

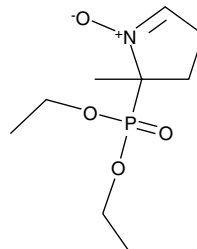
Product Information



DEPMPO

Item No. 10006435

CAS Registry No.: 157230-67-6
Formal Name: (3,4-dihydro-2-methyl-1-oxido-2H-pyrrol-2-yl)-phosphonic acid, diethyl ester
Synonym: 5-(Diethoxyphosphoryl)-5-methyl-1-pyrroline-N-oxide
MF: C₉H₁₈NO₄P
FW: 235.2
Purity: ≥99%
Stability: ≥1 year at -80°C
Supplied as: A colorless to light yellow oil



Laboratory Procedures

For long term storage, we suggest that DEPMPO be stored as supplied at -80°C. It should be stable for at least one year.

DEPMPO is supplied as a colorless to light yellow oil. A stock solution may be made by dissolving the colorless to light yellow oil in the solvent of choice. DEPMPO is soluble in water and organic solvents such as ethanol, DMSO, and methylene chloride which should be purged with an inert gas. We do not recommend storing the aqueous solution for more than one day.

DEPMPO is a phosphorylated derivative of the widely used DMPO spin trap. It has been reported to produce spin adducts with increased stability particularly for the adduct of superoxide.¹⁻³ DEPMPO displays a detectable spin adduct signal at a concentration as low as 1 mM, as compared to 5 mM for DMPO (Item No. 10006436).³ A significant advantage of using DEPMPO in trapping superoxide radical is that the decomposition of DEPMPO/O₂^{•-} does not produce the OH[•] adduct, which can be a drawback when using DMPO.^{2,3}

References

1. Khan, N., Wilmont, C.M., Rosen, G.M., *et al.* Spin traps: *In vitro* toxicity and stability of radical adducts. *Free Radic. Biol. Med.* **34**(11), 1473-1481 (2003).
2. Anzai, K., Aikawa, T., Furukawa, Y., *et al.* ESR measurement of rapid penetration of DMPO and DEPMPO spin traps through lipid bilayer membranes. *Arch. Biochem. Biophys.* **415**, 251-256 (2003).
3. Liu, K.J., Miyake, M., Panz, T., *et al.* Evaluation of DEPMPO as a spin trapping agent in biological systems. *Free Radic. Biol. Med.* **26**, 714-721 (1999).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10006435

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com