Print Date: Nov 22nd 2022

# Certificate of Analysis

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**Product Name:** **Galanthamine hydrobromide** **Catalog No.: 0686** **Batch No.: 10**

CAS Number: 1953-04-4 EC Number: 217-780-5

IUPAC Name: 4a,5,9,10,11,12-Hexahydro-3-methoxy-11-methyl-6*H*-benzofuro[3*a*,3,2-*ef*][2]benzazepin-6-ol hydrobromide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** $C_{17}H_{21}NO_3$.HBr

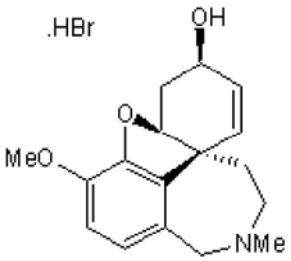
**Batch Molecular Weight:** 368.27

**Physical Appearance:** White solid

**Solubility:** DMSO to 20 mM with gentle warming
water to 20 mM

**Storage:** Store at RT

**Batch Molecular Structure:**




## 2. ANALYTICAL DATA

**HPLC:** Shows 99.8% purity

**$^1$H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

| | Carbon | Hydrogen | Nitrogen |
|---|---|---|---|
| Theoretical | 55.44 | 6.02 | 3.8 |
| Found | 55.32 | 6 | 3.72 |



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**Description:**

Galanthamine hydrobromide is a long-acting, centrally active acetylcholinesterase inhibitor ($IC_{50}$ = 410 nM) and allosteric potentiator at neuronal nicotinic ACh receptors. Prevents β-amyloid-induced apoptosis in SH-SY5Y and bovine chromaffin cells. Long-term administration reduces amyloid precursor protein deposition and neurodegeneration in a mouse model of Alzheimer's disease.

**Physical and Chemical Properties:**

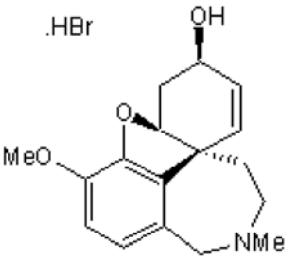
Batch Molecular Formula: $C_{17}H_{21}NO_3$.HBr

Batch Molecular Weight: 368.27

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**




**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 20 mM with gentle warming
water to 20 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:**

**Arias** *et al* (2004) Galantamine prevents apoptosis induced by β-amyloid and thapsigargin: involvement of nicotinic acetycholine receptors. Neuropharmacology ***46*** 103. PMID: 14654102.

**Samochocki** *et al* (2003) Galantamine is an allosterically potentiating ligand of neuronal nicotinic but not of muscarinic acetylcholine receptors. J.Pharmacol.Exp.Ther. ***305*** 1024. PMID: 12649296.

**Capsoni** *et al* (2002) Nerve growth factor and galant. ameliorate early signs of neurodegeneration in anti-nerve growth factor mice. Proc.Natl.Acad.Sci.U.S.A. ***99*** 12432. PMID: 12205295.