

Certificate of Analysis

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Product Name: Metoprolol tartrate

Catalog No.: 3256

Batch No.: 1

CAS Number: 56392-17-7

EC Number: 260-148-9

IUPAC Name: 1-[4-(2-Methoxyethyl)phenoxy]-3-[(1-methylethyl)amino]-2-propanol hemitartrate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{25}NO_3 \cdot \frac{1}{2}C_4H_6O_6$

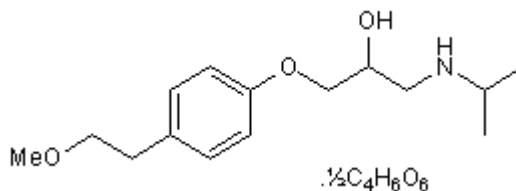
Batch Molecular Weight: 342.4

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 >99.9% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D = +8.5$ (Concentration = 2, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.63	8.25	4.09
Found	59.6	8.33	4.09

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

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Description:

Selective β_1 -adrenoceptor antagonist (K_i values are 47, 2960 and 10100 nM for β_1 , β_2 and β_3 adrenoceptors respectively). Inhibits spontaneous endothelin-1 production in vitro and displays antihypertensive and antianginal activity in vivo.

Physical and Chemical Properties:

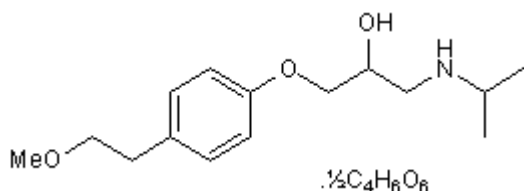
Batch Molecular Formula: $C_{15}H_{25}NO_3 \cdot \frac{1}{2}C_4H_6O_6$

Batch Molecular Weight: 342.4

Physical Appearance: White solid

Minimum Purity: >99%

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. 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:

Garlichs et al (1999) Beta-blockers reduce the release and synthesis of endothelin-1 in human endothelial cells. *Eur.J.Clin.Invest.* **29** 12. PMID: 10092983.

Hoffmann et al (2004) Comparative pharmacology of human β -adrenergic receptor subtypes - characterization of stably transfected receptors in CHO cells. *Naunyn-Schmied.Arch.Pharmacol.* **369** 151.

Dasbiswas et al (2008) S-metoprolol: The 2008 Clinical Review. *J.Indian.Med.Assoc.* **106** 259. PMID: 18828349.

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