

# Certificate of Analysis

**Product Name:** Terfenadine

**Catalog No.:** 3948

**Batch No.:** 1

CAS Number: 50679-08-8

EC Number: 256-710-8

IUPAC Name:  $\alpha$ -[4-(1,1-Dimethylethyl)phenyl]-4-(hydroxydiphenylmethyl)-1-piperidinebutanol

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{32}H_{41}NO_2 \cdot \frac{1}{4}H_2O$

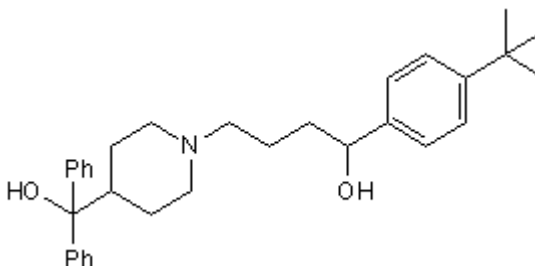
**Batch Molecular Weight:** 476.17

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
ethanol to 25 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.7% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	80.72	8.78	2.94
Found	80.99	8.79	3.06

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

**Product Name:** Terfenadine

**Catalog No.:** 3948

**Batch No.:** 1

CAS Number: 50679-08-8

EC Number: 256-710-8

IUPAC Name:  $\alpha$ -[4-(1,1-Dimethylethyl)phenyl]-4-(hydroxydiphenylmethyl)-1-piperidinebutanol

**Description:**

Histamine H<sub>1</sub> receptor antagonist. Also blocks K<sub>v</sub>11.1 (hERG) and K<sub>ir</sub>6 (K<sub>ATP</sub>) channels (IC<sub>50</sub> values are 204 nM and 1.2  $\mu$ M respectively). Inhibits the delayed rectifier K<sup>+</sup> current (I<sub>Kr</sub>) in guinea pig ventricular myocytes (IC<sub>50</sub> = 50 nM). Activity prolongs QT and induces Torsades de pointes (TdP); cardiotoxic in vivo.

**Physical and Chemical Properties:**

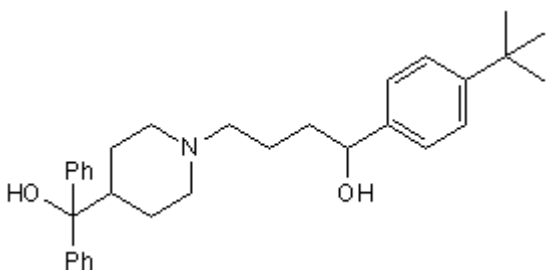
Batch Molecular Formula: C<sub>32</sub>H<sub>41</sub>NO<sub>2</sub> · ¼H<sub>2</sub>O

Batch Molecular Weight: 476.17

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Crumb** (2000) Loratadine blockade of K<sup>+</sup> channels in human heart: comparison with terfenadine under physiological conditions. *J.Pharmacol.Exp.Ther.* **292** 261. PMID: 10604956.

**Zunkler et al** (2000) Mechanism of terfenadine block of ATP-sensitive K<sup>+</sup> channels. *Br.J.Pharmacol.* **130** 1571. PMID: 10928959.

**Stork et al** (2007) State dependent dissociation of HERG channel inhibitors. *Br.J.Pharmacol.* **151** 136.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 25 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.

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956