



# SYNTHESIS OF POLYMER COMPLEXES FOR THE TREATMENT AND PREVENTION OF OBSTETRIC AND GYNECOLOGICAL DISEASES OF CATTLE

**Urinova Zebo Khudayarovna** - PhD student at Samarkand State University

E-mail: [zebourinova83@gmail.com](mailto:zebourinova83@gmail.com)

**Babaev Tuygun Mirzaakhmedovich** - professor at the National University of Uzbekistan, Doctor of Chemical Sciences

E-mail: [tuygun.babaev@mail.ru](mailto:tuygun.babaev@mail.ru)

**Karimov Makhmud Muratovich** - associate professor at the National University of Uzbekistan, Doctor of Chemical Sciences

E-mail: [kmm142216@mail.ru](mailto:kmm142216@mail.ru)

Article history:	Abstract:
<b>Received:</b> 8 <sup>th</sup> April 2025 <b>Accepted:</b> 7 <sup>th</sup> May 2025	The results of studies on obtaining polymer compositions with both organic and inorganic substances intended for use in veterinary pharmacology are presented. Binding physiologically active substances to polymers increases the duration of action and effectiveness of drugs, changing the method of administration, harmfulness and harmful properties of drugs - allows to reduce. It is very important to obtain new medicinal forms of polymers with a complex of unique properties and to develop methods for using polymer systems in pharmacology, especially in veterinary practice. Studies of the obtained compositions have shown the high efficiency of the developed dosage forms.
<b>Keywords:</b> Endometritis, iodopen, service time, morphobiochemical index of blood, medicinal substances	

The causes of endometritis spread among cows in farms, its development features, their impact on calving and milk productivity of cows, causes of prolongation of the service period in cows, infertility were studied. The cows were injected with Uteraton intramuscularly into the uterus once every 48 hours at 10 ml, the Penstrip-400 drug was injected intramuscularly at 10 ml. When treating cows with endometritis in the second experimental group, 3 units of iodopen were injected into the uterus, 10 ml of uteroton intramuscularly, and 10 ml of penstrip-400 intramuscularly. When treating cows in the third control group, the uterus was washed with 5 liters of 0.1% potassium permanganate solution, 4 furazolidone sticks were introduced into the uterus, and 10 ml of the drug Penstrip-400 was administered intramuscularly.

The effectiveness of the treatment was higher in the first experimental group, which was administered Carbocase at a dose of 1 tablet per 100 kg of body weight once every 48 hours into the uterine cavity, the drug Uteraton - 10 ml intramuscularly and the drug Penstrip-400 - 10 ml intramuscularly.

For the second stage of the experiments, experimental and control groups were formed, with 9 cows suffering from endometritis in each. For treatment, cows of the first group were intrauterinely administered a tablet of Carbocase at a dose of 5 ml/100 kg once every 48 hours.

10 ml of the uteroton preparation was injected intramuscularly. In the second control group, cows were treated with 1 tablet of Carbocaz per 100 kg of body weight every 48 hours, 10 ml of uteroton was injected intramuscularly, and 10 ml of penstrip-400 was injected intramuscularly. By the end of the experiments, it was noted that the clinical-physiological indicators and morphobiochemical blood parameters of the cows treated in the first experimental group were within the normal range, the sick animal fully recovered, and fertilization was ensured 18-20 days after treatment. The third phase of the experiments was conducted to prevent endometritis in productive cows. When the cows in the experimental group were treated with Carbocaz once intrauterinely from the day after calving, at the rate of 1 tablet per 100 kg of body weight of the cows, the cost-effectiveness of the treatment was high, and the cost per sum spent was an average of 31.21 sums.

During the scientific research, the following results were achieved with the use of Karbokaz tablets in livestock farms where experiments were conducted: 20% of the 205 cows on the farm, 41 of which were found to be sick and infertile. After treatment of 41 cows with endometritis, 40 of them became pregnant and were inseminated. Of the 205 cows on the farm, 20 percent, or 41, were found to be infertile, and all were treated. After treatment, 40 cows, or 97.6 percent, became pregnant and were calved. When the calved cows were checked, it was found that 39 cows, or 97.5 percent, were calved, and 2.5 percent were infertile.

Of the 763 cows on the second farm, 14.0 percent, or 107, were found to be infertile, and all were treated. After treatment, 103 cows, or 96.3%, were able to conceive and be inseminated. When the inseminated cows were checked, 101 cows, or 98.0%, were found to be fertile, and the remaining 2% were infertile. In the third farm, 25.7% of the 70 cows, or 8, were infertile, and all were treated. After treatment, 17 cows, or 94.5%, became pregnant and were inseminated. When the inseminated cows were checked, it was found that 16 cows, or 94.1%, were pregnant, and 5.9% were infertile.

## **CONCLUSION**

In cows treated with Carbocaz tablets, no placental abruption or endometritis were observed in the following year. The service period of cows was reduced, thus, in the case of three farms, an average economic benefit of 37.24 soums was obtained for every 1 soum spent.

## **REFERENCES:**

1. Babaev T.M., Urinova Z.Kh., Karimov M.M. Foaming polymer systems and basic antimicrobial preparations. // Problems of bioorganic chemistry. X- young chemists conf. materials. Namangan. 2022. Part 1. - B. 101-103.
2. Babaev T.M., Karimov M.M., Urinova Z.Kh. Polymeric preparation for the treatment and prevention of gynecological diseases in animals. // International scientific conference "Actual Problems of the Chemistry of Natural Compounds". Tashkent. 2023. - P. 181.
3. Namozov O.M., Urinova Z.Kh., Usmanova G.A., Karimov M.M., Babaev T.M. Obtaining, studying and application of polymeric dosage forms in veterinary pharmacology. // International scientific and practical conference «Modern Trends of Higher education and science in the field of chemistry and chemical engineering». Almaty. 2023. – P.108-110.
4. Panarin, E.F. Polymery and medicine and pharmacy. St. Petersburg: Izd-vo Politekhnikeskogo un-ta, 2008. - 192 S.
5. Paige K. Pharmacology: Klinichesky podkhod: per. English pod ed. B.K. Romanova.- M.: Logosfera, 2012.- 744 S.
6. Torchilin V.P. Liposomes as targetable drug carriers// Crit.Rev. Ther. Drug Carr. Syst.- 1985.- V. 2.- R. 65–115.
7. Journal Vsesoyuznogo Khimicheskogo obshchestva im. D.I. Mendeleeva. Nomer posvyashchen napravlenomu transportu lekarstvennykh veshchestv. // 1987.- T. 32. No. 5.- S. 485-533.
8. Kedik S.A. Polimery dlya sistem dostavki lekarstvennykh veshchestv prolongirovannogo deystviya (obzor). Polymers and copolymers of lactic and glycolic acid // Development and registration of medicinal products 2013. No. 2.- S. 18-35.
9. Plate N.A., Litmanovich A.D., Kudryavtsev Ya.V. Makromolekulyarnye reaktsii v rasplavakh i smesyakh polimerov. M.: Nauka, 2008, -S. 30-144.
10. Shabanov P.D. Antiseptic novogo pokolenia. Pharmacology katapola i rodstvennykh soedineniy//Klinika, pharmacology i lekarstvennaya therapy. 2002. T.1. #2. -S.64-72.
11. Rashidova S.Sh., Milusheva R.Yu. Chitin and chitosan Bombyx mori: Synthesis, properties and applications. Tashkent: Science, 2009. -S. 23-291.
12. Rashidova S.Sh., Kudryshkin V.O. Vvedenie v khimiyu vysokomolekulyarnykh soedineniy. Tashkent, Nowruz. 2014. - S.19-22.
13. Karimov M.M., Mukhamediev M.G., Musaev U.N. Modification of 4,4'-diamidino diazoamino benzene carboxyl containing ionitami//Sorbtsionnye i khromatograficheskie protsessy. 2012. T12. Vyp 1-S. 124-132.
14. Gavrilin M.V. "Application of polymers and copolymers of production of acrylic acid and ethylene oxide in pharmacy" Khim. Pharm. Journal, vol. 35, No. 1, 2001, p. 33-36.