

Certificate of Analysis

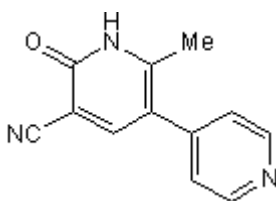
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Product Name: Milrinone
CAS Number: 78415-72-2
IUPAC Name: 1,6-Dihydro-2-methyl-6-oxo-(3,4'-bipyridine)-5-carbonitrile

Catalog No.: 1504 **Batch No.:** 1
EC Number: 278-903-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₉N₃O.¼H₂O
Batch Molecular Weight: 215.73
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.66 (Dichloromethane:Methanol [10:1])
Melting Point: At 290°C(dec)
HPLC: Shows >98.7% purity
¹H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.81	4.44	19.48
Found	67.08	4.25	19.53

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

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Description:

Potent cAMP phosphodiesterase inhibitor (IC_{50} = 56 nM for inhibition of PDE III). Has inotropic and vasodilator effects following oral or intravenous administration in vivo. Also available as part of the Phosphodiesterase Inhibitor Tocriset™.

Physical and Chemical Properties:

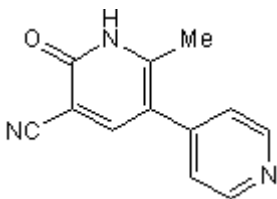
Batch Molecular Formula: $C_{12}H_9N_3O \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 215.73

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

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:

Alousi et al (1983) Characterization of the cardiotonic effects of milrinone, a new and potent cardiac bipyridine, on isolated tissues from several animal species. *J.Cardiovasc.Pharmacol.* **5** 804. PMID: 6195468.

Shahid et al (1991) The presence of five cyclic nucleotide phosphodiesterase isoenzyme activities in bovine tracheal smooth muscle and the functional effects of selective inhibitors. *Br.J.Pharmacol.* **104** 471. PMID: 1665737.

Tang et al (1994) Photoaffinity labelling of cyclic GMP-inhibited phosphodiesterase (PDE III) in human and rat platelets and rat tissues: effects of phosphodiesterase inhibitors. *Eur.J.Pharmacol.* **268** 105. PMID: 7925608.

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