



Gatifloxacin sesquihydrate

PRODUCT DATA SHEET

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Product Name:	Gatifloxacin sesquihydrate
Product Number:	G004
CAS Number:	180200-66-2
Molecular Formula:	$C_{19}H_{22}FN_3O_4 \cdot 1.5H_2O$
Molecular Weight:	375.39 g/mol
Form:	Powder
Appearance:	Whitish or yellowish crystalline powder
Solubility:	Water (pH 4.0): 60 mg/mL
Source:	Synthetic
Boiling Point:	607.8 °C
Melting Point:	182-185 °C
Flash Point:	321.4 °C
Storage Conditions:	2-8 °C
Description:	Gatifloxacin is a fourth generation fluoroquinolone antibiotic and is freely soluble in pH 4 at 60 mg/mL.
Mechanism of Action:	Fluoroquinolone antibiotics target bacterial DNA gyrase, an enzyme which reduces DNA strain during replication. Because DNA gyrase is required during DNA replication, subsequent DNA synthesis and ultimately cell division is inhibited.
Spectrum:	Gatifloxacin is a broad spectrum antibiotic targeting a wide variety of gram positive and gram negative bacteria especially those which cause pneumonia and skin infections.
Microbiology Applications	<p>Gatifloxacin 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 for infected patients. Representative MIC values include:</p> <ul style="list-style-type: none">• <i>Staphylococcus aureus</i> 0.25 µg/mL - 4 µg/mL• <i>Streptococcus pneumoniae</i> 0.5 µg/mL - 4 µg/mL• For a complete list of gatifloxacin MIC values, click here.
References:	Wolfson, John S., and David C. Hooper. "The Fluoroquinolones: Structures, Mechanisms of Action and Resistance, and Spectra of Activity in Vitro." <i>American Society for Microbiology</i> 4th ser. 28 (1985): 581-86.

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