

Product Name: QX 314 chloride

Catalog No.: 2313

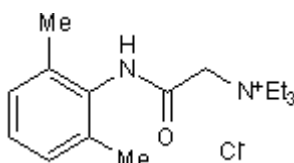
Batch No.: 3

CAS Number: 5369-03-9

IUPAC Name: *N*-(2,6-Dimethylphenylcarbamoylmethyl)triethylammonium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₇N₂OCl
Batch Molecular Weight: 298.85
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.44 (Chloroform:Methanol [75:25])
HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.3	9.11	9.37
Found	63.98	8.98	9.12

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

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IUPAC Name: *N*-(2,6-Dimethylphenylcarbamoylmethyl)triethylammonium chloride

Description:

Membrane impermeable quaternary derivative of lidocaine, a blocker of voltage-activated Na⁺ channels.

Physical and Chemical Properties:

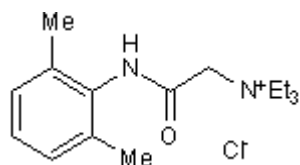
Batch Molecular Formula: C₁₆H₂₇N₂OCl

Batch Molecular Weight: 298.85

Physical Appearance: White solid

Minimum Purity: >99%

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:

Stichartz *et al* (1973) The inhibition of sodium currents in myelinated nerve by quaternary derivatives of lidocaine. *J.Gen.Physiol.* **62** 37. PMID: 4541340.

Alreja and Aghajanian (1994) QX-314 blocks the potassium but not the sodium dependent components of the opiate response in locus coeruleus neurons. *Brain Res.* **639** 320. PMID: 8205485.

Perkins and Wong (1995) Intracellular QX-314 blocks the hyperpolarization activated inward current I_q in hippocampal CA1 pyramidal cells. *J.Neurophysiol.* **72** 911.

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