### Product Name: Cefuroxime Sodium

**Product Number:** C023  
**CAS Number:** 56238-63-2  
**Molecular Formula:** $C_{16}H_{15}N_4NaO_8S$  
**Molecular Weight:** 446.37 g/mol  
**Form:** Powder  
**Appearance:** White to yellowish crystalline powder  
**Source:** Synthetic  
**Water Content (Karl Fischer):** ≤3.5%  
**pH:** 6.0-8.5  
**Optical Rotation:** +55° to +65°  
**Storage Conditions:** ≤-20°C  

**Description:** Cefuroxime Sodium is a broad-spectrum, semi-synthetic second-generation cephalosporin antibiotic with increased stability to beta-lactamases. It is bactericidal against Gram-negative and Gram-positive bacteria. Cefuroxime sodium is freely soluble in aqueous solution (0.145 mg/mL).

**Mechanism of Action:** Like β-lactams, cephalosporins interfere with PBP (penicillin binding protein) activity involved in the final phase of peptidoglycan synthesis. PBP’s are enzymes which catalyze a pentaglycine crosslink between alanine and lysine residues providing additional strength to the cell wall. Without a pentaglycine crosslink, the integrity of the cell wall is severely compromised and ultimately leads to cell lysis and death. Resistance to cephalosporins is commonly due to cells containing plasmid encoded β-lactamases. Like many second generation cephalosporins, Cefuroxime is relatively stable in the presence of β-lactamases.

**Spectrum:** Cefuroxime sodium is a broad-spectrum antibiotic targeting a wide variety of Gram-negative and Gram-positive bacteria.
Microbiology Applications Cefuroxime sodium is commonly used in clinical in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Haemophilus influenzae* 0.25 µg/mL – 4 µg/mL
- *Neisseria gonorrhoeae* 0.2 µg/mL – 1.6 µg/mL
- For a complete list of Cefuroxime MIC values, click here.

References:


If you need any help, contact us: info@toku-e.com. Find more information on: www.toku-e.com/