

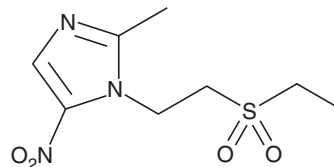
# PRODUCT INFORMATION



## Tinidazole

Item No. 21755

**CAS Registry No.:** 19387-91-8  
**Formal Name:** 1-[2-(ethylsulfonyl)ethyl]-2-methyl-5-nitro-1H-imidazole  
**Synonym:** CP 12,574  
**MF:** C<sub>8</sub>H<sub>13</sub>N<sub>3</sub>O<sub>4</sub>S  
**FW:** 247.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 230, 310 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

Tinidazole is supplied as a crystalline solid. A stock solution may be made by dissolving the tinidazole in the solvent of choice. Tinidazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of tinidazole in these solvents is approximately 0.2, 10, and 20 mg/ml, respectively.

Tinidazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tinidazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Tinidazole has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Tinidazole is a 5-nitroimidazole derivative with antiparasitic and antibiotic activity that exhibits a mean minimum inhibitory concentration of 0.31, 2.33, and 0.5 µg/mL against *C. difficile*, *P. bivia*, and *B. fragilis*, respectively.<sup>1,2</sup> It is orally bioavailable and is rapidly metabolized to cytotoxic intermediates that covalently bind DNA, causing irreversible damage to susceptible cells.<sup>1,2</sup> It shows efficacy against pathogenic protozoa (*T. vaginalis*, *E. bistolytica*, and *G. duodenalis*), clinically significant anaerobic bacteria (*B. fragilis*, *C. difficile*), and microaerophilic bacterium (*H. pylori*).<sup>2</sup>

### References

1. Citron, D.M., Tyrrell, K.L., Warren, Y.A., et al. *In vitro* activities of tinidazole and metronidazole against *Clostridium difficile*, *Prevotella bivia* and *Bacteroides fragilis*. *Anaerobe* **11**(6), 315-317 (2005).
2. Fung, H.B., and Doan, T.L. Tinidazole: A nitroimidazole antiprotozoal agent. *Clin. Ther.* **27**(12), 1859-1884 (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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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