

# PRODUCT INFORMATION



## Fluralaner

Item No. 22061

**CAS Registry No.:** 864731-61-3  
**Formal Name:** 4-[5-(3,5-dichlorophenyl)-4,5-dihydro-5-(trifluoromethyl)-3-isoxazolyl]-2-methyl-N-[2-oxo-2-[(2,2,2-trifluoroethyl)amino]ethyl]-benzamide

**Synonyms:** A-1443, AH 252723

**MF:** C<sub>22</sub>H<sub>17</sub>Cl<sub>2</sub>F<sub>6</sub>N<sub>3</sub>O<sub>3</sub>

**FW:** 556.3

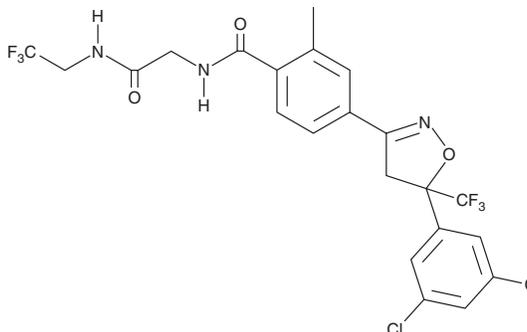
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 265 nm

**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

Fluralaner is supplied as a crystalline solid. A stock solution may be made by dissolving the fluralaner in the solvent of choice, which should be purged with an inert gas. Fluralaner is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of fluralaner in these solvents is approximately 30 mg/ml.

Fluralaner is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fluralaner should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fluralaner has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Fluralaner is an isoxazoline ectoparasiticide.<sup>1,2</sup> It potently and selectively inhibits binding of the GABA receptor channel blocker [<sup>3</sup>H]4'-ethynyl-4-n-propylbicycloorthobenzoate (EBOB) to housefly head membranes, with an IC<sub>50</sub> value of 455 pM as compared to an IC<sub>50</sub> value of >10 μM for rat brain membranes.<sup>1</sup> Fluralaner blocks GABA- and glutamate-induced chloride currents in *Xenopus* oocytes expressing housefly MdGBCl or MdGluCl channels (IC<sub>50</sub>s = 5.32 and 79.9 nM, respectively) but has no effect on rat GABA Cl channels (IC<sub>50</sub> = >30,000 nM). It has insecticidal and acaricidal activity against *C. felis*, *S. calcitrans*, *L. cuprina*, *A. aegypti*, *R. microplus*, *R. sanguineus*, and *O. moubata* at concentrations of 0.0000012 to 1 ppm.<sup>2</sup> Formulations containing fluralaner have been used in the prevention and treatment of parasitic infections in veterinary medicine.

### References

1. Ozoe, Y., Asahi, M., Ozoe, F., *et al.* The antiparasitic isoxazoline A1443 is a potent blocker of insect ligand-gated chloride channels. *Biochem. Biophys. Res. Commun.* **391**(1), 744-749 (2010).
2. Gassel, M., Wolf, C., Noack, S., *et al.* The novel isoxazoline ectoparasiticide fluralaner: Selective inhibition of arthropod γ-aminobutyric acid- and L-glutamate-gated chloride channels and insecticidal/acaricidal activity. *Insect Biochem. Mol. Biol.* **45**, 111-124 (2014).

#### 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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