

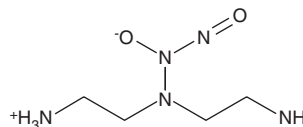
PRODUCT INFORMATION



DETA NONOate

Item No. 82120

CAS Registry No.: 146724-94-9
Formal Name: (Z)-1-[N-(2-aminoethyl)-N-(2-ammonioethyl)amino]diazene-1-ium-1,2-diolate
Synonyms: Diethylenetriamine NONOate, NOC-18
MF: $C_4H_{13}N_5O_2$
FW: 163.2
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 252 nm
Supplied as: A crystalline solid
Storage: -80°C
Stability: ≥ 2 years



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

Laboratory Procedures

DETA NONOate is supplied as a crystalline solid. 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.

DETA NONOate dissociates to the free amine and NO 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. DETA NONOate is highly soluble in water and relatively concentrated solutions can be prepared for further dilution. To initiate the release of NO, add a portion of the stock alkaline solution of DETA NONOate to excess buffer of pH 7.0-7.4. The half-life of DETA NONOate is 20 hours and 56 hours at 37°C and $22-25^\circ\text{C}$, respectively, in 0.1 M phosphate buffer (pH 7.4). DETA NONOate liberates 2 moles of NO per mole of parent compound.^{1,2} The decomposition of NONOates is nearly instantaneous at pH 5.¹

Description

DETA NONOate is a NO donor. It spontaneously dissociates in a pH-dependent, first-order process with a half-life of 20 hours and 56 hours at 37°C and $22-25^\circ\text{C}$, pH 7.4, respectively, to liberate 2 moles of NO per mole of parent compound.^{1,2}

References

1. 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).
2. 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 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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