

# PRODUCT INFORMATION



## Oxytetracycline

Item No. 18076

**CAS Registry No.:** 79-57-2  
**Formal Name:** (4S,4aR,5S,5aR,6S,12aS)-4-(dimethylamino)-

1,4,4a,5,5a,6,11,12a-octahydro-  
3,5,6,10,12,12a-hexahydroxy-6-methyl-  
1,11-dioxo-2-naphthacene-carboxamide

**Synonyms:** NSC 9169, Terramycin

**MF:** C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>9</sub>

**FW:** 460.4

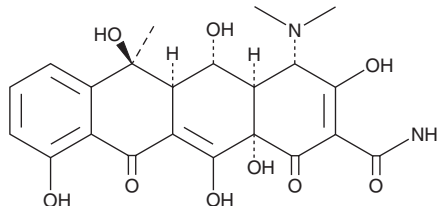
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 220, 265, 360 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Oxytetracycline is supplied as a crystalline solid. A stock solution may be made by dissolving the oxytetracycline in the solvent of choice, which should be purged with an inert gas. Oxytetracycline is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of oxytetracycline in these solvents is approximately 3 and 0.3 mg/ml, respectively.

Oxytetracycline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, oxytetracycline should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Oxytetracycline has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Oxytetracycline is a broad-spectrum tetracycline antibiotic that inhibits protein synthesis in both Gram-positive and Gram-negative bacteria. The features of its biosynthesis often serve as a representative example for understanding the synthesis of other type II polyketides.<sup>1</sup> Oxytetracycline is also used to examine the acquisition of oxytetracycline-resistance genes, which are associated with the development of antibiotic resistance.<sup>2</sup>

### References

1. Pickens, L.B. and Tang, Y. Oxytetracycline biosynthesis. *J. Biol. Chem.* **285(36)**, 27509-27515 (2010).
2. Roberts, M.C. Update on acquired tetracycline resistance genes. *FEMS Microbiol. Lett.* **245**, 195-203 (2005).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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