

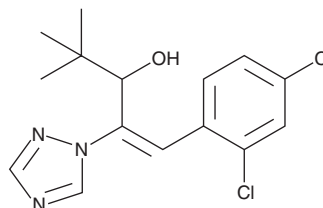
# PRODUCT INFORMATION



## Diniconazole

Item No. 24248

**CAS Registry No.:** 83657-24-3  
**Formal Name:**  $\beta$ E-[(2,4-dichlorophenyl)methylene]- $\alpha$ -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol  
**Synonyms:** Rac-diniconazole, S-3308  
**MF:** C<sub>15</sub>H<sub>17</sub>Cl<sub>2</sub>N<sub>3</sub>O  
**FW:** 326.2  
**Purity:**  $\geq$ 98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Diniconazole is supplied as a solid. A stock solution may be made by dissolving the diniconazole in the solvent of choice, which should be purged with an inert gas. Diniconazole is slightly soluble in DMSO and methanol.

### Description

Diniconazole is a broad-spectrum triazole fungicide that inhibits ergosterol biosynthesis *via* inhibition of the cytochrome P450-dependent 14 $\alpha$ -demethylation of lanosterol, which results in disruption of the fungal cell membrane and cell death.<sup>1</sup> It is fungicidal against *B. cinerea*, *S. fimicola*, *F. graminearum*, *S. cepivorum*, and *B. sorokiniana* (EC<sub>50</sub>s = 0.012, <0.001, 0.008, 0.02, and 0.06 mg/l, respectively).<sup>2</sup> Diniconazole acts as a plant growth regulator, decreasing height and leaf area in bean plants when applied to roots at a concentration of 5 mg/l. It exhibits dose-dependent toxicity in zebrafish.<sup>3</sup>

### References

1. Yoshida, Y., Aoyama, Y., Takano, H., *et al.* Stereo-selective interaction of enantiomers of diniconazole, a fungicide, with purified P-450/14DM from yeast. *Biochem. Biophys. Res. Commun.* **137(1)**, 513-519 (1986).
2. Fletcher, R.A., Hofstra, G., and Gao, J. Comparative fungitoxic and plant growth regulating properties of triazole derivatives. *Plant Cell Physiol.* **27(2)**, 367-371 (1986).
3. Jing, G., Wen-hua, S., Feng, D., *et al.* Acute toxicity study on zebrafish (*Danio rerio*) exposure to triazole fungicides. *J. SE Univ. (Med. Sci. Ed.)* **29(4)**, 402-406 (2010).

#### 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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