

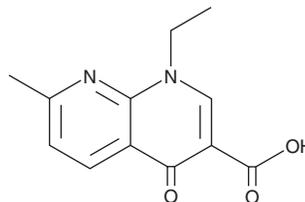
# PRODUCT INFORMATION



## Nalidixic Acid

Item No. 19807

**CAS Registry No.:** 389-08-2  
**Formal Name:** 1-ethyl-7-methyl-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid  
**Synonyms:** NSC 82174, WIN 18,320  
**MF:** C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 232.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 258, 330 nm  
**Supplied as:** A crystalline solid  
**Storage:** 4°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Nalidixic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the nalidixic acid in the solvent of choice, which should be purged with an inert gas. Nalidixic acid is soluble in the organic solvent acetonitrile at a concentration of approximately 1 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 nalidixic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of nalidixic acid in 0.5 M NaOH is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Nalidixic acid is a quinolone antibiotic.<sup>1</sup> It is active against *E. coli*, *Pasturella*, *K. pneumoniae*, *A. aerogenes*, *Proteus*, *Salmonella*, and *Shigella* with minimum bacteriostatic concentrations (MBCs) ranging from 0.5 to 25 µg/ml. Nalidixic acid increases survival in mouse models of systemic *K. pneumoniae*, *A. aerogenes*, *Proteus*, or *Salmonella* infection (ED<sub>50</sub>s = 60, 35, 50, and 62 mg/kg, respectively). Formulations containing nalidixic acid have previously been used in the treatment of urinary tract infections.

### Reference

1. Leshner, G.Y., Froelich, E.J., Gruett, M.D., *et al.* 1,8-Naphthyridine derivatives. A new class of chemotherapeutic agents. *J. Med. Pharm. Chem.* **91**, 1063-1065 (1962).

#### 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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