POLLON-INPEL

BROAD-SPECTRUM ANTIBIOTIC

Oral Powder

REG. SAN: RIP-02-FAR-01107

Formula:

Each 100 g contains:
Tylosin 5 g
Oxytetracycline 4 g
Bromhexine 0.1 g
Vitamin A 600,000 IU
Vitamin D3 200,000 IU
Vitamin E 700 mg
Vitamin C 4 g
Excipients q.s. to 100 g

INDICATIONS:

POLLON INPEL is an ideal combination of antibiotics that exert a synergistic action to combat infections of the urinary tract, soft tissues, skin, and enteric diseases. In swine, it is indicated for the treatment of arthritis, pneumonia, and erysipelas; in poultry, for the treatment of fowl cholera and synovitis. It contains bromhexine, which has mucolytic and expectorant properties, helping to resolve respiratory conditions. The vitamins included in the formulation help improve the animals' overall condition.

ROUTE OF ADMINISTRATION: Oral

SPECIES AND DOSAGE:



ROUTE OF ADMINISTRATION: Oral.
Mix in drinking water and administer the product immediately after preparation. Administer every 24 hours for 5 consecutive days, unless otherwise directed by the veterinarian.

Species	Reference Dose	Practical Dose
Poultry	Tylosin: 25 mg/kg Oxytetracycline: 20 mg/kg Bromhexine: 0.5 mg/kg	1 g per 2 kg body weight 20 g for 20 birds weighing 2 kg each
Swine	Tylosin: 12.5 mg/kg Oxytetracycline: 10 mg/kg Bromhexine: 0.25 mg/kg	20 g per 80 kg body weight

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PHARMACOKINETICS :

Tylosin: Tylosin tartrate is well absorbed from the gastrointestinal tract, primarily from the intestine. Following systemic absorption, it is widely distributed throughout the body, with the exception of cerebrospinal fluid penetration. The volume of distribution of tylosin is 1.7 L/kg in small animals and 1–2.3 L/kg in cattle. In lactating dairy cows, the milk-to-plasma ratio is 1–5.4. Tylosin is eliminated in the urine and bile, apparently as unchanged drug. The elimination half-life of tylosin is 54 minutes in small animals, 139 minutes in newborn calves, and 64 minutes in calves 2 months of age or older.

Oxytetracycline: It is readily absorbed following oral administration in fasted animals. Its bioavailability is approximately 60–80%. Tetracyclines, as a class, are widely distributed throughout the body, including the heart and kidneys, lungs, muscles, pleural fluid, bronchial secretions, sputum, bile, saliva, urine, synovial and ascitic fluids, and aqueous and vitreous humors. Only small amounts of tetracycline and oxytetracycline are distributed into the cerebrospinal fluid, and therapeutic levels may not be achieved. Although all tetracyclines are distributed into the prostate and the eye, doxycycline and minocycline penetrate these and other tissues more effectively.
Tetracyclines cross the placenta, enter the fetal circulation, and are distributed into milk. The volume of distribution of oxytetracycline is 2.1 L/kg in small animals, 1.4 L/kg in horses, and 0.8 L/kg in cattle. Plasma protein binding is approximately 10–40% for oxytetracycline.
Both oxytetracycline and tetracycline are eliminated unchanged, primarily by glomerular filtration. Patients with impaired renal function may have a prolonged elimination half-life, and the drug may accumulate with repeated dosing. These drugs do not appear to be metabolized; however, they are excreted through the gastrointestinal tract via biliary and non-biliary pathways and may be inactivated following chelation with fecal matter.
The elimination half-life of oxytetracycline is approximately 4.6 hours in dogs and cats, 4.3–9.7 hours in cattle, 10.5 hours in horses, 6.7 hours in swine, and 3.6 hours in sheep.

Bromhexine: In chickens and turkeys administered 1 mg/kg/day for 5 days, maximum plasma concentration (Cmax) was reached within 2–4 hours. The elimination half-life is 4–5 hours. Approximately 80% of the administered dose is eliminated within 24 hours after administration.

MECHANISM OF ACTION:

Tylosin: Tylosin is thought to have the same mechanism of action as erythromycin (binding to the 50S ribosomal subunit and inhibition of protein synthesis) and exhibits a similar spectrum of activity. It is a bacteriostatic antibiotic. Tylosin may have immunomodulatory effects on cell-mediated immunity. In dogs, it increases the concentration of enterococci (*Enterococcus faecalis*) in the jejunum. Enterococci are thought to have a probiotic effect.

Oxytetracycline: Tetracyclines generally act as bacteriostatic antibiotics and inhibit protein synthesis by reversibly binding to the 30S ribosomal subunits of susceptible microorganisms, thereby preventing aminoacyl-tRNA from binding to the ribosome. Tetracyclines are also believed to bind reversibly to the 50S ribosomal subunit and to alter the permeability of the cytoplasmic membrane in susceptible microorganisms. At high concentrations, tetracyclines may also inhibit protein synthesis in mammalian cells.

Bromhexine: It regulates bronchial mucus production, often increasing its overall quantity and modifying the activity of secretory cells. It reduces mucus viscosity and increases tracheobronchial ciliary activity.

PRECAUTIONS- WARNINGS- CONTRAINDICATIONS:

Tylosin is contraindicated in patients with hypersensitivity to the drug or to other macrolides (e.g., erythromycin). Most veterinarians believe that Tylosin is contraindicated in horses, as it may cause severe and sometimes fatal diarrhea in this species. The product is contraindicated in patients with hypersensitivity to any of its components. Do not administer the product to species other than those indicated. Do not administer to animals with hypervitaminosis. Do not administer the product to young or lactating animals. Use with caution in patients with renal or hepatic impairment. In pregnant animals, the product should be administered during the second half of gestation only when the benefits outweigh the potential risks to the fetus.

DRUG INTERACTIONS

The combination of tylosin, a sulfonamide (such as sulfachloropyridazine, sulfamonomethoxine, etc.), and trimethoprim has been used for the treatment of respiratory infections, and this combination has been shown to have at least an additive effect. Tylosin tartrate may be combined with pH buffers such as $MgCl_2$, ascorbic acid, and analgesics (e.g., lidocaine). In combination with tetracyclines, it has a synergistic effect against *Pasteurella* spp. When combined with dihydrostreptomycin, an additive effect is achieved, as tylosin acts against Mycoplasma and other susceptible bacteria, while dihydrostreptomycin acts against bacteria such as *E. coli* and other Gram-negative anaerobes.

ADVERSE REACTIONS

Tylosin is considered a relatively safe drug. In some cases, it may cause diarrhea, erythema, and pruritus in swine.

WITHDRAWAL PERIOD:

Poultry and Swine:
Meat**:** 5 days.
Poultry:
Eggs**:** Do not use in birds whose eggs are intended for human consumption.

COMMERCIAL PRESENTATIONS:

Sachet x 20 g
Sachet x 100 g
Sachet x 500 g
Bucket x 1 kg