

# Certificate of Analysis

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**Product Name:** (R)-(-)-Phenylephrine hydrochloride

**Catalog No.:** 2838

**Batch No.:** 2

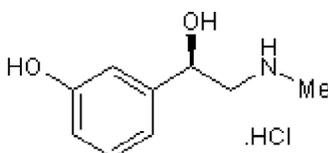
CAS Number: 61-76-7

EC Number: 200-517-3

IUPAC Name: (R)-(-)-1-(3-Hydroxyphenyl)-2-methylaminoethanol hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>9</sub>H<sub>13</sub>NO<sub>2</sub>.HCl  
**Batch Molecular Weight:** 203.67  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
DMSO 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> = -45.4 (Concentration = 2, Solvent = Water)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	53.08	6.93	6.88
Found	53.13	6.9	6.84

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

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IUPAC Name: (R)-(-)-1-(3-Hydroxyphenyl)-2-methylaminoethanol hydrochloride

**Description:**

(R)-(-)-Phenylephrine hydrochloride is a  $\alpha_1$ -adrenoceptor agonist; pK<sub>i</sub> values are 5.86, 4.87 and 4.70 for  $\alpha_{1D}$ ,  $\alpha_{1B}$  and  $\alpha_{1A}$  receptors respectively.

**Physical and Chemical Properties:**

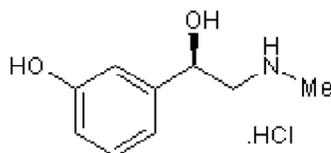
Batch Molecular Formula: C<sub>9</sub>H<sub>13</sub>NO<sub>2</sub>.HCl

Batch Molecular Weight: 203.67

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 100 mM

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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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:**

**Morton *et al* (2007)**  $\alpha_{1A}$ -adrenoceptors mediate contractions to phenylephrine in rabbit penile arteries. *Br.J.Pharmacol.* **150** 112. PMID: 17115072.

**Ford *et al* (1997)** Pharmacological pleiotropism of the human recombinant  $\alpha_{1A}$ -adrenoceptor: implications for  $\alpha_1$ -adrenoceptor classification. *Br.J.Pharmacol.* **121** 1127. PMID: 9249248.

**Minneman *et al* (1994)** Selectivity of agonists for cloned  $\alpha_1$ -adrenergic receptor subtypes. *Mol.Pharmacol.* **46** 929. PMID: 7969082.

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