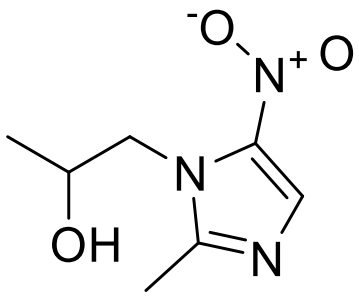


# Product data sheet



MedKoo Cat#: 319558 Name: Secnidazole CAS#: 3366-95-8 Chemical Formula: C <sub>7</sub> H <sub>11</sub> N <sub>3</sub> O <sub>3</sub> Exact Mass: 185.0800 Molecular Weight: 185.18	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

Secnidazole, also known as SYM-1219, is a nitroimidazole anti-infective. Effectiveness in the treatment of dientamoebiasis has been reported. It has also been tested against *Atopobium vaginae*.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
Water	25	135

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	5.40 mL	27.00 mL	54.00 mL
5 mM	1.08 mL	5.40 mL	10.80 mL
10 mM	0.54 mL	2.70 mL	5.40 mL
50 mM	0.11 mL	0.54 mL	1.08 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

- Khayyat AN, Abbas HA, Khayat MT, Shaldam MA, Askoura M, Asfour HZ, Khafagy ES, Abu Lila AS, Allam AN, Hegazy WAH. Secnidazole Is a Promising Imidazole Mitigator of *Serratia marcescens* Virulence. *Microorganisms*. 2021 Nov 11;9(11):2333. doi: 10.3390/microorganisms9112333. PMID: 34835458; PMCID: PMC8617784.
- Pentikis HS, Adetoro N, Kaufman G. In vitro metabolic profile and drug-drug interaction assessment of secnidazole, a high-dose 5-nitroimidazole antibiotic for the treatment of bacterial vaginosis. *Pharmacol Res Perspect*. 2020 Aug;8(4):e00634. doi: 10.1002/prp2.634. PMID: 32776491; PMCID: PMC7416039.

### In vivo study

- Muzny CA, Van Gerwen OT, Kaufman G, Chavoustie S. Efficacy of single-dose oral secnidazole for the treatment of trichomoniasis in women co-infected with trichomoniasis and bacterial vaginosis: a post hoc subgroup analysis of phase 3 clinical trial data. *BMJ Open*. 2023 Aug 7;13(8):e072071. doi: 10.1136/bmjopen-2023-072071. PMID: 37550019; PMCID: PMC10407359.
- Jiménez JC, Pinon A, Dive D, Capron M, Dei-Cas E, Convit J. Antibody response in children infected with *Giardia intestinalis* before and after treatment with Secnidazole. *Am J Trop Med Hyg*. 2009 Jan;80(1):11-5. PMID: 19141831.

## 7. Bioactivity

Biological target:

# Product data sheet



Secnidazole effectively inhibits QS resulting in the attenuation of *Pseudomonas aeruginosa* pathogenesis. Secnidazole has antimicrobial activity against many anaerobic Gram-negative and Gram-positive bacterial species in vitro.

## In vitro activity

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This study reports the metabolism and drug-drug interaction profile for secnidazole and demonstrates that it has minimal to no potential drug interactions of concern. Secnidazole exhibited very low metabolism in human liver microsomes at concentrations up to 6400  $\mu\text{mol/L}$ . Secnidazole inhibited CYP2C19 and CYP3A4, with IC<sub>50</sub> values of 3873 and 3722  $\mu\text{mol/L}$ , respectively. There was no inhibition observed for any other CYP enzyme or with human recombinant aldehyde dehydrogenase 2 (ALDH2).

Reference: Pharmacol Res Perspect. 2020 Aug;8(4):e00634. <https://pubmed.ncbi.nlm.nih.gov/32776491/>

## In vivo activity

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Single-dose oral secnidazole 2 g was highly efficacious in curing trichomoniasis in women co-infected with bacterial vaginosis (BV). Microbiological cure rates for trichomoniasis at test of cure were 97.7% (42/43) for secnidazole and 0% (0/36) for placebo.

Reference: BMJ Open. 2023 Aug 7;13(8):e072071. <https://pubmed.ncbi.nlm.nih.gov/37550019/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*