

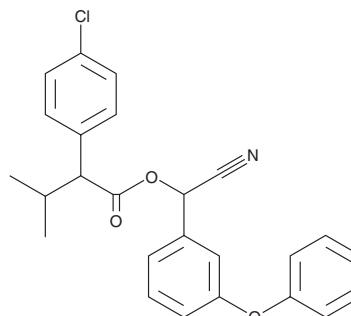
PRODUCT INFORMATION



Fenvalerate

Item No. 29399

CAS Registry No.: 51630-58-1
Formal Name: 4-chloro- α -(1-methylethyl)-benzeneacetic acid, cyano(3-phenoxyphenyl)methyl ester
MF: C₂₅H₂₂ClNO₃
FW: 419.9
Purity: $\geq 95\%$
Supplied as: A neat oil
Storage: -20°C
Stability: ≥ 4 years



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

Laboratory Procedures

Fenvalerate is supplied as a neat oil. A stock solution may be made by dissolving the fenvalerate in the solvent of choice, which should be purged with an inert gas. Fenvalerate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of fenvalerate in these solvents is approximately 5, 1, and 30 mg/ml, respectively.

Description

Fenvalerate is a pyrethroid ester insecticide and acaricide.^{1,2} It is a slow activator of voltage-gated sodium channel 1.8 (Na_v1.8).¹ It induces mortality in pyrethroid-susceptible and -resistant strains of *M. domestica* (LD₅₀s = 0.014-5 µg/fly).³ Fenvalerate also induces mortality in tobacco budworm larvae but is associated with pyrethroid resistance with an increase in LD₅₀ values from 1.01 to 20.85 µg/g over a six-year timeframe.⁴ It induces mortality in 95.5% of *T. macfarlanei* spider mites when applied to leaves at a concentration of 0.015%.²

References

1. Choi, J.S. and Soderlund, D.M. Structure-activity relationships for the action of 11 pyrethroid insecticides on rat Na_v1.8 sodium channels expressed in *Xenopus* oocytes. *Toxicol. Appl. Pharmacol.* **211(3)**, 233-244 (2006).
2. Jose, V.T. and Shah, A.H. Chemical control of the spider mite, *Tetranychus macfarlanei* B & P, the pest of cotton. *Pesticides* **20(12)**, 19-23 (1986).
3. Pedersen, L.-E.K. The potency of cyclopropane pyrethroid ethers against susceptible and resistant strains of the house fly *Musca domestica*. *Experientia* **42(9)**, 1057-1058 (1986).
4. 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).

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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