

Product Name

Name: Amphotericin B Solution, 2500 mg/mL

Cat. No.: C3431-0100

Size: 100 mL

Product Description

Amphotericin B is a mixture of antimycotic polyenes and is used in cell culture for the control of fungi, yeasts and molds. This type of antimycotic is typically derived from *Streptomyces spp.* bacteria. Their mode of action (MOA) is exhibited by their ability to bind to steroidal alcohols (e.g., cholesterol, cholestanol), specifically ergosterol, in the cell membrane of susceptible fungi by creating transmembrane channels in the cell membrane per se thereby increasing membrane permeability. The resultant loss of cations (e.g., K⁺, Na⁺, H⁺) or other low molecular weight substances including sugars, amino acids or nucleotides in addition to the inhibitory effect through these channels on the extracellular space membrane-bound enzymes, and all contribute to the demise of these types of organisms. Used as a fungicide, it is cytolytic by causing the formation of pores that allow passage of small molecules through the plasma membrane resulting in cytolysis.

In human medicine, since the introduction of the Echinocandins (i.e., synthetically modified lipopeptides which inhibit the synthesis of β -D-Glucan in Fungal Cell Walls) and the broad-spectrum Azoles, Amphotericin B formulations have seen considerably less use. However, with its long-proven track-record, its place in the anti-fungal armamentarium is ensured.

The current role of this antimycotic solution in cell culture is multi-faceted and may be divided into several principal functions.

- Antimycotic spectrum only, it is not bactericidal or virucidal
- Interacts with the fungal cell membranes by increasing cell membrane permeability
- One hundred percent (100%) pharmacokinetic activity

Predominant Characteristics

- Easy to use
- Liquid formulation
- Sterile filtered (0.1 μ m)
- Cell culture performance tested

Storage and Stability

The product should be kept at **-20°C**.

The product is **light-sensitive** and therefore should not be left in the light.

Shelf life: 18 months from date of manufacture.

Procedure

1. Take a bottle from the freezer at -20°C and read the label.

2. Ensure that the cap of the bottle is tight.
3. Allow to thaw to room temperature prior to use.
4. Gently swirl the solution in the bottle intermittently until all the content is thawed.
5. Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
6. Pipette appropriate volume using an aseptic/sterile technique under a laminar-flow culture hood.
7. Aliquot the remaining solution and put them back to freezer to avoid repeated freezing and thawing.
8. Recommended Use: 1:1,000 to 1:10,000.

Precaution and Disclaimer

For research use only, not for clinical diagnosis, and treatment.