

## Certificate of Analysis

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**Product Name:** Oxymetazoline hydrochloride

**Catalog No.:** 1142

**Batch No.:** 1

CAS Number: 2315-02-8

EC Number: 219-015-0

IUPAC Name: 3-[(4,5-Dihydro-1*H*-imidazol-2-yl)methyl]-6-(1,1-dimethylethyl)-2,4-dimethyl-phenol hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>16</sub>H<sub>24</sub>N<sub>2</sub>O.HCl

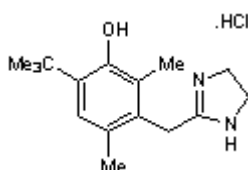
**Batch Molecular Weight:** 296.84

**Physical Appearance:** White solid

**Solubility:** water to 50 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.6 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

**Melting Point:** Between 297 - 299°C

**HPLC:** Shows 100% purity

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

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen	
Theoretical	64.74	8.49	9.44	0 0 0
Found	64.8	8.65	9.45	0 0 0

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**Description:**

Partial  $\alpha_{2A}$  adrenoceptor agonist and  $\alpha_{1A}$  agonist.  
Agonist/antagonist activity at 5-HT receptors.

**Physical and Chemical Properties:**

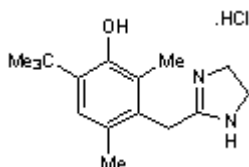
Batch Molecular Formula: C<sub>16</sub>H<sub>24</sub>N<sub>2</sub>O.HCl

Batch Molecular Weight: 296.84

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

water to 50 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:**

**Schoeffter et al** (1991) Interaction of the  $\alpha$ -adrenoceptor agonist oxymetazoline with serotonin 5-HT<sub>1A</sub>, 5-HT<sub>1B</sub>, 5-HT<sub>1C</sub> and 5-HT<sub>1D</sub> receptors. *Eur.J.Pharmacol.* **196** 213. PMID: 1678720.

**Horie et al** (1995) Selectivity of the imidazoline  $\alpha$ -adrenoceptor agonists (oxymetazoline and cirazoline) for human cloned  $\alpha_1$ -adrenoceptor subtypes. *Br.J.Pharmacol.* **116** 1611. PMID: 8564227.

**Bayorh et al** (1997) Cardiovascular effects of oxymetazoline and UK14,304 in conscious and pithed rats. *Clin.Exp.Hypertens.* **19** 445. PMID: 9140707.

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