

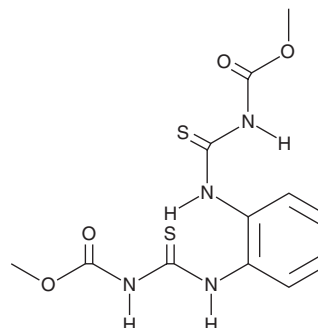
PRODUCT INFORMATION



Thiophanate-methyl

Item No. 35402

CAS Registry No.: 23564-05-8
Formal Name: N,N'-[1,2-phenylenebis(iminocarbonothioyl)]
bis-carbamic acid, C,C'-dimethyl ester
Synonyms: NSC 170811, Thiophanate M, TM
MF: C₁₂H₁₄N₄O₄S₂
FW: 342.4
Purity: ≥98%
UV/Vis.: λ_{max}: 270 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

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

Description

Thiophanate-methyl is a carbamate fungicide.¹ It is active against a variety of fungi, including *T. terrestris* and *G. roseum* (EC₅₀s = <1 to 1-10 μM). Thiophanate-methyl induces hepatotoxicity and increases hepatic reactive oxygen species (ROS) levels in zebrafish larvae and adults when used at concentrations of 12.5 and 25 mg/L.² Formulations containing thiophanate-methyl have been used in the control and prevention of fungi in agriculture and landscaping.

References

1. Bollen, G.J. A comparison of the in vitro antifungal spectra of thiophanates and benomyl. *Neth. J. Pl. Path.* **78**, 55-64 (1972).
2. Jia, K., Cheng, B., Huang, L., *et al.* Thiophanate-methyl induces severe hepatotoxicity in zebrafish. *Chemosphere* **248**, 125941 (2020).

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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