

Certificate of Analysis

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Product Name: Milameline hydrochloride

Catalog No.: 2604

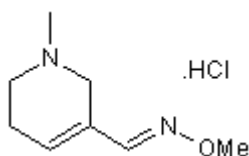
Batch No.: 2

CAS Number: 139886-04-7

IUPAC Name: (E)-1,2,5,6-Tetrahydro-1-methyl-3-pyridinecarboxaldehyde O-methyloxime hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₁₄N₂O.HCl
Batch Molecular Weight: 190.67
Physical Appearance: Cream solid
Solubility: water to 100 mM
Storage: Desiccate at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.39	7.93	14.68
Found	50.33	7.92	14.8

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

Product Information

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IUPAC Name: (E)-1,2,5,6-Tetrahydro-1-methyl-3-pyridinecarboxaldehyde O-methyloxime hydrochloride

Description:

Muscarinic receptor agonist that displays roughly equal affinity at all receptor subtypes (K_i values are 2.3, 2.4, 3.6, 3.8 and 4.3 μ M for hM₁, hM₂, hM₃, hM₄ and hM₅ receptors respectively). Cognitive enhancer; reverses spatial memory deficits in rats.

Physical and Chemical Properties:

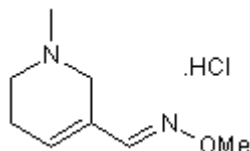
Batch Molecular Formula: C₈H₁₄N₂O.HCl

Batch Molecular Weight: 190.67

Physical Appearance: Cream solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate 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:

Sedman *et al* (1995) Preclinical and phase I clinical characterization of CI-979/RU35926, a novel muscarinic agonist for the treatment of Alzheimer's disease. *Life Sci.* **56** 877. PMID: 10188788.

Wood *et al* (1999) Functional comparison of muscarinic partial agonists at muscarinic receptor subtypes hM₁, hM₂, hM₃, hM₄ and hM₅ using microphysiometry. *Br.J.Pharmacol.* **126** 1620. PMID: 10323594.

Schwarz *et al* (1999) Milameline (CI-979/RU35926): a muscarinic receptor agonist with cognition-activating properties: biochemical and *in vivo* characterization. *J.Pharmacol.Exp.Ther.* **291** 812. PMID: 10525104.

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