

## Technical Data Sheet

Date: 23/10/2007

**Amphotericin B**  
Cat No : PM-A4121

<b>Molecular Formula:</b>	C <sub>47</sub> H <sub>73</sub> NO <sub>17</sub>
<b>Molecular Weight:</b>	924.1 g/mol
<b>CAS No:</b>	1397-89-3
<b>pKa values:</b>	5.5 and 10.0 <sup>1</sup>
<b>Colour:</b>	Yellow to Orange powder
<b>Storage conditions:</b>	+2-8°C
<b>Shelf life:</b>	30 months

### Recommended use:

For in vitro laboratory use only, not for drug human or veterinary use. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Applications:

Amphotericin B is used for the prevention or elimination of fungal contaminants in cell culture. Normal usage is at 2.5mg/L with penicillin and streptomycin in the medium. To kill yeast and fungi use 2-4 times the normal level (5-10mg/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 *Streptomyces nodosus*.<sup>2</sup> The name of the drug is derived from the amphoteric behaviour of the drug, because of a carboxyl group on the main ring and a primary amino group on the mycosamine ring.<sup>3</sup> 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 *Coccidiodes*. It is inactive against bacteria, rickettsia and viruses.

### Preparation Instructions:

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 (2-4mg/ml) and in DMSO (30-40 mg/ml). Aqueous solutions cannot be sterile filtered due to poor solubility.

### Storage/Stability:

Stable for 3 days in cell culture at 37°C. Stock solutions at 2-8 °C are stable up to 1 month. For long term storage at -20 °C, protected from air and light is recommended.

### References:

1. Clarke's Isolation and Identification of Drugs, 2<sup>nd</sup> Ed. Moffat, A.C et al, eds. The Pharmaceutical Press (London, GB: 1988) p.351
2. The Merck Index, 12<sup>th</sup> ed., Entry 627



3. The Pharmacological Basis of Therapeutics, 8<sup>th</sup> ed., Gilman, A.G and Goodman, L. S eds McGraw-Hill (New York NY: 1990), p 1665. ANGW/RXR 12/02