# MycoNator-2 Antibiotic Solution product information



## Product Name

Name: MycoNator-2 Antibiotic Solution 100X Conc.

Cat. No.: C3471-0020

Size: 20 mL

## Product Description

MycoNator-2 is a member of the broad-spectrum tetracycline antibiotics, one of several semi-synthetic antibiotics available to prevent, treat and control contamination of cell lines by *Mycoplasma* species when used in tandem with MycoNator-1. The mode of action (MOA) of MycoNator -2 inhibits bacterial protein synthesis by blocking the attachment of transfer RNA-amino acid at the A-site on the 30S bacterial ribosome. More precisely they are inhibitors of the codon-anticodon interaction (i.e., the incoming aminoacyl-tRNAs to the A-site). Selectivity against bacterial versus eukaryotic ribosomes is due to both structural differences in the RNA of the ribosomal subunits and selective concentration in susceptible bacterial cells. MycoNator-2 offers treatment options when used sequentially and in combination with MycoNator-1 (a pleuromutilin antibiotic) to take advantage of the antibiotic synergism.

In human medicine, tetracyclines have been known since 1948 with the discovery of chlortetracycline and tetracycline from *Streptomyces aureofaciens* and oxytetracycline from *S. rimosus*. Minocycline was introduced in 1972. Although the lack of new versions of tetracycline reflects a declining role as the front-line therapy in many human infections, but on-going clinical development indicates continued interest in this polyketide antibiotic class. Tetracyclines were once considered broad-spectrum antibiotics but due to the relentless prevalence of bacterial resistance, among other things, these drugs have been reduced to niche indications. Although different classes of tetracyclines may see a revival, some of these newer drugs evade most tetracycline-resistant mechanisms and have a broad spectrum of activity.

## Predominant Characteristics

- Much more effective when used sequentially with MycoNator-1
- Easy-to-use
- Liquid formulation
- Sterile-filtered (0.1 μm)
- Shows high anti-mycoplasma activity

## 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 out from proper storage conditions at -20ºC and read the label.
2. Thaw to room temperature.
3. Ensure that the cap of the bottle is tight.

4. Gently swirl the solution in the bottle.
5. Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
6. Take appropriate volume of the solution using aseptic/sterile technique under a laminar flow culture hood.

**Recommended use**

1. Do not use the two solutions together but sequentially.
2. Add 1 mL MycoNator-1 to 100 mL of culture medium. Culture the contaminated cells in this medium for four days. Any fresh medium added should also include MycoNator-1.
3. After four days, add 1 mL MycoNator-2 to 100 mL of fresh medium. Maintain the cells in this second mixture for an additional three days.
4. The aforementioned steps (from steps1, 2 to 3) are considered as one treatment cycle. It may be necessary to repeat this cycle 2-3 more times.
5. During the process, the cells should be tested for the presence of *Mycoplasma* and the results may then be used to shorten the process where possible.

**Quality Control**

MycoNator-2 Antibiotic Solution 100X Conc. is tested for sterility.

**Manufacturer**

Shanghai Dr. Cell Co., Ltd.

**Issue Date**

Feb 2024

**Precaution and Disclaimer**

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