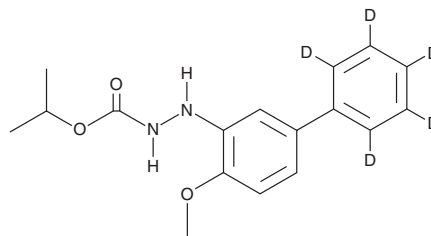


PRODUCT INFORMATION



Bifenazate-d₅ Item No. 39592

Formal Name: 2-(4-methoxy[1,1'-biphenyl]-3-yl)-2',3',4',5',6'-d₅-hydrazinecarboxylic acid, 1-methylethyl ester
MF: C₁₇H₁₅D₅N₂O₃
FW: 305.4
Purity: ≥95% (Bifenazate)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 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

Bifenazate-d₅ is intended for use as an internal standard for the quantification of bifenazate (Item No. 24147) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Bifenazate-d₅ is supplied as a solid. A stock solution may be made by dissolving the bifenazate-d₅ in the solvent of choice, which should be purged with an inert gas. Bifenazate-d₅ is slightly soluble in acetonitrile and chloroform.

Description

Bifenazate is a carbamate acaricide that provides 100% control of mites when used at a concentration of 25 ppm.¹ It acts as a positive allosteric modulator of GABA receptors containing the resistance to dieldrin (Rdl) subunit homolog TuGABAR in *T. urticae* (spider mites), shifting the GABA-induced response from an EC₅₀ value of 24.8 to 4.83 μM when used at a concentration of 30 μM.² Formulations containing bifenazate have been used for the control of mites and for pesticide detection.

References

1. Dekeyser, M.A., McDonald, P.T., and Angle, G.W., Jr. The discovery of bifenazate, a novel carbamate acaricide. *Chimia* **57**(11), 702-704 (2003).
2. Hiragaki, S., Kobayashi, T., Ochiai, N., et al. A novel action of highly specific acaricide; bifenazate as a synergist for a GABA-gated chloride channel of *Tetranychus urticae* [Acari: Tetranychidae]. *Neurotoxicology* **33**(3), 307-313 (2012).

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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