Print Date: Sep 30th 2022

Certificate of Analysis

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Product Name: **SIN-1 chloride** **Catalog No.: 0756** **Batch No.: 9**

CAS Number: 16142-27-1

IUPAC Name: Amino-3-morpholinyl-1,2,3-oxadiazolium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_6H_{11}ClN_4O_2$

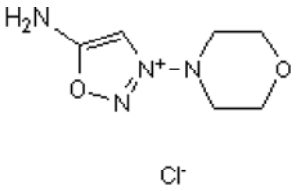
Batch Molecular Weight: 206.63

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	34.88	5.37	27.11
Found	35.08	5.26	26.98

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CAS Number: 16142-27-1

IUPAC Name: Amino-3-morpholinyl-1,2,3-oxadiazolium chloride

Description:

This compound (the active product of the prodrug SIN-10, molsidomine) acts as a vasodilator and inhibitor of platelet aggregation; longer acting than nitroprusside or nitroglycerin. Decreases myocardial necrosis and reperfusion-induced endothelial dysfunction in models of myocardial ischemia-reperfusion.

Physical and Chemical Properties:

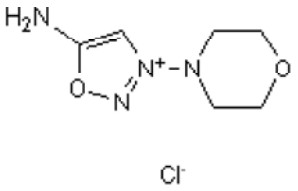
Batch Molecular Formula: $C_6H_{11}ClN_4O_2$

Batch Molecular Weight: 206.63

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM

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:

Siegfried *et al* (1992) Cardioprotection and attenuation of endothelial dysfunction by organic nitric oxide donors in myocardial ichemia-reperfusion. J.Pharmacol.Exp.Ther. ***260*** 668. PMID: 1738117.

Maurice and Heslam (1990) Molecular basis of the synergistic inhibition of platelet function by nitrovasodilators and activators of adenylate cyclase: inhibition of cyclic AMP breakdown by cyclic GMP. Mol.Pharmacol. ***37*** 671. PMID: 2160060.

Nishikawa *et al* (1982) Inhibition of platelet aggregation and stimulation of guanylate cyclase by an anti-anginal agent molsidomine and its metabolite. J.Pharmacol.Exp.Ther. ***220*** 183. PMID: 6118429.