

Certificate of Analysiswww.tocris.com**Product Name:** **(±)-Bisoprolol hemifumarate****Catalog No.:** 0914**Batch No.:** 2**CAS Number:** 104344-23-2**IUPAC Name:** (\pm) -1-[4-[[2-(1-Methylethoxy)ethoxy)methyl]phenoxy]-3-[(1-methylethyl)amino]-2-propanol hemifumarate**1. PHYSICAL AND CHEMICAL PROPERTIES****Batch Molecular Formula:** $C_{18}H_{31}NO_4 \cdot \frac{1}{2}C_4H_4O_4 \cdot \frac{1}{4}H_2O$ **Batch Molecular Weight:**

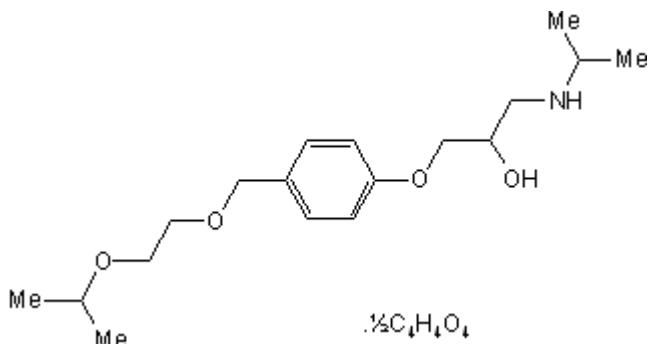
387.98

Physical Appearance:

White solid

Solubility:water to 50 mM
ethanol to 100 mM
DMSO to 100 mM**Storage:**

Store at RT

Batch Molecular Structure:**2. ANALYTICAL DATA****TLC:** $R_f = 0.65$ (Dichloromethane:Methanol:Ammonia soln. [17:3:0.1])**Melting Point:**

Between 100 - 101°C

HPLC:

Shows 98% purity

 ^1H NMR:

Consistent with structure

Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical 61.91 8.7 3.61

Found 61.95 8.68 3.6

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bio-technne.com

info@bio-technne.com

techsupport@bio-technne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-technne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of Worldwww.tocris.com/distributors

Tel: +1 612 379 2956

Product Name: **(±)-Bisoprolol hemifumarate**

Catalog No.: 0914

Batch No.: 2

CAS Number: 104344-23-2

IUPAC Name: (\pm) -1-[4-[[2-(1-Methylethoxy)ethoxy)methyl]phenoxy]-3-[(1-methylethyl)amino]-2-propanol hemifumarate

Description:

A selective β_1 -adrenergic antagonist. Has a K_d of 2-3 nM at the β_1 receptor and a β_1/β_2 selectivity of approximately 100-fold.

Physical and Chemical Properties:

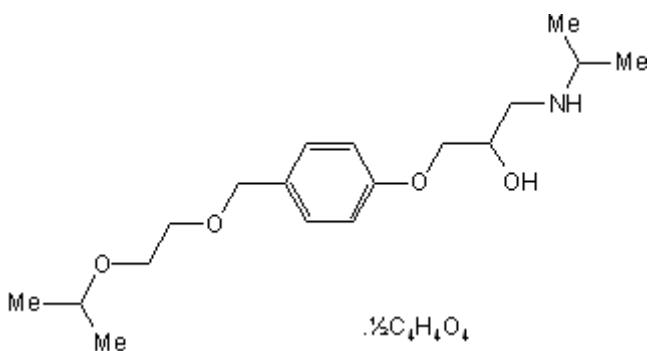
Batch Molecular Formula: $C_{18}H_{31}NO_4 \cdot \frac{1}{2}C_4H_4O_4 \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 387.98

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 50 mM

ethanol 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. 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:

Kaumann and Lemoine (1985) Direct labelling of myocardial β_1 -adrenoceptors. Comparison of binding affinity of ^3H -(S)-bisoprolol with its blocking potency. *Naunyn Schmiedebergs Arch.Pharmacol.* **331** 27. PMID: 2866449.

Klockow et al (1986) Studies on the receptor profile of bisoprolol. *Arzneimittelforschung* **36** 197. PMID: 2870719.

Heible et al (1995) α - and β -Adrenoceptors: from the gene to the clinic. 1. Molecular biology and adrenoceptor subclassification. *J.Med.Chem.* **38** 3415. PMID: 7658428.

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