

Brand Name: CELTUM 1.5

Composition: Cefoperazone & Sulbactam for injection

Dosage Form: INJECTION

Category: BROAD-SPECTRUM ANTIBIOTIC (CEPHALOSPORIN + BETA-LACTAMASE INHIBITOR)

Packaging Type: Vial +Wfi.

PACKAGING: 1.5 GM

Brief Product Introduction:

CELTUM 1.5 is a powerful combination of a third-generation cephalosporin with a β -lactamase inhibitor, formulated and manufactured by **AstraEureka Pharmaceutical**, a reputed **manufacturer of sterile injectable compositions**. The product contains **Cefoperazone**, known for its broad-spectrum antibacterial activity, and **Sulbactam**, a β -lactamase inhibitor that enhances the efficacy of Cefoperazone against resistant strains. CELTUM 1.5 is indicated for the treatment of various moderate to severe bacterial infections, including hospital-acquired infections.

Composition:

Each vial contains:

Cefoperazone Sodium IP

equivalent to Anhydrous Cefoperazone.....1000 mg.

Sulbactam Sodium IP

equivalent to Sulbactam.....500 mg.

Key Ingredients:

1. **Cefoperazone (1000 mg):** A third-generation cephalosporin antibiotic active against a wide variety of Gram-positive and Gram-negative bacteria.
2. **Sulbactam (500 mg):** An irreversible β -lactamase inhibitor that protects Cefoperazone from enzymatic degradation and restores its activity against resistant pathogens.

Key Benefits:

1. Broad-spectrum coverage, including β -lactamase-producing organisms
2. Enhanced efficacy in mixed or polymicrobial infections
3. Excellent tissue penetration and high serum concentrations
4. Useful in both community-acquired and hospital-acquired infections
5. Effective against multi-drug resistant organisms (MDRs) in selected cases

Indications:

1. Lower respiratory tract infections (pneumonia, bronchitis)
2. Intra-abdominal infections
3. Urinary tract infections (complicated and uncomplicated)
4. Skin and soft tissue infections
5. Gynecological infections
6. Septicemia and bacteremia
7. Bone and joint infections
8. Meningitis (off-label under medical supervision)
9. Empirical treatment in neutropenic patients with fever

Directions for Use:

1. Administer only under supervision of qualified medical personnel
2. Reconstitute the vial with sterile water for injection or appropriate IV diluent
3. Administer either via **intravenous (IV)** or **intramuscular (IM)** route
4. Shake well until the powder dissolves completely
5. Use aseptic technique for preparation and administration

Dosage and Administration:

1. **Adults:** 1.5–3 g per day in divided doses every 12 hours
2. **Severe Infections:** Up to 6 g/day or as directed by the physician
3. **Children:** Dosage based on body weight (recommended: 40–80 mg/kg/day)
4. **Route:** IV infusion over 15–30 minutes or deep IM injection
5. **Renal Impairment:** Dose adjustment may be required depending on creatinine clearance

Safety Information:

1. Perform sensitivity testing before starting therapy
2. Monitor renal and hepatic function in prolonged therapy
3. Not to be mixed with calcium-containing IV solutions
4. Use with caution in patients with penicillin allergy
5. Avoid intrathecal administration

Mechanism of Action:

- **Cefoperazone** exerts its bactericidal effect by inhibiting **bacterial cell wall synthesis**, targeting **penicillin-binding proteins (PBPs)**, leading to cell lysis.
- **Sulbactam** irreversibly binds to bacterial **β -lactamase enzymes**, preventing the enzymatic degradation of Cefoperazone.

- This synergy enhances the antimicrobial spectrum to include β -lactamase-producing resistant strains, especially in **Enterobacteriaceae, Haemophilus, and Neisseria** species.

Contraindications:

1. Known hypersensitivity to cephalosporins, penicillins, or any component of the formulation
2. Patients with a history of severe allergic reactions to β -lactam antibiotics
3. Use in neonates with hyperbilirubinemia should be avoided (risk of kernicterus)

Side Effects:

1. Common: Diarrhea, nausea, rash, local pain at injection site
2. Less Common: Elevated liver enzymes, eosinophilia, phlebitis
3. Rare: Anaphylaxis, Stevens-Johnson Syndrome, blood dyscrasias
4. Overuse may lead to secondary infections including fungal superinfection

Important Notice:

- For hospital and clinical use only
- Complete the full course of therapy even if symptoms improve
- Should be used based on bacterial culture and sensitivity results when possible
- Not recommended for empirical use in viral infections
- Do not self-administer; requires professional medical handling

Storage Condition:

1. Store below 25°C in a dry, cool place
2. Protect from light and moisture
3. Reconstituted solution should be used immediately or as per guidelines
4. Do not freeze the reconstituted solution
5. Keep out of reach of children

Packing Information:

- Each pack contains **1 sterile vial of 1.5 gm** (Cefoperazone 1000 mg + Sulbactam 500 mg) with Wfi.