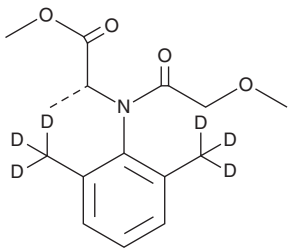
PRODUCT INFORMATION

(R)-(−)-Metalaxyl-d_6

Item No. 39575

CAS Registry No.: 1398112-32-7
Formal Name: methyl N-(2,6-*bis*(methyl-d_3)phenyl)-N-(2-methoxyacetyl)-D-alaninate
Synonym: (R)-(-)-Metalaxyl-d_6
MF: $C_{15}H_{15}D_6NO_4$
FW: 285.4
Chemical Purity: ≥95% ((R)-(−)-metalaxyl)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as: A solution in acetonitrile
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

(R)-(−)-Metalaxyl-d_6 is intended for use as an internal standard for the quantification of (R)-(−)-metalaxyl 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).

Description

(R)-(−)-Metalaxyl is a fungicide and an active enantiomer of metalaxyl (Item No. 25817).[1,2] It is active against several isolates of the plant pathogenic fungus *P. nicotianae* (EC_{50}s = <0.01-2.9 µg/ml).[1] (R)-(−)-Metalaxyl (3 g/kg of seeds) completely protects sunflower plants (*H. annus*) from infection by *P. helianthi*.[2] It is toxic to *D. magna* and *D. rerio* (LC_{50}s = 176.4 and 237.67 mg/L, respectively).[3] Formulations containing (R)-(−)-metalaxyl have been used in the control of fungi in agriculture.

References

1. Hu, J., Hong, C., Moorman, G.W., *et al.* Mefenoxam sensitivity and fitness analysis of Phytophthora nicotianae isolates from nurseries in Virginia, USA. *Plant Pathol.* **57(4)**, 728-736 (2008).
2. Zadra, C., Marucchini, C., and Zazzerini, A. Behavior of metalaxyl and its pure R-enantiomer in sunflower plants (*Helianthus annus*). *J. Agric. Food Chem.* **50(19)**, 5373-5377 (2002).
3. Yao, K., Zhu, L., Duan, Z., *et al.* Comparison of R-metalaxyl and rac-metalaxyl in acute, chronic, and sublethal effect on aquatic organisms: *Daphnia magna*, *Scenedesmus quadricanda*, and *Danio rerio*. *Environ. Toxicol.* **24(2)**, 148-156 (2009).

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