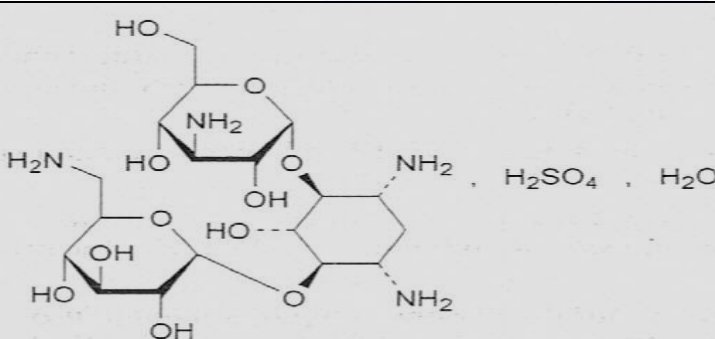


Product Profile

	
Product Name:	Kanamycin Sulfate Solution 10mg/ml
Product Catalog Number	03-049-1
Concentration:	10.0mg/ml(as base)
Unit Size Availability:	(B)100ml;(C)20ml
Formulation:	Frozen Solution
Optimal Storage Conditions:	-20°C
Stability: (Under Ideal Handling & Storage)	Please Refer To Product Label

Important Note! Please read the MSDS and Product Profile carefully in their entirety before using this material for possible safety precautions and potential hazards.

Product Description

Kanamycin Sulfate is an aminoglycoside (aminocyclitol) antibiotic isolated from *Streptomyces kanamyceticus* and represent products of secondary carbohydrate metabolism. They are a closely related group of bactericidal antibiotics and have broadly similar toxicological features.¹ *Kanamycin Sulfate* is an antimicrobial agent with bactericidal properties against Gram-negative and Gram-positive bacteria and *Mycoplasma spp.* Its Mode of Action (MOA) includes binding to the 70S ribosomal subunit, inhibits translocation (i.e. part of the translation process in which the mRNA is shifted one codon in relation to the ribosome) and elicits miscoding (i.e. causing mRNA to be misread by the ribosome) causing a lethal level of translational errors thereby inhibiting protein synthesis and a cascade effect resulting in bacterial cell death. The 2-deoxystreptamine-containing antibiotics include the structurally related neomycins and streptomycins².

Cross-resistance occurs between kanamycin, neomycin, paromomycin and framycetin and partial cross-resistance has been reported between kanamycin and streptomycin. The aminoglycosides are excellent at synergizing with the β -Lactams and glycopeptides to improve the efficiency of their bactericidal activity³.

Important Note: Please consult other comprehensive pharmacology references regarding other antibiotic properties, characteristics, interactions and possible incompatibilities.

Some Predominant Characteristics of *Kanamycin Sulfate* include:

- Easy-To-Use Formulation
- Isolated from *Streptomyces kanamyceticus*
- Bactericidal Activity
- Frozen Solution
- Sterile-Filtered(0.1 μ)

Storage & Handling

The product should be stored at -20°C and thawed to room temperature prior to use. The contents should not be left in the light for prolonged periods as it is light-sensitive. When stored in the dark under ideal conditions, the product is stable until the expiry date.

Instructions/ Procedure

- 1) Take a bottle from proper storage conditions at -20°C and read the label.
- 2) Thaw to room temperature.
- 3) Ensure that the cap of the bottle is tight.
- 4) Gently swirl the solution in the bottle.
- 5) Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
- 6) Using aseptic/sterile technique under a laminar-flow culture hood, work according to established protocols.
- 7) Recommended Dilution: 1:100

Quality Control

Test	Specification
Sterility:	Sterile
Appearance:	Clear Solution

Auxiliary Products

Product Name	Catalog Number	Storage Temperature
Dulbecco's Phosphate Buffered Saline(DPBS) without Calcium and Magnesium	02-023-1	Room Temperature (15-30°)
Amphotericin B 250 micrograms/ml	03-028-1	-20°C
Amphotericin B 2500 micrograms/ml	03-029-1	-20°C
Penicillin-Streptomycin 10X Solution	03-031-5	-20°C
Penicillin-Streptomycin Nystatin Solution	03-032-1	-20°C
Nystatin Cell Culture-Tested Biochemicals (γ-Irradiated)	41-506-1/5	-20°C
Note: For a list of Serum, other antibiotics, or Biological Industries' Products, please refer to our Product Catalog/Product Profiles, Product Guides and Internet Site.		

References:

- 1) Biological Industries (BI) Specifications
- 2) Darling, D.C. and Morgan S.J. Animal Cells: Culture and Media, John Wiley & Sons, New York, 1994
- 3) Current Edition Merck Index
- 4) Biological Industries (BI) Specifications
- 5) Current Edition USP/E Ph
- 6) Martindale, The Extra Pharmacopeia, 28th Edition, Royal Pharmaceutical Society: London, England
- 7) Lackie, J. M. The Dictionary of Cell & Molecular Biology, Academic Press: London, 2007
- 8) Gallagher, Jason C. and MacDougall, Conan. Antibiotics Simplified, Jones & Bartlett: Sudbury, Mass., 2009.

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