

Product Name: Memantine hydrochloride

Catalog No.: 0773

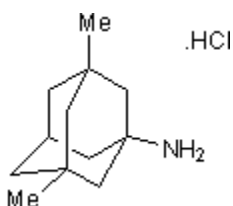
Batch No.: 10

CAS Number: 41100-52-1

IUPAC Name: 3,5-Dimethyl-tricyclo[3.3.1.1^{3,7}]decan-1-amine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₂₁N.HCl
Batch Molecular Weight: 215.77
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.8	10.28	6.49
Found	66.61	10.51	6.67

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

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Description:

An antagonist at the NMDA receptor, binding to the ion channel site. Used in the treatment of Parkinsonism.

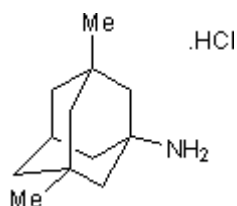
Physical and Chemical Properties:

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Batch Molecular Weight: 215.77

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water 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:

Zajackowski *et al* (1997) Uncompetitive NMDA receptor antagonists attenuate NMDA-induced impairment of passive avoidance learning and LTP. *Neuropharmacology* **36** 961. PMID: 9257940.

Chen *et al* (1998) Neuroprotective concentrations of the *N*-methyl-D-aspartate open-channel blocker memantine are effective without cytoplasmic vacuolation following post-ischemic administration and do not block maze learning or long-term potentiation. *Neuroscience* **86** 1121. PMID: 9697119.

Parsons *et al* (1999) Memantine is a clinically well tolerated N-methyl-D-aspartate (NMDA) receptor antagonist - a review of preclinical data. *Neuropharmacology* **38** 735. PMID: 10465680.

Parsons *et al* (2007) Memantine: A NMDA receptor antagonist that improves memory by restoration of homeostasis in the glutamatergic system - too little activation is bad, too much is even worse. *Neuropharmacology* **53** 699. PMID: 17904591.

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