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| Product Name: | Methacycline |
| Product Number: | M051 |
| CAS Number: | 914-00-1 |
| Molecular Formula: | $C_{22}H_{22}N_2O_8$ |
| Molecular Weight: | 442.4 |
| Appearance: | Yellow to orange solid |
| Storage Conditions: | -20°C |
| Description: | <p>Methacycline is a semi-synthetic tetracycline prepared by dehydration of the 6-hydroxy group of oxytetracycline to yield an exocyclic 6-methylene. Like all tetracyclines, methacycline shows broad spectrum antibacterial and antiprotozoan activity. Methacycline has been extensively cited in the literature with over 400 references.</p> <p>Methacycline is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</p> |
| Mechanism of Action: | <p>Like all tetracyclines, methacycline acts by binding to the 30S and 50S ribosomal subunits, blocking protein synthesis.</p> |
| References: | <p>6-Methylenetetracyclines. I A new class of tetracycline antibiotics. Blackwood R.K. et al. J. Am. Chem. Soc. 1961, 83, 2773.</p> <p>6-Methylenetetracyclines. III. Preparation and Properties. Blackwood R.K. et al. J. Am. Chem. Soc. 1963, 85, 3943.</p> <p>A comparison of the in vitro and in vivo activity of methacycline and other tetracycline compounds. Chang T.W. & Weinstein L. Antibiot. Chemother. 1962, 12, 676.</p> <p>Evaluation of methacycline, a new analogue of oxytetracycline. Limson B.M. & Guevara R. Curr. Ther. Res. Clin. Exp. 1963, 5, 249.</p> |