

## Certificate of Analysis

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**Product Name:** Naloxone hydrochloride

**Catalog No.:** 0599

**Batch No.:** 10

CAS Number: 357-08-4

EC Number: 206-611-0

IUPAC Name: (5 $\alpha$ )-4,5-Epoxy-3,14-dihydro-17-(2-propenyl)morphinan-6-one hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>.HCl.2H<sub>2</sub>O

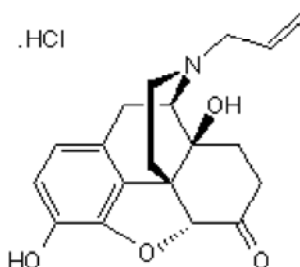
**Batch Molecular Weight:** 399.87

**Physical Appearance:** White solid

**Solubility:** water to 100 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.5% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	57.07	6.55	3.5
Found	57.09	6.52	3.49

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

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**Description:**

Naloxone hydrochloride is an opioid antagonist.

**Physical and Chemical Properties:**

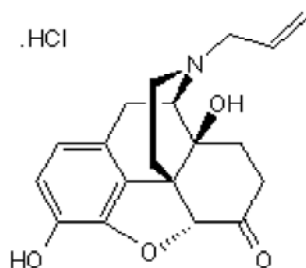
Batch Molecular Formula: C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>.HCl.2H<sub>2</sub>O

Batch Molecular Weight: 399.87

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**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:**

**Pinelli and Trivulzio** (1997) Quantitative evaluation of opioid withdrawal signs in rats repeatedly treated with mor. and injected with naloxone, in the absence or presence of the antiabstinence agent clon. *J.Pharmacol.Toxicol.Methods* **38** 117. PMID: 9523765.

**Spivak et al** (1997) Naloxone activation of mu-opioid receptors mutated at a histidine residue lining the opioid cavity. *Mol.Pharmacol.* **52** 983. PMID: 9415708.

**Olson et al** (1996) Endogenous opiates: 1995. *Peptides* **17** 1421.

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