

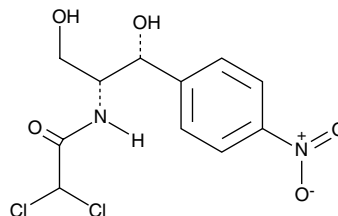
# Product Information



## Chloramphenicol

Item No. 14334

**CAS Registry No.:** 56-75-7  
**Formal Name:** 2,2-dichloro-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]-acetamide  
**Synonyms:** CAF, CAM, CAP, NSC 3069  
**MF:** C<sub>11</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>5</sub>  
**FW:** 323.1  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 273 nm



### Laboratory Procedures

For long term storage, we suggest that chloramphenicol be stored as supplied at -20°C. It should be stable for at least two years.

Chloramphenicol is supplied as a crystalline solid. A stock solution may be made by dissolving the chloramphenicol in the solvent of choice. Chloramphenicol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of chloramphenicol in these solvents is approximately 10, 12.5, and 16 mg/ml.

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 chloramphenicol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of chloramphenicol in PBS, pH 7.2, is approximately 0.12 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Chloramphenicol is a broad-spectrum antibiotic that is effective against both Gram-positive and Gram-negative bacteria including *H. influenzae*, *N. meningitides*, *N. gonorrhoeae*, *S. typhi*, *Brucella* species, and *B. pertussis* strains.<sup>1</sup> Chloramphenicol disrupts bacterial protein synthesis by preventing chain elongation through the inhibition of the peptidyl transferase activity of the bacterial 50S ribosome.<sup>2</sup>

### References

1. Lam, R.F., Lai, J.S.M., Ng, J.S.K., *et al.* Topical chloramphenicol for eye infections. *Hong Kong Med. J.* **8**(1), 44-47 (2002).
2. Jardetzky, O. Studies on the mechanism of action of chloramphenicol. I. The conformation of chloramphenicol in solution. *J. Biol. Chem.* **238**(7), 2498-2508 (1963).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14334](http://www.caymanchem.com/catalog/14334)

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

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