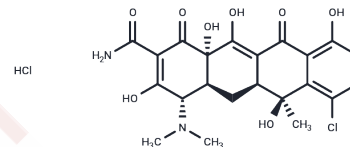


## Chlortetracycline hydrochloride

## Chemical Properties

CAS No. :	64-72-2
Formula:	C <sub>22</sub> H <sub>23</sub> ClN <sub>2</sub> O <sub>8</sub> ·HCl
Molecular Weight:	515.35
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Chlortetracycline Hydrochloride is a tetracycline with broad-spectrum antibacterial and antiprotozoal activity. Chlortetracycline hydrochloride (Isphamycin) is bacteriostatic and inhibits bacterial protein synthesis by binding to the 30S ribosomal subunit, thereby preventing the addition of amino acids to the growing peptide chain. This tetracycline is active against a wide range of gram-positive and gram-negative organisms, spirochetes, rickettsial species, certain protozoa and Mycoplasma and Chlamydia organisms.
Targets(IC50)	ribosome,Antibacterial,Antibiotic,Parasite
In vivo	Chlortetracycline HCl exhibits inhibitory activity against a range of organisms, including <i>Diplococcus pneumoniae</i> (MIC: 0.098 mg/L), <i>Streptococcus pyogenes</i> (MIC: 0.292 mg/L), two strains of <i>Bacillus subtilis</i> (MICs: 0.195 mg/L and 0.15 mg/L), <i>Streptococcus faecalis</i> (MIC: 0.3 mg/L), and <i>Mycobacterium ranae</i> (0.3 mg/L). Its high affinity to a site on the 30S subunit effectively suppresses the activity of various Gram-positive and Gram-negative bacteria, including obligatory anaerobes.

## Solubility Information

Solubility	DMSO: 10 mg/mL (19.4 mM),Sonication is recommended. H <sub>2</sub> O: 10 mg/mL (19.4 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.9404 mL	9.7021 mL	19.4043 mL
5 mM	0.3881 mL	1.9404 mL	3.8809 mL
10 mM	0.194 mL	0.9702 mL	1.9404 mL
50 mM	0.0388 mL	0.194 mL	0.3881 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Chopra I, et al. J Antimicrob Chemother, 1992, 29(3), 245-277.

Abou-Zeid AZ. Zentralbl Bakteriол Parasitenkd Infektionskr Hyg, 1973, 128(1), 51-60.

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