

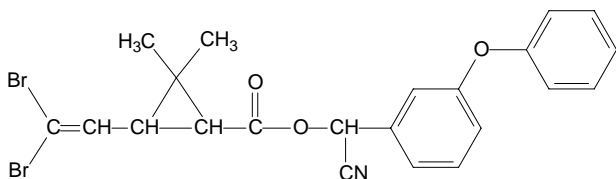
Product Information

Deltamethrin

Product Number **D 9315**
Storage Temperature 0 °C

CAS# 52918-63-5

Synonym: (S)- α -Cyano-3-phenoxybenzyl (1R)-*cis*-3-(2,2-dibromo-vinyl)-2,2-dimethylcyclopropane-carboxylate



Product Description

Formula: C₂₂H₁₉Br₂NO₃
Formula weight: 505.2
Purity: minimum 98% (HPLC)

Deltamethrin is a type II semi-synthetic pyrethrin, which acts as a potent inhibitor of calcineurin (protein phosphatase 2B) and has an IC₅₀ of about 100 pM.¹ This inhibitory action results in cellular hyperexcitability by causing non-mutated calcium channels to remain open for an extended period of time allowing an abundance of Ca²⁺ to enter the cell. Some sodium channel mutations such as the L993F mutation in *Xenopus* oocytes show decreased sensitivity to deltamethrin.²

The product is packaged as a white film.

Preparation Instructions

Deltamethrin is soluble at 5 mg/ml in a solution of ethanol:DMSO (1:1). Solutions may also be prepared in DMSO, ethanol, or acetone. The product is insoluble in water.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Storage at 0 °C is recommended.

References

1. Enan, E., and Matsumura, F., Specific inhibition of calcineurin by type II synthetic pyrethroid insecticides. *Biochem. Pharm.*, **43**, 1777-1784 (1992).
2. Tan, J., et al., Novel sodium channel gene mutations in *Blattella germanica* reduce the sensitivity of expressed channels to deltamethrin. *Insect Biochem. Mol. Biol.*, **32** (4), 445-454 (2002).

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