Technical Data Sheet

Version date: 24/02/14

Kanamycin solution 100X

CAT n°: SM-K0271

Theoretical pH : 8 ± 1

Storage conditions : Frozen / Freeze again after using at –20°C

Shelf life : 24 month

Sterility tests : - bacteria aerobic-anaerobic - bacteria strictly anaerobic - fungi

Endotoxin : <10 EU/ml

Composition : 10 mg/ml Kanamycin A + 9 mg/ml sodium chloride in water

Recommended use : Use in cell culture applications at 10ml/l. This concentration is for tissue culture media containing serum; serum-free media generally require lower concentration.

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

Stability: 5 days at 37°C

Mode of Action:
Binds to 70S ribosomal subunit; inhibits translocation; elicits miscoding.

Antimicrobial spectrum:
Gram-negative and Gram-positive bacteria, and mycoplasma.

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Application:
Antibiotics, combined with good sterile technique, help prevent microbiological contamination
When an irreplaceable culture becomes contaminated, determine if the contamination is bacteria, fungus, mycoplasma, or yeast. Isolate the contaminated culture from other cell lines. Clean incubators and laminar flow hoods with a laboratory disinfectant, and check HEPA filters.
Kanamycin at high concentration can be toxic to some cell lines; therefore, perform a dose response test to determine the level at which Kanamycin becomes toxic.
The following is a suggested procedure for determining toxicity levels and decontaminating cultures.

1) Dissociate, count, and dilute the cells in antibiotic free medium. Dilute the cells to the concentration used for regular cell passage.
2) Dispense the cell suspension into a multiwell culture plate or several small flasks. Add the Kanamycin to each well in a range of concentrations.
3) Observe the cells daily for signs of toxicity such as sloughing, appearance of vacuoles, decrease in confluency, and rounding.
4) When the toxic level has been determinated, culture the cells for two to three passages using the Kanamycin at a concentration one to two fold lower than the toxic concentration.
5) Culture the cells for one passage in an antibiotic-free media
6) Repeat step 4.
7) Culture the cells in antibiotic-free medium for 4 to 6 passages to determine if the contamination has been eliminated.