



Spectral Data, Polymyxin B[®]
Polymyxin B2 Sulfate, EvoPure[®]
PRODUCTION DATA SHEET[®]
issue date 01/06/2020

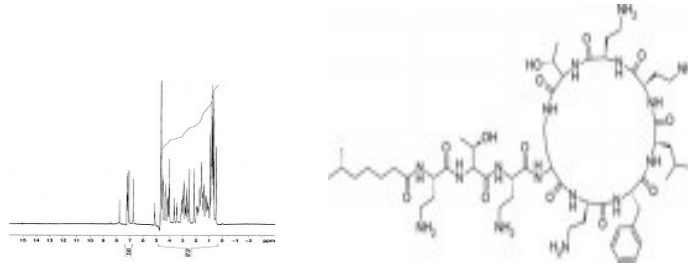
Product Name:	Polymyxin B2 Sulfate, EvoPure [®]
Product Number:	P039
CAS Number:	N/A
Molecular Formula:	C ₅₅ H ₉₆ N ₁₆ O ₁₃ · xH ₂ SO ₄ (lot specific)
Molecular Weight:	1189.45 g/mol (Free base)
Form:	Powder
Appearance:	White powder
Source:	<i>Pseudomonas sp.</i>
Storage Conditions:	-20°C
Description:	<p>Polymyxin B2 sulfate is one of several polypeptide components that comprises the antibiotic polymyxin B sulfate. The unique fatty acid moiety found in polymyxin B2 is 6-methylheptanoic acid (6-MHA). Results from <i>in vitro</i> studies have shown marginal differences in MIC data when comparing the fractions.</p> <p>Kassamali, et al. used polymyxin B1, polymyxin B2, polymyxin B3, and polymyxin B1-I to test for synergistic and antagonistic effects against various Gram-negative organisms. Read more here: "Microbiological Assessment of Polymyxin B Components Tested Alone and In Combination"</p> <p>Lim et al. used polymyxin B1, B2, B3, and B1-I from TOKU-E to study the stability of each compound in saline, dextrose, and saline/dextrose infusion solutions. "Physicochemical stability study of polymyxin B in various infusion solutions for administration to critically ill patients."</p>
Mechanism of Action:	Polymyxin B targets and alters permeability lipopolysaccharide (LPS) of gram negative bacteria leading to lysing of the cell. Polymyxin B only needs to interact with LPS, it is not required to enter the cell.
Spectrum:	Polymyxin B sulfate targets the outer membrane of gram negative bacteria especially <i>Pseudomonas aeruginosa</i> .
Microbiology Applications	<p>Polymyxin B sulfate is commonly used in clinical <i>in vitro</i> microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:</p> <ul style="list-style-type: none">• <i>Pseudomonas aeruginosa</i> 0.25 µg/mL – 1 µg/mL• For a complete list of polymyxin B sulfate MIC values, click here.

Plant Biology Applications

Polymyxin B sulfate was successfully tested to counteract phytopathogenic gram-negative bacterial growth including different strains of *Pseudomonas viridiflava* and *Erwinia carotovora*. Polymyxin B sulfate was shown to reduce bacterial growth of different strains of *Pseudomonas viridiflava* at low concentrations, (0.08 µg/ml) and *Erwinia carotovora* growth at slightly higher concentrations (0.25 µg/ml) (Selim et al. 2005).

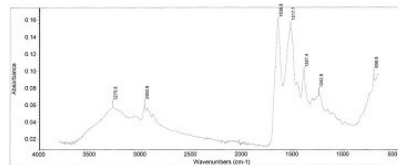
Technical Data:

HNMR Spectra



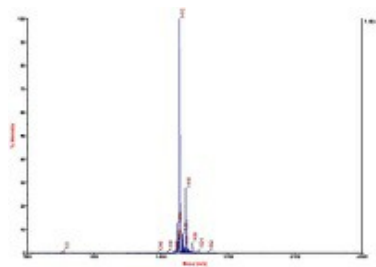
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FTIR Spectra



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Mass Spectra



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References:

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