Bitertanol
Item No. 24054

CAS Registry No.: 55179-31-2
Formal Name: β-[(1,1'-biphenyl)-4-yloxy]-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol
Synonym: Biloxazol
MF: C₂₀H₂₃N₃O₂
FW: 337.4
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

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

Description

Bitertanol is a broad-spectrum triazole fungicide that is active against a variety of fungi, including V. inaequalis and V. pirina, which are responsible for apple and pear scab, respectively, as well as S. mors-uvae and P. ribis, which are responsible for American gooseberry mildew and leaf spot in black currants, respectively.¹ It is active against isolates of V. inaequalis (MICs = 0.6 and 1 µg/ml) but repeated use leads to resistance and cross-resistance (MICs = 9.8-13 µg/ml for bitertanol-resistant isolates).² Bitertanol inhibits the cytochrome P450 (CYP450) isoform CYP3A4 (IC₅₀ = 2.74 µM) and inhibits androgenic activity induced by the androgen receptor agonist DHT (Item No. 15874) in a yeast two-hybrid assay (IC₅₀ = 79.85 µM).³ In rats, bitertanol (10-300 mg/kg, i.p.) increases operant responding on one- and five-minute fixed interval schedules with no effect on motor activity.⁴

References