

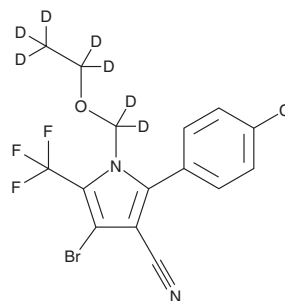
PRODUCT INFORMATION



Chlorfenapyr-d₇

Item No. 39599

Formal Name: 4-bromo-2-(4-chlorophenyl)-1-((ethoxy-d₅)methyl-d₂)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile
MF: C₁₅H₄BrD₇ClF₃N₂O
FW: 414.7
Chemical Purity: ≥98% (Chlorfenapyr)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀
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

Chlorfenapyr-d₇ is intended for use as an internal standard for the quantification of chlorfenapyr (Item No. 24141) 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).

Chlorfenapyr-d₇ is supplied as a solid. A stock solution may be made by dissolving the chlorfenapyr-d₇ in the solvent of choice, which should be purged with an inert gas. Chlorfenapyr-d₇ is slightly soluble in chloroform and methanol.

Description

Chlorfenapyr is a pyrrole pro-insecticide that is metabolized *in vivo* into CL 303268 by mixed function oxidases.¹ It is toxic to Colorado potato beetles (*L. decemlineata*) when used at a concentration of 10 ppm, as well as horn flies (*H. irritans*) susceptible- and resistant to the insecticide cypermethrin (LC₅₀s = 1.25 and 0.29 µg/cm² on filter paper) and *A. culicifacies* and *A. stephensi* mosquitos (LC₁₀₀ = 5% for both on filter paper).¹⁻³ Chlorfenapyr is toxic to rats (LD₅₀s = 441 and 1,152 mg/kg for males and females, respectively).¹ Formulations containing chlorfenapyr have been used to control termites and in agriculture to control various insects.

References

1. Black, B.C., Hollingworth, R.M., Ahammadsahib, K.I., *et al.* Insecticidal action and mitochondrial uncoupling activity of AC-303,630 and related halogenated pyrroles. *Pestic. Biochem. Physiol.* **50**(2), 115-128 (1994).
2. Sheppard, D.C. and Joyce, J.A. Increased susceptibility of pyrethroid-resistant horn flies (Diptera: Muscidae) to chlorfenapyr. *J. Econ. Entomol.* **91**(2), 398-400 (1998).
3. Raghavendra, K., Barik, T.K., Sharma, P., *et al.* Chlorfenapyr: A new insecticide with novel mode of action can control pyrethroid resistant malaria vectors. *Malar. J.* **10**, 16 (2011).

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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