Amphotericin B

CAT N°: P4030

Storage conditions: +2°C to +8°C
Stable for 3 days in culture at 37°C.
Stock solutions at +2°C to +8°C are stable for up to 1 month.
For long term, storage at –20°C, protected from air and light, is recommended.[1]

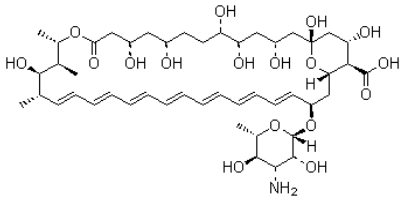
Shelf life: 24 months

Composition: Amphotericin B

Molecular weight: 924,1 g/mol

CAS Number: 1397-89-3

Chemical Formula: $C_{47}H_{73}NO_{17}$



Appearance: Yellow to orange powder

Activity: > 750 mg/g

Loss on drying: < 5.0 %

Residue on ignition: < 3.0 %

Recommended use:
- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store the product in a dry area
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall…)
- Protect the product from any form of humidity
- Use, in one time, after opening, the entire quantity of product of the container. If it is not possible, close the container immediately after sampling the quantity of powder required.

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:
Amphotericin B is used for the prevention or elimination of fungal contaminants in cell culture. Normal usage is at 2.5 mg/L with penicillin and streptomycin in the medium. To kill yeast and fungi use 2-4 times the normal level (5-10 mg/L) in the medium without penicillin and streptomycin for 2-3 subcultures. Amphotericin B is a mixture of antifungal polyenes produced by certain strains of *Streptomycetes nodosus*.[2] The name of the drug is derived from the amphoteric behavior of the drug, because of a carboxyl group on the main ring and a primary amino group on the mycosamine ring [3]. It appears to act mainly by interfering with the permeability of the cell membrane of sensitive fungi. It induces the loss of low molecular weight substances from cells, possibly by forming channels as a result of complexing membrane sterols. Minimum inhibitory concentrations range from 0.03-1 µg/ml for a variety of organisms including strains of *Candida*, *Rhizopus*, *Asperigillus*, and *Coccidioides*. It is inactive against bacteria, rickettsia, and viruses.

Uses:
Amphotericin B is insoluble in water at pH 6 to 7, but soluble in water at pH 2 or 11. It is soluble in dimethylformamide (2-4 mg/ml) and in DMSO (30-40 mg/ml). Aqueous solutions cannot be sterile filtered due to poor solubility.

Signs of deterioration:
Not applicable

References:
1. The Merck Index, 12th ed., Entry# 627.
2. Clarke's Isolation and Identification of Drugs, 2nd ed., Moffat, A. C., et al., eds, The Pharmaceutical Press (London, GB: 1988), p. 351.
3. The Pharmacological Basis of Therapeutics, 8th ed., Gilman, A. G. and Goodman, L. S., eds., McGraw-Hill (New York, NY: 1990), p. 1165. AGW/RXR 12/02