



Mezlocillin Sodium PRODUCT DATA SHEET

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Product Name:	Mezlocillin Sodium
Product Number:	M017
CAS Number:	59798-30-0
Molecular Formula:	$C_{21}H_{24}N_5NaO_8S_2$
Molecular Weight:	561.57
Form:	Powder
Appearance:	white to off-white crystalline powder
Source:	semi-synthetic
Water Content (Karl Fischer):	≤6.0%
pH:	4.5-8.0
Optical Rotation:	+175° to +195°
Storage Conditions:	2-8 °C
Description:	Mezlocillin sodium is broad-spectrum, semisynthetic, β -lactam antibiotic and ureido penicillin derived from ampicillin. It is sparingly soluble in aqueous solution.
Mechanism of Action:	β -lactams 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 β -lactams is commonly due to cells containing plasmid encoded β -lactamases, however, mezlocillin is resistant to a number of β -lactamases.
Spectrum:	Mezlocillin is a broad-spectrum antibiotic targeting a wide variety of Gram-positive and Gram-negative bacteria.
Microbiology Applications	Mezlocillin is commonly used in clinical <i>in vitro</i> 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. Representative MIC values include: <ul style="list-style-type: none">• <i>Helicobacter pylori</i> 0.125 μg/mL – 0.25 μg/mL• For a complete list of Mezlocillin MIC values, click here.

References:

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