



NEOSIN-T

Registration number: Q-7972-191

FORMULATION:

Each g contains:

Neomycin sulfate	4.58 mg
Tetracycline Hydrochloride	4.2 mg
Prednisolone Acetate	0.5 mg
Excipient (Vitamin E) q.s.	1 g

DOSAGE SIZE AND FORM: 25 g

OINTMENT

TETRACYCLINE, NEOMYCIN AND PREDNISOLONE
BROAD-SPECTRUM BACTERICIDE AND ANTI-INFLAMMATORY AGENT

VETERINARY USE

INDICATIONS:

Indicated for the treatment of simple or infected wounds, sores, burns, pustular dermatitis and eczema. The combination of Neomycin and Tetracycline has broad-spectrum bactericidal properties, it attacks the main pathogenic microorganisms involved in infections and skin wounds. Prednisolone Acetate facilitates a rapid evolution of wounds due to its anti-inflammatory action.

It is efficient against Gram positive bacteria: *Corynebacterium* spp., *Listeria monocytogenes*, *Clostridium* spp., *Bacillus anthracis*, *Staphylococcus* spp.; Gram negative bacteria: *Escherichia coli*, *Brucella* spp., *Plesiomonas* spp., *Aeromonas* spp., *Neisseria* spp., *Klebsiella* spp., *Proteus* spp., *Pseudomonas aeruginosa*, *Salmonella* spp., *Enterobacter* spp., *Serratia* spp., *Shigella* spp., *Bacteroides fragilis*.

NEOMYCIN

Neomycin is an aminoglycoside antibiotic, It inhibits the protein's synthesis by binding to ribosomal RNA, altering the genetic code of the bacterium. It is effective against gram-positive and gram-negative bacteria.

MECHANISM OF ACTION

The neomycin has a bactericidal activity, it inhibits the bacterial protein's synthesis through an irreversible union with de Ribosomal 30 S sub-unit of the susceptible bacteria. The active form neomycin is transported to the bacteria, where it binds to the receptors of the Ribosomal 30 S sub-unit. This union interferes with the beginning complex between messenger RNA and the 30 S sub-unit. As a result, the production of abnormal non-functional proteins, because a deficient bacterial DNA interpretation.

The following microorganisms are considered susceptible to the neomycin in vitro: *Acinetobacter* spp; *Citrobacter* spp; *Enterobacter* spp; *Escherichia coli*, *Haemophilus influenzae* (negative beta-lactamase); *Haemophilus influenzae* (positive beta-lactamase), *Klebsiella* spp. *Neisseria* spp. *Proteus mirabilis*, *Proteus vulgaris*, *Providencia* spp. *Salmonella* spp. *Serratia* spp. *Shigella* spp. *Staphylococcus aureus*, *Staphylococcus epidermidis*, etc.



REGISTRATION NUMBER Q-7972-085



TETRACYCLINE CHLORHIDE

Is a broad spectrum tetracyclic antibiotic produced by the actinomycetes *Streptomyces griseus*. To inhibit or reduced resistant bacterial developing and maintain its effectiveness, the tetracycline can be only used to treat or prevent infections caused by susceptible bacteria.

MECHANISM OF ACTION

Tetracyclines act by binding to the 30s subunit of the ribosome, preventing the access of aminoacyl-t-RNAs that cannot bind to the growing protein. Consequently, protein synthesis stops, causing the cell death of the bacteria. Tetracyclines cross the outer membrane of Gram-negative enteric bacteria through OPDF channels and ompC pores, as positively charged cations (probably tetracycline-magnesium coordination complexes). The ionic complex of the metal ion-antibiotic is attracted by the Donnan potential across the outer membrane, accumulating in the periplasm, where the metal ion-tetracycline complex dissociates to release tetracycline, a weakly lipophilic molecule capable of diffusing through across the lipid bilayer regions of the inner cytoplasmic membrane. Similarly, the electroneutral, lipophilic form is transferred across the cytoplasmic membrane of Gram-positive bacteria. Within the cytoplasm, tetracycline molecules are likely to be chelated, since the internal pH and concentrations of divalent metal ions are higher than those outside the cell. In fact, the active ribosome-binding species of the antibiotic is likely to be a magnesium-tetracycline complex. The binding of tetracyclines to the ribosome is reversible, which explains their bacteriostatic effects. The Tetracycline- ribosome union is reversible, that's because it has bacteriostatic effects.

The tetracyclines are active against the following gram negative bacterias: *Neisseria gonorrhea*, *Haemophilus ducreyi*, *Haemophilus influenzae*, *Yersinia pestis*, *Francisella tularensis*, *Vibrio cholera*, *Bartonella bacilliformis* and *Brucella* spp. Also, they are active against *Escherichia coli*, *Klebsiella* spp., *Enterobacter aerogenes*, *Shigella* spp., *Acinetobacter* spp. and *Bacteroides* spp.

The tetracyclines are active against the following gram positive bacterias: *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Enterococcus* spp. (*Streptococcus faecalis* y *Streptococcus faecium*) and streptococcus alpha hemolytic. However, up to 44% of *Streptococcus pyogenes* and 74% of *Streptococcus faecalis* strains have been found to be resistant to tetracyclines.

PREDNISOLONE ACETATE

Prednisolone is a synthetic corticosteroid classified as intermediate-acting, It has a little mineralocorticoid activity, and therefore with anti-inflammatory and immunosuppressive action. It's mechanism of action is through the inhibition of the prostaglandin and leukotrienes synthesis. Substances that mediate the cellular and vascular process related to inflammation and also, they mediate the immunologic response.

This means that Prednisolone reduces vasodilation, decrease fluid exudate, leukocyte activity, neutrophil aggregation and degranulation, release of hydrolytic enzymes by lysosomes, production of superoxide-type free radicals, and the number of blood vessels (with less fibrosis) in chronic processes. The two actions correspond to the same mechanism that consists of inhibiting the synthesis of phospholipase A2, it is an enzyme that releases polyunsaturated fatty acids, precursors of prostaglandins and leukotrienes.

VITAMIN E

Fat-soluble vitamin with antioxidant effects, it also regulates the arachidonic acid metabolism. Vitamin E is indicated to the treatment of burns, surgical scars and wounds.

SPECIES

Bovine, Equine, Ovine, Caprine, Swine, Canine and Feline



**DOSE:**

3 to 4 times for day at Veterinary Doctor's discretion.

INSTRUCTIONS FOR USE:

To Apply a considerable amount over the affected area.

ROUTE OF ADMINISTRATION:

Topical.

WARNINGS AND/OR RESTRICTIONS:

External use, do not ingest. In case of accidental ingestion, show the product label to the doctor. It is not considered a toxic product, however, depending on the amount of product ingested, it can cause diarrhea and/or vomiting. Avoid contact with the eyes. Discontinue immediately in case of adverse reactions. Keep in a cool, dry place, in a range within 15-30 °C and protected from direct sunlight. Keep out of reach of children and pets. Any unused veterinary drug product, residues derived from it and empty containers must be disposed safely and in accordance with local regulations, avoiding contaminating water sources. Product for exclusive use in Veterinary Medicine.

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