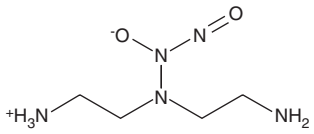
PRODUCT INFORMATION

DETA NONOate

Item No. 82120

CAS Registry No.:	146724-94-9
Formal Name:	(Z)-1-[N-(2-aminoethyl)-N-(2-ammonioethyl)amino]diazen-1-ium-1,2-diolate
Synonyms:	Diethylenetriamine NONOate, NOC-18
MF:	$C_4H_{13}N_5O_2$
FW:	163.2
Purity:	≥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°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°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).

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