

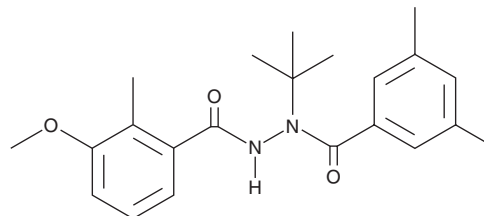
PRODUCT INFORMATION



Methoxyfenozide

Item No. 29182

CAS Registry No.: 161050-58-4
Formal Name: 3-methoxy-2-methyl-benzoic acid, 2-(3,5-dimethylbenzoyl)-2-(1,1-dimethylethyl)hydrazide
Synonyms: RG-102398, RH-2485
MF: C₂₂H₂₈N₂O₃
FW: 368.5
Purity: ≥98%
Supplied as: A crystalline 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

Methoxyfenozide is supplied as a crystalline solid. A stock solution may be made by dissolving the methoxyfenozide in the solvent of choice, which should be purged with an inert gas. Methoxyfenozide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of methoxyfenozide in these solvents is approximately 10, 20, and 25 mg/ml, respectively.

Methoxyfenozide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, methoxyfenozide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Methoxyfenozide has a solubility of approximately 0.1 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Methoxyfenozide is a diacylhydrazine insecticide.¹ It selectively binds to lepidopteran ecdysone receptors (EcRs) over dipteran EcRs with K_d values of 0.5 and 124 nM, respectively. Dietary administration of methoxyfenozide is lethal to neonatal larvae of *S. exigua*, *S. frugiperda*, *T. ni*, *O. nubilalis*, *L. pomonella*, *H. zea*, and *H. virescens* (LC₅₀s = 0.35, 0.2, 0.11, 0.18, 0.21, 0.79, and 3.12 mg/L, respectively). It induces early molting in *O. nubilalis* neonatal larvae when used at concentrations ranging from 0.063 to 0.5 ppm.² Formulations containing methoxyfenozide have been used as insecticides in agriculture.

References

1. Carlson, G.R., Dhadialla, T.S., Hunter, R., *et al.* The chemical and biological properties of methoxyfenozide, a new insecticidal ecdysteroid agonist. *Pest Manag. Sci.* **57**(2), 115-119 (2001).
2. Trisyono, A. and Chippendale, M.G. Effect of the nonsteroidal ecdysone agonists, methoxyfenozide and tebufenozide, on the European corn borer (Lepidoptera: Pyralidae). *J. Econ. Entomol.* **90**(6), 1486-1492 (1997).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/04/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM