

Certificate of Analysis

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Product Name: (S)-(+)-Dimethindene maleate

Catalog No.: 1425

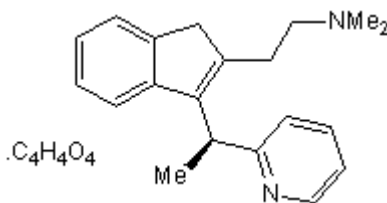
Batch No.: 2

CAS Number: 136152-65-3

IUPAC Name: *N,N*-Dimethyl-3-[(1*S*)-1-(2-pyridinyl)ethyl]-1*H*-indene-2-ethanamine maleate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{20}H_{24}N_2 \cdot C_4H_4O_4 \cdot \frac{1}{4}H_2O$
Batch Molecular Weight:	413
Physical Appearance:	White solid
Solubility:	water to 100 mM with gentle warming DMSO to 100 mM
Storage:	Desiccate at RT
Batch Molecular Structure:	



2. ANALYTICAL DATA

TLC:	$R_f = 0.5$ (Dichloromethane:Methanol:Ammonia soln. [6:3½:½])
Melting Point:	Between 133 - 134°C
HPLC:	Shows 100% purity
¹H NMR:	Consistent with structure
Optical Rotation:	$[\alpha]_D = +133.3$ (Concentration = 1, Solvent = Water)
Microanalysis:	

	Carbon	Hydrogen	Nitrogen
Theoretical	69.8	6.96	6.78
Found	70.07	6.94	6.75

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

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Description:

Enantiomer that is a subtype-selective M₂ muscarinic receptor antagonist (pK_i values are 7.08, 7.78, 6.70 and 7.00 for M₁, M₂, M₃ and M₄ receptors respectively). Also H₁ histamine receptor antagonist (pK_i = 7.48). Allows formation of extended pluripotent stem (EPS) cells in combination with CHIR 99021 (Cat.No. 4423), minocycline hydrochloride (Cat.No. 3268) and human leukemia inhibitory factor.

Physical and Chemical Properties:

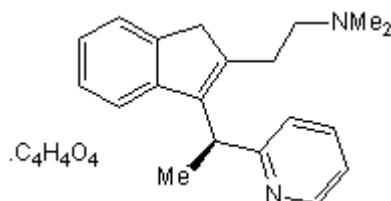
Batch Molecular Formula: C₂₀H₂₄N₂·C₄H₄O₄·¼H₂O

Batch Molecular Weight: 413

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Yang et al (2017) Derivation of pluripotent stem cells with in vivo embryonic and extraembryonic potency. *Cell*. **169** 243. PMID: 28388409.

Lambrech et al (1999) Neuronal soma-dendritic and prejunctional M₁-M₄ receptors in gastrointestinal and genitourinary smooth muscle. *Life Sci*. **64** 403. PMID: 10069503.

Pfaff et al (1995) The (S)-(+)-enantiomer of dimethindene: a novel M₂-selective muscarinic receptor antagonist. *Eur.J.Pharmacol.* **286** 229. PMID: 8608784.

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM with gentle warming
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.

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