



Cefminox sodium PRODUCT DATA SHEET

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Product Name:	Cefminox sodium
Product Number:	C124
CAS Number:	92636-39-0
Molecular Formula:	$C_{16}H_{20}N_7NaO_7S_3$
Molecular Weight:	541.56
Form:	Powder
Appearance:	White powder
Source:	Semi-synthetic
Water Content (Karl Fischer):	18.0-20.0%
pH:	4.5-6.0
Optical Rotation:	+62° to +72°
Storage Conditions:	-20°C
Description:	Cefminox sodium is a second generation cephalosporin antibiotic and is soluble in aqueous solution. TOKU-E offers two forms of cefminox: <u>cefminox (C076)</u> and cefminox sodium (C124).
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. Cefminox sodium, like many cephalosporins, is resistant to β -lactamase activity.
Spectrum:	Cefminox sodium is a broad spectrum antibiotic targeting a wide range of gram positive and gram negative microbes including anaerobes.
Microbiology Applications	Because of its potent properties against anaerobes, cefminox sodium can be used in cell media culture to select against <i>Bacteroides</i> , <i>Clostridium</i> , and other susceptible anaerobic bacteria.

References:

Georgopapadakou, N. H. "Mechanisms of Action of Cephalosporin 3'-quinolone Esters, Carbamates, and Tertiary Amines in Escherichia Coli." *American Society for Microbiology* 37.3 (1992): 559-65. *Antimicrobial Agents and Chemotherapy*. Web. 21 Aug. 2012.

Jacobs, Michael R., and et al. "In Vitro Activities of Cefminox against Anaerobic Bacteria Compared with Those of Nine Other Compounds." *Antimicrobial Agents and Chemotherapy* 42.3 (1998): 495-501. *www.ncbi.gov*. Web. 27 Aug. 2012.

"Cefminox Sodium Official Monographs." JPDB (n.d.): 332. *Ncbi.gov*. Web. 12 Mar. 2013.

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