Gentamicin A sulfate, EvoPure®
Spectral Data - Gentamicin A®

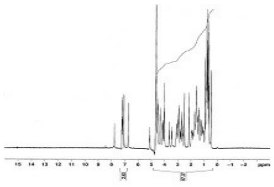
PRODUCT DATA SHEET

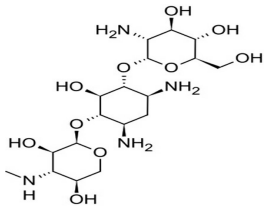
issue date 01/06/2020

Product Name:	Gentamicin A sulfate, EvoPure®
Product Number:	G035
CAS Number:	13291-74-2
Molecular Formula:	$C_{18}H_{36}N_4O_{10} \cdot xH_2SO_4$ (lot specific)
Molecular Weight:	468.50 g/mol (Free base)
Form:	Powder
Appearance:	White powder
Source:	*Micromonospora* spp.
Storage Conditions:	-20°C
Description:	Gentamicin A sulfate, EvoPure® is ≥99.0% Gentamicin A. Gentamicin A sulfate can be used to study the conversion of Gentamicin A to other congeners as the Gentamicin biosynthetic pathway is an attractive target for genetic engineering. Gentamicin A is a minor component of Gentamicin, along with B, X2 and others. The minor components account for 20% of Gentamicin as opposed to the major components (gentamicin C1, gentamicin C1a, and gentamicin C2) which account for 80% of Gentamicin. For more Gentamicin products, click here.
Mechanism of Action:	Aminoglycosides target the 30S ribosomal subunit resulting in an inability to read mRNA ultimately producing a faulty or nonexistent protein.
Spectrum:	Gentamicin is a broad-spectrum antibiotic targeting a wide range of Gram-positive and Gram-negative bacteria. Gentamicin has been found to be effective against certain β-lactam sensitive VRE or vancomycin resistant *Enterococcus*; a glycopeptide antibiotic resistant "superbug."
Microbiology Applications	Gentamicin EvoPure® compounds can be used to study effects of individual gentamicin components on various bacterial strains.

Technical Data:

HNMR Spectra

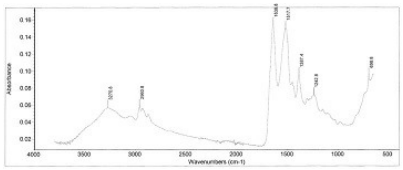




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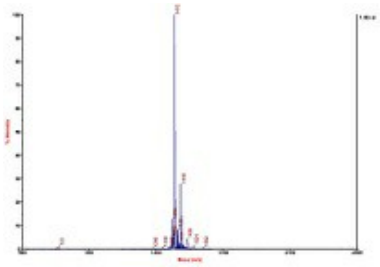
Solvent: cdc13
Instrument: Mercury 300
Frequency: 300 MHz

FTIR Spectra



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Mass Spectra



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Polarity/Scan Type: Positive
Solvent: H2O
Solution Concentration: 10 mg/mL

References:

Davis BD (1987) Mechanism of bactericidal action of aminoglycosides. Microbiol. Rev. 51(3): 341-350 PMD 3312985

Huang C et al (2015) Delineating the biosynthesis of gentamicin X2, the common precursor of the gentamicin C antibiotic complex. Chem. Biol. 22(2):251-261 PMID 25641167

Stypulkowska K, Blazewicz A, Fijalek Z, Sarna K.(2010) Determination of gentamicin sulphate composition and related substances in pharmaceutical preparations by LC with charged aerosol detection. Chromatograph. 72(11-12):1225-1229 PMID 21212825

Vydrin, AF (2003) Component composition of gentamicin sulfate preparations. Pharma. Chem. J 37(8): 448-449