

Certificate of Analysis

Product Name: Pentamidine isethionate

Catalog No.: 3277

Batch No.: 1

CAS Number: 140-64-7

EC Number: 205-424-1

IUPAC Name: 4,4'-(Pentamethylenedioxy)dibenzamidine bis-2-hydroxyethanesulfonate salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{24}N_4O_2 \cdot 2C_2H_6O_4S$

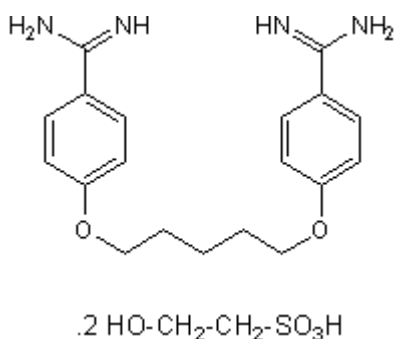
Batch Molecular Weight: 592.68

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	46.61	6.12	9.45
Found	46.34	6.21	9.36

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

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IUPAC Name: 4,4'-(Pentamethylenedioxy)dibenzamidine bis-2-hydroxyethanesulfonate salt

Description:

Antimicrobial. Neuroprotective; inhibits constitutive nitric oxide synthase in the brain and acts as a NMDA glutamate receptor antagonist.

Physical and Chemical Properties:

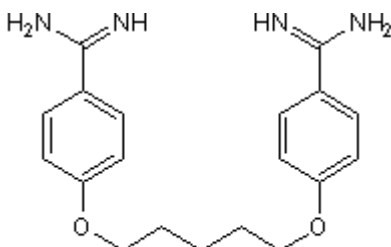
Batch Molecular Formula: C₁₉H₂₄N₄O₂.2C₂H₆O₄S

Batch Molecular Weight: 592.68

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



.2 HO-CH₂-CH₂-SO₃H

Storage: Store at -20°C

Solubility & Usage Info:

water 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:

Reynolds and Aizeman (1992) Pentamidine is an N-methyl-D-aspartate receptor antagonist and is neuroprotective *in vitro*. J.Neurosci. **12** 970. PMID: 1532027.

Kitamura et al (1995) Inhibition of constitutive nitric oxide synthase in the brain by pentamidine, a calmodulin antagonist. Eur.J.Pharmacol. **289** 299. PMID: 7542607.

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