Gentamicin solution

Product Number  G 1272
Storage Temperature  2-8 °C

Product Description
CAS Number: 1405-41-0 (powder form)

Molecular Formula¹:
Gentamicin C₁: C₂₁H₄₃N₅O₇
Gentamicin C₁₈: C₁₉H₃₉N₅O₇
Gentamicin C₂: C₂₀H₄₁N₅O₇

Molecular Weight (free base)¹:
Gentamicin C₁ = 477.6
Gentamicin C₁₈ = 449.5
Gentamicin C₂ = 463.6
Synonyms: Gentamycin, Garamycin, Gentiomycin C

This product is cell culture tested and is appropriate for use in cell culture applications. It is sterile-filtered and formulated to contain 10 mg/ml gentamicin in deionized water. The general recommended working concentration for eukaryotic cell culture is 50 µg/ml, and 15 µg/ml for prokaryotic cell cultures.

Gentamicin is an aminoglycoside antibiotic complex produced by fermentation of Microprimospora purpurea or M. echinospora.¹ It is a mixture of 3 major components designated as C₁, C₁₈, and C₂. The ratio of the three major components by HPLC analysis are:

C₁: < 45%
C₁₈: < 35%
C₂: < 30%

Gentamicin is used as the sulfate salt. Each component consists of five basic nitrogens and requires five equivalents of sulfuric acid per mole of gentamicin base.²

Gentamicin sulfate is a broad spectrum antibiotic. It inhibits the growth of a wide variety of Gram-positive and Gram-negative microorganisms, including strains resistant to tetracycline, chloramphenicol, kanamycin, and colistin, particularly strains of Pseudomonas, Proteus, Staphylococcus, and Streptococcus.³,⁴

Gentamicin sulfate inhibits bacterial protein biosynthesis by binding to the 30S subunit of the ribosome.⁴,⁵

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Procedure
This product is recommended for use in cell culture applications at a volume of 5 ml per liter. Gentamicin is stable at 37 °C for 5 days.

References
1. The Merck Index, 12th ed., Entry# 4398.