

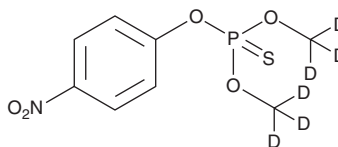
PRODUCT INFORMATION



Methyl Parathion-d₆

Item No. 37894

CAS Registry No.: 96740-32-8
Formal Name: phosphorothioic acid, O,O-di(methyl-d₃)
O-(4-nitrophenyl) ester
MF: C₈H₄D₆NO₅PS
FW: 269.2
Chemical Purity: ≥98% (Methyl Parathion)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A 10 mg/ml solution in chloroform
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Methyl parathion-d₆ is intended for use as an internal standard for the quantification of methyl parathion (Item No. 25786) 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).

Methyl parathion-d₆ is supplied as a solution in chloroform. To change the solvent, simply evaporate the chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. Methyl parathion-d₆ is slightly soluble in methanol.

Description

Methyl parathion is an organophosphate insecticide.¹ Methyl parathion is lethal to lab strains and field isolates of tobacco budworm larvae (LD₅₀s = 7 and 81.8-128.3 µg/g, respectively).² It reduces the number of stink bugs (*C. sayi*) caught per 100 net sweeps when applied to alfalfa fields at a concentration of 0.4 pounds per acre.³ Methyl parathion increases sister chromatid exchange (SCE) in a concentration-dependent manner and induces cell cycle arrest at the M₁ phase in V79 cells at a concentration of 40 µg/ml.⁴ It is toxic to rats (LD₅₀ = 14 mg/kg).¹

References

1. Guo, J.-X., Wu, J.J.-Q., Wight, J.B., *et al.* Mechanistic insight into acetylcholinesterase inhibition and acute toxicity of organophosphorus compounds: A molecular modeling study. *Chem. Res. Toxicol.* **19**(2), 209-216 (2006).
2. Martinez-Carrillo, J.L. and Reynolds, H.T. Dosage-mortality studies with pyrethroids and other insecticides on the tobacco budworm (*Lepidoptera: Noctuidae*) from the Imperial Valley, California. *J. Econ. Entomol.* **76**(5), 983-986 (1983).
3. Reynolds, H.T., Stern, V.M., Fukoto, T.R., *et al.* Potential use of Dylox and other insecticides in a control program for field crop pests in California. *J. Econ. Entomol.* **53**(1), 72-78 (1960).
4. Chen, H.H., Hsueh, J.L., Sirianni, S.R., *et al.* Induction of sister-chromatid exchanges and cell cycle delay in cultured mammalian cells treated with eight organophosphorus pesticides. *Mutat. Res.* **88**(3), 307-316 (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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