

# PRODUCT INFORMATION



## Methacycline (hydrochloride)

Item No. 21338

**CAS Registry No.:** 3963-95-9  
**Formal Name:** (4S,4aR,5S,5aR,12aS)-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methylene-1,11-dioxo-2-naphthacene-carboxamide, monohydrochloride

**Synonyms:** 6-methylene Oxytetracycline, Rondomycin

**MF:** C<sub>22</sub>H<sub>22</sub>N<sub>2</sub>O<sub>8</sub> • HCl

**FW:** 478.9

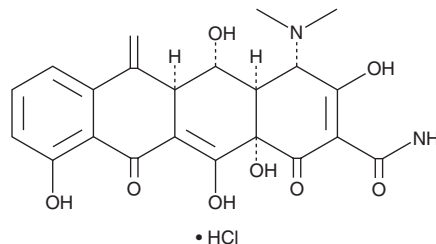
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 251, 346 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

Methacycline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the methacycline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Methacycline (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of methacycline (hydrochloride) in these solvents is approximately 5 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of methacycline (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of methacycline (hydrochloride) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Methacycline is a tetracycline-class antibiotic that is active against a wide range of Gram-positive and Gram-negative organisms.<sup>1,2</sup> It is readily absorbed from the gastrointestinal tract and reaches a maximum concentration at about the fourth hour, declining to a negligible amount in about 24 hours.<sup>3</sup> It is more active than tetracycline (Item No. 14328) against a number of bacteria.<sup>1</sup>

### References

1. Hubert, E.G., Kalmanson, G.M., Montgomerie, J.Z., *et al.* Activity of methacycline, related tetracyclines, and other antibiotics against various L-forms and their parent bacteria *in vitro*. *Antimicrob. Agents and Chemother.* **2**(4), 276-280 (1972).
2. Morton, R.S., and Higson, D.W. Methacycline (rondomycin) in gonorrhoea. *Brit. J. Vener. Dis.* **42**(3), 175-177 (1966).
3. McLone, D.G., Billings, T.E., Lucas, J.B., *et al.* Gonorrheal urethritis in men treated with one oral dose of methacycline. *Public Health Rep.* **83**(1), 87-89 (1968).

#### 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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