1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_8\text{H}_{11}\text{NO}_3\cdot\text{C}_4\text{H}_6\text{O}_6\cdot\text{H}_2\text{O} \)

Batch Molecular Weight: 337.28

Physical Appearance: White solid

Solubility: water to 100 mM

DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:

![Molecular Structure]

2. ANALYTICAL DATA

Melting Point: Between 101 - 103°C

HPLC: Shows 99.9% purity

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

Mass Spectrum: Consistent with structure

Optical Rotation: \([\alpha]_D = -10.9\) (Concentration = 5, Solvent = water)

Microanalysis:

<table>
<thead>
<tr>
<th></th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>42.73</td>
<td>42.8</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>5.68</td>
<td>5.68</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>4.15</td>
<td>4.07</td>
</tr>
</tbody>
</table>
Product Name: Noradrenaline bitartrate  
CAS Number: 51-40-1  
IUPAC Name: 4-{[(1R)-2-Amino-1-hydroxyethyl]-1,2-benzenediol (L-\(+\))}-bitartrate salt

**Description:**  
Endogenous adrenergic hormone and neurotransmitter. A classical stress hormone; underlies the fight or flight response, along with adrenaline. Increases heart rate. Vasoconstrictor.

**Physical and Chemical Properties:**  
- **Batch Molecular Formula:** C_{10}H_{11}NO_3.C_4H_4O_5.H_2O  
- **Batch Molecular Weight:** 337.28  
- **Physical Appearance:** White solid  
- **Minimum Purity:** >99%  
- **Batch Molecular Structure:**

![Molecular Structure](image)

**Storage:** Store at +4°C  
CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

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