1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** \( C_{12}H_{13}NO_3 \)

**Batch Molecular Weight:** 219.24

**Physical Appearance:** Cream solid

**Solubility:**
- Ethanol to 25 mM
- DMSO to 100 mM

**Storage:** Store at RT

**Batch Molecular Structure:**

![Chemical Structure Image]

2. ANALYTICAL DATA

**TLC:** \( R_f = 0.2 \) (Chloroform:Methanol [9:1])

**Melting Point:** Between 123 - 127°C

**HPLC:** Shows >99.5% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

<table>
<thead>
<tr>
<th></th>
<th>Carbon</th>
<th>Hydrogen</th>
<th>Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>65.74</td>
<td>5.98</td>
<td>6.39</td>
</tr>
<tr>
<td>Found</td>
<td>65.34</td>
<td>5.99</td>
<td>6.17</td>
</tr>
</tbody>
</table>
Product Name: Aniracetam
CAS Number: 72432-10-1
IUPAC Name: 1-(4-Methoxybenzoyl)-2-pyrrolidinone

Description:
Nootropic, with modulatory actions through allosteric potentiation of AMPA specific receptors, reduction of glutamate receptor desensitization and potentiation of metabotropic glutamate receptor activity. Anxiolytic following systemic administration.

Physical and Chemical Properties:
Batch Molecular Formula: C_{12}H_{13}NO_3
Batch Molecular Weight: 219.24
Physical Appearance: Cream solid
Minimum Purity: >99%

Storage: Store at RT

Solubility & Usage Info:
ethanol to 25 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: