

## Certificate of Analysis

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**Product Name:** Pilocarpine hydrochloride

**Catalog No.:** 0694

**Batch No.:** 2

CAS Number: 54-71-7

EC Number: 200-212-5

IUPAC Name: (3*S*-cis)-3-Ethylidihydro-4-[(1-methyl-1*H*-imidazol-5-yl)methyl]-2(3*H*)-furanone hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>.HCl

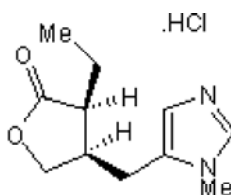
**Batch Molecular Weight:** 244.72

**Physical Appearance:** White solid

**Solubility:** DMSO to 75 mM  
water to 100 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.7% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Optical Rotation:** [α]<sub>D</sub> = +85.9 (Concentration = 2, Solvent = Water)

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	53.99	7	11.45
Found	53.89	7.07	11.38

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

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**Description:**

Pilocarpine hydrochloride is an M3 muscarinic acetylcholine receptor agonist.

**Physical and Chemical Properties:**

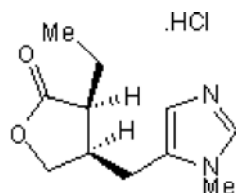
Batch Molecular Formula: C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>.HCl

Batch Molecular Weight: 244.72

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

DMSO to 75 mM

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:**

**Wang et al** (1999) PilC modulates the cellular electrical properties of mammalian hearts by activating a cardiac M<sub>3</sub> receptor and a K<sup>+</sup> current. *Br.J.Pharmacol.* **126** 1725. PMID: 10372814.

**Brown and Taylor** (1996) Muscarinic receptor agonists and antagonists. *The Pharmacological Basis of Therapeutics*. Eds Goo Chapter 7, p147.

**ten Berge et al** (1996) Differences in the prejunctional effects of methach. and PilC on the release of endogenous acetylcholine from guinea-pig trachea. *Naunyn Schmiedebergs Arch.Pharmacol.* **354** 606. PMID: 8938659.

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