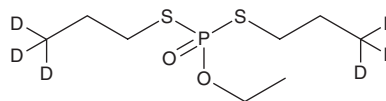


PRODUCT INFORMATION



Ethoprop-d₆ Item No. 39601

CAS Registry No.: 2733774-72-4
Formal Name: O-ethyl S,S-bis(propyl-3,3,3-d₃) phosphorodithioate
Synonym: Ethoprophos-d₆
MF: C₈H₁₃D₆O₂PS₂
FW: 248.4
Chemical Purity: ≥95% (Ethoprop)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A solution in methanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Ethoprop-d₆ is intended for use as an internal standard for the quantification of ethoprop (Item No. 27609) 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).

Ethoprop-d₆ is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO purged with an inert gas can be used. Ethoprop-d₆ is slightly soluble in DMSO.

Description

Ethoprop is an organothiophosphate nematicide and insecticide.¹⁻³ It decreases the infectivity of *M. chitwoodi* and *M. hapla* second-stage juveniles (EC₅₀s = 5.6 and 6.8 µg/ml, respectively) and inhibits hatching of *M. chitwoodi* egg masses and *M. chitwoodi* and *M. hapla* free eggs (EC₅₀s = 0.2, 46, and 83.3 µg/ml, respectively).² Ethoprop (1.8 µg/g) decreases the number of *M. chitwoodi* nematodes in tomato roots when added to soil from fields without previous ethoprop exposure, but is biodegraded in soil from fields previously exposed to ethoprop. In field trials, it decreases the percentage of potato tubers damaged by wireworms when applied as granules in the planting furrow at a concentration of 3 kg AI/ha.³ Ethoprop is toxic to rats via oral administration and dermal contact (LD₅₀s = 47 and 226 mg/kg, respectively) as well as inhalation (LD₅₀ = 0.123 mg/L).¹ It is also toxic to bluegill (LC₅₀ = 0.32 mg/L). Formulations containing ethoprop have been used in the agricultural control of pests.

References

1. European Food Safety Authority. Conclusion regarding the peer review of the pesticide risk assessment of the active substance ethoprophos. *EFSA Scientific Report* (2006).
2. Mojtahedi, H., Santo, G.S., and Pinkerton, J.N. Efficacy of ethoprop on *Meloidogyne hapla* and *M. chitwoodi* and enhanced biodegradation in soil. *J. Nematol.* **23(4)**, 372-379 (1991).
3. Stewart, K.M. Chemical control of wireworms (Elateridae) in potatoes. *N. Z. J. Exp. Agr.* **9(3-4)**, 357-362 (1981).

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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