1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{62}\text{H}_{86}\text{N}_{12}\text{O}_{16.2\frac{1}{2}\text{H}_{2}\text{O}} \)

Batch Molecular Weight: 1300.47

Physical Appearance: Red solid

Solubility: DMSO to 50 mM

Storage: Desiccate at +4°C

2. ANALYTICAL DATA

Melting Point: Between 252 - 254°C

HPLC: Shows 99.4% purity

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>57.26</td>
<td>7.05</td>
<td>12.92</td>
</tr>
<tr>
<td>Found</td>
<td>57.28</td>
<td>6.97</td>
<td>12.76</td>
</tr>
</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
**Product Name:** Actinomycin D

**CAS Number:** 50-76-0

**IUPAC Name:** 2-Amino-(N,N)-1-bis(hexadecahydro-6,13-diisopropyl-2,5,9-trimethyl-1,4,7,11,14-pentaaxo-1H-pyrrolo[2,1]-[1,4,7,10,13] oxatetraazacyclohexadecin-10-yl)-4,6-dimethyl-3-oxo-3H-phenoxazine-1,9-dicarboxamide

**Description:**
Anti-neoplastic antibiotic. Inhibits RNA polymerase and is a potent inducer of apoptosis.

**Physical and Chemical Properties:**

- **Batch Molecular Formula:** C<sub>62</sub>H<sub>96</sub>N<sub>12</sub>O<sub>16</sub>·2½H<sub>2</sub>O
- **Batch Molecular Weight:** 1300.47
- **Physical Appearance:** Red solid
- **Minimum Purity:** >98%

**Storage:** Desiccate at +4°C

**Solubility & Usage Info:**
DMSO to 50 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:**


Glynn et al (1992) Apoptosis induced by actinomycin D, camptothecin or aphidicolin can occur in all phases of the cell cycle. Biochem.Soc.Trans. 20 84S. PMID: 1634006.