

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

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# PRODUCT INFORMATION



# Spirotetramat-d<sub>5</sub>

Item No. 39032

CAS Registry No.: 2469007-09-6

Formal Name: carbonic acid, cis-3-(2,5-dimethylphenyl)-8-methoxy-

2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl ester-d<sub>5</sub>

MF:  $C_{21}H_{22}D_5NO_5$ 

FW: 378.5

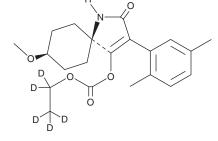
**Chemical Purity:** ≥98% (Spirotetramat)

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>);  $\leq$ 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**

Spirotetramat-d<sub>5</sub> is intended for use as an internal standard for the quantification of spirotetramat (Item No. 25634) 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).

Spirotetramat- $d_5$  is supplied as a solid. A stock solution may be made by dissolving the spirotetramat- $d_5$ in the solvent of choice, which should be purged with an inert gas. Spirotetramat-d<sub>5</sub> is slightly soluble in DMSO and methanol.

### Description

Spirotetramat is an insecticide. It is active against C. pyri nymphs in vitro ( $LC_{50} = 6.51-12.53 \text{ mg AI/L}$ ) and induces mortality of nymphs in European pear (P. communis) fields by 99.2% 15 days after application at a concentration of 27 g/hectare. Spirotetramat also reduces O. insidiosus embryonic viability and nymph survival.<sup>2</sup> It exhibits aquatic toxicity, increasing protein levels of glutathione peroxidase (GPX) and superoxide dismutase (SOD), decreasing levels of malondialdehyde (MDA), and inducing lethality in Chinese toad (B. gargarizans) tadpoles ( $LC_{50} = 6.98 \text{ mg/L}$ ). Formulations containing spirotetramat have been used in the control of insects in agriculture.

#### References

- 1. Civolani, S., Boselli, M., Butturini, A., et al. Testing spirotetramat as an alternative solution to abamectin for Cacopsylla pyri (Hemiptera: Psyllidae) control: Laboratory and field tests. J. Econ. Entomol. 108(6), 2737-2742 (2015).
- 2. Moscardini, V.F., da Costa Gontijo, P., Carvalho, G.A., et al. Toxicity and sublethal effects of seven insecticides to eggs of the flower bug Orius insidiosus (Say) (Hemiptera: Anthocoridae). Chemosphere 92(5), 490-496 (2013).
- 3. Yin, X., Jiang, S., Yu, J., et al. Effects of spirotetramat on the acute toxicity, oxidative stress, and lipid peroxidation in Chinese toad (Bufo bufo gargarizans) tadpoles. Environ. Toxicol. Pharmacol. 37(3), 1229-1235 (2014).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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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