

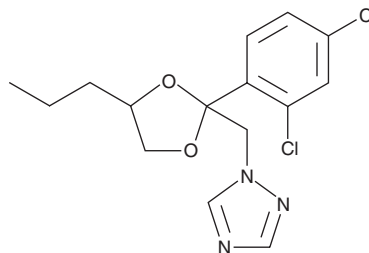
PRODUCT INFORMATION



Propiconazole

Item No. 18853

CAS Registry No.: 60207-90-1
Formal Name: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole
Synonym: CGA 64250
MF: C₁₅H₁₇Cl₂N₃O₂
FW: 342.2
Purity: ≥95% (mixture of isomers)
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Propiconazole is supplied as a neat oil. A stock solution may be made by dissolving the propiconazole in the solvent of choice, which should be purged with an inert gas. Propiconazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of propiconazole in these solvents is approximately 10, 20, and 33 mg/ml, respectively.

Propiconazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, propiconazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Propiconazole has a solubility of approximately 0.16 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Propiconazole is a broad-spectrum triazole fungicide that inhibits the conversion of lanosterol to ergosterol, leading to fungal cell membrane disruption.¹ It inhibits *S. cerevisiae*, but not rat liver, microsomal cytochrome P450 (IC₅₀s = 0.04 and >200 μM, respectively).² Propiconazole inhibits the growth of *T. deformans* and *R. stolonifer* (EC₅₀s = 0.073 and 4.6 μg/ml, respectively), as well as *A. niger*, *M. fructigena*, *S. nodorum*, *T. harzanium*, *R. solani*, and *S. rolsii* at concentrations ranging from 0.1 to 5 ppm.³ It increases the weight of seminal vesicles and vas deferens, as well as the percentage of sperm with abnormal tail morphology, and decreases the plasma concentration of estradiol in male rats when administered at a dose of 4 mg/kg.⁴ Propiconazole increases production of reactive oxygen species (ROS), the number of DNA mutations, and the incidence of tumor formation in mouse liver.⁵ Formulations containing propiconazole have been used in the control of fungi in agriculture.

References

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2. Vanden Bossche, H., Lauwers, W., Willemsens, G., et al. *Pestic. Sci.* **15**(2), 188-198 (1984).
3. Sancholle, M., Weete, J.D., and Montani, C. *Pest. Biochem. Phys.* **21**(1), 31-44 (1984).
4. Costa, N.O., Vieira, M.L., Sgarioni, V., et al. *Toxicology* **335**, 55-61 (2015).
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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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