

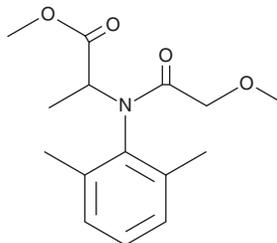
# PRODUCT INFORMATION



## Metalaxyl

Item No. 25817

**CAS Registry No.:** 57837-19-1  
**Formal Name:** N-(2,6-dimethylphenyl)-N-(2-methoxyacetyl)-alanine, methyl ester  
**Synonyms:** (±)-Metalaxyl, *rac*-Metalaxyl  
**MF:** C<sub>15</sub>H<sub>21</sub>NO<sub>4</sub>  
**FW:** 279.3  
**Purity:** ≥98%  
**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

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

### Description

Metalaxyl is a fungicide that inhibits protein synthesis in fungi.<sup>1,2</sup> It inhibits the growth of potato blight (*P. infestans*) fungal isolates from Serbian potato fields (EC<sub>50</sub>s = 0.3-3.9 µg/ml).<sup>1</sup> Metalaxyl (300 and 1,000 µg/ml) induces formation of chromosomal aberrations in human lymphocytes.<sup>3</sup> It exhibits aquatic toxicity against *S. quadricanda*, *D. magna*, and *D. rerio* (IC<sub>50</sub>s = 222.89, 471.95, and 241.98 mg/L, respectively).<sup>4</sup> Metalaxyl also induces tremors, twitches, tonic extension, ataxia, and hypnosis, symptoms of CNS poisoning, and lethality in rats (LD<sub>50</sub>s = 265 and 288.8 mg/kg for female and male rats, respectively).<sup>2</sup> Formulations containing metalaxyl have been used as fungicides in agricultural, aquatic, commercial, industrial, and residential areas.

### References

1. Rekanović, E., Potočnik, I., Milijašević-Marčić, S., *et al.* Toxicity of metalaxyl, azoxystrobin, dimethomorph, cymoxanil, zoxamide and mancozeb to *Phytophthora infestans* isolates from Serbia. *J. Environ. Sci. Health B.* **47(5)**, 403-409 (2012).
2. Naidu, K.A. and Radhakrishnamurty, R. Metalaxyl-induced bradycardia in rats: Mediated by α-adrenoreceptors. *J. Toxicol. Environ. Health* **23(4)**, 495-498 (1988).
3. Hrelia, P., Maffei, F., Fimognari, C., *et al.* Cytogenetic effects of metalaxyl on human and animal chromosomes. *Mutat. Res.* **369(1-2)**, 81-86 (1996).
4. 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).

#### 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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