Print Date: Dec 8th 2020

Certificate of Analysis

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Product Name: **Gabapentin hydrochloride** **Catalog No.: 0806** **Batch No.: 8**

CAS Number: 60142-96-3 EC Number: 262-076-3

IUPAC Name: 1-(Aminomethyl)cyclohexaneacetic acid hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_9H_{17}NO_2.HCl$

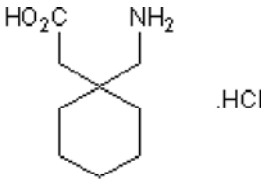
Batch Molecular Weight: 207.7

Physical Appearance: White crystalline solid

Solubility: water to 100 mM with gentle warming
phosphate buffered saline to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

Melting Point: Between 135 - 136°C

HPLC: Shows >99% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	52.05	8.73	6.74	17.07
Found	52.07	8.9	6.68	16.91

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IUPAC Name: 1-(Aminomethyl)cyclohexaneacetic acid hydrochloride

Description:

Anticonvulsant with several possible mechanisms of action. Increases GABA in the brain and binds to a novel site associated with voltage-sensitive Ca^{2+} channels. Prevents neuronal death and is antinociceptive and anxiolytic.

Physical and Chemical Properties:

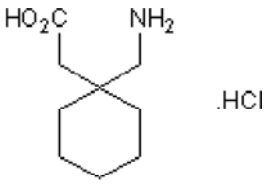
Batch Molecular Formula: $C_9H_{17}NO_2.HCl$

Batch Molecular Weight: 207.7

Physical Appearance: White crystalline solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 100 mM with gentle warming
phosphate buffered saline 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.

Licensing Information:

Sold for research purposes under agreement from Pfizer Inc.

References:

Fink *et al* (2000) Inhibition of Ca^{2+} influx by gabap. and subsequent reduction of neurotransmitter release from rat neocortical slices. Br.J.Pharmacol. ***130*** 900. PMID: 10864898.

Timmerman *et al* (2000) A microdialysis study on the mechanism of action of gabap. Eur.J.Pharmacol. ***398*** 53. PMID: 10856447.

Taylor *et al* (1998) A summary of mechanistic hypotheses of gabap. pharmacology. Epilepsy Res. ***29*** 233. PMID: 9551785.