

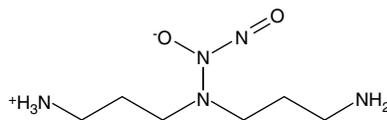
Product Information



DPTA NONOate

Item No. 82110

CAS Registry No.: 146724-95-0
Formal Name: (Z)-1-[N-(3-aminopropyl)-N-(3-ammoniopropyl)amino]diazen-1-ium-1,2-diolate
Synonym: Dipropylentriamine NONOate
MF: C₆H₁₇N₅O₂
FW: 191.2
Purity: ≥98%
Stability: ≥1 year at -80°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 252 nm



Laboratory Procedures

For long term storage, keep dipropylentriamine NONOate (DPTA NONOate) sealed under nitrogen at -80°C. It should be stable for at least one year. The crystals are sensitive to moisture and become discolored on exposure to air. Keep the vial sealed until use unless your laboratory is equipped with a glove box with an inert atmosphere for the handling of air sensitive compounds.

DPTA NONOate dissociates to the free amine and nitric oxide in a pH-dependent manner following first order kinetics. Alkaline solutions of NONOates (in 0.01 M NaOH) are very stable and can be stored at 0°C for 24 hours. DPTA NONOate is highly soluble in water and relatively concentrated solutions can be prepared for further dilution. To initiate the release of nitric oxide, add a portion of the stock alkaline solution of DPTA NONOate to excess buffer of pH 7.0-7.4. The half-life of DPTA NONOate is 5 hours at 22°C in 0.1 M phosphate buffer (pH 7.4). The decomposition of NONOates is nearly instantaneous at pH 5.¹

DPTA NONOate is a NO donor. It spontaneously dissociates in a pH-dependent, first-order process with a half-life of three hours and five hours at 37°C and 22-25°C, pH 7.4, respectively, to liberate 2 moles of NO per mole of parent compound.^{1,2}

References

- Hrabie, J.A., Klose, J.R., Wink, D.A., *et al.* New nitric oxide-releasing zwitterions derived from polyamines. *J. Org. Chem.* **58**, 1472-1476 (1993).
- Keefer, L.K., Nims, R.W., Davies, K.M., *et al.* 'NONOates' (1-substituted diazen-1-ium-1,2-diolates) as nitric oxide donors: Convenient nitric oxide dosage forms. *Methods Enzymol.* **268**, 281-293 (1996).

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.

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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