

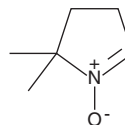
PRODUCT INFORMATION



DMPO

Item No. 10006436

CAS Registry No.: 3317-61-1
Formal Name: 3,4-dihydro-2,3-dimethyl-2H-pyrrole 1-oxide
Synonym: 5,5-Dimethyl-1-Pyrroline-N-Oxide
MF: C₆H₁₁NO
FW: 113.2
Purity: ≥98%
UV/Vis.: λ_{max}: 235 nm
Supplied as: A liquid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

DMPO is supplied as a liquid. A stock solution may be made by dissolving the DMPO in the solvent of choice, which should be purged with an inert gas. DMPO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DMPO in DMF is approximately 42 mg/ml and approximately 50 mg/ml in ethanol and 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 DMPO can be prepared by directly dissolving the liquid in aqueous buffers. The solubility of DMPO in PBS (pH 7.2) is approximately 9.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Free radicals are highly reactive, short-lived species. Spin traps react with radicals, forming stable adducts that can be further studied. DMPO is a commonly-used spin trap that reacts with O-, N-, S-, and C-centered radicals.¹⁻³ This allows their characterization when used in association with electron spin resonance and immuno-spin trapping.⁴⁻⁶ DMPO is water-soluble, rapidly penetrates lipid bilayers, has low toxicity, and can be used *in vitro* and *in vivo*.⁷⁻⁹

References

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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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