# **PRODUCT** INFORMATION



## Ornidazole

Item No. 26818

CAS Registry No.:	16773-42-5	
Formal Name:	α-(chloromethyl)-2-methyl-5-nitro-1H-	
	imidazole-1-ethanol	
Synonyms:	NSC 95075, (±)-Ornidazole, Ro 7-0207	N OH
MF:	C <sub>7</sub> H <sub>10</sub> CIN <sub>3</sub> O <sub>3</sub>	
FW:	219.6	Ń CI
Purity:	≥98%	
UV/Vis.:	λ <sub>max</sub> : 312 nm	O <sub>2</sub> N
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	
Information represents	the product specifications. Batch specific analytical res	sults are provided on each certificate of analysis.

#### Laboratory Procedures

Ornidazole is supplied as a crystalline solid. A stock solution may be made by dissolving the ornidazole in the solvent of choice, which should be purged with an inert gas. Ornidazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ornidazole in these solvents is approximately 10, 14, and 25 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 ornidazole can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ornidazole in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

#### Description

Ornidazole is an orally bioavailable 5-nitroimidazole derivative with antibacterial and antiprotozoal activities.<sup>1,2</sup> Ornidazole inhibits the growth of clinical isolates of B. fragilis (MICs = 0.5-5  $\mu$ M) and various anaerobic bacteria when used at concentrations ranging from less than 0.1 to 3.2 µg/ml.<sup>2,3</sup> It also inhibits the growth of Giardia isolates (IC<sub>50</sub>s = 0.01-0.47  $\mu$ g/ml).<sup>4</sup> Oral administration of ornidazole reduces T. vaginalis and T. foetus infection in mice and E. histolytica infection in rats with curative dose ( $CD_{50}$ ) values of 37, 3, and 10 mg/kg, respectively.<sup>1</sup> Ornidazole (400 mg/kg per day) induces infertility in male rats within 7 days and inhibits spermatozoa binding to rat oocyte zona pellucida.<sup>5,6</sup>

#### References

- 1. Hoffer, M. and Grunberg, E. J. Med. Chem. 17(9), 1019-1020 (1974).
- 2. Jokipii, L. and Jokipii, A.M. Antimicrob. Agents Chemother. 28(4), 561-564 (1985).
- 3. Wüst, J. Antimicrob. Agents Chemother. 11(4), 631-637 (1977).
- 4. Majewska, A.C., Kasprzak, W., De Jonckheere, J.F., et al. Trans. R. Soc. Trop. Med. Hyg. 85(1), 67-69 (1991).
- 5. Oberländer, G., Yeung, C.H., and Cooper, T.G. J. Reprod. Fertil. 100(2), 551-559 (1994).
- 6. Bone, W., Jones, N.G., Kamp, G., et al. J. Reprod. Fertil. 118(1), 127-135 (2000).

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

#### SAFFTY 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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