GESTIWAN POWDER

(Propionic Acid Calcium, Propionic Acid Sodium, Acetanilide, Magnesium Oxide, Iron II Sulphate, Zinc Sulphate, Magnesium Sulphate, Copper Sulphate, Cobalt Sulphate, Sodium Molybdate, Sodium Chloride)

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE VETERINARY MEDICINAL PRODUCT

GESTIWAN POWDER.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 1000 Gram Powder contains:-
Propionic Acid Calcium ……. 250gm
Propionic Acid Sodium …….. 400gm
Acetanilide…… 150gm
Magnesium Oxide…… 125gm
Iron II Sulphate…… 400mg
Zinc Sulphate…… 100mg
Magnesium Sulphate…… 200mg
Copper Sulphate…… 450mg
Cobalt Sulphate……400mg
Sodium Molybdate……100mg
Sodium Chloride…….. 20gm

3. PHARMACEUTICAL FORM

Oral Powder.

4. CLINICAL INFORMATION

4.1. Target species

Cattle, Camel, Calf, Sheep, Goat & Horse.

4.2. Indications for use specifying the target species

Treatment of alimentary caused disturbances & disorders of rumen digestion, indigestion in the course of diseases connected with fever, traumatic indigestions, feed intoxications with diarrhea, primary & secondary acetonemia

Treatment of disturbances of carbohydrate metabolism for general appetizing tonic after digestion failures

4.3. Contraindications

Hypersensitivity to any of the ingredients of the product.

4.4. Special warnings for each target species

Not Reported.

4.5. Special precautions for use

Special precautions for safe use in the target species:

Not reported.

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

Unnecessary handling and direct contact with the product should be avoided and protective gloves should be worn if necessary. If the user of the product is hypersensitive to the medicinal substances it contains, careless handling may lead to a hypersensitivity reaction.

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

Suspend 1 bag 100 g in 1-2L 0f drinking water administer with the help of a bottle or stomach tube

CATTLE one Sachet per treatment **CAMEL** one bag to two Sachet per treatment **HORSE** half –one Sachet per treatment **CALF, GOAT, SHEEP** ¼ – 1/2 Sachet per treatment

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

Not Reported.

4.11. Restrictions and special conditions of use, including restrictions on the use of antimicrobial and antiparasitic veterinary drugs, in order to reduce the risk of resistance development

Not Applicable.

4.12. Withdrawal period:

Zero

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Combination of Minerals.

5.1. Pharmacodynamics properties

Propionic Acid, Calcium Propionate, Propionic Sodium Acid: These act as antimicrobials and antifungals, primarily by the undissociated propionic acid molecule penetrating microbial cell membranes. Once inside, it acidifies the cell, disrupting key pH-sensitive enzymes and interfering with cellular metabolism to halt growth.
Acetanilide: This compound functions as an analgesic and antipyretic through its active metabolite, paracetamol (acetaminophen). Paracetamol's mechanism involves the inhibition of prostaglandin synthesis in the central nervous system (CNS), thereby reducing pain signaling and lowering fever.
Magnesium Oxide & Magnesium Sulphate: Magnesium oxide acts as an antacid by neutralizing stomach acid, while both salts function as osmotic laxatives by drawing water into the intestinal lumen. Systemically, magnesium acts as a calcium antagonist, depressing the CNS and neuromuscular transmission to produce anticonvulsant effects.
Iron II Sulphate (FeSO4): This compound provides essential ferrous iron, a required element for hematopoiesis. Its role is to replenish iron stores needed as a central component of hemoglobin and myoglobin for oxygen transport and for various enzymes involved in cellular metabolism.
Zinc Sulphate (ZnSO4): Zinc is a vital trace element acting as a cofactor for over 300 enzymes across the body. Its pharmacodynamics include supporting immune function, facilitating wound healing through cell division, and regulating metabolism and gene expression.
Copper Sulphate (CuSO4): It supplies essential copper, which acts as a cofactor for enzymes critical to iron metabolism, energy production, and the formation of connective tissue. In high doses, copper ions exert an antimicrobial and algicidal effect by binding to and damaging microbial proteins.
Cobalt Sulphate (CoSO4): Cobalt's pharmacodynamic function is to serve as the metal atom necessary for the microbial synthesis of **Vitamin B12 (Cobalamin)**. B12 is a key cofactor for DNA synthesis and various critical metabolic pathways.
Sodium Molybdate (Na2MoO4): This compound provides molybdenum, an essential trace element that serves as a cofactor for important molybdoenzymes like xanthine oxidase and sulfite oxidase. These enzymes are critical for the metabolism of sulfur, nitrogen, and various detoxification processes.
Sodium Chloride (NaCl): NaCl provides the main extracellular electrolytes (Na^+ and Cl^-), crucial for maintaining plasma osmolality and fluid distribution. Sodium ions are fundamental for regulating blood volume and generating electrical signals in nerves and muscles.

5.2. Pharmacokinetic information

Propionic Acid, Calcium Propionate, Propionic Sodium Acid: These are rapidly absorbed from the GI tract and delivered to the liver via the portal vein. The propionate ion is quickly and extensively metabolized through conversion to propionyl-CoA, which enters the TCA cycle for energy; consequently, little is excreted unchanged.
Acetanilide: The drug is readily absorbed from the gut and distributed widely before undergoing extensive hepatic metabolism (first-pass effect). Its pharmacokinetics are dominated by its rapid conversion to the active metabolite, paracetamol, and subsequently to other toxic metabolites, which are then primarily eliminated as inactive glucuronide and sulfate conjugates via the kidneys.

Magnesium Oxide & Magnesium Sulphate: Following oral intake, only a small, variable percentage (4%-15%) of the magnesium ion is absorbed from the intestines. Absorbed magnesium is distributed to bone and soft tissue, is not metabolized, and is homeostatically regulated, with excess eliminated rapidly through the kidneys in the urine.
Iron II Sulphate (FeSO4): Ferrous iron absorption in the duodenum is tightly regulated by the body's iron requirements, with limited bioavailability in non-deficient states. Once absorbed, it is immediately bound to transferrin for transport, primarily to the bone marrow, and stored as ferritin, as the body has no physiological mechanism for active iron excretion.
Zinc Sulphate (ZnSO4): Zinc absorption occurs mainly in the small intestine and is homeostatically controlled. It is widely distributed, particularly to muscle and bone, where it is not metabolized. The main route of elimination and regulation is through endogenous secretion into the gastrointestinal tract and subsequent excretion in the feces.
Copper Sulphate (CuSO4): Copper is absorbed in the upper intestine and delivered to the liver, where it is tightly regulated. It is incorporated into ceruloplasmin for distribution, and is not metabolized. Homeostasis is maintained by the liver, which controls its primary excretion route: biliary secretion into the feces.
Cobalt Sulphate (CoSO4): The absorption of inorganic cobalt is variable but can increase in iron-deficient states due to shared uptake transporters. It is rapidly distributed, and any amount not incorporated by microbes (in ruminants) into Vitamin B12 is quickly cleared and primarily eliminated via the kidneys in the urine.
Sodium Molybdate (Na2MoO4): Molybdate is readily absorbed from the gastrointestinal tract, distributed mainly to the liver and kidneys, and is not metabolized. The absorbed compound is rapidly cleared from the body, with its primary elimination route being renal excretion (urine).
Sodium Chloride (NaCl): Both sodium (Na^+) and chloride (Cl^-) ions are almost completely absorbed throughout the small intestine and colon. They are distributed throughout the extracellular fluid and are not metabolized. Their concentration and volume are tightly regulated by the kidneys, which excrete excess amounts to maintain fluid and electrolyte balance.

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 or reconstitution according to instructions: 24 hours.

6.3. Special precautions for storage

Store below 25°C in a dry place.
Do not store in the refrigerator or freezer.
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

100 gm sachet in metalized aluminum foil

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

Any unused veterinary medicinal products or waste materials derived from such medicinal products should be disposed of in accordance with local requirements and placed in appropriate collection and disposal systems for unused or expired medicinal products.

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.: 130302

9. DATE OF FIRST AUTHORISATION

Date of Reg.: 29-09-2025

10. DATE OF REVISION OF THE TEXT

17-02-2025

MANUFACTURED BY:

NAWAN LABORATORIES (PVT) LTD.
136, Sector 15, Korangi Industrial Area, Karachi-74900, Pakistan.