**Product Information**

**Doxycycline hyclate**

Catalog Number **D9891**

Storage Temperature 2–8 ºC

Synonym: Doxycycline hydrochloride hemiethanolate hemihydrate

**Product Description**

Molecular Formula: 

\[ \text{C}_{22}\text{H}_{24}\text{N}_{2}\text{O}_{8} \cdot \text{HCl} \cdot 0.5\text{H}_{2}\text{O} \cdot 0.5\text{C}_{2}\text{H}_{6}\text{O} \]

Molecular Weight: 512.94

pK_\text{a}^1: 3.5, 7.7, 9.5 (20 ºC)

Melting Point: ~201 ºC

\( \lambda_{\text{max}}: \) 351 nm, 267 nm

Extinction Coefficient: \( E_{\text{mM}}^{\text{nm}} = 13.2 \) (351 nm), 17.4 (267 nm) (10 mM HCl in methanol)

Specific Rotation: \( [\alpha]_{\text{mM}}^{\text{C}_{2}\text{H}_{6}\text{O}} = -110^\circ \) (10 mg/ml, 10 mM HCl in methanol)

Doxycycline is a relative of tetracycline often used in culture at a concentration of 0.1–12 µg/ml.

**Preparation Instructions**

This product is soluble in water (50 mg/ml), yielding a clear, yellow-green solution. Mild warming may be required to fully dissolve the material.

This product is also reported to be soluble in methanol, sparingly soluble in ethanol, and insoluble in chloroform or ether.

**Storage/Stability**

Solutions in sodium chloride or glucose should be used within 48 hours of preparation and protected from direct sunlight. Solutions should be stored at 2–8 ºC.

**References**

2. The Merck Index, 10th ed., Entry #3436

SS,MWM,RLG,NSB,MAM 05/19-1