

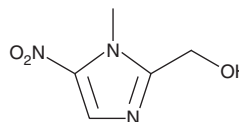
PRODUCT INFORMATION



Hydroxy Dimetridazole

Item No. 16208

CAS Registry No.: 936-05-0
Formal Name: 1-methyl-5-nitro-1H-imidazole-2-methanol
Synonyms: HMMNI, 2-Hydroxymethyl-1-methyl-5-Nitroimidazole
MF: C₅H₇N₃O₃
FW: 157.1
Purity: ≥98%
UV/Vis.: λ_{max}: 304 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

Hydroxy dimetridazole is supplied as a crystalline solid. A stock solution may be made by dissolving the hydroxy dimetridazole in the solvent of choice, which should be purged with an inert gas. Hydroxy dimetridazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of hydroxy dimetridazole in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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 hydroxy dimetridazole can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of hydroxy dimetridazole in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Dimetridazole is a nitroimidazole-based compound with antibacterial and anticoccidial activity.¹ It was once widely used in the treatment of parasitic infections in poultry, cattle, swine and farmed fish until suspected to be carcinogenic and mutagenic to humans.² Hydroxy dimetridazole is a metabolite of dimetridazole that may be useful for identifying this nitroimidazole in various agricultural samples through liquid chromatography–tandem mass spectrometry and other methods.²⁻⁴

References

1. Jokipii, L. and Jokipii, A.M. Comparative evaluation of the 2-methyl-5-nitroimidazole compounds dimetridazole, metronidazole, secnidazole, ornidazole, tinidazole, carnidazole, and panidazole against *Bacteroides fragilis* and other bacteria of the *Bacteroides fragilis* group. *Antimicrob. Agents Chemother.* **28(4)**, 561-564 (1985).
2. Sakamoto, M., Takeba, K., Sasamoto, T., *et al.* Determination of dimetridazole, metronidazole and ronidazole in salmon and honey by liquid chromatography coupled with tandem mass spectrometry. *Shokuhin Eiseigaku Zasshi* **52(1)**, 51-58 (2011).
3. Tölgyesi, A., Sharma, V.K., Fekete, S., *et al.* Development of a rapid method for the determination and confirmation of nitroimidazoles in six matrices by fast liquid chromatography-tandem mass spectrometry. *J. Pharm. Biomed. Anal.* **64-65**, 40-48 (2012).
4. Mohamed, R., Mottier, P., Treguier, L., *et al.* Use of molecularly imprinted solid-phase extraction sorbent for the determination of four 5-nitroimidazoles and three of their metabolites from egg-based samples before tandem LC-ESIMS/MS analysis. *J. Agric. Food Chem.* **56(10)**, 3500-3508 (2008).

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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