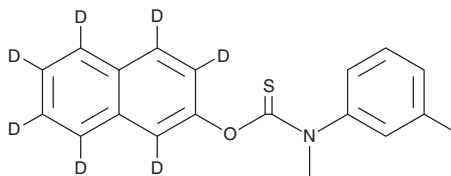


# PRODUCT INFORMATION



## Tolnaftate-d<sub>7</sub> Item No. 29048

**CAS Registry No.:** 1329835-64-4  
**Formal Name:** N-methyl-N-(3-methylphenyl)-  
carbamothioic acid, O-(2-naphthalen-  
d<sub>7</sub>-yl) ester  
**MF:** C<sub>19</sub>H<sub>10</sub>D<sub>7</sub>NOS  
**FW:** 314.5  
**Chemical Purity:** ≥98% (Tolnaftate)  
**Deuterium**  
**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

Tolnaftate-d<sub>7</sub> is intended for use as an internal standard for the quantification of tolinaftate (Item No. 21446) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Tolnaftate-d<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the tolinaftate-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. Tolinaftate-d<sub>7</sub> is soluble in organic solvents such as methanol, DMSO, and acetonitrile.

### Description

Tolnaftate is a thiocarbamate antifungal agent.<sup>1</sup> It is active against clinical isolates of the dermatophytes *T. rubrum*, *T. mentagraphytes*, *T. verrucosum*, *E. floccosum*, and *M. canis* (MIC<sub>50</sub>s = 50, 100, 6, 50, and 50 ng/ml, respectively), as well as 18 additional yeast and filamentous fungi species (MIC = 0.003-0.8 µg/ml).<sup>2,3</sup> Tolnaftate also reduces aflatoxin production in *A. parasiticus* in a concentration-dependent manner.<sup>4</sup> It inhibits squalene epoxidase with an IC<sub>50</sub> value of 12.5 µg/ml in a cell-free assay.<sup>1</sup>

### References

1. Ryder, N.S., Frank, I., and Dupont, M.C. Ergosterol biosynthesis inhibition by the thiocarbamate antifungal agents tolinaftate and tolcliate. *Antimicrob. Agents Chemother.* **29**(5), 858-860 (1986).
2. Petranyi, G., Meingassner, J.G., and Mieth, H. Antifungal activity of the allylamine derivative terbinafine in vitro. *Antimicrob. Agents Chemother.* **31**(9), 1365-1368 (1987).
3. Waitz, J.A., Moss, E.L., and Weinstein, M.J. Chemotherapeutic evaluation of clotrimazole [Bay b 5097, 1 (o-chloro-α-α-diphenylbenzyl) imidazole]. *Appl. Microbiol.* **22**(5), 891-898 (1971).
4. Khan, S.N., Maggon, K.K., and Venkitasubramanian, T.A. Inhibition of aflatoxin biosynthesis by tolinaftate. *Appl. Environ. Microbiol.* **36**(2), 270-273 (1978).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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