INSTRUCTIONS
for Use of the Veterinary Drug Letpenstrepum-LA
1 General Information

1.1 The veterinary drug Letpenstrepum-LA.

International non-proprietary name: procaine penicillin, benzathine penicillin, dihydrostreptomycin.

Dosage form: suspension for intramuscular injection.

1.2 The veterinary drug Letpenstrep-LA (hereinafter referred to as the drug) is a suspension ranging in color from white to yellow.

1.3 Each 1.0 ml of the drug contains 200 mg of procaine penicillin G and benzathine penicillin G, 200 mg of dihydrostreptomycin sulfate, and excipients: procaine hydrochloride, sodium citrate, sodium formaldehyde sulfoxylate, methylparaben, povidone, polysorbate, and water for injection.

1.4 The drug is supplied in glass vials of 10, 50, and 100 ml, sealed with rubber stoppers and crimped with aluminum caps.

1.5 The drug should be stored and transported in the manufacturer's packaging, protected from direct sunlight, at temperatures not exceeding 25 °C. Keep out of reach of children.

1.6 Shelf life of the drug, if storage and transportation rules are followed, is 2 (two) years from the date of manufacture. After opening the vial, the drug must be used within 24 days, provided the remaining product is stored at 2 °C to 8 °C. Do not use after the expiration date. After the expiration date, the drug should be disposed of in accordance with the law.

1.7 Dispensing conditions: without a veterinary prescription.

2 Pharmacological Properties

2.1 The drug is active against Gram-positive and Gram-negative microorganisms such as: *Staphylococcus spp.*, *Streptococcus spp.*, *Corynebacterium spp.*, *Actinomyces spp.*, *Campylobacter spp.*, *Clostridium spp.*, *Erysipelotrix rhusiopathiae*, *Haemophilus parasuis*, *Listeria monocytogenes*, *Pasteurella multocida*, *Mannheimia haemolytica*, *Leptospira spp.*, *Brachyspira spp.*, *Escherichia coli*, *Salmonella spp.*, and others sensitive to procaine penicillin, benzathine penicillin, and dihydrostreptomycin.

2.2 Procaine penicillin G included in the formulation is a biosynthetic penicillin antibiotic. Its antimicrobial mechanism involves disrupting the synthesis of peptidoglycan, a mucopolysaccharide of the cell wall, leading to inhibition of bacterial cell wall synthesis, suppressing bacterial growth and reproduction.

Benzathine penicillin G belongs to the group of β-lactam antibiotics sensitive to β-lactamase action. Its bactericidal mechanism is based on disrupting the synthesis of peptidoglycan by inhibiting the enzymes transpeptidase and carboxypeptidase, leading to osmotic imbalance and bacterial cell destruction.

Dihydrostreptomycin sulfate is an aminoglycoside antibiotic that acts bactericidally by binding to the 30S subunit of the bacterial ribosome, subsequently suppressing protein synthesis.

2.3 Procaine penicillin G and benzathine penicillin G are slowly absorbed after intramuscular injection and have a prolonged effect. Dihydrostreptomycin sulfate is rapidly absorbed into the bloodstream upon intramuscular injection. The combined use of procaine penicillin G, benzathine penicillin G, and dihydrostreptomycin sulfate produces a synergistic effect, enhancing each other's actions and broadening the antimicrobial spectrum of the drug. Therapeutic concentrations are maintained in various tissues and fluids for 8–12 hours. Procaine penicillin G, benzathine penicillin G, and dihydrostreptomycin sulfate are not metabolized in the body and are excreted unchanged primarily via urine and bile; in lactating animals, partially with milk.

2.4 The drug is classified as low-hazard (hazard class 4 according to GOST 12.1.007-76).

3 Directions for Use

3.1 The drug is used therapeutically in pigs, large and small ruminants to treat gastrointestinal, respiratory, and genitourinary tract diseases, as well as to prevent secondary bacterial infections caused by pathogens sensitive to procaine penicillin, benzathine penicillin, and dihydrostreptomycin.

3.2 The drug is administered once intramuscularly in the following doses:

- Cattle: 10.0 ml per 100 kg of body weight; maximum volume per injection site – 20.0 ml
- Pigs: 1.0 ml per 10 kg of body weight; maximum volume per injection site – 10.0 ml
- Sheep, calves: 1.0 ml per 10 kg of body weight; maximum volume per injection site – 5.0 ml

If necessary, a second injection may be given after 72 hours; in severe cases, after 48 hours. Shake the vial thoroughly before use.

3.3 Contraindications include individual hypersensitivity to penicillins and/or aminoglycosides, as well as impaired kidney and liver function.

3.4 The drug should be used with caution in pregnant animals due to the risk of premature labor in the last trimester of pregnancy.

3.5 In rare cases, side effects such as allergic reactions may occur. In case of side effects, discontinue the drug, and administer antihistamines and calcium preparations.

3.6 It is not recommended to use the drug in combination with other antibiotics that have ototoxic and nephrotoxic effects (neomycin, kanamycin, monomycin, gentamicin, etc.), or with antibiotics from the groups of amphenicols, macrolides, tetracyclines, polymyxins, and lincosamides. Use in females during the last trimester of pregnancy is not recommended.

3.7 No specific effects were observed with the first administration or discontinuation of the drug.

3.8 Slaughter of cattle, pigs, and sheep for meat is permitted no earlier than 30 days after the last administration of the drug; milk may be used for human consumption no earlier than 10 days after administration. Meat from animals slaughtered before this period may be used for feeding carnivorous animals.

4 Precautionary Measures

4.1 When working with the drug, general rules of personal hygiene and safety precautions for handling veterinary medicinal products should be observed.

5 Claims Procedure

5.1 In the event of complications after using the drug, its administration must be discontinued, and the consumer should contact the state veterinary institution in their locality. Veterinary specialists at the institution will investigate whether the drug was used in accordance with the instructions. If adverse effects of the drug on the animal’s body are confirmed, samples are collected in sufficient quantity for laboratory testing, and an act of sample collection is drawn up and submitted to the State Institution "Belarusian State Veterinary Center" (220005, Minsk, Krasnaya St. 19A) for conformity verification with regulatory documents.

6. Manufacturer Information

6.1 Production Cooperative "Biogel". Legal address: Republic of Belarus, 220035, Minsk, Timiryazeva St., 65, office 313.

Production site address: Republic of Belarus, 222685, Minsk Region, Stolbtsovsky District, village of Nivnoye.

Manufactured by order of: Private production and trading unitary enterprise "Letyal", Republic of Belarus, 220075, Minsk, Inzhenernaya St., 1E.

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