiotic complexes ACTI-DOG and ACTI-CAT showed high efficiency in the treatment of diarrhea due to the use of courses of antibiotics.

The research involved 10 animals of different breeds, age, body weight and sex. Cats in the number of 5 individuals. Dogs in the amount of 5 individuals. All animals took a course of antibiotic therapy on the study period.

The efficiency of the complexes ACTI-DOG and ACTI-CAT was observed:
1st day - have not demonstrated effectiveness;
2nd day - significant positive effect was observed for two animals, the Siamese cat breed and the Caucasian shepherd dog;
3 days - no symptoms of diarrhea observed for two animals, the symptoms of diarrhea decreased by 50% for 7 animals slight changes were observed for one animal;
4-th and 5-th day - signs of diarrhea was absent.

The effectiveness of the drug "Loperamide" and "Smecta" was observed:
1st, 2nd and 3rd days - the drug has not showed effectiveness;
4 days - 6 animals showed a significant positive effect,
for 4 animals positive effect was not observed.
5 days - the symptoms of diarrhea decreased by 50% for 5 animals,
slight changes were observed for 3 animals,
for 2 animals the effect was not observed.

The use of antidiarreatic drugs, which show intestinal motility (Loperamide is an opioid-receptor agonist and acts on the $\mu$-opioid receptors in the myenteric plexus of the large intestine) and enterosobents (Smecta) didn't show any definite beneficial effect. The research of the use of a symbiotic complexes ACTI-DOG and ACTI-CAT for dogs and cats with diarrhea due to antibiotic use, showed a significant efficiency. These complexes can be recommended for cats and dogs of all ages for the purpose of correction of the state of intestinal flora, in the case of dysbacteriosis and diarrhea due to the use of antibiotic therapy, to reduce the risk of nutritional diseases (dysbiosis, poisoning, food intolerance), during pregnancy and post partum to prevent bacterial infections, and also exercise and stimulation of the immune system of young animals.

**Keywords:** SYNBIOTIC COMPLEXES, VIOLATION OF DIGESTION OF ANIMALS, DIARRHEA OF DOGS AND CATS, INVESTIGATION OF APPLICATION OF ANTIBIOTICS.