TIAMIX®
Water-soluble powder for oral administration

Description
White powder.
Composition
1 g of the drug contains:
active ingredients: tiamulin (as hydrogen fumarate) – 225 mg; lincomycin (as lincomycin hydrochloride) – 44 mg; spectinomycin (spectinomycin sulfate) – 44 mg;
excipient: dextrose.
Pharmacological properties
ATCvet: QJ01. Antibacterials for systemic use.
Tiamix® is a complex drug with a broad spectrum of antimicrobial action. The combination of tiamulin, lincomycin and spectinomycin causes potentiated synergistic effect upon bacteria.
Tiamulin is a semisynthetic antibiotic of the diterpenes group, which is effective against gram-positive (*Staphylococcus spp., Streptococcus spp., Clostridium spp., Corynebacterium spp., Erysipelothrix spp., Listeria spp.*) and certain gram-negative microorganisms (*Haemophilus influenzae, Pasteurella multocida, Actinobacillus pleuropneumoniae, Campylobacter spp*.), spirochetes (*Serpulina hyodysenteriae, S. innocens, S. pilosicoli, S. suis*) as well as *Lawsonia intracellularis*. The mechanism of its antibacterial activity consists in inhibition of synthesis of bacterial protein at the level of ribosomal 50S subunit.
Lincomycin is an antibiotic of the lincosamides group. It demonstrates bacteriostatic or bactericidal action depending on concentration. It acts mostly upon gram-positive (*Staphylococcus spp., Streptococcus spp., Bacillus anthracis, Corynebacterium spp*.) and gram-negative microorganisms (*Actinobacillus spp., Bordetella spp.)* and certain species of *Nocardia* and *Actinomyces.* It is particularly effective against *Serpulina hyodysenteriae* and *Mycoplasma spp.* Lincomycin inhibits synthesis of protein in microorganisms, binding ribosomal 50S subunits of bacterial cells.
Spectinomycin is an antibiotic of tricyclic structure of the aminoglycosides group. It is mostly effective against gram-negative microorganisms, particularly, *E. coli, Pasteurella multocida, Salmonella spp., Clostridium spp., Erysipelothrix rhusiopathiae, Haemophilus spp., Vibrio spp.*, as well as certain gram-positive microorganisms and *Mycoplasma spp.* Its efficacy is related to inhibition of synthesis of proteins in microbial cell through binding of ribosomal 30S subunit of microorganisms, which prevents elongation of polypeptide chain at translocation stage.
Tiamulin is quickly absorbed from digestive tract and penetrates into all organs and tissues of the body of swine. Its maximum concentration is observed in 2 hours following administration. The antibiotic is eliminated from the body primarily with feces.
After oral administration lincomycin is well absorbed from digestive tract (almost 60%) and is distributed in organs and tissues, particularly, in bone tissue. It binding to proteins makes 50%. Its concentration in blood serum reaches maximum in 2 hours following administration. Half-life period makes 2.5-4 hours. Major quantities of lincomycin and its metabolites are excreted with urine and bile. Minor quantities are eliminated with feces.
Spectinomycin is poorly absorbed in digestive tract. In 24 hours following oral administration minor concentrations of the antibiotic are observed in kidneys, liver, lungs, muscles, fat tissue. Binding of spectinomycin to proteins does not exceed 10%. Its concentration in serum reaches maximum in 4 hours. Spectinomycin is scarcely biotransformed in the body and is eliminated in unchanged form with feces.
Administration
Treatment of lawsoniosis, enzootic pneumonia, actinobacillary pleuropneumonia, salmonellosis, dysentery, MMA (mastitis-metritis-agalactia) syndrome, eperythrozoonosis, necrotic enteritis, colibacillosis, mycoplasmosis and other diseases of digestive tract and breathing organs caused by tiamulin-, lincomycin- and spectinomycin-sensitive microorganisms in swine.
Dosage
Administer orally with feed individually or by group method in a dose of 0.5-1 kg of Tiamix® per 1 t of feed for 5-7 days or with drinking water in a dose of 0.5-1 kg of Tiamix® per 1000 l of drinking water for 5-7 days.
If administered with feed, mix the drug with the feed thoroughly. It is recommended that the drug be used with 3-10% of total feed quantity first and then the obtained mixture be mixed with the rest of the feed.

If administered with drinking water, the medicated solution must be the only source of drinking water throughout the whole treatment period.

Contraindications

Do not administer to animals with hypersensitivity to tiamulin, lincomycin and spectinomycin. Do not administer to rabbits, horses, cattle and laying hens. Do not administer to pregnant and lactating animals.

Avoid administration of drugs containing monensin, maduramycin, narasin, lasalocid or salinomycin at least in 7 days prior to, during and in 7 days following administration of Tiamix® as this may cause deterioration in health condition or even death.

Precautions

Animal slaughter for meat is possible in 7 days following the last administration of the drug. Meat obtained before the mentioned term shall be utilized or fed to non-productive animals depending on the statement of veterinary physician.

Packaging

Bags of 1000 g film or foil materials.

Storage

Store in a dark, damp-proof place out of the reach of children at 0-30°C.

Shelf life

2 years. 3 months after being mixed with feed. 24 hours after dissolution in drinking water.