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- Trockeneiszuschlag
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- Expressversand

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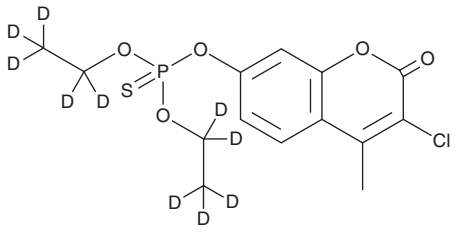
PRODUCT INFORMATION

Coumaphos-d_{10}

Item No. 39563

CAS Registry No.: 287397-86-8
Formal Name: O-(3-chloro-4-methyl-2-oxo-2H-1-benzopyran-7-yl), phosphorothioic acid, O,O-di(ethyl-d_5) ester
MF: $C_{14}H_6ClD_{10}O_5PS$
FW: 372.8
Chemical Purity: ≥98% (Coumaphos)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_{10}); ≤1% d_0
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

Coumaphos-d_{10} is intended for use as an internal standard for the quantification of coumaphos (Item No. 24230) 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).

Coumaphos-d_{10} is supplied as a solid. A stock solution may be made by dissolving the coumaphos-d_{10} in the solvent of choice, which should be purged with an inert gas. Coumaphos-d_{10} is slightly soluble in chloroform and methanol.

Description

Coumaphos is an organophosphate pesticide.[1] It is converted into the corresponding oxon metabolite *in vivo*, similar to other organophosphate pesticides, that inhibits acetylcholinesterase (AChE). It is active against adult, but not arrested stage, *O. ostertagi* helminths.[2] Coumaphos is toxic to *A. stephensi* and *A. aegypti* mosquitoes when applied topically, with median lethal doses of 0.002 and 0.012 µg per female mosquito, respectively, but not when used as a contact insecticide.[3] It is lethal to rats (LD_{50}s = 41 and 16 mg/kg for male and female rats, respectively).[4] Formulations containing coumaphos have been used to control pests in livestock.

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. Prichard, R.K. Anthelmintics and control. *Vet. Parasitol.* **27(1-2)**, 97-109 (1988).
3. Hadaway, A.B. and Barlow, F. The toxicity of some organophosphorus compounds to adult *Anopheles stephensi*. *Bull. World Health Organ.* **28(1)**, 55-61 (1963).
4. Gaines, T.B. Acute toxicity of pesticides. *Toxicol. Appl. Pharmacol.* **14(3)**, 515-534 (1969).

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