1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( C_{10}H_{14}N_2.2C_4H_6O_6.1\frac{1}{2}H_2O \)

Batch Molecular Weight: 489.43

Physical Appearance: White solid

Solubility:
- Water to 100 mM
- DMSO to 75 mM

Storage: Desiccate at RT

Batch Molecular Structure:

![Molecular Structure](image)

2. ANALYTICAL DATA

HPLC: Shows 100% purity

\(^1\)H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: \([\alpha]_D = +21.3\) (Concentration = 3, Solvent = Water)

Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>44.17</td>
<td>44.03</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>5.97</td>
<td>5.66</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>5.72</td>
<td>5.68</td>
</tr>
</tbody>
</table>
Product Information

Product Name: (-)-Nicotine ditartrate
Catalog No.: 3546
Batch No.: 5

CAS Number: 65-31-6
EC Number: 200-607-2

IUPAC Name: (S)-(-)-1-Methyl-2-(3-pyridyl)pyrrolidine (+)-ditartrate salt

Description:
Nicotinic acetylcholine receptor (nAChR) agonist (K_i values are 1, > 1000, 4000 and 7130 nM at α4β2, α1β1δγ, rat α7 and human α7 respectively). Exhibits vasoconstrictive, hypertensive and prothrombotic activity in vivo.

Physical and Chemical Properties:
Batch Molecular Formula: C_{10}H_{14}N_{2}.2C_{4}H_{6}O_{6}.1\frac{1}{2}H_{2}O
Batch Molecular Weight: 489.43
Physical Appearance: White solid
Minimum Purity: >99%

Storage: Desiccate at RT

Solubility & Usage Info:
- water to 100 mM
- DMSO to 75 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: