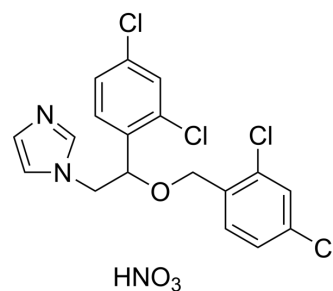


## Miconazole nitrate

<b>Cat. No.:</b>	HY-B0454A
<b>CAS No.:</b>	22832-87-7
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>15</sub> Cl <sub>4</sub> N <sub>3</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	479.14
<b>Target:</b>	Fungal; Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 50 mg/mL (104.35 mM; Need ultrasonic)  
H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.0871 mL	10.4354 mL	20.8707 mL
	5 mM	0.4174 mL	2.0871 mL	4.1741 mL
	10 mM	0.2087 mL	1.0435 mL	2.0871 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Miconazole nitrate (R18134 nitrate) is an imidazole antifungal agent. Miconazole nitrate also has antibacterial effects<sup>[2]</sup>.

#### In Vitro

Miconazole nitrate (R18134 nitrate) is an imidazole antifungal agent, developed by Janssen Pharmaceutica, commonly applied topically to the skin or to mucous membranes to cure fungal infections. It works by inhibiting the synthesis of ergosterol, a critical component of fungal cell membranes. It can also be used against certain species of Leishmania protozoa which are a type of unicellular parasite that also contain ergosterol in their cell membranes. In addition to its antifungal and antiparasitic actions, it also has some antibacterial properties. Miconazole nitrate (R18134 nitrate) is also used in Ektachrome film developing in the final rinse of the Kodak E-6 process and similar Fuji CR-56 process, replacing

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formaldehyde. Fuji Hunt also includes miconazole as a final rinse additive in their formulation of the C-41RA rapid access color negative developing process. From Wikipedia.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Acta Physiol. 2023 Jan 6;e13926.
- J Biol Chem. 2022 May;298(5):101847.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. <http://en.wikipedia.org/wiki/Miconazole>

[2]. Nenoff P, et al. New insights on the antibacterial efficacy of miconazole in vitro. Mycoses. 2017 Aug;60(8):552-557.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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