

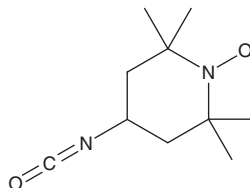
PRODUCT INFORMATION



4-isocyanato TEMPO

Item No. 23075

CAS Registry No.: 88418-69-3
Formal Name: 4-isocyanato-2,2,6,6-tetramethyl-1-piperidinyloxy
MF: C₁₀H₁₇N₂O₂
FW: 197.3
Purity: ≥85%
UV/Vis.: λ_{max}: 451 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

4-isocyanato TEMPO is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-isocyanato TEMPO in the solvent of choice. 4-isocyanato TEMPO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4-isocyanato TEMPO in these solvents is approximately 30 mg/ml.

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 4-isocyanato TEMPO can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4-isocyanato TEMPO in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

4-isocyanato TEMPO is a spin labeling reagent used to label the 2'-position in RNA.¹ It has been used to study HIV-1 transactivation response RNA and hammerhead ribosome dynamics by electron paramagnetic resonance (EPR) spectroscopy.^{2,3}

References

1. Edwards, T.E., Okonogi, T.M., Robinson, B.H., *et al.* Site-specific incorporation of nitroxide spin-labels into internal sites of the TAR RNA; structure-dependent dynamics of RNA by EPR spectroscopy. *J. Am. Chem. Soc.* **123(7)**, 1527-1528 (2001).
2. Edwards, T.E. and Sigurdsson, S.T. EPR spectroscopic analysis of TAR RNA-metal ion interactions. *Biochem. Biophys. Res. Commun.* **303(2)**, 721-725 (2003).
3. Edwards, T.E. and Sigurdsson, S.T. EPR spectroscopic analysis of U7 hammerhead ribozyme dynamics during metal ion induced folding. *Biochemistry* **44(38)**, 12870-12878 (2005).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/05/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM