

Product Name: Rivastigmine tartrate

Catalog No.: 4440

Batch No.: 1

CAS Number: 129101-54-8

IUPAC Name: *N*-Ethyl-*N*-methylcarbamic acid 3-[(1*S*)-1-(dimethylamino)ethyl]phenyl ester (2*R*,3*R*)-2,3-dihydroxybutanedioate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₂₂N₂O₂·C₄H₆O₆

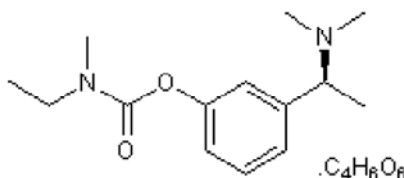
Batch Molecular Weight: 400.42

Physical Appearance: White solid

Solubility:
water to 100 mM
DMSO to 100 mM
ethanol to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 123 - 124°C

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = +4.36 (Concentration = 5, Solvent = Ethanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.99	7.05	7
Found	54.11	7.16	6.96

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Description:

Rivastigmine tartrate is a cholinesterase inhibitor; inhibits both acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) (IC₅₀ ranges are 4.3-4760 nM and 16-238 nM respectively). Rivastigmine increases α-secretase activity and directs APP processing to the non-amyloidogenic pathway. Brain penetrant.

Physical and Chemical Properties:

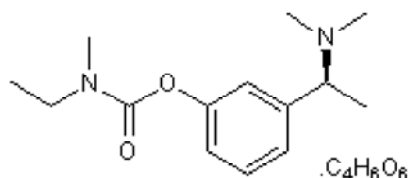
Batch Molecular Formula: C₁₄H₂₂N₂O₂·C₄H₆O₆

Batch Molecular Weight: 400.42

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



References:

Brus et al (2014) J.Med.Chem. **57** 8167. PMID: 25226236.

Mehta et al (2012) New acetylcholinesterase inhibitors for Alzheimer's disease. Int.J.Alzheimers Dis. PMID: 22216416.

Bailey et al (2011) Rivastigmine lowers Aβ and increases sAPPα levels, which parallel elevated synaptic markers and metabolic activity in degenerating primary rat neurons. PLoS One **6** e21954. PMID: 21799757.

Storage: Store at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM
ethanol 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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