

DOTXIME

Ceftizoxime Dry Injection for Veterinary use Only

Description

Ceftizoxime for Injection is a sterile, lyophilized powder intended for **parenteral use in animals**. It contains **Ceftizoxime**, a third-generation cephalosporin antibiotic known for its **broad-spectrum bactericidal activity**, including against many Gram-positive and Gram-negative pathogens.

Ceftizoxime is **highly stable against most β -lactamase enzymes**, allowing it to remain effective in infections caused by resistant bacterial strains. It exhibits **excellent tissue penetration**, making it highly effective in deep-seated infections.

The formulation is supplied as a dry powder to be reconstituted with sterile water immediately before administration.

Specifications

- **Dosage Form:** Sterile lyophilized powder for injection
- **Appearance (Dry Powder):** White to off-white crystalline powder
- **Appearance (After Reconstitution):** Clear to slightly opalescent solution
- **pH (Reconstituted Solution):** 5.0 to 7.0 (approx.)
- **Sterility:** Must comply with pharmacopeial standards (USP)
- **Bacterial Endotoxins:** Within USP permissible limits
- **Assay:** 90% – 110% of labelled content
- **Moisture Content:** Within allowable pharmacopeial range
- **Container Integrity:** Type I glass vials, sealed with rubber stoppers and aluminium flip-off caps

Composition

Each vial contains:

- **Ceftizoxime (as Ceftizoxime Sodium U.S.P.)** – 1.5 gm or 3.0 gm
- **Excipients** – q.s.
- **Sterile Water for Injection** – Provided in the pack (free) for reconstitution

Pharmacological Category

- **Therapeutic Class:** Antimicrobial Agent
- **Drug Class:** Third-generation cephalosporin (β -lactam antibiotic)
- **Mechanism of Action:**
Ceftizoxime binds to penicillin-binding proteins (PBPs) on bacterial cell walls, **inhibiting cell wall synthesis** and resulting in cell lysis and death.

Indications (Veterinary Use)

Ceftizoxime is indicated for the treatment of bacterial infections in animals caused by susceptible organisms, including:

- Respiratory tract infections (e.g. pneumonia, bronchitis)
- Genito-urinary tract infections
- Gastrointestinal tract infections
- Septicaemia and bacteraemia
- Mastitis, metritis, and other post-parturient infections
- Skin, soft tissue, and wound infections
- Bone and joint infections (in selected cases)

Species: Suitable for use in cattle, buffalo, sheep, goats, pigs, dogs, and cats.

Dosage and Route of Administration

Route:

- Intramuscular (I.M.) or
- Intravenous (I.V.) injection

Dosage Guidelines:

- **Large Animals (Cattle, Buffalo, etc.):** 20–30 mg/kg body weight once or twice daily
- **Small Animals (Dogs, Cats, etc.):** 25–50 mg/kg once or twice daily
- **Duration:** 3–5 days, extendable based on clinical response

Note: Use immediately after reconstitution with provided sterile water.

Dosage Form and Presentation

- **Form:** Sterile dry powder for injection
- **Available Pack Sizes:**
 - 1.5 gm vial
 - 3.0 gm vial
- **Each pack includes:**
 - 1 glass vial of sterile powder
 - 1 ampoule/vial of sterile water for injection (free)

Key Advantages

- High stability against β -lactamases
- Broad-spectrum coverage
- Excellent bioavailability and tissue penetration
- Effective for deep and systemic infections
- Well tolerated across major veterinary species
- Ideal for single or twice-daily dosing

Adverse Effects

- Mild local pain or swelling at injection site
- Hypersensitivity reactions: rash, anaphylaxis (rare)
- Gastrointestinal effects (more common in small animals): vomiting, diarrhoea
- Altered kidney or liver parameters (rare, in long-term use)

Precautions and Contraindications

- Contraindicated in animals with known cephalosporin or penicillin allergy
- Use cautiously in animals with severe renal impairment
- Do not mix with other medications in the same syringe unless compatibility is confirmed
- Not recommended for use in neonates unless prescribed by a veterinarian

Withdrawal Period

- **Meat:** 28 days after last injection
- **Milk:** 7 days after last injection

Ensure full withdrawal periods are followed before slaughter or milk collection.

Storage and Handling

- Store below 25°C in a dry place
- Protect from light and moisture
- Do not freeze
- Use reconstituted solution immediately
- Discard any unused portion responsibly
- Maintain cold-chain during transport if required

Schedule / Regulatory Classification

- **Prescription Drug – Veterinary Only**
- Regulated under **Schedule H1** or local equivalents
- Not for human use

HS Code / HSN Code

- **HS Code (International):** 3004.20 – Medicaments containing antibiotics
- **HSN Code (India):** 3004.20.90 – Other antibiotic formulations

Special Instructions

- Reconstitute only with the sterile water provided
- Do not split vials or reuse remaining contents
- Always complete the full course as prescribed
- Avoid use in animals intended for breeding unless approved by a veterinarian
- Follow all relevant veterinary drug regulations and good stewardship practices

? Frequently Asked Questions (FAQs)

Q1: What is Ceftizoxime?

A: Ceftizoxime is a third-generation cephalosporin antibiotic with broad-spectrum bactericidal activity used in veterinary infections.

Q2: Can it treat resistant bacterial infections?

A: Yes, it is effective against many β -lactamase producing strains due to its chemical stability.

Q3: Can it be used during pregnancy or lactation?

A: Use only under the direction of a veterinarian after assessing risk-benefit.

Q4: Is this safe for puppies or calves?

A: Use with caution in neonates or very young animals. Dosage adjustment may be necessary.

Q5: Can reconstituted solution be stored for later use?

A: No. It should be used immediately after mixing. Discard any unused solution.

Q6: Can it be given with other antibiotics?

A: Avoid mixing in the same syringe unless confirmed compatible. Consult a veterinarian.

