

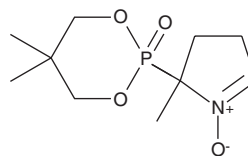
PRODUCT INFORMATION



CYPMPO

Item No. 10009660

CAS Registry No.: 934182-09-9
Formal Name: 5-(2,2-dimethyl-1,3-propoxycyclophosphoryl)-5-methyl-1-pyrroline N-oxide
Synonym: RR 071
MF: C₁₀H₁₈NO₄P
FW: 247.2
Purity: ≥95%
UV/Vis.: λ_{max}: 240 nm
Supplied as: A crystalline 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

CYPMPO is supplied as a crystalline solid. A stock solution may be made by dissolving the CYPMPO in the solvent of choice, which should be purged with an inert gas. CYPMPO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CYPMPO in ethanol and DMF is approximately 25 mg/ml and approximately 20 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of CYPMPO can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CYPMPO in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CYPMPO is a free radical spin trap with excellent trapping capabilities toward hydroxyl and superoxide radicals in biological and chemical systems.¹ Decay of the superoxide adduct of CYPMPO proceeds in an apparent first order fashion with half-lives of 15 and 51 minutes in a UV-illuminated hydrogen peroxide solution and a hypoxanthine/xanthine oxidase system, respectively. CYPMPO traps superoxide radicals generated by bovine neutrophils as effectively as DEPMPO.¹ The high melting point (126°C), low hygroscopic properties, and long shelf-life in aqueous solutions offer significant practical advantages for use of CYPMPO over DEPMPO and DMPO.

Reference

1. Kamibayashi, M., Oowada, S., Kameda, H., *et al.* Synthesis and characterization of a practically better DEPMPO-type spin trap, 5-(2,2-dimethyl-1,3-propoxy cyclophosphoryl)-5-methyl-1-pyrroline N-oxide (CYPMPO). *Free Radic. Res.* **40(11)**, 1166-1172 (2006).

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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