Synonyms: [4S-(4α,4aα,5α,6β,12αα)]-4-(Dimethylamino)-
1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-
pentahydroxy-6-methyl-1,11-dioxo-2-
napthacenecarboxamide Hydrochloride

CAS: 64-75-5
Formula: C_{22}H_{24}N_{2}O_{8}•HCl
Mol. Weight: 480.94

Properties
Form: Powder
Appearance: Yellow Powder
Application: Plant Tissue Culture Antibiotic
Solubility: Soluble in Water and DMSO
Storage Temp: -20 to 0 °C

Stock Solution Storage Temp:
Solutions of Tetracycline are stable at -20 to 0°C for short periods of time. Tetracycline hydrolyzes in the presence of water to form a turbid solution. It will not hydrolyze completely, and the resulting trace amount solutions are stable for longer periods of time at -20 to 0°C.

Other Notes: This product is hygroscopic. Protect from light.

Application Notes
Tetracycline is a broad spectrum antibiotic effective against many aerobic and anaerobic Gram-positive and Gram-negative bacteria, Chlamydiaceae, Mycoplasma spp., Rickettsia spp., spirochaetes and some protozoa.

Tetracycline inhibits protein synthesis by binding reversibly to 30S subunit of the ribosome to prevent the binding of aminoacyl tRNA.2, 3

Minimum inhibitory concentration (MIC) of tetracycline HCL has been reported for many bacteria. MIC of tetracycline HCL against M. luteus is >100 µg/mL, S. aureus is 2.5 µg/mL, P. aeruginosa is 50 µg/mL, B. subtilis is ≤ 1 µg/mL, and K. pneumonia is 5 µg/mL.4

Tetracycline can also be used as a selective agent for cells containing tetracycline resistance gene.

PhytoTechnology Laboratories® also carries Tetracycline Hydrochloride Solution (10 mg/mL), Product No. T7859.

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References
1. Merck 13, 9271