



β -Apo-oxytetracycline, EvoPure[®] PRODUCT DATA SHEET

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Product Name:	β -Apo-oxytetracycline, EvoPure [®]
Product Number:	O042
CAS Number:	18751-99-0
Molecular Formula:	C ₂₂ H ₂₂ N ₂ O ₈
Molecular Weight:	442.42
Form:	Powder
Appearance:	Yellow
Solubility:	Soluble in Basic solutions. Very slight soluble in water (0.2 mg/ml).
Source:	Semi-synthetic
Melting Point:	>160°C
Storage Conditions:	-20°C
Description:	<p>β-Apo-oxytetracycline, EvoPure[®] (oxytetracycline-related compound E) is an oxytetracycline metabolite and impurity found in commercial oxytetracycline. It is formed via acid hydrolysis of oxytetracycline. Unlike other oxytetracycline metabolites, β-apo-oxytetracycline formation does not appear to be influenced by pH; however, it does form more rapidly with increasing temperature. β-Apo-oxytetracycline can be used as a QC standard during stability studies of oxytetracycline. It can be also be used to study the degradation pathway and products of tetracyclines. β-Apo-oxytetracycline, EvoPure[®] is very slightly soluble in water.</p> <p>We also offer:</p> <ul style="list-style-type: none">• 4-Epi-oxytetracycline, EvoPure[®] (oxytetracycline-related compound A) (Q008)• α-Apo-oxytetracycline, EvoPure[®] (oxytetracycline-related compound D) (Q009)
Mechanism of Action:	Oxytetracycline causes inhibition of protein synthesis. It binds to the 30S ribosomal subunit and prevents the amino-acyl tRNA from binding to the A site of the ribosome.
Spectrum:	broad-spectrum, including Gram-negative and Gram-positive bacteria.

Microbiology Applications The fate of tetracyclines and their degradation products were studied under pH, chelation, and photodegradation. Studied whether they were potent to environmentally relevant sludge and soil bacteria. Tetracyclines photodecompose easily because they undergo direct photolysis and are converted to several products.

MIC₅₀ was 32 mg/L for tetracycline-sensitive strains of *Pseudomonas*, and > 32 mg/L for tetracycline-sensitive strains of *Agrobacterium*, *Bacillus*, *E. coli*. and *Moraxella* (Halling-Sorenson et al, 2002).

Technical Data: HPLC, NMR, FTIR, and MS analysis may be available. For more info, please email info@toku-e.com.

References:

Halling-Sorensen B, Sengelov G and Tjornelund J (2002) Toxicity of tetracyclines and tetracycline degradation products to environmentally relevant bacteria, including selected tetracycline-resistant bacteria. Arch. Environ. Contam. Toxicol. (2002) 42(3): 263-271 PMID 11910453

Lykkeberg AK, Halling-Sørensen B, Cornett C, Tjørnelund J and Honoré HS (2004) Quantitative analysis of Oxytetracycline and its impurities by LC-MS-MS. J. Pharm. Biomed. Anal. 34(2):325-332 PMID 15013146

Richeng X et al (2010) Hydrolysis and photolysis of Oxytetracycline in aqueous solution. J. Environ. Sci. and Health 45:73-81 PMID 20390934

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