

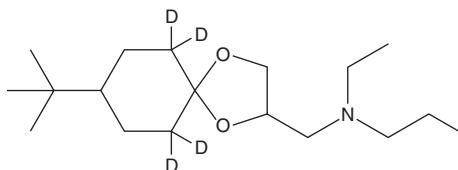
# PRODUCT INFORMATION



## Spiroxamine-d<sub>4</sub>

Item No. 39604

**CAS Registry No.:** 2469272-82-8  
**Formal Name:** 8-(1,1-dimethylethyl)-N-ethyl-N-propyl-1,4-dioxaspiro[4.5]decane-2-methanamine-6,6,10,10-d<sub>4</sub>  
**MF:** C<sub>18</sub>H<sub>31</sub>D<sub>4</sub>NO<sub>2</sub>  
**FW:** 301.5  
**Chemical Purity:** ≥95% (Spiroxamine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A neat oil  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Spiroxamine-d<sub>4</sub> is intended for use as an internal standard for the quantification of spiroxamine (Item No. 25823) 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).

Spiroxamine-d<sub>4</sub> is supplied as a neat oil. A stock solution may be made by dissolving the spiroxamine-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Spiroxamine-d<sub>4</sub> is slightly soluble in chloroform and methanol.

### Description

Spiroxamine is a tertiary amine fungicide.<sup>1</sup> It inhibits the growth of *N. parvum*, *B. dothidea*, *D. seriata*, and *L. theobromae* isolates from grape vines (EC<sub>50</sub>s = 0.97-10.28 mg/L).<sup>2</sup> Spiroxamine reduces mean firing and burst rates in rat cortical cultures (EC<sub>50</sub>s = 90 and 110 nM, respectively).<sup>3</sup> It is also cytotoxic to MDA-kb2 breast cancer cells (EC<sub>20</sub> = 9.29 μM).<sup>4</sup>

### References

1. Sui, G., Zhang, W., Zhou, K., *et al.* Trialkylamine derivatives containing a triazole moiety as promising ergosterol biosynthesis inhibitor: Design, synthesis, and antifungal activity. *Chem. Pharm. Bull. (Tokyo)* **65(1)**, 82-89 (2017).
2. Amponsah, N.T., Jones, E., Ridgway, H.J., *et al.* Evaluation of fungicides for the management of Botryosphaeria dieback diseases of grapevines. *Pest Manag. Sci.* **68(5)**, 676-683 (2012).
3. Frank, C.L., Brown, J.P., Wallace, K., *et al.* Developmental neurotoxicants disrupt activity in cortical networks on microelectrode arrays: Results of screening 86 compounds during neural network formation. *Toxicol. Sci.* **160(1)**, 121-135 (2017).
4. Orton, F., Rosivatz, E., Scholze, M., *et al.* Widely used pesticides with previously unknown endocrine activity revealed as *in vitro* antiandrogens. *Environ. Health Perspect.* **119(6)**, 794-800 (2011).

#### 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.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM