1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: \( \text{C}_{16}\text{H}_{27}\text{N}_{2}\text{OCl} \)
   Batch Molecular Weight: 298.85
   Physical Appearance: White solid
   Solubility: water to 100 mM
   Storage: Store at RT
   Batch Molecular Structure:

     ![Molecular Structure]

2. ANALYTICAL DATA

   HPLC: Shows 99.9% purity
   \(^1\text{H} \text{NMR:}\) Consistent with structure
   Mass Spectrum: Consistent with structure
   Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>64.3</td>
<td>64.02</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>9.11</td>
<td>9.16</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>9.37</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Name: QX 314 chloride  
Catalog No.: 2313  
Batch No.: 4  

CAS Number: 5369-03-9  
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%

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: