Penicillin – Streptomycin

CAT N°: LM-A4118

Storage conditions: - 20°C

Shelf life: 24 months

Composition: Displayed on website; also available on request

Colour: Colourless

pH: 6 ± 1

Osmolality: 300 ± 50 mOsm/kg

Endotoxin: <10 EU/ml

Sterility tests:
- Bacteria in aerobic and anaerobic conditions
- Fungi and yeasts

Cell Growth test: Not applicable

Other tests: Not applicable

Recommended use:
This product is intended to be use in cell culture applications without dilution. This concentration is for tissue culture media containing serum; serum-free media generally require lower concentration. But we recommend you to test the toxicity levels of the product regarding your cell lines (see § Application).
- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store product in an area protected from light
- Manipulate the product in aseptic conditions (e.g.: under laminar air flow)
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g.: gloves, mask, hygiene cap, overall…)
- In order to preserve all product qualities, it is recommended to thaw out the flask, to aliquote, then to re-freeze the produced flasks rather than to thaw out and re-freeze the flask at each use.
- It is recommended to use the product immediately after its thaw out.

The product is intended to be used in vitro for research or further manufacturing only and not for use as an Active Pharmaceutical Ingredient or food or animal feed.

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.
Penicillin-Streptomycin solution at high concentration can be toxic to some cell lines; therefore, perform a dose response test to determine the level at which Penicillin-Streptomycin solution 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 Penicillin-Streptomycin solution 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 determined, culture the cells for two to three passages using the Penicillin-Streptomycin solution 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.

Uses: Not applicable

Signs of Deterioration: Not applicable

Remarks:
Stability: 3 days at 37°C
Potency of the penicillin in solution: 100 000 U/l
Antimicrobial spectrum: Gram-negative and Gram-positive bacteria.
Mode of Action:
Penicillin G interferes with the final stage of synthesis of the bacterial cell wall.
Streptomycin Sulfate binds to 30S subunit to cause misreading of protein synthesis.