

<b>Product Name:</b>	Chlortetracycline
<b>Product Number:</b>	C173
<b>CAS Number:</b>	57-62-5
<b>Molecular Formula:</b>	$C_{22}H_{23}ClN_2O_8$
<b>Molecular Weight:</b>	478.9
<b>Appearance:</b>	Yellow solid
<b>Storage Conditions:</b>	-20°C
<b>Description:</b>	<p>Chlortetracycline was the first reported member of the tetracycline class, isolated from <i>Streptomyces aureofaciens</i> in 1948. Chlortetracyclines heralded the early wave of antibiotic discoveries from microbes and after 50 years are still widely used as pharmaceuticals. Chlortetracycline is a pigment and, like most pigments, is extremely sensitive to environmental and storage conditions. Commercial chlortetracycline may contain significant levels of degradation products.</p>
<b>Mechanism of Action:</b>	<p>Chlortetracycline is soluble in ethanol, methanol, DMF and DMSO.</p> <p>The mechanism of chlorotetracycline involves entering a cell and binding to the 30s ribosomal subunit preventing peptide elongation and ultimately inhibiting protein synthesis. Resistance to chlorotetracycline can be a result of inactivation by cell enzymes or pumping the antibiotic out of the cell upon entering.</p>
<b>References:</b>	<p>Aureomycin, a new antibiotic. Broschard R.W. et al. Science 1949, 109, 199.</p> <p>Chemical stability of chlortetracycline and chlortetracycline degradation products and epimers in soil interstitial water. Soeborg T. et al. Chemosphere 2004, 57, 1515.</p>