

Product Name:	Methacycline hydrochloride
Product Number:	M003
CAS Number:	3963-95-9
Molecular Formula:	$C_{22}H_{22}N_2O_8 \cdot HCl$
Molecular Weight:	478.88
Appearance:	Yellow crystalline powder
Source:	Semi-synthetic
Water Content (Karl Fischer):	Not more than 2.0%
pH:	2.0 - 3.0
Storage Conditions:	$\leq 30^{\circ}C$
Description:	Methacycline HCl is a member of the tetracycline antibiotics and is more active against Gram-negative and Gram-positive bacteria than tetracycline and demethylchlortetracycline.
Mechanism of Action:	Methacycline inhibits protein synthesis by preventing amino-acyl tRNA from binding to the "A" site in the bacterial ribosome.
Spectrum:	Metacycline has a broad spectrum of activity and is effective against several clinically significant pathogenic bacteria.
References:	<p>Hubert, E. G., G. M. Kalmanson, J. Z. Montgomerie, and L. B. Guze. "Activity of Methacycline, Related Tetracyclines, and Other Antibiotics Against Various L-Forms and Their Parent Bacteria In Vitro." <i>Antimicrobial Agents and Chemotherapy</i> 2.4 (1972): 276-80.</p> <p>hopra, Ian, and Marilyn Roberts. "Tetracycline Antibiotics: Mode of Action, Applications, Molecular Biology, and Epidemiology of Bacterial Resistance." <i>Microbiology and Molecular Biology Reviews</i> (2001): 232-60. Http://www.ncbi.nlm.nih.gov. Web. 21 Aug. 2012.</p>