

Product Name: Miconazole nitrate

Catalog No.: 3016

Batch No.: 1

CAS Number: 22832-87-7

EC Number: 245-256-6

IUPAC Name: 1-[2-(2,4-Dichlorophenyl)-2-[(2,4-dichlorophenyl)methoxy]ethyl]-1H-imidazole nitrate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₄Cl₄N₂O.HNO₃

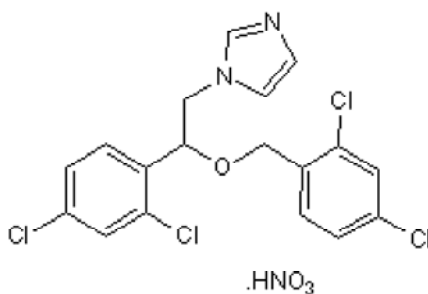
Batch Molecular Weight: 479.14

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM
ethanol to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.9% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Antifungal agent. Inhibits lanosterol demethylase and induces formation of reactive oxygen species. Enhances the generation of mature oligodendrocytes from progenitor cells in vitro and promotes myelination in vivo. Attenuates disease severity in a mouse model of multiple sclerosis. Brain penetrant.

Physical and Chemical Properties:

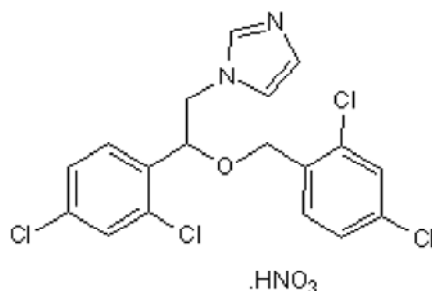
Batch Molecular Formula: C₁₈H₁₄Cl₄N₂O.HNO₃

Batch Molecular Weight: 479.14

Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hubler et al (2018) Accumulation of 8,9-unsaturated sterols drives oligodendrocyte formation and remyelination. *Nature*. PMID: 30046109.

Najim et al (2015) Drug-based modulation of endogenous stem cells promotes functional remyelination *in vivo*. *Nature* **522** 216. PMID: 25896324.

Chang et al (2005) Effect of miconazole on intracellular Ca²⁺ levels and proliferation in human osteosarcoma cells. *Life Sci*. **76** 2091. PMID: 15826876.

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