

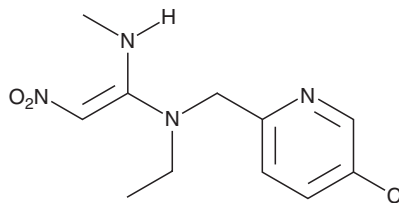
PRODUCT INFORMATION



Nitenpyram

Item No. 21271

CAS Registry No.: 150824-47-8
Formal Name: (1E)-N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-1,1-ethenediamine
MF: $C_{11}H_{15}ClN_4O_2$
FW: 270.7
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 213, 270, 343 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Nitenpyram is supplied as a crystalline solid. A stock solution may be made by dissolving the nitenpyram in the solvent of choice. Nitenpyram is slightly soluble in organic solvents such as methanol and DMSO, which should be purged with an inert gas.

Description

Nitenpyram is a neonicotinoid insecticide.¹ It is an antagonist of housefly neuronal-type nicotinic acetylcholine receptors (nAChRs; $IC_{50} = 2$ nM for housefly head homogenates).² Nitenpyram induces mortality in brown planthopper (*N. lugens*) larvae when used at a concentration of 0.5 ppm.³ Orally administered nitenpyram (11.4, 11.4, and 57 mg/animal, respectively) eliminates live adult fleas on cats, small dogs, and large dogs after six hours of treatment.⁴ It also reduces the number of aphids, ladybugs, ladybug larvae, lacewings, and syrphid larvae on adult cotton plants when applied to cotton seeds at a concentration of 4 g/kg of seeds.⁵ Formulations containing nitenpyram have been used in the control of fleas and ticks on companion animals.

References

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2. Nauen, R., Ebbinghaus, U., and Tietjen, K. Ligands of the nicotinic acetylcholine receptor as insecticides. *Pest. Manag. Sci.* **55**(5), 608-610 (1999).
3. Minamida, I., Iwanaga, K., Tabuchi, T., *et al.* Synthesis and insecticidal activity of acyclic nitroethene compounds containing a heteroarylmethylamino group. *J. Pesticide Sci.* **18**, 41-48 (1993).
4. Dobson, P., Tinembart, O., Fisch, R.D., *et al.* Efficacy of nitenpyram as a systemic flea adulticide in dogs and cats. *Vet. Rec.* **147**(25), 709-713 (2000).
5. Zhang, Z., Zhang, X., Wang, Y., *et al.* Nitenpyram, dinotefuran, and thiamethoxam used as seed treatments act as efficient controls against *Aphis gossypii* via high residues in cotton leaves. *J. Agric. Food Chem.* **64**(49), 9276-9285 (2016).

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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