

## Certificate of Analysis

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**Product Name:** Tolterodine L-tartrate

**Catalog No.:** 3761

**Batch No.:** 1

CAS Number: 124937-52-6

IUPAC Name: 2-[(1*R*)-3-[*Bis*(1-methylethyl)amino]-1-phenylpropyl]-4-methylphenol (2*R*,3*R*)-2,3-dihydroxybutanedioate

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>22</sub>H<sub>31</sub>NO.C<sub>4</sub>H<sub>6</sub>O<sub>6</sub>

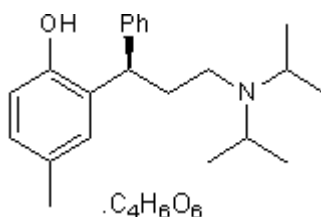
**Batch Molecular Weight:** 475.57

**Physical Appearance:** White solid

**Solubility:** water to 10 mM  
DMSO to 100 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 100% purity

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

**Mass Spectrum:** Consistent with structure

**Optical Rotation:** [α]<sub>D</sub> = +28 (Concentration = 1, Solvent = Methanol)

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.66	7.84	2.95
Found	65.68	7.6	2.89

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

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**Description:**

High affinity muscarinic receptor antagonist ( $K_i = 3.3$  nM). Active at all muscarinic receptor subtypes ( $M_1 - M_5$ ); exhibits a greater effect on the bladder than salivary glands in vivo.

**Physical and Chemical Properties:**

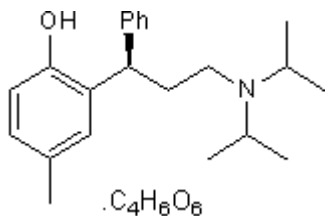
Batch Molecular Formula:  $C_{22}H_{31}NO \cdot C_4H_6O_6$

Batch Molecular Weight: 475.57

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

water to 10 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. 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:**

Nilvebrant *et al* (1997) Tolterodine - a new bladder-selective antimuscarinic agent. *Eur.J.Pharmacol.* **327** 195. PMID: 9200560.

Nilvebrant (2001) Clinical experiences with tolterodine. *Life Sci.* **68** 2549. PMID: 11392625.

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