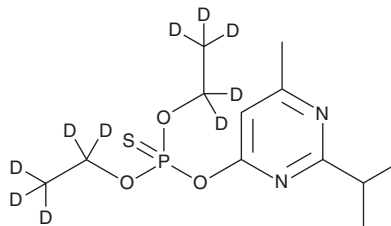


PRODUCT INFORMATION



Diazinon-d₁₀ Item No. 39556

CAS Registry No.: 100155-47-3
Formal Name: phosphorothioic acid, O,O-di(ethyl-1,1,2,2,2-d₅) O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester
MF: C₁₂H₁₁D₁₀N₂O₃PS
FW: 314.4
Chemical Purity: ≥95% (Diazinon)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₀); ≤1% d₀
Supplied as: A 10 mg/ml solution in methanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Diazinon-d₁₀ is intended for use as an internal standard for the quantification of diazinon (Item No. 23769) 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).

Diazinon-d₁₀ 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. Diazinon-d₁₀ is slightly soluble in chloroform.

Description

Diazinon is an insecticide.¹ It is lethal to adult and larval beet webworms (LD₅₀s = 0.15 and 464 mg/kg, respectively).² Diazinon (0.5, 1, and 2 mg/kg) decreases isolated brainstem and forebrain choline acetyltransferase activity, a marker for neurological development, in neonatal rats.³ It is lethal to dogs when administered at doses ranging from 300-500 mg/kg.¹ Diazinon (5-50 mg/kg) induces cardiac hemorrhage, increases fatty areas in the pancreas, as well as decreases the thickness of the duodenum and jejunum, in pigs. Formulations containing diazinon have been used in the control of ticks, lice, and flies in agriculture.

References

1. Earl, F.L., Melveger, B.E., Reinwall, J.E., *et al.* Diazinon toxicity-comparative studies in dogs and miniature swine. *Toxicol. Appl. Pharmacol.* **18(2)**, 285-295 (1971).
2. Leonova, I.N. and Slynko, N.M. Life stage variations in insecticidal susceptibility and detoxification capacity of the beet webworm, *Pyrausta sticticalis* L. (Lep., Pyralidae). *J. Appl. Entomol.* **128(6)**, 419-425 (2004).
3. Slotkin, T.A., Levin, E.D., and Seidler, F.J. Comparative developmental neurotoxicity of organophosphate insecticides: Effects on brain development are separable from systemic toxicity. *Environ. Health Perspect.* **114(5)**, 746-751 (2006).

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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