

## Certificate of Analysis

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**Product Name:** DETA NONOate

**Catalog No.:** 6077

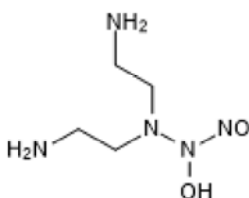
**Batch No.:** 3

CAS Number: 146724-94-9

IUPAC Name: 2,2'-(2-Hydroxy-2-nitrosohydrazinylidene)bis-ethanamine

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>4</sub>H<sub>13</sub>N<sub>5</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 163.18  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**Melting Point:** Between 107 - 108°C  
**<sup>1</sup>H NMR:** Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: 2,2'-(2-Hydroxy-2-nitrosohydrazinylidene)bis-ethanamine

**Description:**

Nitric oxide donor. Activates an inward current in cultured rat cerebellar granules cells. Increases cGMP production in cultured vascular smooth muscle cells. Reduces contractility of cardiac muscle preparations in vitro.

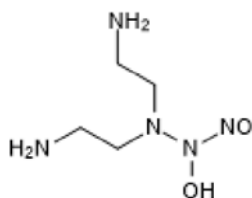
**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>4</sub>H<sub>13</sub>N<sub>5</sub>O<sub>2</sub>

Batch Molecular Weight: 163.18

Physical Appearance: White solid

**Batch Molecular Structure:**



**Storage:** Store at -20°C. This product is packaged under an inert atmosphere.

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

water to 100 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Thompson et al** (2009) The NO donor DETA-NONOate reversibly activates an inward current in neurones and is not mediated by the released nitric oxide. *Br.J.Pharmacol.* **158** 1338. PMID: 19785659.

**Wegener et al** (2002) Effects of nitric oxide donors on cardiac contractility in wild-type and myoglobin-deficient mice. *Br.J.Pharmacol.* **136** 415. PMID: 12023944.

**Olson et al** (1997) Selective guanylyl cyclase inhibitor reverses nitric oxide-induced vasorelaxation. *Hypertension* **29** 254. PMID: 9039111.

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