

Nugmentan Injection

(Amoxicillin, Clavulanic Acid)

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Nugmentan Injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Amoxicillin (as Amoxicillin Trihydrate)	140mg
Clavulanic acid (as Potassium clavulanate)	35mg

3. PHARMACEUTICAL FORM

Suspension for injection.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle, Sheep & Goat

4.2 Indications for use, specifying the target species

Cattle:

Nugmentan Injection has a broad spectrum of bactericidal activity against gram positive and gram Negative Bacteria including:

Respiratory infections

Soft tissue infections (e.g. joint/navel ill, abscesses etc.)

Metritis

Mastitis.

Combined Therapy for the treatment of bovine mastitis. In the situation where systemic treatment as well as intramammary treatment is necessary

4.3 Contraindications

Do not use in cases of hypersensitivity to the active substances or to any of the excipients.

The product should not be administered to rabbits, hamsters or gerbils. Caution is advised in its use in other very small herbivores.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

i) Special precautions for use in animals

Official and local antimicrobial policies should be taken into account when the product is used. Use of the product should be based on susceptibility testing of the bacteria isolated from the animal. If this is not possible, therapy should be based on local epidemiological information.

Avoid use of the product in herds where no β -lactamase producing *Staphylococci* strains have been isolated. Veterinarians should strive to use narrow spectrum antibiotics if possible. Inappropriate use of the product may increase the prevalence of bacteria resistant to β -lactam antibiotics and may decrease the effectiveness of treatment with β -lactam antibiotics, due to the potential for cross-resistance.

Care should be taken to avoid contaminating the remaining contents of a vial with water.

Clavulanic acid is moisture sensitive. It is very important therefore, that a completely dry needle and syringe is used when extracting suspension for injection in order to avoid contaminating the remaining contents of the vial with drops of water.

Contamination will result in obvious beads of dark, brown discolouration corresponding to the introduced water droplets. Material affected in this way should not be used as it may have significantly reduced potency.

ii) Special precautions to be taken by the person administering the veterinary medicinal product to animals

Penicillins and cephalosporins may cause hypersensitivity (allergy) following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross-reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.

Care should be taken to avoid accidental self-injection.

Do not handle this product if you know you are sensitised, or if you have been advised not to work with such preparations.

Handle this product with great care to avoid exposure, taking all recommended precautions.

If you develop symptoms following exposure such as a skin rash, you should seek medical advice and show the doctor this warning. Swelling of the face, lips or eyes or difficulty in breathing are more serious symptoms and require urgent medical attention. Wash hands after use.

4.6 Adverse reactions (frequency and seriousness)

Use of the product may occasionally result in pain on injection and/or local tissue reaction.

4.7 Use during pregnancy, lactation or lay

The product may be used safely in pregnant animals.

4.8 Interaction with other medicinal products and other forms of interaction

None known.

4.9 Amount(s) to be administered and administration route

For intramuscular injection, administer 8.75 mg/kg bodyweight (1 ml per 20 kg bodyweight) daily for 3-5 days. Shake the vial well before use. After injection, massage the injection site. Use a completely dry sterile needle and syringe. Swab the septum before removing each dose.

Nugmentan Injection	
8.75 mg/kg bodyweight (7.0 mg amoxicillin, 1.75 mg clavulanic acid) i.e. 1 ml/20 kg bodyweight.	
24 hours	↓
8.75 mg/kg bodyweight (7.0 mg amoxicillin, 1.75 mg clavulanic acid) i.e. 1 ml/20 kg bodyweight.	
24 hours	↓
8.75 mg/kg bodyweight (7.0 mg amoxicillin, 1.75 mg clavulanic acid) i.e. 1 ml/20 kg bodyweight.	
Where necessary Nugmentan Injection may be administered for an additional two days for a total of 5 daily injections.	

To ensure the correct dosage, bodyweight should be determined as accurately as possible to avoid underdoing.

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

Potentiated penicillin is of a low order of toxicity and is well tolerated by the parenteral route. Apart from occasional injection site reactions, which may occur at the recommended dose, no other adverse effects are to be expected from an accidental overdose.

4.11 Withdrawal period(s)

Meat and Offal: 42
days. Milk: 60 hours

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Amoxicillin and enzyme

inhibitor **ATC Vet Code:** QJ01CR02

5.1 Pharmacodynamic properties

Mode of Action

Amoxi
cillin:

The mechanism by which β -lactam antibiotics bind with proteins associated with developing the bacterial cell wall, resulting in the ultimate lysis of the cell, is well established. In the case of Gram-positive bacteria the β -lactam can freely pass across the peptidoglycan layer in the aqueous phase to the site of activity at the cytoplasmic membrane. In the case of Gram-negative bacteria there is a hydrophobic barrier outside the peptidoglycan layer. Broad-spectrum β -lactam antibiotics have the ability to cross this barrier by way of small pores in its structure.

There are three major mechanisms of resistance available to bacteria: the production of β -lactamase enzymes, impermeability of the cell wall by modification of the small pores and by modifications of the amino acid sequences at the cytoplasmic membrane interface where the cell wall is constructed.

Clavulanic
Acid:

In the absence of specific inhibitor enzymes with β -lactamase activity, β -lactamases either form complexes with the antibiotic or cause a breakdown of the β -lactam ring. In either case the antibacterial activity is lost.

Clavulanic acid has a β -lactam ring in its structure which is recognized by β -lactamases as a type of “penicillin”. The enzyme/clavulanate interaction is irreversible and results in the depletion of enzymes molecules.

6. PHARMACEUTICAL PARTICULARS

6.1 Major 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 year.
Shelf life after first opening the immediate packaging: 28 days.

6.3 Special precautions for storage

Store below 25°C

Protect from light and moisture

Shake well before use

Keep out of reach of children

To be used as directed by the registered veterinary practitioner only

This product does not contain an antimicrobial preservative.

Once a vial has been broached the contents should be used within 28 days.

6.4 Nature and composition of immediate packaging

Cardboard box with glass injection vial.

Vial is closed with a bromobutyl rubber stopper and sealed with an aluminum flip off seal.

Pack sizes: 50ml & 100ml

6.5 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with local requirements.

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.: 072675

9. DATE OF FIRST AUTHORISATION

Date of Reg.: 29-08-2011

10. DATE OF REVISION OF THE TEXT

05-07-2024

MANUFACTURED BY:



NAWAN
LABORATORIES (PVT) LTD.

136, Sector 15, Korangi Industrial
Area, Karachi-74900, Pakistan.