PSB-EXCEL POWDER

(Procaine Penicillin, Streptomycin Sulphate, Zinc Bacitracin, Neomycin Sulphate)

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE VETERINARY MEDICINAL PRODUCT

PSB-EXCEL POWDER

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each Kg Contains:
Procaine Penicillin ………………. 12gm
Streptomycin Sulphate ………….. 36gm
Zinc Bacitracin (10%) …………… 52gm
Neomycin Sulphate ……………… 10gm

3. PHARMACEUTICAL FORM

Oral powder

4. CLINICAL INFORMATION

4.1. Target species

Poultry.

4.2. Indications for use specifying the target species

This Powder performs better, through optimal use of nutrients improves feed efficiency & weight gain, promotes health & growth, increases egg production & This Powder stabilizes the intestinal flora favorably, reduces morbidity & mortality.

4.3. Contraindications

Do not use any of these drugs in animals with a known allergy or hypersensitivity to the specific active ingredients

4.4. Special warnings for each target species

Not Specified.

4.5. Special precautions for use

Special precautions for safe use in the target species:

Not Specified.

Special precautions to be taken by the person administering the product to animals:

When using, do not eat, drink or smoke.

Wash splashes from eyes and skin immediately.
Take off immediately any contaminated clothing.
Wash hands and exposed skin before meals and after work.

Special precautions for environmental protection

Not applicable.

4.6. Adverse reactions (frequency and seriousness)

Not Reported

4.7. Use during pregnancy and lactation or lay

Not Reported

4.8. Interaction with other veterinary medicinal products and other forms of interaction

Not Reported.

4.9. Dosage and administration route

Poultry: (For 3-5 days or fill the disappearance of disease)
Increase weight gain: 1kg-2kg per ton feed continuously.
Increase of egg production and hatchability: 1kg-2kg per ton of feed continuously.
For maintenance & feed efficiency. 500gm-1kg per ton of feed.

4.10. Overdose (symptoms, emergency procedures, antidotes), if necessary

Not Reported.

4.11 Specific restrictions on use and special conditions of use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products to reduce the risk of development of resistance

Not applicable

4.12. Withdrawal period:

Zero Days.

5. PHARMACOLOGICAL PROPERTIES

ATCvet code: **QJ01RA90**,

5.1. Pharmacodynamics properties

Procaine Penicillin As a beta-lactam antibiotic, Procaine Penicillin works by interfering with the synthesis of the bacterial cell wall. It binds to and inactivates enzymes known as penicillin-binding proteins (PBPs), which are crucial for the final stages of cell wall construction. This action leads to a weakened and unstable cell wall, causing the bacterial cell to swell and eventually rupture due to osmotic pressure. It is bactericidal and most effective against Gram-positive bacteria.
Streptomycin is an aminoglycoside antibiotic. Its mechanism of action involves irreversibly binding to the 30S ribosomal subunit of susceptible bacteria. This binding interferes

with protein synthesis by causing misreading of the mRNA genetic code. As a result, the bacteria produce non-functional proteins, which leads to cell death. It is bactericidal and effective against a range of Gram-negative bacteria.
Bacitracin acts by inhibiting bacterial cell wall synthesis. It prevents the transport of cell wall precursors by forming a complex with C55-isoprenyl pyrophosphate, a lipid carrier molecule crucial for moving peptidoglycan building blocks across the bacterial cell membrane. This action leads to a breakdown of the cell wall, causing the bacteria to die. Its effectiveness is primarily against Gram-positive bacteria.
Neomycin sulfate is an aminoglycoside antibiotic that exerts its bactericidal effect by irreversibly binding to the 30S ribosomal subunit of susceptible bacteria. This action disrupts protein synthesis by causing misreading of the mRNA, which leads to the production of non-functional proteins and ultimately, cell death. It is effective against a wide range of aerobic Gram-negative bacteria, including *E. coli* and *Salmonella*, but has limited activity against Gram-positive bacteria. This mechanism makes it a concentration-dependent antibiotic, meaning its effectiveness is linked to achieving a high peak concentration.

5.2 Pharmacokinetic information

Procaine Penicillin is a combination of penicillin G and procaine. The procaine slows down the absorption of penicillin from the injection site, allowing for a longer duration of action. After intramuscular administration, penicillin is distributed widely in the body, but it does not easily cross the blood-brain barrier unless the meninges are inflamed. The drug is primarily excreted rapidly through the kidneys, with a short half-life in the bloodstream.
Streptomycin Sulphate When given intramuscularly, Streptomycin Sulphate is absorbed rapidly. It has a relatively short half-life and is distributed primarily in the extracellular fluid. It does not penetrate well into the cerebrospinal fluid, although it can cross the placental barrier. The drug is not metabolized in the body and is excreted largely unchanged in the urine through glomerular filtration.
Zinc Bacitracin is a polypeptide antibiotic. When administered orally, it is very poorly absorbed from the gastrointestinal tract and thus exerts its effects locally within the gut. Due to its limited systemic absorption, it is primarily excreted in the feces. This lack of absorption makes it a safe choice for use in feed to control intestinal infections without leaving significant residues in the animal's tissues.
Neomycin sulfate for veterinary use, neomycin sulfate is most commonly administered orally. Its primary pharmacokinetic characteristic is its poor absorption from the gastrointestinal tract. A very small fraction of the drug is absorbed into the bloodstream (bioavailability is less than 5%), which means it acts almost entirely within the gut to combat intestinal infections. Because of this poor absorption, the risk of systemic toxicity is low. The small amount that is absorbed is not significantly metabolized and is excreted unchanged, primarily by the kidneys via glomerular filtration. The unabsorbed portion is eliminated in the feces.

6. PHARMACEUTICAL INFORMATION

6.1 Incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

6.2. Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 2 years.
Shelf life after dilution according to instructions: 24 hours.

6.3. Special precautions for storage

Store below 25°C.
Protect from light and moisture.
Keep out of the reach of children.
To be used as directed by the registered veterinary practitioner only.

6.4. Nature and composition of primary conditioning

Printed Milky White Polyethylene Bag for 500gm, 5 Kg & Printed plastic Polyethylene Woven bag for 25 Kg, Plastic French Jar with yellow cap for 2.5 Kg

SPECIAL PRECAUTIONS FOR THE DISPOSAL OF WASTE MATERIALS
UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS

Waste materials derived from the use of such products
Medicinal products should not be disposed of via wastewater or household waste.
Use return systems for unused veterinary medicinal products or waste materials derived from such products, in accordance with local requirements and national collection systems applicable to the veterinary medicinal product concerned.
Treated animals should be kept in shelters throughout the treatment period and their droppings should be collected and NOT used for soil fertilization.

7. MARKETING AUTHORISATION HOLDER

Nawan Laboratories (Pvt.) Ltd.
Plots No. 136-138, Sector-15,
Korangi Industrial Area, Karachi-74900, Pakistan.

8. MARKETING AUTHORISATION NUMBER

Reg. No.: 082489

9. DATE OF FIRST AUTHORISATION

Date of Reg.: 30-10-2017

10. DATE OF REVISION OF THE TEXT

17-08-2025