



Product Information

Sulconazole nitrate salt

Product Number **S 9632**
Store at Room Temperature

Product Description

Molecular Formula: $C_{18}H_{15}Cl_3N_2S \cdot HNO_3$
Molecular Weight: 460.8
CAS Number: 61318-91-0
Melting Point: 130.5 - 132 °C¹
Synonym: 1-[2-[[4-chlorophenyl)methyl]-thio]-
2-(2,4-dichlorophenyl)ethyl]-1H-imidazole nitrate;
(±)-1-[2,4-dichloro-β-[(p-
chlorobenzyl)thio]phenethyl]imidazole nitrate

Sulconazole is an imidazole derivative with antifungal and antibacterial activity. It has activity against *Malassezia furfur* and *Candida albicans*, as well as dermatophytes and Gram-positive bacteria.² A study of the action of sulconazole and other antifungal agents against various *Candida albicans* and other *Candida* isolates has been reported.³ The comparative activity of sulconazole against *Candida albicans* in logarithmic phase (2 μM) and stationary phase (8 μM) has been investigated.⁴

A study of the formation of aggregates of sulconazole in solution and their inhibitory activity against the enzymes, β-lactamase, chymotrypsin, and malate dehydrogenase, has been described.⁵ The inhibition of cytochromes P450 in cDNA-expressing microsomes from human lymphoblast cells or human liver microsomes by sulconazole and other antifungal compounds has been examined.⁶

An HPLC method for the analysis of sulconazole in plasma has been described.⁷ HPLC assays for the resolution of the optical isomers of sulconazole that use chiral amylose columns and chiral cellulose columns have been reported.^{8,9}

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (50 mg/ml), with heat and sonication as needed, yielding a clear, colorless solution.

References

1. The Merck Index, 12th ed., Entry# 9062.
2. Martindale The Extra Pharmacopoeia, 31st ed., Reynolds, J. E. F., ed., Royal Pharmaceutical Society (London, UK: 1996), p. 415.
3. Hernandez Molina, J. M., et al., *In vitro* activity of cloconazole, sulconazole, butoconazole, isoconazole, fenticonazole, and five other antifungal agents against clinical isolates of *Candida albicans* and *Candida* spp. *Mycopathologia*, **118(1)**, 15-21 (1992).
4. Beggs, W. H., Influence of growth phase on the susceptibility of *Candida albicans* to butoconazole, oxiconazole, and sulconazole. *J. Antimicrob. Chemother.*, **16(3)**, 397-399 (1985).
5. Seidler, J., et al., Identification and prediction of promiscuous aggregating inhibitors among known drugs. *J. Med. Chem.*, **46(21)**, 4477-4486 (2003).
6. Zhang, W., et al., Inhibition of cytochromes P450 by antifungal imidazole derivatives. *Drug Metab. Dispos.*, **30(3)**, 314-318 (2002).
7. Fass, M., et al., Reversed-phase high-pressure liquid chromatographic analysis of sulconazole in plasma. *J. Pharm. Sci.*, **70(12)**, 1338-1340 (1981).

8. Aboul-Enein, H. Y., and Ali, I., Comparison of the chiral resolution of econazole, miconazole, and sulconazole by HPLC using normal-phase amylose CSPs. *Fresenius J. Anal. Chem.*, **370(7)**, 951-955 (2001).
9. Aboul-Enein, H. Y., and Ali, I., Comparative study of the enantiomeric resolution of chiral antifungal drugs econazole, miconazole and sulconazole by HPLC on various cellulose chiral columns in normal phase mode. *J. Pharm. Biomed. Anal.*, **27(3-4)**, 441-446 (2002).

GCY/NSB 1/04

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.