

Tetracycline, Hydrochloride Solution

Contains 10 mg/mL tetracycline, hydrochloride
in Ultra Pure Water

DNase, RNase and protease – none detected

Catalog Number **ML 003-07**

Storage Temperature -5~-20°C

Product Description

Tetracyclines possess a wide range of antimicrobial activity against gram-positive and gram-negative bacteria. The bacterial ribosome is the site of action of tetracyclines. Access to the ribosomes of gram-negative bacteria is obtained by passive diffusion through hydrophilic pores in the outer cell membrane and then by an energy-dependent active transport system that pumps all tetracyclines through the inner cytoplasmic membrane. This active transport system may require a periplasmic protein carrier. Tetracyclines bind specifically to 30S ribosomes and appear to inhibit protein synthesis by preventing access of aminoacyl tRNA to the acceptor site on the mRNA-ribosome complex. The inhibitory effects of the tetracyclines can be reversed by washing. This suggests that the reversibly bound antibiotic rather than the small portion of irreversibly bound drug is responsible for the antibacterial action.

ML 003-07 contains 10 mg/mL tetracycline, hydrochloride in Ultra Pure Water (**ML 019-02**). Working concentration is 10 ~ 20 µg/mL.

Storage/Stability

Tetracycline solution should be stored at -5~-20°C. Deterioration of the liquid may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. Product label bears expiration date.

Precautions

For *In Vitro* Use Only

Product Profile	
Appearance	Clear colorless solution
DNase, RNase and protease	None detected
Sterility	Sterilized by 0.2 µm filtration system. Sterility tests are performed in accordance with protocols described in USP.

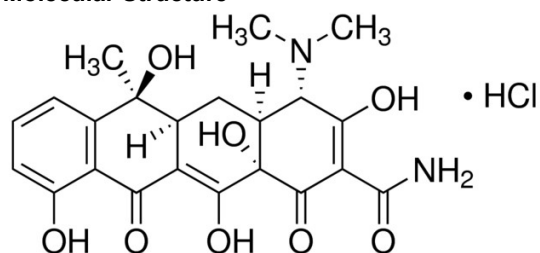
Molecular Weight

480.9 g/mole

Molecular Formula

C₂₂H₂₈N₂O₈

Molecular Structure



References

The Merck Index, 12th ed., #9337 (1996).
Martindale The Extra Pharmacopoeia, 30th ed., 212-213 (1993).
Goodman and Gilman's The Pharmacological Basis of Therapeutics, 7th ed., 1170-1171 (1985).